



Cynulliad Cenedlaethol Cymru
The National Assembly for Wales

Welsh Health Survey 1998

Results of the
Second Welsh Health Survey



The National Assembly for Wales
Welsh Health Survey 1998



Government Statistical Service

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Introduction

This report presents the results of the second Welsh Health Survey which took place in 1998. The aim of the survey was to collect information on a cross-section of the population with a range of illnesses or disabilities and on similar groups of healthy people, without using any medical records. Its results provide a picture of the health of the people of Wales, the way the NHS is used and areas where services could be improved. Although some changes were made to the questionnaire, the bulk of the questions was the same as that used in the previous Welsh Health Survey in 1995. Chapter 7 of this report compares some results from the two surveys.

In May 1998, self-completion questionnaires were sent to over 50,000 adults (aged 18 and over) across Wales. By the middle of June, almost 30,000 people had returned completed forms providing information on their use of the health service, their satisfaction with the service provided and complaints about it, their general health and specific illnesses for which they had been treated as well as aspects of their lifestyle. The questionnaire included the Short Form 36 (SF-36) - a standard set of health status questions - the answers to which can be combined to give summary measures of physical and mental well-being.

People's readiness to take part in the survey depended on several factors such as age, sex and health. In order to establish how those who did not reply differed from those who did respond, a separate survey of 1,000 non-responders was conducted. Fuller details are given in Appendix 4. In general non-responders were more likely to be younger, female and reported themselves to be in better health than those who returned their questionnaire. Whilst most of the results given in this report have been weighted to reduce the potential bias caused by different response rates between age-groups and sexes, differences in health have not been factored in. Indicators of the prevalence of many conditions, therefore, are likely to be overestimates. Where possible, relevant information from the survey of non-responders is mentioned in the text.

It should also be remembered that the survey relies on a self-completion questionnaire. Consequently, the results reflect people's own understanding of their health rather than a clinical assessment of their medical condition.

This report presents some of the main findings of the 1998 Welsh Health Survey. In many cases, the data invite closer consideration and more sophisticated analysis to fully exploit the survey's potential. For researchers wishing to do so, a copy of the survey database is available through the ESRC data archive.

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Chapter 1



Illness

The Welsh Health Survey provides information on the prevalence of some specific conditions amongst the people of Wales. This chapter presents these findings along with other information from the survey on dental health, eyesight, hearing, accidents needing a visit to casualty, bouts of food poisoning and the extent to which people hide health problems from others. In the main, each section includes broad figures for Wales with some geographical, age or sex breakdown.

Further analysis can be found elsewhere in this report. Appendices 1 and 2 contain data for each parliamentary constituency and unitary authority area and Appendix 3 gives a breakdown of key variables by age and sex. Chapter 5 considers the association between health and other factors such as social class and economic status. Chapter 7 compares results with the previous survey conducted in 1995.

People's health was one of the factors affecting readiness to take part in the survey - in general, those who responded to the survey reported that they had poorer health than those who did not. As a result, the true prevalence of most of the conditions detailed is likely to be lower than stated in this report.

Importantly, users should also remember that the survey relies on a self-completion questionnaire. The results, therefore, reflect people's own understanding of their health rather than a clinical assessment of their medical condition.

Heart Disease

Respondents were asked if they had ever been treated for any of the following diseases: angina, heart attack (or coronary), heart failure, high blood pressure (or hypertension) or another heart disease.

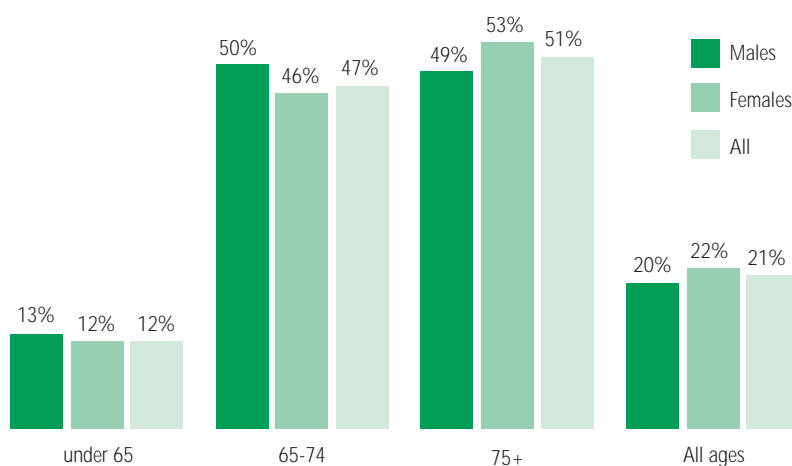
One in five adults who took part in the survey reported being treated for some kind of heart condition. Amongst non-responders, only around 6% reported heart disease suggesting that this and the estimates given below overstate true prevalence in the population (see Appendix 4 for further details).

Table 1.1 Proportion having been treated for heart disease; by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Hypertension	14.8	15.0	15.4	14.8	16.3	15.2
Angina	5.5	5.8	6.3	5.5	6.0	5.8
Heart attack	3.1	3.4	3.6	2.9	2.9	3.1
Heart failure	0.9	1.0	0.8	0.7	0.7	0.8
Other heart disease	2.6	3.0	3.2	3.1	2.4	2.9
All heart disease	20.1	21.5	21.1	20.0	21.7	20.8
No heart disease	79.9	78.5	78.9	80.0	78.3	79.2
base	6500	4745	4900	7097	5383	28624

- across Wales, 21% of adults reported having been treated for heart disease;
- there was little variation between health authority areas but rates were highest in Blaenau Gwent (25%) and Merthyr Tydfil (24%) and lowest in Cardiff and Monmouthshire (18%);
- 15% had been treated for high blood pressure, 6% for angina and 3% for heart attack.

Figure 1.1 Proportion having been treated for heart disease; by age and sex, adults aged 18+



- women are more likely to have been treated for heart disease than men;
- the level of heart disease in those aged over 65 was around four times higher than in those aged under 65.

Cancer

Respondents were asked if they had ever been treated for cancer of the lung, breast, bowel, skin or another kind.

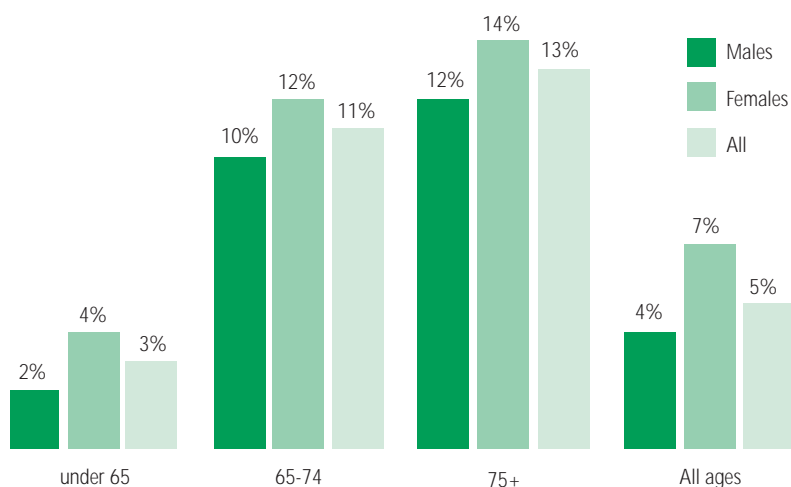
One in twenty adults who took part in the survey reported being treated for cancer. Amongst non-responders, only around 4% reported cancer suggesting that this and the estimates given below overstate true prevalence in the population (see Appendix 4 for further details).

Table 1.2 Proportion having been treated for cancer; by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Skin cancer	1.5	1.5	1.5	1.2	1.1	1.3
Breast cancer	1.2	1.2	1.2	1.1	1.3	1.2
<i>(women only)</i>	2.2	2.3	2.4	2.2	2.5	2.3
Bowel cancer	0.5	0.5	0.4	0.4	0.5	0.5
Lung cancer	0.2	0.1	0.3	0.2	0.1	0.2
Other cancer	2.6	2.2	1.8	2.5	2.3	2.3
All cancer	5.5	5.3	4.8	5.1	5.2	5.2
No cancer	94.5	94.7	95.2	94.9	94.8	94.8
base	6499	4723	4898	7090	5355	28564

- 5% of adults in Wales had been treated for cancer;
- there was little variation between health authorities in any of the major cancers identified;
- just over 2% of women reported having been treated for breast cancer.

Figure 1.2 Proportion having been treated for cancer; by age and sex, adults aged 18+



- 7% of women had been treated for cancer compared with 4% of men;
- the proportion reporting having been treated increased with age for both sexes and was consistently higher for women than men.

Respiratory illness

Respondents were asked if they currently had any of the following chest or breathing difficulties: asthma, cystic fibrosis, emphysema, pleurisy, tuberculosis, spells of bronchitis for over 3 years or another chest or breathing problem.

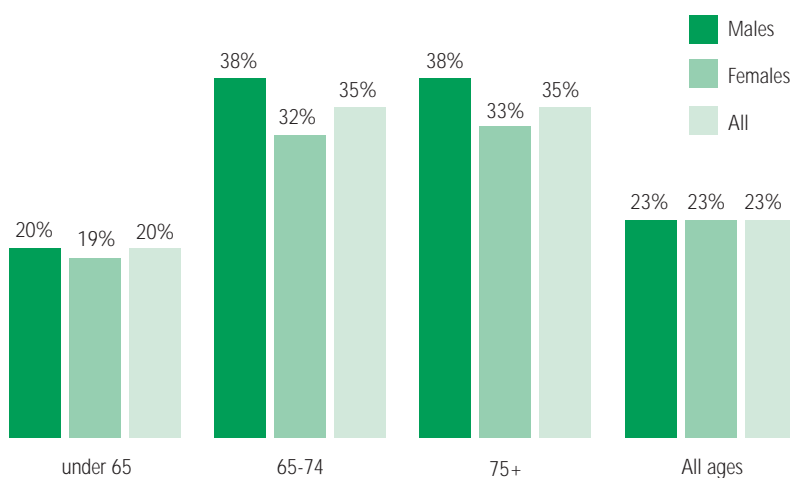
Nearly one in four adults who took part in the survey reported being treated for some kind of respiratory illness. Amongst non-responders, only around 15% reported respiratory illness suggesting that this and the estimates given below overstate true prevalence in the population (see Appendix 4 for further details).

Table 1.3 Proportion having respiratory illness; by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Asthma	9.4	9.2	12.2	10.0	11.5	10.4
Bronchitis	4.8	4.6	6.0	5.8	6.6	5.6
Emphysema	1.3	1.0	1.2	1.4	1.5	1.3
Pleurisy	0.4	0.6	0.4	0.6	0.7	0.5
Tuberculosis	0.2	0.3	0.2	0.3	0.2	0.2
Cystic fibrosis	0.1	0.1	0.0	0.1	0.1	0.1
Other respiratory illness	9.3	9.4	10.9	10.6	11.0	10.3
Respiratory illness	20.8	21.0	25.1	23.7	25.2	23.1
No Respiratory illness	79.2	79.0	74.9	76.3	74.8	76.9
base	6523	4746	4910	7120	5380	28679

- 23% of adults said they had chest or breathing problems with 10% having asthma and approaching 6% bronchitis;
- the highest overall rates were reported in Merthyr Tydfil (30%), Neath Port Talbot, Blaenau Gwent and Caerphilly (28%) and the lowest in Powys and Monmouthshire (19%)

Figure 1.3 Proportion having respiratory illness; by age and sex, adults aged 18+



- those aged over 65 were more likely to report respiratory illness than younger people;
- there was no difference between the rate reported by 65-74 year olds and older people;
- men were more likely to report illness than women in this older group but across all ages, the rate for men and women was the same;

Respondents were asked if anyone under 18 years of age lived with them. If so, they were asked if any of those under 18s had had wheezing or whistling in the chest in the last 12 months.

- 29% of respondents who lived with someone aged under 18 reported such wheezing or whistling. This figure ranged from 26% in Conwy and Anglesey to 35% in Merthyr Tydfil and Torfaen.

Mental illness

Respondents were asked if they currently had any of the following mental or nervous illnesses and had had them for three months or more: depression, anxiety, Alzheimer's disease, schizophrenia, another mental or nervous illness.

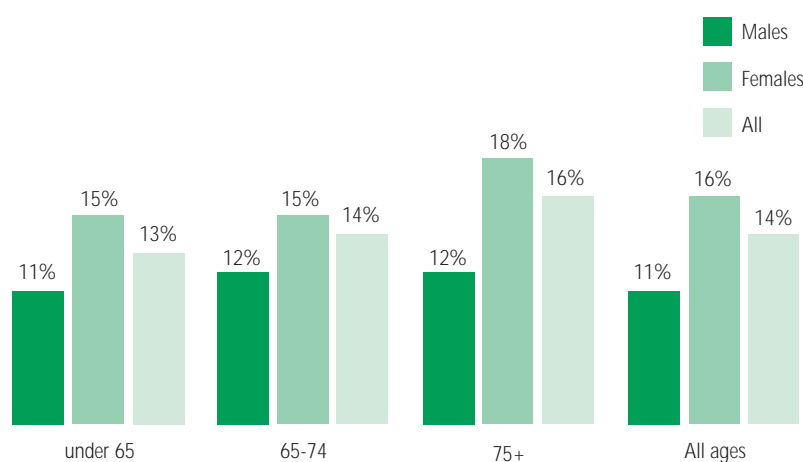
One in seven adults who took part in the survey reported being treated for some kind of mental illness. Amongst non-responders, only around 10% reported a mental illness suggesting that this and the estimates given below overstate true prevalence in the population (see Appendix 4 for further details).

Table 1.4 Proportion having mental illness; by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Depression	7.6	8.0	9.7	10.2	11.5	9.4
Anxiety	6.2	7.2	7.2	7.7	8.2	7.3
Schizophrenia	0.3	0.2	0.3	0.2	0.1	0.2
Alzheimer's disease	0.1	0.1	0.2	0.2	0.2	0.2
Other mental illness	1.4	1.3	1.5	1.3	1.7	1.4
Mental illness	11.5	12.5	13.7	14.7	15.9	13.6
No Mental illness	88.5	87.5	86.3	85.3	84.1	86.4
base	6505	4721	4904	7076	5363	28568

- across Wales, 14% of adults reported a mental or nervous illness;
- the areas making up the Gwent health authority area reported the lowest and some of the highest rates of mental illness in Wales - Monmouthshire residents reported the lowest rate (8%) whilst three of the four highest rates were in Blaenau Gwent, Torfaen and Caerphilly (19%);
- 22% of adults in Merthyr Tydfil reported a mental illness, the highest in Wales.

Figure 1.4 Proportion having a mental illness; by age and sex, adults aged 18+



- women were more likely than men to report a mental or nervous illness;
- the difference between the sexes was most pronounced for those aged over 75.

Diabetes

Respondents were asked if they had diabetes and, if so, if it was treated by injection, tablets or diet.

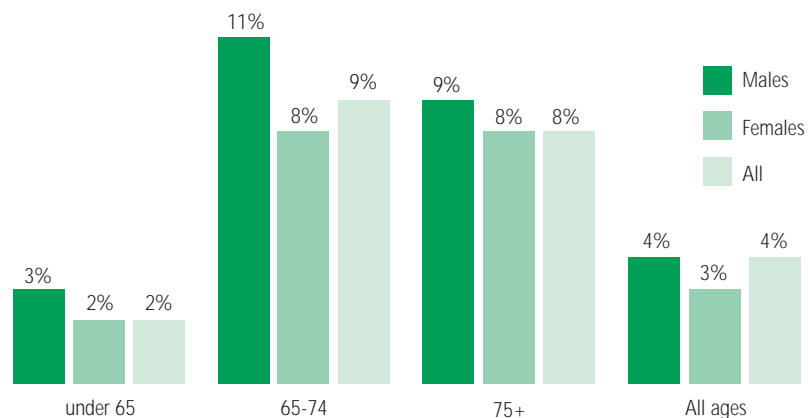
Diabetes was reported by 3.7% of adults who took part in the survey. Amongst non-responders, around 2% reported diabetes suggesting that this and the estimates given below overstate true prevalence in the population (see Appendix 4 for further details).

Table 1.5 Proportion being treated for diabetes; by treatment method, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Have diabetes	3.5	3.5	4.1	3.5	4.0	3.7
By tablets	1.5	1.4	1.8	1.8	2.1	1.7
By diet only	1.1	1.1	1.2	1.1	1.1	1.1
By injection	0.8	0.9	1.1	0.6	0.8	0.8
base	6483	4710	4867	7050	5338	28447

- 4% of adults said they had diabetes;
- the highest rates were in Blaenau Gwent (6%), Neath Port Talbot, Torfaen and Caerphilly (5%) and the lowest in Ceredigion, Monmouthshire and Vale of Glamorgan (2%);
- nearly half of those with diabetes were treated by tablets only.

Figure 1.5 Proportion being treated for diabetes; by age and sex, adults aged 18+



- diabetes was more common amongst men than women;
- its prevalence increased through middle age and was most common in the 65-74 year old age-group.

Other conditions

Respondents were asked if they currently had any of the following conditions - arthritis, back pain, epilepsy or fits, stroke, Parkinson's disease, pressure/bed sores or varicose veins.

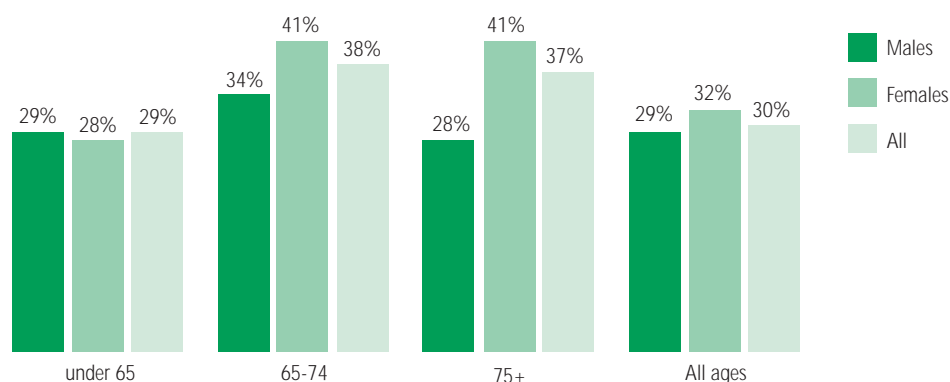
Back pain was reported by nearly one in three adults who took part in the survey, arthritis by one in four and varicose veins by one in ten. Amongst non-responders, around 32% reported back pain in line with the survey results. 19% of non-responders reported arthritis suggesting that estimates from the survey overstate true prevalence in the population (see Appendix 4 for further details). The non-response survey did not ask about the other conditions shown.

Table 1.6 Proportion being treated for other conditions; by treatment method, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Back pain	29.2	29.9	32.3	29.5	31.8	30.4
Arthritis	23.4	23.2	26.6	24.9	27.0	25.0
Varicose veins	11.1	1.2	11.3	9.7	11.3	10.8
Stroke	1.1	1.2	1.0	1.4	1.2	1.2
Epilepsy	0.8	0.7	0.8	1.0	1.1	0.9
Parkinson's disease	0.2	0.5	0.2	0.2	0.3	0.2
Pressure sores	0.2	0.2	0.2	0.3	0.2	0.2
base	6581	4801	4977	7180	5454	28992

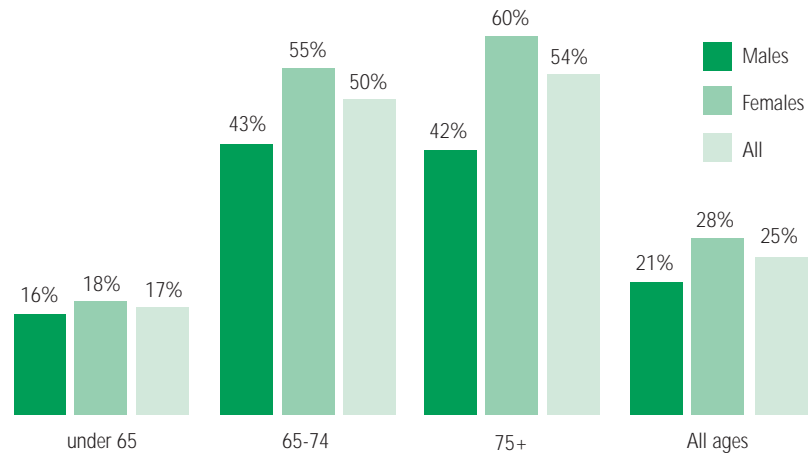
- 30% of adults reported having back pain, 25% arthritis and 11% varicose veins;
- back pain was most prevalent in Neath Port Talbot (37%), Blaenau Gwent (36%) and Merthyr Tydfil (35%). Lowest rates were in Monmouthshire and Cardiff (26%);
- arthritis was most prevalent in Merthyr Tydfil (33%), Blaenau Gwent (31%) and Caerphilly (30%). Lowest rates were in Monmouthshire and Powys (20%);

Figure 1.6 Proportion being treated for back pain; by age and sex, adults aged 18+



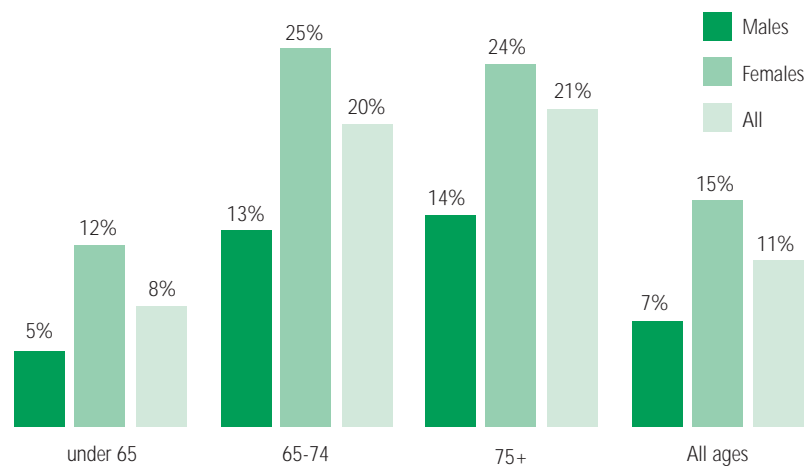
- back pain was more common in women than men;
- its prevalence generally increased with age but was most common amongst men aged between 55 and 64 (see Appendix 3).

Figure 1.7 Proportion being treated for arthritis; by age and sex, adults aged 18+



- arthritis was more common in women than men;
- it was three times more common in women over 75 than in those under 65.

Figure 1.8 Proportion being treated for varicose veins; by age and sex, adults aged 18+



- women were twice as likely as men to report having varicose veins;
- women over the age of 65 were twice as likely as younger women to report varicose veins.

Long-term illness

Respondents were asked if they had any long-term illness, health problem or handicap which limited their daily activities or the work they could do (including any problems due to old age). The question was identical to one used in the decennial Census of Population.

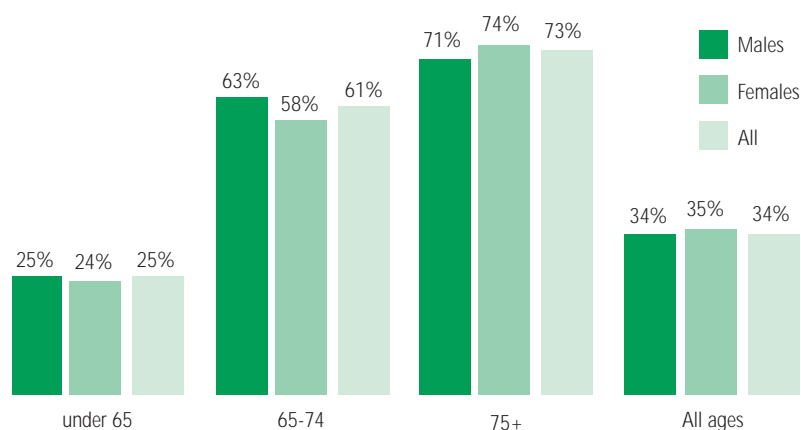
The rate of limiting long-term illness reported in the Survey was considerably higher than the equivalent figure recorded in the 1991 Census of Population (around 20%). There may be several explanations for the difference, other than an increase in prevalence. Most obviously, the non-response survey suggests there was bias in terms of morbidity in those who chose to take part in the survey. Generally speaking, those with worse health were more likely to respond to the Welsh Health Survey than those in better health. A further factor might be the nature of the survey itself. When asked the question in the context of a health survey, respondents may be more likely to say that they have a long-term illness than when faced with the same question in a more wide ranging questionnaire.

Table 1.7 Proportion with limiting long-term illness: by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Limiting long-term illness	32.5	33.6	36.0	32.7	36.6	34.1
base	6533	4749	4948	7149	5406	28785

- 34% of respondents said that they had a limiting long-term illness;
- the lowest rates were recorded in Flintshire and Cardiff (29%) and the highest in Merthyr Tydfil (43%) and Blaenau Gwent (41%).

Figure 1.9 Proportion with limiting long-term illness: by age and sex, adults aged 18+



- there was little difference in recorded rates between men and women;
- rates rose with age from around a quarter of under 65 year olds to three quarters of those aged 75 and over.

Food poisoning

Respondents were asked if they had had a stomach upset with diarrhoea in the past three months which they thought was due to something they had eaten. They were also asked if the upset occurred in this country or abroad and if they had seen a doctor about it.

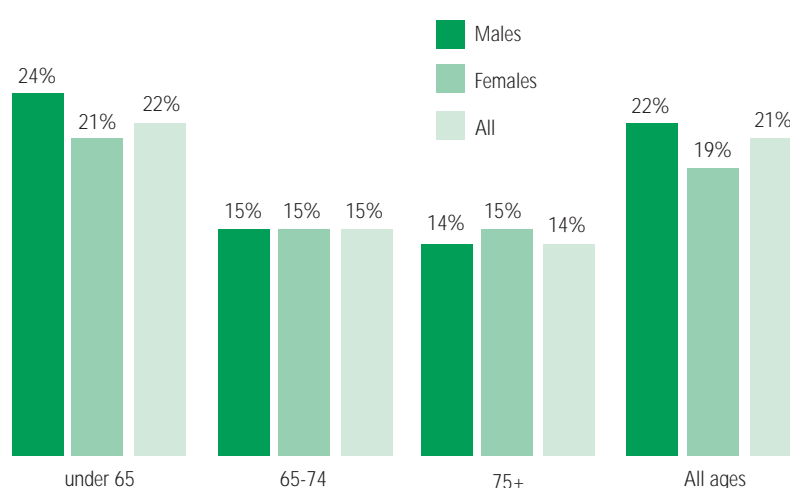
The symptoms people ascribe to food poisoning can, of course, result from infections acquired in other ways. The likelihood that some respondents include stomach upsets occurring more than three months before would also contribute to an overestimation of the actual level of food poisoning.

Table 1.8 Proportion having had upset stomach in last 3 months; by age and sex, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Upset stomach in UK	18.0	17.1	19.6	20.3	20.2	19.1
Upset stomach abroad	1.6	1.4	2.0	1.8	1.6	1.7
No upset stomach	80.5	81.6	78.5	78.0	78.3	79.3
base	6468	4702	4873	7049	5313	28405

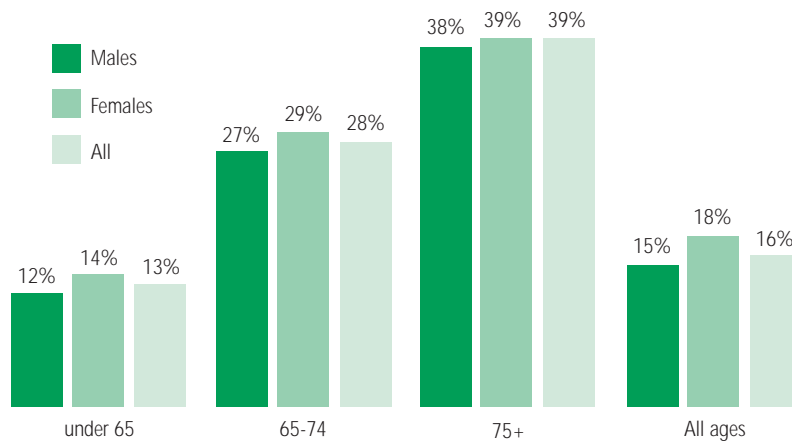
- down to food poisoning in the previous three months;
- the lowest rates were in Anglesey (16%), Monmouthshire and Gwynedd (17%) and the highest in Torfaen and Blaenau Gwent (24%).

Figure 1.10 Proportion having had upset stomach in last 3 months: by age and sex, adults aged 18+



- young adults were more likely to have had suspected food poisoning than other age groups (see Appendix 3);
- overall, men were more likely to have had suspected food poisoning than women.

Figure 1.11 Proportion of those who had had an upset stomach in last 3 months who then saw their doctor about it; by age and sex, adults aged 18+



- only one in six (16%) of those who had had an upset stomach went to see a doctor about it;
- people aged over 65 were three times as likely as those under 25 to visit their doctor with food poisoning;
- women were more likely to go to the doctor than men.

Accidents

Respondents were asked if they had had an accident, injury or poisoning needing hospital treatment or a visit to casualty in the previous three months. Considering only the most recent accident if they had had more than one, they were then asked about the type of injury they suffered and where the accident took place.

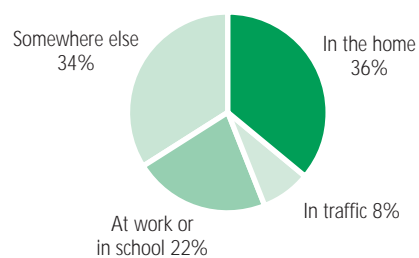
About one in every thirteen adults who took part in the survey reported having had an accident, injury or poisoning within the previous three months requiring hospital treatment. The non-response survey did not ask about accidents although it seems reasonable to assume respondents are more likely to include incidents occurring more than three months ago than to forget recent events. This would lead to an over estimation of true incidence.

Table 1.9 Proportion having had an accident, injury or poisoning in last three months; by age and sex, adults aged 18+

									percentage
	Male				Female				All people
	18-24	25-64	65-74	75 & over	18-24	25-64	65-74	75 & over	
Break or fracture	3.4	2.0	1.6	2.4	1.8	1.3	3.2	5.8	2.1
Cut or puncture	3.2	2.4	0.9	1.2	1.5	0.7	0.8	2.2	1.6
Head injury	2.7	0.7	0.3	0.7	0.7	0.4	0.3	1.3	0.7
Burn	0.4	0.4	0.2	0.2	0.5	0.3	0.3	0.3	0.3
Poisoning	0.6	0.2	0.2	0.4	0.5	0.2	0.2	0.1	0.2
Another kind of injury	6.1	3.9	1.6	2.5	3.7	2.7	2.6	3.4	3.3
Any kind of accident or injury	14.6	8.8	4.5	6.3	8.0	5.3	7.0	12.3	7.7
base	1538	9299	1514	936	1433	9186	1710	1653	28436

- 8% of adults had had an accident needing hospital or casualty treatment in the previous three months;
- young men (15%) were most likely to have suffered an accident;
- elderly women were also more likely than other groups to have had an accident with 6% of women aged 75 and over having had a break or fracture.

Figure 1.12 Place of accident: adults aged 18+



- over a third of accidents took place in the home;
- another third took place at work or in traffic.

The tables below consider the association between accidents and some other factors
 - alcohol consumption, exercise, eyesight and hearing.

Table 1.10 Proportion having had an accident, in last three months; by alcohol consumption, exercise, eyesight and hearing, adults aged 18+

	percentage	base
by alcohol consumption:		
none	7.3	7549
sensible	7.3	16178
harmful	9.7	3850
by exercise:		
none	10.4	2897
light	6.4	4891
moderate	5.9	8062
vigorous	9.4	6245
eyesight:		
can see a face across a room	7.5	26162
can see a face across a room with difficulty	10.1	1179
cannot see	9.5	978
hearing:		
can hear what is said in a chat	7.3	24735
can hear what is said in a chat with difficulty	9.2	2917
cannot hear	12.4	551

Sensible drinking level defined as 14 or fewer units of alcohol per week for women and 21 or fewer for men. Harmful drinking level defined as more than these amounts.

Exercise classified according to the heaviest form taken in previous 7 days

- heavy drinkers were more likely to have had an accident than those who drank less;
- those who took no exercise, or exercised most vigorously, were more likely to have had an accident than people who took light or moderate exercise only;
- adults who could not see, or had difficulty seeing a face across a room (with glasses or contact lenses if they usually wore them) were more likely to have had an accident than those with better eyesight;
- those who were unable to hear, or had difficulty hearing another person (using a hearing aid if necessary) were more likely to have had an accident than people with better hearing.

Teeth

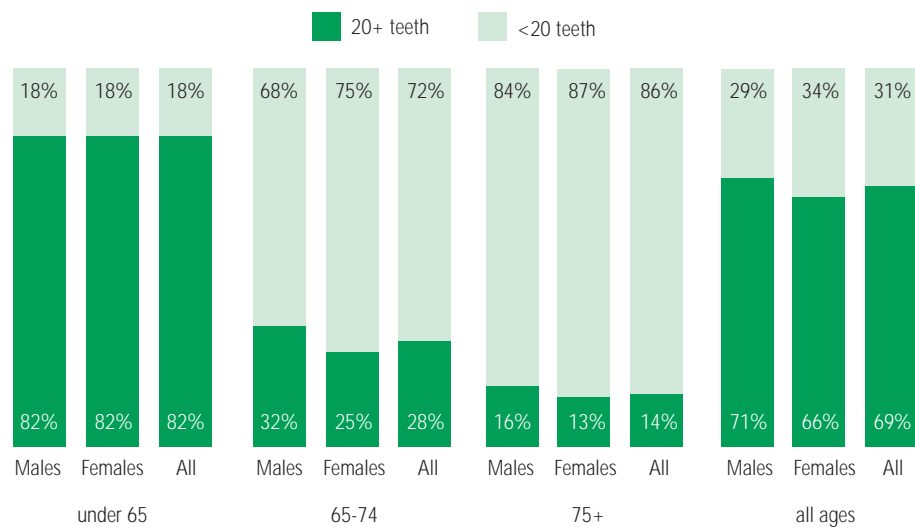
Respondents were asked how many of their own natural teeth they had. They were told that filled and capped teeth counted as their own whilst false teeth and dentures did not. Answers were restricted to '20 or more' of their own teeth or fewer than 20 or mainly false teeth/dentures'.

Table 1.11 Proportion having fewer than 20 or 20 or more of their own teeth; by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
20 or more teeth	69.1	66.3	67.5	71.4	67.4	68.6
Fewer than 20 teeth	30.9	33.7	32.5	28.6	32.6	31.4
base	6151	4584	4921	7064	5423	28142

- around one in three adults had fewer than twenty of their own teeth.
- the proportion with fewer than twenty of their own teeth varied from 24% in Cardiff and 26% in Monmouthshire to 37% in Neath Port Talbot, Carmarthenshire, Blaenau Gwent and Merthyr Tydfil.

Figure 1.13 Proportion having fewer than 20 or 20 or more of their own teeth; by age and sex, adults aged 18+



- women were more likely than men to have fewer than 20 of their own teeth;
- there was a continual reduction in the proportion with 20 or more of their own teeth with increasing age, most marked from the age of about 50 onwards (see Appendix 3).

Eyesight

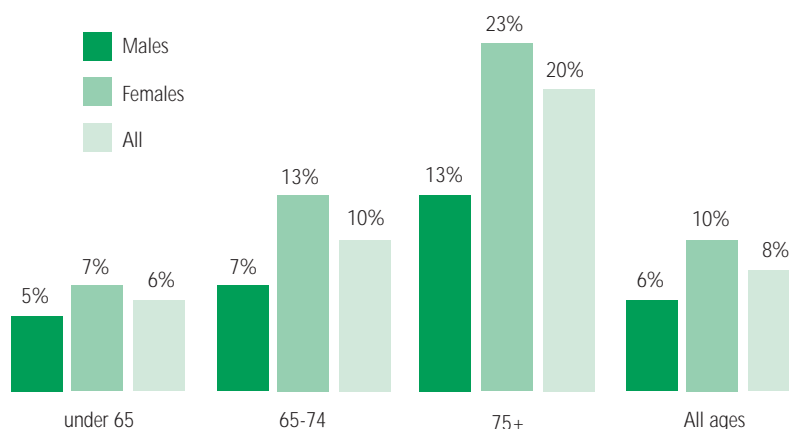
Respondents were asked if their eyesight was good enough to see the face of someone across a room (with glasses or contact lenses if they usually wore them). They were able to answer 'yes', 'yes, with difficulty' or 'no'. It may be that some people whose eyesight was adequately corrected with glasses or contact lenses misread the question and replied 'yes, with difficulty'. This would lead to an overestimation of the number of people with poor eyesight. On the other hand, blind people may well have been less likely to complete the survey at all leading to their under representation in the results (the survey of non-responders found just over 4% who said they were unable to see a face across a room).

Table 1.12 Proportion able to see a face across a room; by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Can see a face across a room	93.4	93.0	91.2	91.3	91.2	92.0
Can see a face across a room with difficulty	3.6	4.1	4.7	4.8	5.0	4.4
Cannot see	3.0	3.0	4.1	3.9	3.9	3.6
base	6660	4868	5056	7280	5496	29360

- 8% of adults found it difficult, or were unable to make out a face across a room;
- this rate varied from 5% in Powys and 6% in Flintshire, Conwy and Ceredigion to 13% in Rhondda Cynon Taff and 12% in Blaenau Gwent.

Figure 1.14 Proportion unable or who find it difficult to see a face across a room; by age and sex, adults aged 18+



- 10% of women and 6% of men were unable, or found it difficult to see across a room;
- eyesight deteriorated with age, particularly for women;
- nearly one in four women aged 75 and over had eyesight problems;
- diabetics were more likely to have poor eyesight than the rest of the population - 6% were unable to see and another 10% had difficulty compared with 3% and 4% respectively of adults without diabetes.

Hearing

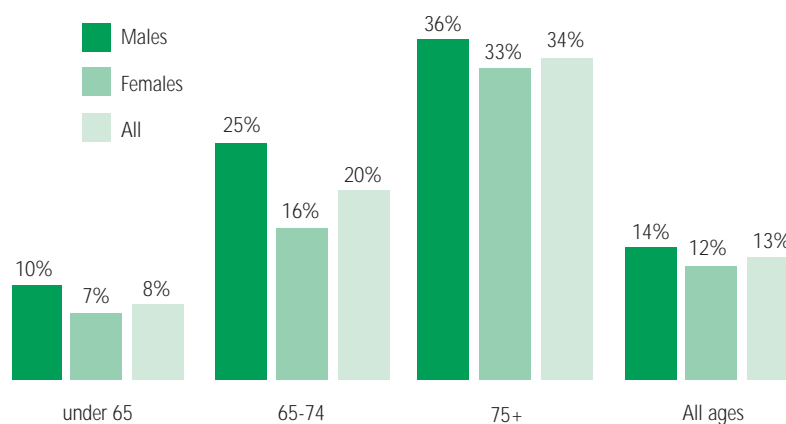
Respondents were asked if they could hear what was said in a chat with another person (with a hearing aid if they usually wore one). They were able to answer 'yes', 'yes, with difficulty' and 'no'.

Table 1.13 Proportion able to hear a chat with another person; by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Can hear a chat with another person	88.6	88.8	86.6	87.1	85.3	87.3
Can hear a chat with another person with difficulty	9.7	9.2	11.2	10.8	12.2	10.6
Cannot hear	1.7	2.1	2.2	2.1	2.4	2.1
base	6642	4840	5028	7229	5469	29208

- 13% of adults found it difficult, or were unable to hear what was said in a chat with another person (11% with difficulty, 2% unable);
- this rate varied from 9% in Powys and Ceredigion to 19% in Merthyr Tydfil and 18% in Caerphilly.

Figure 1.15 Proportion unable or who find it difficult to hear a chat with another person; by age and sex, adults aged 18+



- 14% of men and 12% of women were unable, or found it difficult to hear;
- men's hearing deteriorated at an earlier age;
- a third of people over 75 had hearing difficulty.

Stigma

Respondents were asked if they hid any health problems from family, friends, employer or doctor. If so, they were asked if the illness they hid was a mental or physical one. Respondents were able to say if each category applied to them e.g. whether they had an employer or not. Table 1.14 is based on the responses of those for whom each category was relevant.

Table 1.14 Proportion hiding any health problem: adults aged 18+

	percentage			
	All yes	Yes - a mental or nervous illness	Yes - a physical illness	No
Husband, wife or partner	6	2	4	94
Close family or friends	11	5	6	89
Other friends or acquaintances	13	6	8	87
Employer	8	4	5	92
Your family doctor (GP)	4	2	2	96

- 6% of respondents with a spouse or partner said they hid a health problem from them;
- 8% hid a health problem from their employer.

Chapter 2



Use of health services and patient satisfaction

This chapter covers the use people make of health services - GP's, hospitals, dentists and others - and their satisfaction with the service provided. Each section of the chapter includes some of the survey's broad results with some geographical, age or sex breakdown. Further geographical analysis can be found in Appendices 1 and 2. Appendix 3 considers results by age and sex.

Chapter 3 looks at the complaints made by patients about the health service.

Family doctors (GPs)

Respondents were asked when they last talked to their family doctor (GP) about their own health.

Over three quarters of adults (78%) had contacted their GP at least once in the past year with almost half the population (47%) seeing their doctor within the previous three months. Analysis of those who chose not to take part in the survey suggests that they were slightly less likely to have visited their doctor (43% in the previous 3 months, 69% in the previous year). The figures presented here, therefore may be slight overestimates.

Figure 2.1 Contact with family doctor

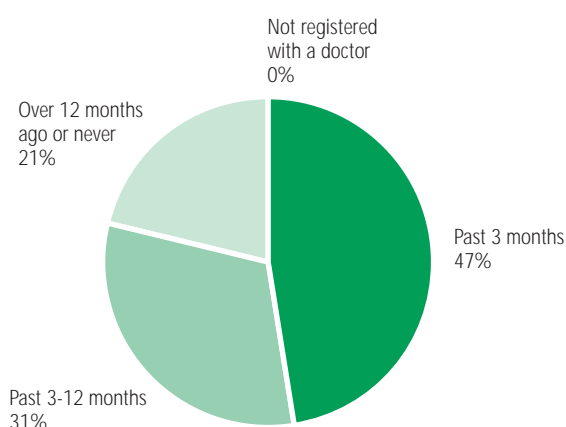


Table 2.1 Proportion visiting GP by age and sex

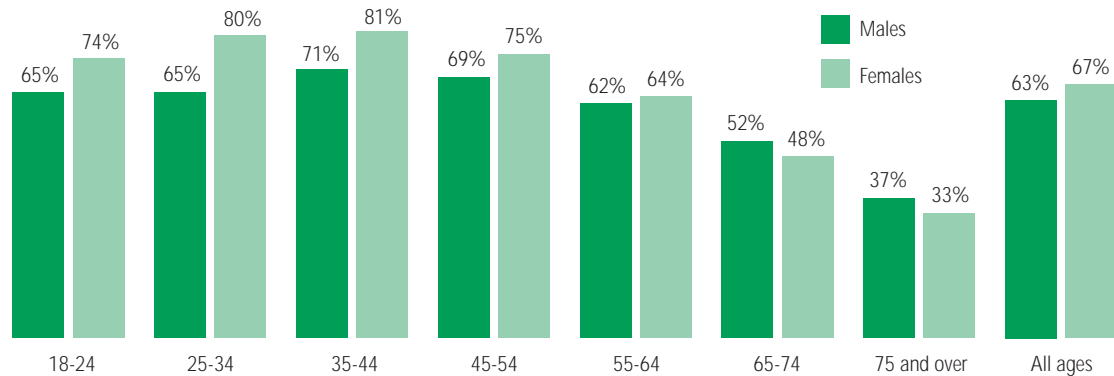
	percentage					
	under 65	65-74	75 & over	males	females	all
Past 3 months	43.5	57.8	60.7	40.6	53.3	47.2
Past 3-12 months	32.6	27.2	26.9	31.4	31.2	31.3
Over 12 months ago or never	23.6	14.9	12.3	27.6	15.3	21.2
Not registered with a doctor	0.3	0.2	0.1	0.4	0.2	0.3
base	21,797	3,426	2,837	14,163	15,188	29,352

- women were more likely to have seen their GP than men and more likely to have visited in the previous three months suggesting more frequent use also;
- older patients were more likely to have seen their doctor than younger ones;
- younger were least likely to have seen their doctor and most likely not to be registered at all;
- there was little variation in GP usage in the year between health authorities and only ranged from 77% to 80% between unitary authorities (Conwy, Denbighshire, Gwynedd, Carmarthenshire, Bridgend and Powys being the lowest, Merthyr Tydfil, Cardiff, Newport and Swansea the highest).

Dentist

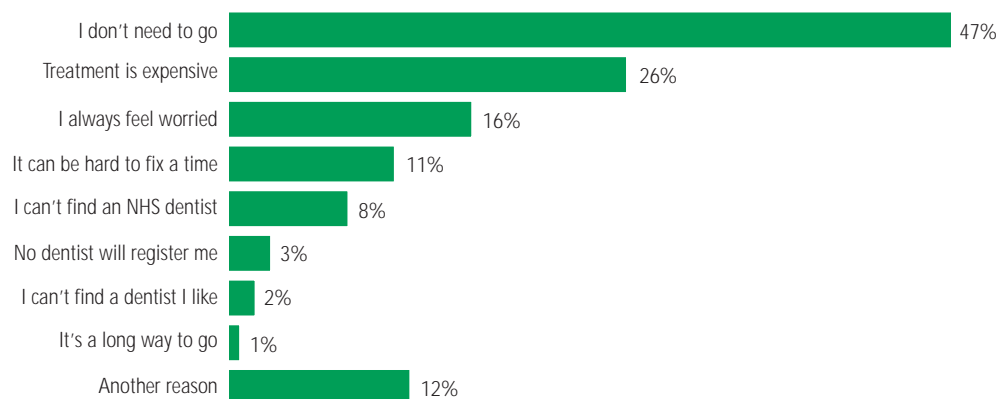
Respondents were asked if they had been to the dentist in the previous twelve months and, if so, where the visit had taken place. If they had not been to the dentist, they were asked to say why not. They were given a list of eight possible reasons and given the opportunity to give another reason. They were able to give more than one reason for not going to the dentist.

Figure 2.2 Proportion visiting dentist in previous year: by age and sex, adults aged 18+



- almost two-thirds of adults in Wales (65%) had visited the dentist in the previous year although this figure varied considerably with age - people aged under 65 were twice as likely to have visited than those aged 75 and over;
- men were less likely than women to go to the dentist, particularly amongst younger age-groups;
- there was considerable variation in annual dental visits between unitary authority areas. The highest rates were seen in Anglesey, Conwy (70%) and Cardiff (69%) and the lowest in Merthyr Tydfil (48%) and Blaenau Gwent (58%).

Figure 2.3 Reasons for not visiting the dentist: adults aged 18+



- nearly half of those who did not go to the dentist felt a visit unnecessary;
- a quarter of those who did not go thought treatment was too expensive;
- 8% of those who did not go said they were unable to find an NHS dentist.

Other services

Respondents were asked if they had used any of a list of other primary and community services within the last year.

After the GP and the dentist, the service most widely used was the optician - by nearly half of adults. Around one in ten adults had used a chiropodist, a health visitor.

Figure 2.4 Proportion using service within last 12 months: adults aged 18+

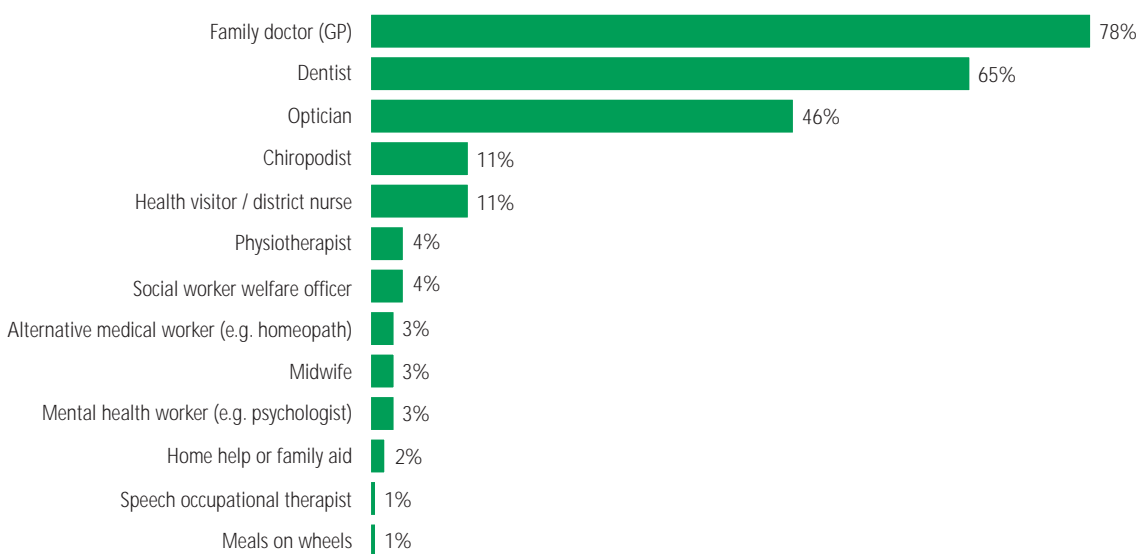


Table 2.2 Number of services used: by age and sex, adults aged 18+

	percentage								
	Male				Female				All people
	under 65	65-74	75 & over	All ages	under 65	65-74	75 & over	All ages	
No service used	9.5	5.7	5.4	8.7	3.1	5.3	3.8	3.4	6.2
Used 1-3 services	27.6	21.8	21.3	26.4	15.7	19.3	14.3	16.0	21.0
Used 4 or more services	62.9	72.5	73.3	64.8	81.2	75.4	82.0	80.6	72.8
base	10969	1607	1027	13603	10827	1876	1908	14611	29873

- only 6% of people had not used any of the health services listed above during the previous year and almost three quarters of the population had used four or more services;
- men, especially younger men, were most likely not to have made use of any service.

Hospital services

Respondents were asked when they had last been in hospital as an in-patient (staying overnight or longer), an out-patient (including having treatment then going home the same day) or visited casualty for treatment.

- 5% of adults had been a hospital in-patient within the last three months and 13% within the last year. These figures were mirrored by those interviewed in the survey of non-responders;
- 16% had visited hospital as an out-patient in the last three months and over 30% in the last year;
- 7% had been treated in a casualty department in the last three months and 20% in the last year;
- women were more likely than men to have been hospital in-patients or out-patients;
- men were more likely to have used casualty departments;
- use of hospital services increased with age although there was less variation in the use of casualty departments.

Table 2.3 Proportion staying in hospital as an in-patient; by age and sex, adults aged 18+

	percentage					
	under 65	65-74	75 & over	males	females	all
Past 3 months	3.6	6.8	10.2	4.1	5.3	4.7
Past 3-12 months	7.3	11.8	14.8	7.1	10.3	8.7
Over 12 months ago or never	89.0	81.4	75.0	88.8	84.4	86.6
base	21,270	3,219	2,630	13,769	14,555	28,324

Table 2.4 Proportion visiting hospital as an out-patient; by age and sex, adults aged 18+

	percentage					
	under 65	65-74	75 & over	males	females	all
Past 3 months	13.5	22.4	24.3	14.4	17.0	15.7
Past 3-12 months	14.1	16.1	18.2	14.3	15.2	14.8
Over 12 months ago or never	72.4	61.5	57.5	71.4	67.8	69.5
base	21,334	3,180	2,554	13,798	14,477	28,275

Table 2.5 Proportion visiting casualty department; by age and sex, adults aged 18+

	percentage					
	under 65	65-74	75 & over	males	females	all
Past 3 months	7.0	7.2	10.2	8.0	6.7	7.3
Past 3-12 months	12.7	10.2	12.8	14.0	11.1	12.5
Over 12 months ago or never	80.3	82.6	77.0	78.0	82.2	80.2
base	21,290	3,084	2,484	13,697	14,337	28,033

Patient satisfaction

Respondents who said they had used their GP or visited hospital or casualty department within the last year were also asked how satisfied they had been with the service provided on a five point scale from very satisfied to very dissatisfied. Those who said they had used any of the other services mentioned - dentist, optician, chiropodist etc. - were simply asked if they had been satisfied or not with the service. It should be remembered that different people with differing expectations use different services.

- generally, respondents expressed a high level of satisfaction with major health services. The proportions saying they were very or fairly satisfied were as follows: 86% of GP users, 86% of in-patients, 89% of out-patients, 81% of casualty department users
- there was relatively little variation between health authorities although Bro Taf and Gwent tended to have slightly lower satisfaction levels;
- patient satisfaction increased with age.

Table 2.6 Satisfaction with GP service: by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Satisfied (very/fairly)	87.1	87.7	86.5	84.6	83.7	85.8
Neither satisfied nor dissatisfied	8.3	7.0	8.5	8.8	10.0	8.6
Dissatisfied (very/fairly)	4.6	5.3	5.0	6.6	6.3	5.6
base	5057	3717	3913	5653	4245	22585

- 86% of people said they were satisfied with the service they received from their GP;
- there was little variation between health authority areas but between unitary authorities, satisfaction was lowest in Caerphilly (79%), Merthyr Tydfil and Blaenau Gwent (81%) and highest in Ceredigion and Anglesey (90%), Vale of Glamorgan and Pembrokeshire (89%).

Table 2.7 Satisfaction with GP service: by age and sex, adults aged 18+

	percentage					
	under 65	65-74	75 & over	males	females	all
Satisfied (very/fairly)	83.8	92.2	93.1	84.1	87.2	85.8
Neither satisfied nor dissatisfied	9.9	4.8	3.2	9.9	7.5	8.6
Dissatisfied (very/fairly)	6.3	3.1	3.7	6.1	5.2	5.6
base	16,313	2,819	2,417	10,005	12,581	22,585

- satisfaction with the service given by GPs increased steadily with age from under 80% or those aged under 25 to over 90% of those aged 60 and over;
- much of the difference was accounted for by the decreasing proportion who said they were neither satisfied nor dissatisfied with the service - from 14% of under 25s to 3% of those aged 75 and over. Dissatisfaction, though, was still higher amongst younger age-groups.

Table 2.8 Satisfaction with hospital in-patient service and care: by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Satisfied (very/fairly)	86.5	87.8	87.4	84.4	84.3	86.0
Neither satisfied nor dissatisfied	8.1	5.9	6.5	8.0	5.8	7.0
Dissatisfied (very/fairly)	5.3	6.4	6.1	7.6	9.9	7.0
base	893	599	660	876	715	3742

- 86% of hospital in-patients said they were satisfied with the service and care given;
- 90% of patients in Neath Port Talbot and in 89% in Gwynedd and Newport were satisfied compared with 80% in Torfaen and 82% in Merthyr Tydfil.

Table 2.9 Satisfaction with hospital in-patient service and care: by age and sex, adults aged 18+

	percentage					
	under 65	65-74	75 & over	males	females	all
Satisfied (very/fairly)	82.5	92.9	92.0	87.5	85.0	86.0
Neither satisfied nor dissatisfied	8.7	4.4	4.1	6.3	7.5	7.0
Dissatisfied (very/fairly)	8.8	2.6	3.9	6.2	7.6	7.0
base	2,304	579	647	1,511	2,231	3,742

- in-patient satisfaction increased with age - from around 75% of under 25s to over 90% of those aged 65 or more.

Table 2.10 Satisfaction with hospital out-patient service and care: by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Satisfied (very/fairly)	89.2	87.9	89.5	87.5	88.6	88.6
Neither satisfied nor dissatisfied	5.7	6.6	5.2	6.5	5.4	5.9
Dissatisfied (very/fairly)	5.0	5.4	5.4	6.0	5.9	5.5
base	1894	1221	1603	2076	1577	8370

- 89% of out-patients said they satisfied with the service and care given;
- 93% of out-patients in Monmouthshire and 92% in Neath Port Talbot said they were satisfied compared with 83% in Ceredigion and 86% in Cardiff and Bridgend.

Table 2.11 Satisfaction with hospital out-patient service and care: by age and sex, adults aged 18+

	percentage					
	under 65	65-74	75 & over	males	females	all
Satisfied (very/fairly)	86.1	94.6	94.3	88.0	89.1	88.6
Neither satisfied nor dissatisfied	7.1	2.9	2.8	6.2	5.6	5.9
Dissatisfied (very/fairly)	6.8	2.5	2.8	5.8	5.3	5.5
base	5,767	1,176	1,039	3,836	4,534	8,370

- out-patient satisfaction increased with age - from under 80% of under 25s to ver 90% of those aged 55 or more.

Tabl 2.12 Satisfaction with casualty department service and care: by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Satisfied (very/fairly)	81.5	82.2	83.2	78.3	79.3	80.7
Neither satisfied nor dissatisfied	8.3	9.3	7.6	10.6	8.2	8.9
Dissatisfied (very/fairly)	10.3	8.6	9.2	11.2	12.5	10.5
base	1113	827	1018	1369	1078	5406

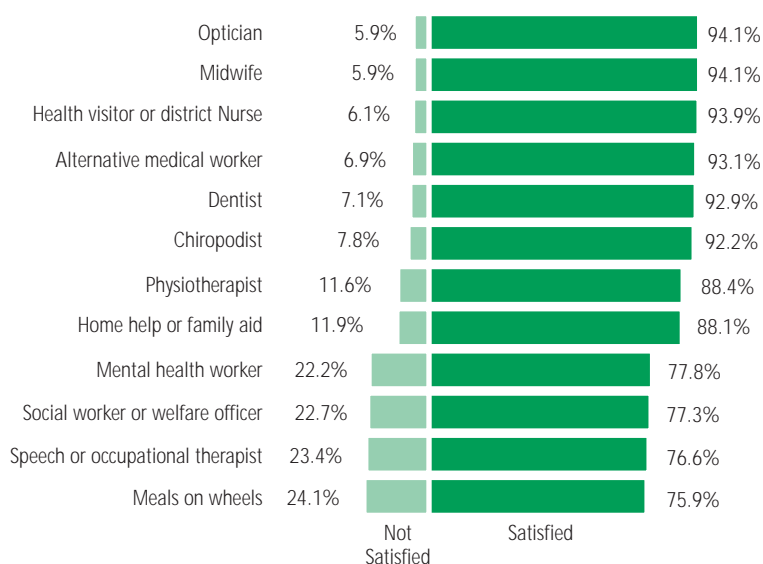
- 81% of those who had visited accident and emergency units said they were satisfied with the service and care received;
- this varied from 86% in Bridgend and 85% in Carmarthenshire and Conwy to 74% in Newport and 77% in Cardiff and Ceredigion.

Table 2.13 Satisfaction with casualty department service and care: by age and sex, adults aged 18+

	percentage					
	under 65	65-74	75 & over	males	females	all
Satisfied (very/fairly)	77.6	91.4	92.5	79.2	82.3	80.6
Neither satisfied nor dissatisfied	10.4	4.2	3.6	9.9	7.7	8.9
Dissatisfied (very/fairly)	11.9	4.4	3.9	10.9	10.0	10.5
base	4,095	512	551	2,917	2,488	5,406

- accident and emergency patient satisfaction increased with age - from 70% of under 25s to over 90% of those aged 70 or more.

Figure 2.5 Proportion satisfied/not satisfied with service: adults aged 18+



- dissatisfaction was highest amongst users of meals on wheels, speech or occupational therapist, social work and mental health services.

**Table 2.14 Proportion of users in last 12 months satisfied with various services:
by health authority**

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Optician	93.4	94.5	94.9	94.4	93.7	94.1
Dentist	92.3	91.6	94.6	93.2	92.8	92.9
Chiropodist	92.7	94.3	91.1	91.6	91.3	92.2
Health visitor or district Nurse	92.8	96.0	92.9	94.3	94.0	93.9
Home help or family aid	90.4	86.0	90.2	88.5	85.6	88.1
Meals on wheels	68.7	80.4	74.9	80.3	71.0	75.9
Social worker or welfare officer	80.1	76.2	79.2	76.1	74.5	77.3
Mental health worker	79.1	80.9	83.5	74.5	74.3	77.8
Midwife	94.1	96.5	91.2	95.6	92.9	94.1
Alternative medical worker	91.3	94.2	95.7	90.9	94.1	93.1
Speech or occupational therapist	82.0	82.8	74.8	71.7	71.2	76.6
Physiotherapist	88.6	87.2	90.6	87.3	88.5	88.4

Chapter 3



Complaints

The overall level of patient satisfaction recorded in the survey, and presented in the previous chapter, was high. It is likely, though, that many patients might be unhappy with specific aspects of the health services they have used, whilst still saying they were satisfied with the service received overall. To assess some of these more specific concerns, respondents who were dissatisfied with any of the health and social services mentioned in the survey were asked to give details of what was wrong. They were also asked if they had made a complaint about any of the services and, if so, how satisfied they were with the way the complaint was dealt with and its outcome. If they had not made a complaint, they were asked to say why not.

This chapter summarises the results of these questions. Complaints were classified in terms of the service mentioned (GP, hospital in-patient, dentist etc.) and the kind of complaint (getting the service, the quality of the service or its outcome). The following classification was used:

complaints about . . .

getting the service

- *no service or limited availability*
- *waiting for appointments or cancellations*
- *travelling problems*
- *waiting at the appointment*
- *brusque or unhelpful administration*

quality of execution

- *lack of or poor information*
- *too little time taken*
- *lack of continuity*
- *service provider brusque or unhelpful*
- *communication problems*
- *poor quality service*
- *privacy or sex issues*
- *poor ancillary facilities*

outcome

- *cost of service*
- *problem not solved*
- *problem made worse*
- *new problems*
- *lack of support or aftercare*
- *delay in receipt of prescription*

The nature of the complaints data collected makes it difficult to devise a satisfactory weighting frame. As a result, only unweighted data are presented in this chapter.

Kinds of complaints

Table 3.1 shows the number of people who recorded written complaints on survey questionnaires in each classification.

Table 3.1 Complaints by kind

	Number of people complaining
Getting the Service	1,258
No service or limited availability	321
Waiting for appointments or cancellations	473
Travelling problems	58
Waiting at the appointment	439
Brusque or unhelpful administration	107
Quality of execution	2,219
Lack of or poor information	220
Too little time taken	330
Lack of continuity	100
Service provider brusque or unhelpful	674
Communication problems	147
Poor quality service	1,183
Privacy or sex issues	25
Poor ancillary facilities	53
Outcome	1,027
Cost of service	331
Problem not solved	442
Problem made worse	132
New problems	78
Lack of support or aftercare	117
Delay in receipt or prescription	22

- the commonest cause of complaint was about the quality of the treatment, care or service;
- the next most common cause of complaint was a brusque or unhelpful attitude from service providers;
- delay at an appointment or in getting an appointment in the first place were also common complaints;
- complaints could be reduced substantially by eliminating rudeness and improving administration and communication (rude administration, rude service provider, waiting at an appointment, lack of continuity, lack of information, communication problems).

Complaints by service

Table 3.2 shows the number of people who recorded written complaints on survey questionnaires broken down by service. The information is also expressed as a rate per 1,000 respondents who said they had used the service in question.

There is considerable variation in the rate of complaint between different services. This would be expected given that some services tend to deal with problems which are potentially intractable and some kinds of complaint would not apply to all services. Not all complaints necessarily imply that the service or provider was at fault, many complaints, for example, concerned the availability of services. Some people made more than one complaint about a specific service.

Table 3.2 Complaints by service: number and rate per 1,000 users aged 18+

	Number of people complaining	per 1,000 service users
GP	594	25
In-patient	247	63
Casualty	350	66
Out-patient	314	36
Optician	595	42
Dentist	1,095	59
Chiroprapist	214	60
Health visitor	142	44
Home help	51	71
Social worker	212	178
Mental health worker	131	170
Midwife	34	42
Alternative medical worker	38	41
Speech/occupational therapist	48	151
Physiotherapist	144	115
Meals on wheels	35	116

- the highest complaint rates were seen against social workers, mental health workers and speech/occupational therapists. Physiotherapists and meals on wheels services also had high rates. Some rates are based on much lower absolute numbers and levels of use;
- of the major health services, hospital in-patient, casualty and dental services attracted the highest rates of complaint.

Complaints by health authority

Table 3.3 shows the rate of people complaining for each service broken down by health authority.

Table 3.3 Complaints per 1,000 service users aged 18+: by health authority

	GP	In-Patients	Casualty	Out-Patients	Optician	Dentist	Chiropodist	Health Visitor
North Wales	24	61	73	39	45	64	55	49
Dyfed Powys	23	72	58	35	39	75	43	31
Morgannwg	25	68	58	34	41	42	77	58
Bro Taf	26	67	66	36	41	54	70	40
Gwent	29	49	72	34	43	59	56	44
Wales	25	63	66	36	42	59	60	44

	Home Help	Social Worker Worker	Mental Health Worker	Midwife	Alternative Medical Therapist	Speech/ Occupational Therapist	Physio-therapist	Meals-on-wheels
North Wales	44	167	165	41	58	131	142	136
Dyfed Powys	101	193	148	18	28	89	109	82
Morgannwg	44	151	143	53	28	143	100	200
Bro Taf	83	187	200	33	52	198	113	88
Gwent	79	189	174	60	31	184	102	111
Wales	71	178	170	42	41	151	115	116

- there was relatively little variation in the rates of complaint about GPs, casualty, out-patient and optician services;
- complaints about hospital in-patient services and dentists were highest in Dyfed Powys;
- complaint rates for some services varied quite considerably between authorities although these figures are often based on only a small number of complaints or low levels of use.

Formal complaints

Respondents were also asked how they felt their complaints had been handled.

Table 3.4 shows the proportion who said they were completely, partly or not satisfied with the way their complaint was dealt with.

Table 3.4 Percentage satisfied with way complaint was dealt with: by health authority

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Completely Satisfied	53	58	58	54	50	54
Partly Satisfied	26	18	23	21	26	23
Not satisfied	21	24	20	25	25	23
base	255	203	194	311	254	1217

Table 3.5 shows the proportion who said they were completely, partly or not satisfied with the outcome of their complaint.

Table 3.5 Percentage satisfied with outcome of complaint: by health authority

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
Completely Satisfied	43	50	50	46	42	46
Partly Satisfied	28	19	24	25	24	24
Not satisfied	28	31	26	30	34	30
base	211	159	172	248	193	983

- 23% of people who made a complaint said they were not satisfied with the way it was dealt with, ranging from 20% in Morgannwg to 25% in Bro Taf and Gwent;
- 30% of people making a complaint were not satisfied with its outcome, ranging from 26% in Morgannwg to 34% in Gwent.

Table 3.6 Reason for not making a complaint: by health authority

	percentage					
	North Wales	Dyfed/Powys	Morgannwg	Bro Taf	Gwent	Wales
I didn't think the complaint was serious enough	37	33	36	38	35	36
I didn't know who to complain to	19	24	21	24	21	22
I didn't know who to go about complaining	16	21	16	17	16	17
I was worried about what might happen if I complained	23	19	19	19	23	21
Other reason	24	28	23	24	23	24
base	681	503	456	739	609	2988

- 22% of those who had chosen not to make a formal complaint said this was because they didn't know who to complain to;
- 17% said they didn't know how to go about complaining;
- 21% had not complained because they worried about the consequences.

Chapter 4



Health status

The Welsh Health Survey questionnaire included a standard set of 36 health status questions known as SF-36 (questions 15 to 25 of the survey questionnaire). SF-36 questions ask respondents about their own perception of their physical and mental health and the impact it has on their daily lives. Responses can be combined to produce eight scores for the following aspects of health and well-being:

- physical functioning
- role-physical
- bodily pain
- general health
- vitality
- social functioning
- role-emotional
- mental health

In turn, these can be combined to produce two summary measures of physical and mental health - the Physical Component Summary (PCS) and Mental Component Summary (MCS). These two scores are presented in this chapter as summary measures of the self-perceived health and well-being of different sections of the population of Wales. Scores generally range between 30 and 60: higher scores indicate better health.

The eight component and two summary SF-36 scores are analysed by geographical area in Appendices 1 and 2 and by age and sex in Appendix 3. More information about SF-36 is given in Appendix 4.

Table 4.1 shows the mental and physical component summary scores for each health authority area. Disparities in scores between small geographical areas can be hidden by aggregated information at the health authority level and so unitary authority data are also shown. As a rule of thumb, a difference in score of one unit (for example, 47.2 and 48.2) is likely to be statistically significant. Differences of less than 0.5 are unlikely to be meaningful.

Table 4.1 Physical and mental component summary scores: by health and unitary authority, adults aged 18+

	PCS	MCS	base
North Wales HA	48.7	50.4	5193
Anglesey	48.6	51.8	493
Gwynedd	48.8	50.6	906
Conwy	47.8	50.6	895
Denbighshire	48.5	50.6	713
Flintshire	48.9	49.9	1196
Wrexham	49.2	49.6	990
Dyfed Powys HA	48.2	50.2	3785
Powys	49.0	50.2	1005
Ceredigion	49.0	50.1	587
Pembrokeshire	48.4	50.8	879
Carmarthenshire	47.0	49.8	1314
Morgannwg HA	47.4	49.6	3882
Swansea	47.8	49.9	1820
Neath & Port Talbot	46.3	49.5	1047
Bridgend	48.0	49.1	1015
Bro Taf HA	48.7	48.9	5738
Vale of Glamorgan	49.4	50.7	947
Cardiff	49.4	48.8	2599
Rhondda, Cynon, Taff	47.8	48.5	1812
Merthyr Tydfil	46.2	47.4	381
Gwent HA	47.5	48.6	4245
Caerphilly	46.5	48.1	1257
Blaenau Gwent	45.9	47.5	535
Torfaen	47.9	48.1	676
Monmouthshire	49.0	50.6	708
Newport	48.4	48.8	1069
Wales	48.2	49.5	22843

- both summary measures were highest (indicating better health) in North Wales and lowest (or next to lowest) in Gwent health authority
- Powys, Ceredigion, the Vale of Glamorgan and Monmouthshire had some of the highest scores on both measures and Merthyr Tydfil and Blaenau Gwent the lowest.

Figure 4.1 Physical and mental component summary scores: by unitary authority, adults aged 18+

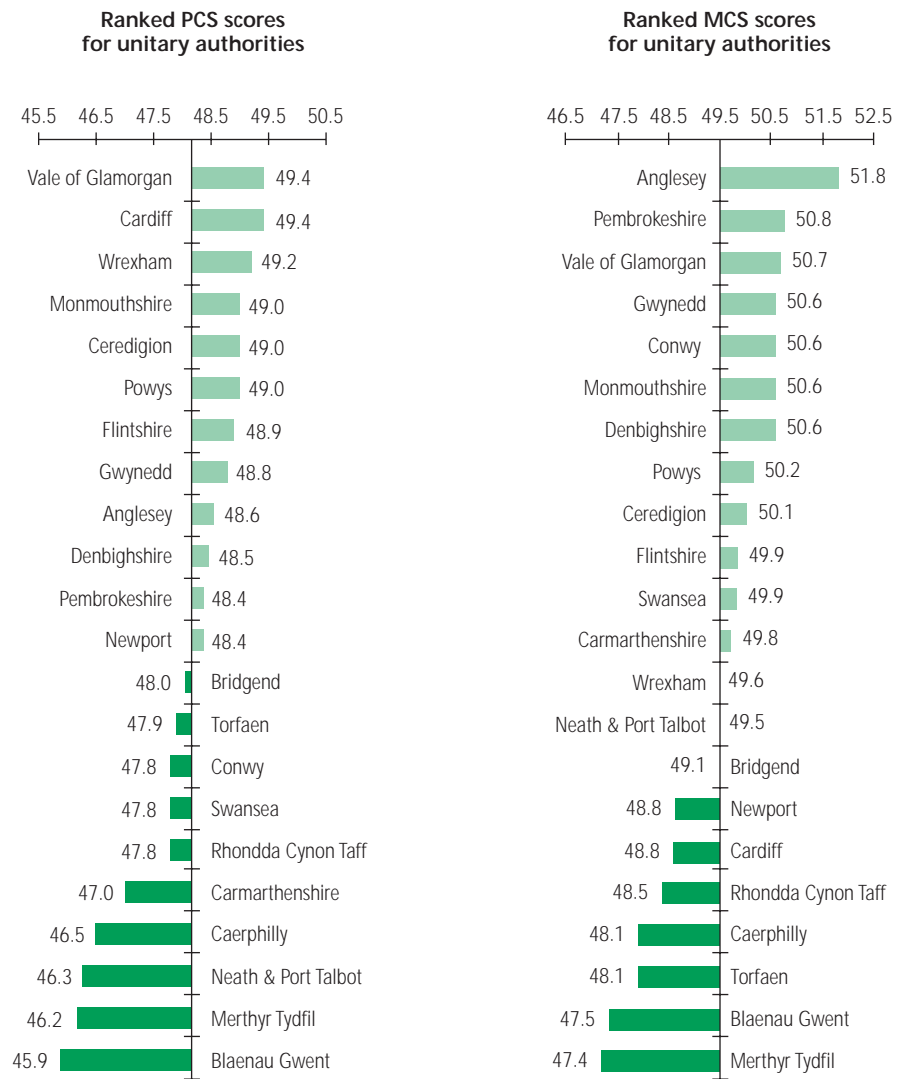


Table 4.2 Physical and mental component summary scores: by age and sex

Age	male		PCS		all people	
	score	base	female	base	score	base
18-24	54.8	1446	54.3	1337	54.6	2783
25-34	53.2	2472	53.0	2325	53.1	4797
35-44	51.6	2151	51.4	2132	51.5	4283
45-54	48.3	2011	46.9	1965	47.6	3976
55-64	42.2	1376	43.3	1334	42.8	2709
65-74	39.9	1011	38.8	1071	39.4	2082
75 and over	36.2	531	32.8	896	34.0	1427
All ages	48.7	11394	47.6	11449	48.2	22843

Age	male		MCS		all people	
	score	base	female	base	score	base
18-24	50.7	1446	46.8	1337	48.8	2783
25-34	50.2	2472	47.3	2325	48.8	4797
35-44	49.9	2151	47.6	2132	48.8	4283
45-54	50.2	2011	48.3	1965	49.3	3976
55-64	50.8	1376	50.9	1334	50.9	2709
65-74	52.8	1011	51.3	1071	52.0	2082
75 and over	51.7	531	49.0	896	50.0	1427
All ages	50.6	11394	48.4	11449	49.5	22843

- both physical and mental scores were generally higher for men than for women except in the 55-64 year old age-group;
- the differences between the sexes was more marked for the mental component summary score than the PCS
- physical component summary scores tended to worsen with age;
- mental component summary scores generally improved with age but worsened slightly for those over 75.

Figure 4.2 PCS and MCS: by age

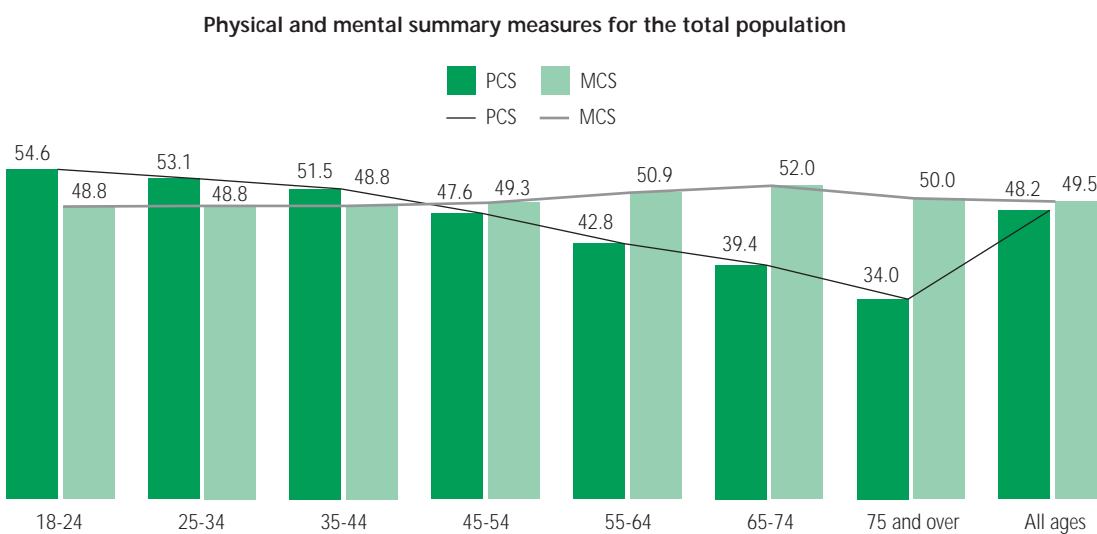


Figure 4.3 PCS: by age and sex

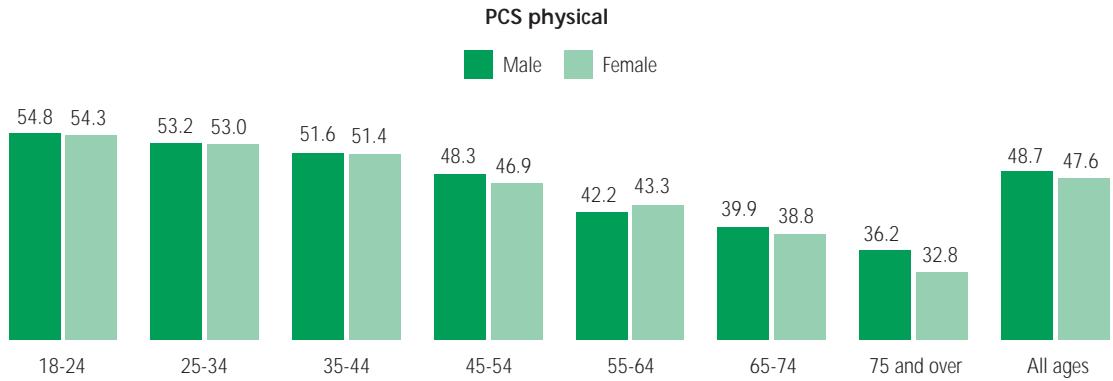
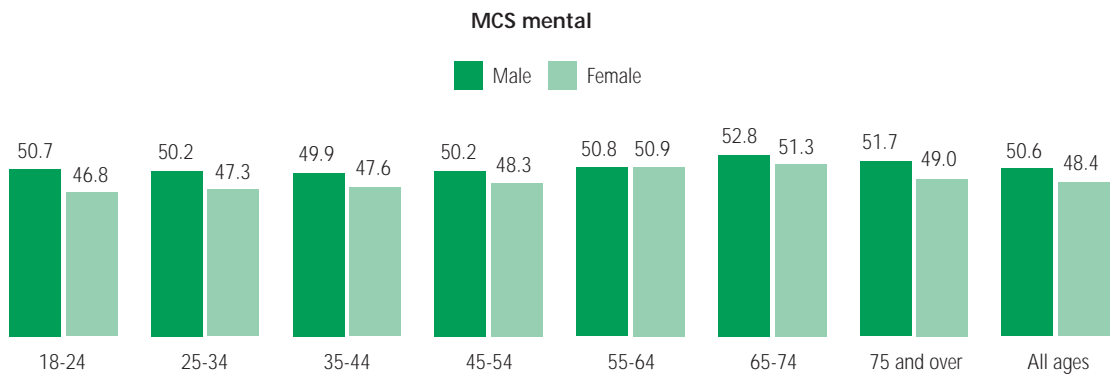
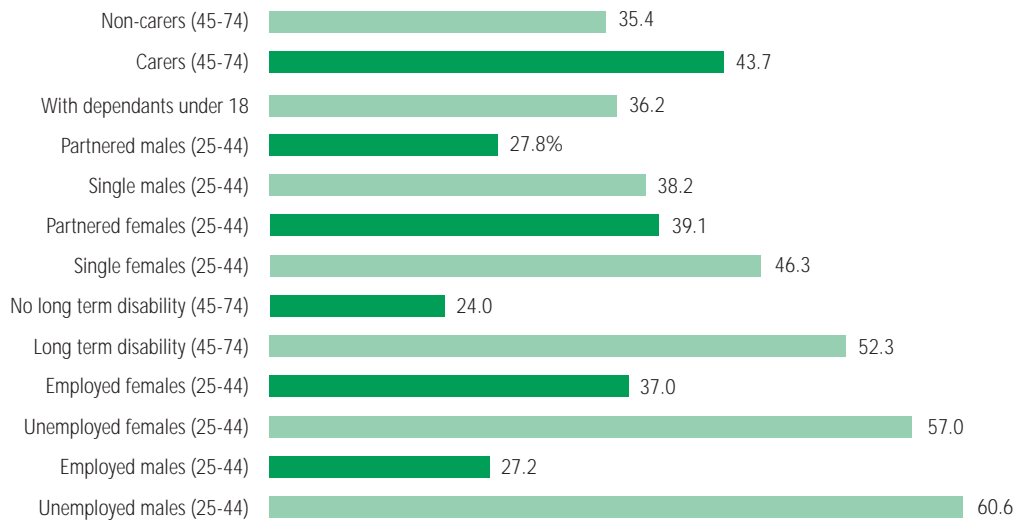


Figure 4.4 MCS: by age and sex



One question within the SF-36 group asks respondents if, in the past year, they had had two weeks or more during which they felt sad, unhappy or depressed or had lost all interest or pleasure in things they usually cared about or enjoyed. People answering 'yes' to this question were classified as being 'at risk of major depression'. Figure 4.5 shows the proportion in various groups answering 'yes'.

Figure 4.5 Proportion feeling sad, unhappy depressed etc for two weeks or more in past year



- the unemployed, people with long term illness and those who cared for others were particularly likely to be at risk of depression on the basis of this question.

Chapter 5



Health and associated factors

This chapter provides some basic information on the association between health and the use people make of health services and other factors such as social class, and economic activity.

The results suggest considerable differences in the health of different groups of the population, differences which may well be directly related to the associated factors shown. The nature of the Welsh Health Survey means, though, that results of this kind should be viewed cautiously and in the light of the limitations of the data. Some general points should be borne in mind:

- the survey results cannot be used to assess causal links between health and other factors.
- different groups have different age and sex structures which may have considerable impact on health. Such sex and age differences will go a long way to explaining observed health variation in some areas. It is possible to control for these factors and the results in this chapter do this in part by considering 45-64 year olds only.
- many of the factors associated with health are themselves related.

Social class

Table 5.1 analyses, by occupational classification, the summary health scores of 45-64 year olds in Wales, the proportion reporting various conditions and using GP, in-patient and dentist services in the past year.

Respondents have been classified according to their present or most recent paid occupation. The categories of occupation are:

Class	Occupation	example:
I	professional	doctor, solicitor, professional engineer
II	managerial/technical	teacher, librarian, nurse
III (n)	skilled, non-manual	photographer, clerk, salesperson
III (m)	skilled, manual	bricklayer, watchmaker, electrician
IV	partly skilled	caretaker, waiter, gardener
V	unskilled	cleaner, labourer, messenger

Table 5.1 Health and use of health services: by social class; population aged 45-64

	professional I	managerial/ technical II	skilled non-manual III(N)	skilled manual III(M)	partly skilled IV	unskilled V	all respondents
Mental component summary score	52.4	50.9	50.2	49.4	48.4	47.8	49.9
Physical component summary score	49.6	48.1	45.8	43.3	43.9	43.6	45.7
Heart disease ¹	19%	21%	23%	27%	25%	26%	24%
Cancer ¹	3%	6%	7%	5%	6%	5%	6%
Respiratory illness ²	12%	19%	17%	28%	27%	32%	23%
Mental illness ³	4%	11%	16%	17%	21%	23%	16%
Diabetes ²	2%	4%	3%	5%	5%	4%	5%
Arthritis ²	21%	25%	34%	37%	39%	41%	33%
Back pain ²	24%	31%	36%	44%	39%	42%	37%
Varicose veins ²	7%	13%	14%	11%	18%	17%	14%
Long term illness ⁴	23%	31%	36%	46%	46%	51%	40%
Eyesight problems ⁵	1%	4%	6%	7%	10%	12%	7%
Hearing problems ⁶	6%	9%	8%	19%	16%	19%	13%
GP ⁷	68%	78%	82%	79%	80%	82%	79%
In-patient ⁷	6%	9%	9%	11%	14%	15%	11%
Dentist ⁷	84%	78%	75%	60%	58%	56%	68%
base	223	2,271	1,808	1,748	1,358	452	8,783

¹ percentage who have ever been treated

² percentage who have condition now

³ percentage who have mental or nervous illness now and have had for 3 months or more

⁴ percentage who have a long term illness, health problem or handicap which limits their daily activities or the work they can do (including problems due to old age)

⁵ percentage who cannot see face across a room, or have difficulty doing so, with glasses or contact lenses if they usually wear them

⁶ percentage who cannot hear a chat with another person, or have difficulty doing so, with a hearing aid if they usually wear one

⁷ percentage visiting in the last 12 months

- those in social classes I and II (professional and managerial/technical occupations) had higher mental and physical summary scores and below average rates for all of the conditions shown;
- they were also less likely to have been to their GP or stayed in hospital as an in-patient in the last year, but more likely to have visited their dentist;
- those in social class III(m) (skilled manual occupations) had above average rates of heart disease, respiratory illness, arthritis, back pain, long term illness and hearing problems;
- those in social classes IV and V (partly skilled and unskilled occupations) had low summary health scores and higher than average rates of respiratory and mental illness, arthritis, back pain, varicose veins, long term illness, eyesight and hearing problems. They were more likely than other social groups to have used their GP or to have been in hospital and less likely to have made a trip to the dentist.

Economic activity

Table 5.2 analyses, by economic activity, the summary health scores of 45-64 year olds in Wales, the proportion reporting various conditions and using GP, in-patient and dentist services in the past year.

Respondents were classified according to which of the following they felt best described them:

- self-employed
- employed full-time (30 hours a week or more)
- employed part-time (less than 30 hours a week)
- on a work-related training scheme
- retired
- waiting to start a job that I have accepted
- unemployed for less than 12 months and have looked for work in the past 4 weeks
- can't work because of long-term disability or ill-health
- caring for my home and family or dependants
- full-time student
- other

Table 5.2 Health and use of health services: by economic activity; population aged 45-64

	employed	unemployed less than 12 months	unemployed 12 months or more	can't work because of long-term disability	caring for home, family or dependants	retired	all respondents
Mental component summary score	51.2	49.9	43.7	41.5	48.7	51.7	49.9
Physical component summary score	50.0	49.0	45.4	25.7	46.4	42.3	45.7
Heart disease ¹	17%	23%	24%	44%	21%	35%	24%
Cancer ¹	4%	1%	2%	9%	6%	8%	6%
Respiratory illness ²	15%	21%	33%	49%	21%	27%	23%
Mental illness ³	8%	15%	28%	45%	19%	17%	16%
Diabetes ²	2%	10%	2%	11%	4%	7%	5%
Arthritis ²	23%	28%	28%	64%	33%	45%	33%
Back pain ²	30%	37%	41%	61%	35%	39%	37%
Varicose veins ²	12%	14%	10%	15%	19%	17%	14%
Long term illness ⁴	22%	34%	47%	97%	35%	51%	40%
Eyesight problems ⁵	5%	6%	7%	15%	9%	9%	7%
Hearing problems ⁶	10%	11%	17%	25%	11%	13%	13%
GP ⁷	74%	78%	77%	97%	82%	83%	79%
In-patient ⁷	8%	8%	12%	22%	9%	14%	11%
Dentist ⁷	71%	60%	59%	57%	68%	67%	68%
base	5,127	74	123	1,354	464	1,561	8,783

¹ percentage who have ever been treated

² percentage who have condition now

³ percentage who have mental or nervous illness now and have had for 3 months or more

⁴ percentage who have a long term illness, health problem or handicap which limits their daily activities or the work they can do (including problems due to old age)

⁵ percentage who cannot see face across a room, or have difficulty doing so, with glasses or contact lenses if they usually wear them

⁶ percentage who cannot hear a chat with another person, or have difficulty doing so, with a hearing aid if they usually wear one

⁷ percentage visiting in the last 12 months

- employed people had higher summary health scores than the unemployed and lower rates of heart disease, respiratory and mental illness, arthritis, back pain, long-term illness and eyesight and hearing problems;
- although sample sizes were not large, there were indications that the long-term unemployed had lower overall health scores and higher prevalence of some conditions than people in employment or those who had been out of work for less than a year.

Chapter 6



Carers

The survey asked respondents if they were carers, defining this as:

‘someone whose life is restricted in some way because they look after a person who is mentally or physically disabled, or who is limited in what they can do by illness or old age’.

This chapter considers the proportion who saw themselves as carers and their health, the people they look after and the time devoted.

Table 6.1 Proportion of population who are carers: by health authority, adults aged 18+

	percentage					
	North Wales	Dyfed powys	Morgannwg	Bro Taf	Gwent	Wales
base	6383	4629	4843	6974	5270	28098
Carers	7.3	7.3	8.4	7.5	7.3	7.5

- one in thirteen (7.5%) of adults in the survey reported being carers with the highest rate (8.4%) being in the Morgannwg health authority area;
- within Morgannwg, Neath Port Talbot had the highest proportion of carers in Wales (9.5%) and Swansea (8.1%) and Bridgend (7.9%) also had rates above the Welsh average.

Table 6.2 Profile of carers: by age and sex, adults aged 18+

	percentage	
	carers	all people
base	2118	29874
Male	39.8	48.3
Female	60.2	51.7
base	2006	28461
Under 45	28.9	46.6
45-64	44.9	30.9
65-74	15.1	12.2
75+	11.1	10.3

- carers were most likely to be women and to be aged between 45 and 64;
- one in four carers were aged 65 or over.

Table 6.3 Profile of those looked after by carers: by age and sex

	percentage
base	1937
Male	41.0
Female	59.0
base	1960
Under 45	21.0
45-64	20.6
65-74	15.6
75+	42.7

- those looked after were also more likely to be women than men;
- 40% of people cared for were aged 75 or over.

Table 6.4 Illness or disability of those looked after by carers

	percentage
base	1882
Mental illness	10.9
Learning disability	10.5
Stroke	10.4
Alzheimer's disease	5.2
Another illness or disability	76.5

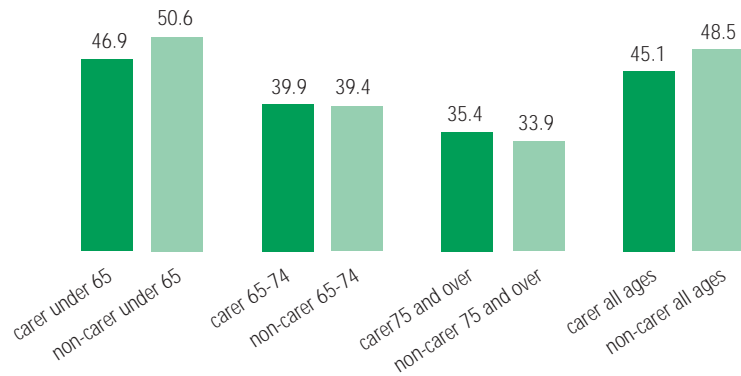
- around one in ten people being looked after by carers had a mental illness and similar proportions learning disability or stroke.

Table 6.5 Time spent looking after someone else

	percentage
base	1875
It varies but usually less than 20 hours a week	5.6
It varies but usually more than 20 hours a week	12.5
Less than 5 hours per week	4.9
5-9 hours per week	8.4
10-19 hours per week	8.9
20-34 hours per week	9.0
35-49 hours per week	8.7
50-99 hours per week	12.2
100 or more hours per week	25.1
Other	4.7

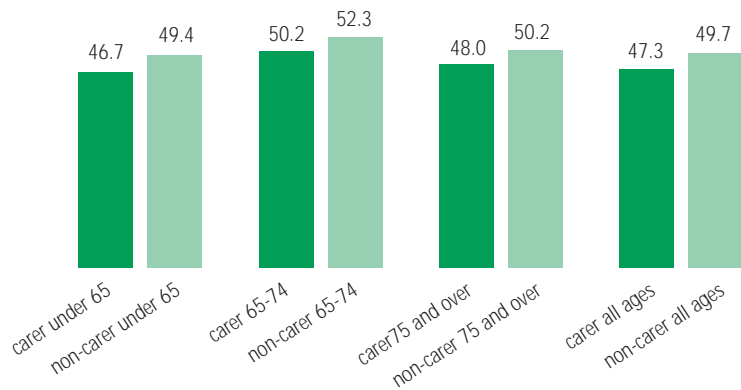
- a quarter of carers said they spent 100 hours or more each week looking after or helping the person they cared for.

Figure 6.1 Physical component summary scores of carers and non-carers: by age



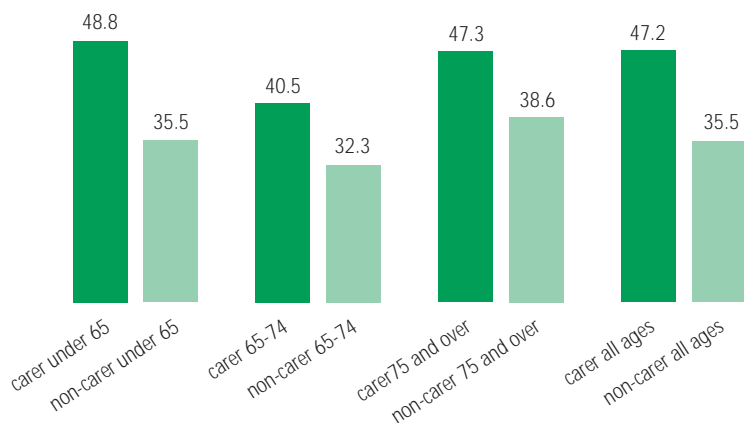
- the physical health of younger carers (under 65), as measured by their SF-36 physical component summary score, was a little poorer than others in their age-group;
- carers aged 75 and over recorded slightly better physical health scores than their peers.

Figure 6.2 Mental component summary scores of carers and non-carers: by age



- SF-36 mental component summary scores were considerably lower amongst carers than non-carers in all age groups.

Figure 6.3 Proportion of population classified as at risk of depression: by age



- carers in all age-groups were more likely than non-carers to be classified as 'at risk of depression'. That is, they reported that they had had 2 weeks or more feeling sad, unhappy or depressed during the past year.

Chapter 7



1995 and 1998 compared

The first Welsh Health Survey was carried out in 1995. Its methodology was similar to the 1998 survey and many of the questions asked were identical. This chapter compares the results of the two surveys for some questions asked in 1995 and 1998. Differences which are statistically significant (at 95% confidence level) are marked with an asterisk.

Appendix 4 gives detail on the potential error associated with the results of the Welsh Health Survey. It is important to bear these in mind when considering differences between two sample surveys, both of which may be subject to error. The major causes of potential error in the survey are:

- statistical sampling error. Any estimates derived from a sample survey may differ from the true population figures because they are based on a sample, rather than a full count of every member of the population. In general, the smaller the sample size, the larger the potential error;
- non-response. Appendix 4 details how certain characteristics of those who responded to the survey differ from those who did not. Generally, respondents had poorer health than non-respondents and used health services more;
- other non-sampling error:
 - the Welsh Health Survey relies on a self-completion questionnaire. People's perceptions of their own health and the health services they use are important, but they may change over time for a variety of reasons;
 - the questionnaire is not straightforward and people's understanding of particular questions or willingness to give personal information affect any estimates derived. The layout and design of the 1998 survey were altered from 1995 in an attempt to improve clarity and some minor changes resulted from interviews with respondents to the pilot survey. Again, it is not possible to assess the impact of differences and error of this kind on the results of the two surveys.

Health service use and satisfaction

Table 7.1 Change in use of services and satisfaction: 1995-1998 adults aged 18+

	1995	1998	difference
% using service in last 3 months			
GP	47.3%	47.2%	-0.1%
in-patient	4.4%	4.7%	0.3%
casualty	6.7%	7.3%	0.6%*
out-patient	13.5%	15.7%	2.2%*
% using service in last 12 months			
GP	77.5%	78.5%	1.0%*
in-patient	13.3%	13.4%	0.1%
casualty	18.1%	19.8%	1.7%*
out-patient	27.3%	30.5%	3.2%*
% of users in last 12 months who were satisfied			
GP	88.1%	85.8%	-2.3%*
in-patient	89.6%	86.0%	-3.6%*
casualty	82.0%	80.7%	-1.3%
out-patient	87.7%	88.6%	0.9%
% of users in last 12 months who were dissatisfied			
GP	4.3%	5.6%	1.3%*
in-patient	5.5%	7.0%	1.5%*
casualty	10.1%	10.5%	0.4%
out-patient	6.2%	5.5%	-0.7%
% visiting the dentist in the last 12 months	58.7%	64.9%	6.2%*
% with fewer than 20 of their own teeth	32.6%	31.4%	-1.2%*

- there were statistically significant increases in the proportions using GP, casualty, out-patient and dental services between 1995 and 1998;
- the proportion of GP and in-patient service users who said they were satisfied with the service provided decreased;
- the proportion who said they were dissatisfied with those services increased.

Morbidity

Table 7.2 % of adults reporting various conditions and SF-36 summary scores: adults aged 18+ by sex, 1995 & 1998

	All respondents		Males		Females	
	1995	1998	1995	1998	1995	1998
Any heart disease	19.5	20.8*	18.8	19.8	20.3	21.7*
Angina	5.8	5.8	6.3	6.3	5.4	5.3
Heart attack	3.1	3.1	4.4	4.2	1.9	2.1
Hypertension	13.6	15.2*	12.0	13.6*	15.0	16.8*
Any cancer	4.3	5.2*	2.9	3.7*	5.7	6.5*
Any respiratory illness	21.6	23.1*	22.6	23.5	20.7	22.7*
Asthma	8.8	10.4*	8.2	9.1*	9.4	11.7*
Bronchitis	5.6	5.6	5.7	5.1*	5.5	6.0
Any mental illness	11.2	13.6*	9.2	11.5*	13.1	15.7*
Depression	7.4	9.4*	5.9	7.7*	8.8	11.0*
Anxiety	6.2	7.3*	4.9	6.0*	7.4	8.4*
Arthritis	23.5	25.0*	20.1	21.3*	26.6	28.4*
Back pain	28.6	30.4*	27.2	29.2*	29.9	31.6*
Varicose veins	11.2	10.8	6.8	6.6	15.3	14.8
Stroke	1.6	1.2*	1.7	1.2*	1.6	1.2*
Diabetes	3.2	3.7*	3.6	4.0	2.8	3.4*
% with 20 or fewer teeth	32.6	31.4*	30.2	28.6*	34.9	33.9
PCS	47.9	48.2*	48.3	48.7*	47.6	47.6
MCS	49.5	49.5	50.6	50.6	48.4	48.4

There were statistically significant increases in the proportion of adults reporting having, or having been treated for, the following conditions:

- high blood pressure, cancer, asthma, depression, anxiety, arthritis, back pain and diabetes;
- the increase for diabetes was significant for men only. Significant increases were seen for both sexes for each of the other conditions.

There was a statistically significant decrease in:

- the proportion reporting stroke amongst both men and women
- the proportion of men (and adults overall) with fewer than 20 of their own teeth;
- the mental component summary score remained unchanged for both men and women;
- the physical component summary score increased (improved) slightly overall and for men.

Table 7.3 % of adults reporting various conditions and SF-36 summary scores: adults aged 18+ by age, 1995 & 1998

	18-64		65-74		75+	
	1995	1998	1995	1998	1995	1998
Any heart disease	12.5	12.4	43.1	47.4	46.5	51.4*
Angina	2.8	2.5	15.3	15.9	18.5	17.8
Heart attack	1.6	1.4	8.4	9.3	8.8	8.7
Hypertension	9.4	9.7	28.4	34.3*	28.7	33.0*
Any cancer	2.8	3.3*	8.9	10.8*	11.6	13.1
Any respiratory illness	18.7	19.5*	30.4	34.7*	34.7	35.2
Asthma	8.8	10.2*	8.9	11.5*	9.2	10.6
Bronchitis	4.1	3.6*	10.5	12.5*	11.8	11.3
Any mental illness	11.2	13.3*	11.1	13.6*	11.3	15.7*
Depression	7.7	9.5*	6.5	8.5*	6.3	8.8*
Anxiety	6.4	7.2*	6.1	7.2*	4.9	8.2*
Arthritis	16.4	17.1	46.4	49.5*	51.2	53.7
Back pain	27.4	28.5*	31.8	37.5*	34.0	36.6*
Varicose veins	8.8	8.2*	19.4	19.5	20.1	20.6
Stroke	0.9	0.4*	3.6	2.7*	5.2	5.0
Diabetes	2.1	2.3	6.7	9.3*	7.7	8.0
% with 20 or fewer teeth	20.2	18.0*	73.3	71.6	87.9	85.8*
PCS	50.0	50.3	39.2	39.4	34.3	34.0
MCS	49.2	49.2	51.9	52.0	49.6	50.0

Within the overall increases in the proportions reporting various conditions:

- the increase in the proportion reporting high blood pressure was mainly concentrated in the 65 and over age-group;
- reported cancer, respiratory illness, mental illness, arthritis and back pain increased across all age-groups;
- there was a significant increase in the proportion of 65-74 year olds reporting being treated for diabetes.

Mental and physical component summary scores remained basically unchanged across all age-groups.

Table 7.4 % of adults reporting various conditions and SF-36 summary scores: adults aged 18+ by unitary authority, 1995 & 1998

	Heart disease		Cancer		Respiratory illness		Mental illness	
	1995	1998	1995	1998	1995	1998	1995	1998
Isle of Anglesey	16.5	22.3*	3.3	6.4*	17.7	22.4*	7.7	9.8
Gwynedd	18.4	19.4	5.5	5.1	21.2	20.9	8.9	9.9
Conwy	19.7	21.8	5.9	7.2	19.0	21.2	10.1	13.0*
Denbighshire	19.5	19.5	5.0	6.1	17.8	20.4	8.9	11.7*
Flintshire	17.5	18.9	3.7	4.6	20.5	19.5	9.7	11.2
Wrexham	17.5	19.9	3.9	4.7	20.9	21.2	11.1	12.7
Powys	19.0	19.7	4.2	4.2	19.6	18.8	11.0	10.2
Ceredigion	21.5	19.1	5.0	4.4	18.6	20.5	10.6	12.4
Pembrokeshire	21.4	22.7	4.7	6.4	19.5	20.7	11.3	13.2
Carmarthenshire	21.2	23.1	4.5	5.7	23.4	23.0	11.4	13.7
Swansea	19.4	19.2	4.8	5.0	21.9	23.3	10.8	13.3*
Neath Port Talbot	20.6	23.4	3.9	5.1	24.2	28.5*	13.5	15.0
Bridgend	19.5	22.3	4.0	4.2	19.5	24.7*	9.8	13.0*
Vale of Glamorgan	18.6	18.6	4.2	5.3	21.7	19.8	9.7	10.5
Cardiff	17.4	18.1	4.4	5.3	22.4	22.2	10.4	14.0*
Rhondda Cynon Taff	21.0	22.4	3.8	4.7	25.6	26.0	15.2	16.0
Merthyr Tydfil	25.5	23.7	4.0	4.9	24.9	30.2*	16.2	21.6*
Caerphilly	22.6	23.2	3.6	5.7*	23.4	28.4*	13.2	18.7*
Blaenau Gwent	19.4	25.2*	5.1	4.6	26.4	28.4	13.9	18.9*
Torfaen	17.3	23.0*	3.9	4.5	20.0	24.5*	12.3	18.7*
Monmouthshire	17.1	17.8	5.0	5.2	16.1	19.0	7.9	8.1
Newport	20.0	19.6	4.0	5.3	21.1	24.0	9.7	14.3*

	Arthritis		Back pain		PCS		MCS	
	1995	1998	1995	1998	1995	1998	1995	1998
Isle of Anglesey	19.2	22.3	23.3	29.0*	48.8	48.6	51.1	51.8
Gwynedd	21.7	22.9	25.7	27.2	48.5	48.8	51.1	50.6
Conwy	24.7	24.6	28.5	30.1	47.9	47.8	50.5	50.6
Denbighshire	25.3	25.2	31.3	30.6	47.6	48.5	50.5	50.6
Flintshire	21.5	22.1	28.1	29.6	49.3	48.9	50.4	49.9
Wrexham	20.3	23.8*	28.1	29.0	48.8	49.2	49.3	49.6
Powys	21.5	20.2	30.9	29.3	47.7	49.0*	50.1	50.2
Ceredigion	25.8	20.7	25.3	28.9	48.0	49.0	50.0	50.1
Pembrokeshire	22.2	24.0	26.2	29.6	48.2	48.4	50.4	50.8
Carmarthenshire	25.1	25.8	29.6	31.0	46.7	47.0	49.2	49.8
Swansea	23.1	25.6	28.2	30.3	47.8	47.8	49.8	49.9
Neath Port Talbot	25.9	29.1	31.6	36.5*	46.7	46.3	49.2	49.5
Bridgend	22.1	25.5	28.9	31.4	47.9	48.0	49.4	49.1
Vale of Glamorgan	19.8	22.6	24.9	29.4*	49.3	49.4	49.8	50.7
Cardiff	19.9	21.3	26.7	26.0	48.9	49.4	49.1	48.8
Rhondda Cynon Taff	27.9	29.0	32.3	32.8	46.9	47.8*	48.2	48.5
Merthyr Tydfil	31.1	33.1	29.4	34.7*	46.0	46.2	46.8	47.4
Caerphilly	28.1	30.4	30.6	32.3	47.5	46.5	48.5	48.1
Blaenau Gwent	23.3	30.6*	30.6	35.9*	46.2	45.9	48.4	47.5
Torfaen	24.4	25.2	29.1	31.2	47.8	47.9	49.3	48.1*
Monmouthshire	20.6	20.2	26.1	26.4	49.1	49.0	50.2	50.6
Newport	24.4	26.5	27.0	32.9*	48.5	48.4	49.4	48.8

Because of the smaller sample sizes involved, differences between rates for individual unitary authorities need to be more pronounced in order to appear statistically significant. Nonetheless, Table 7.4 shows a fairly consistent pattern of increased prevalence for the conditions shown across Wales (although the increase is often not statistically significant).

A few areas show statistically significant increases in reported prevalence for more than one condition:

- Anglesey (heart disease, cancer, respiratory illness and back pain);
- Bridgend (respiratory and mental illness);
- Merthyr Tydfil (respiratory illness and back pain);
- Caerphilly (cancer, respiratory and mental illness);
- Blaenau Gwent (heart disease, mental illness, arthritis and back pain);
- Torfaen (heart disease, respiratory and mental illness);
- Newport (mental illness and back pain).

There was generally little change in an area's mental and physical component summary scores.

Appendix 1

Key variables by assembly /
parliamentary constituency
(percentage aged 18+ unless stated)

	Unweighted base	Weighted base	Ever treated for heart disease	Ever treated for cancer	Currently with:							20 or more teeth	Eyesight difficulty	Hearing difficulty
					Respiratory illness	Mental illness	Diabetes	Arthritis	Back pain	Varicose veins	Long-term limiting illness			
Assembly electoral region														
North Wales	6,305	6,336	19.8	5.4	20.8	11.5	3.5	23.2	29.5	11.0	32.3	69.4	6.6	11.4
Mid & West Wales	5,323	5,398	21.7	5.4	20.9	12.3	3.6	23.5	29.5	11.3	33.7	66.2	7.0	11.2
South Wales West	5,056	5,240	21.0	4.8	25.1	13.6	4.1	26.5	32.3	11.1	35.9	67.6	8.8	13.3
South Wales Central	6,497	6,742	19.7	5.1	23.1	14.2	3.5	24.3	29.0	9.6	31.9	72.1	8.3	12.4
South Wales East	6,693	6,158	21.9	5.1	25.6	16.4	4.0	27.5	32.1	11.3	37.2	67.1	9.2	15.1
Assembly regional committee area														
South West Wales	6,325	6,717	21.7	5.4	23.9	13.7	4.3	26.1	31.7	11.3	36.0	66.1	8.3	13.0
South East Wales	14,535	14,338	20.9	5.0	24.4	15.0	3.7	25.8	30.6	10.4	34.4	69.6	8.8	13.7
North Wales	6,375	6,414	19.9	5.5	20.8	11.5	3.5	23.2	29.4	11.0	32.4	69.5	6.6	11.4
Mid Wales	2,639	2,405	20.0	4.6	19.7	10.9	3.0	21.4	28.7	11.5	31.1	67.5	5.7	9.6
Assembly Constituencies														
Ynys Mon	1,014	675	22.3	6.4	22.4	9.8	3.0	22.3	29.0	10.8	32.6	68.1	6.6	12.0
Caernarfon	640	642	18.6	4.5	22.0	9.5	3.7	22.1	29.4	11.0	31.2	70.8	7.2	10.3
Conwy	666	722	20.2	6.0	20.7	11.0	3.7	20.8	26.9	11.4	34.7	73.5	3.9	9.6
Clwyd West	711	758	19.8	6.9	20.4	13.8	4.4	25.0	31.2	12.9	33.6	63.9	7.4	12.3
Vale of Clwyd	726	692	21.4	6.4	21.8	12.1	3.7	26.6	31.0	10.8	37.7	65.7	7.0	11.1
Delyn	677	696	19.9	4.5	19.0	13.3	3.5	23.9	31.3	10.5	31.2	70.6	6.6	9.9
Alyn & Deeside	762	794	17.9	4.6	20.0	9.3	3.0	20.6	28.0	10.1	27.8	74.5	6.0	9.3
Wrexham	532	661	21.2	4.9	18.5	13.0	3.0	24.3	29.5	10.0	28.8	69.6	5.9	11.5
Clwyd South	577	695	17.5	4.3	22.6	11.9	3.3	23.3	29.2	11.7	33.1	68.0	9.2	17.0
Meirionnydd Nant Conwy	456	445	23.5	7.0	20.7	10.5	3.8	27.2	25.5	12.6	34.7	63.5	6.5	11.0
Montgomeryshire	583	599	18.9	3.1	18.0	9.9	2.8	20.2	27.6	11.4	29.7	71.0	4.6	7.9
Brecon and Radnorshire	681	686	20.6	5.3	19.3	10.4	3.9	20.1	30.4	12.0	31.9	67.6	6.2	10.5
Ceredigion	989	753	19.1	4.4	20.5	12.4	2.0	20.7	28.9	10.2	30.3	67.2	5.8	9.0
Preseli Pembrokeshire	742	737	21.9	7.1	20.8	12.0	3.9	23.2	28.2	11.3	32.0	67.2	7.9	9.9
Carmarthen W & S. Pems	666	709	21.8	6.2	19.5	12.8	4.3	22.3	28.7	10.6	34.6	65.1	7.8	12.5

	Currently with:													
	Unweighted base	Weighted base	Ever treated for heart disease	Ever treated for cancer	Respiratory illness	Mental illness	Diabetes	Arthritis	Back pain	Varicose veins	Long-term limiting illness	20 or more teeth	Eyesight difficulty	Hearing difficulty
Cardiff North	925	933	17.0	5.1	18.1	11.1	2.3	22.2	25.7	9.0	27.6	75.9	5.5	10.4
Cardiff West	787	798	23.2	6.1	24.7	17.2	3.9	24.6	28.7	10.1	33.7	73.1	7.5	11.7
Pontypridd	907	966	18.6	4.8	23.2	12.4	3.4	25.4	30.6	10.9	29.6	72.3	8.1	13.2
Rhondda	720	771	25.6	5.5	28.2	21.7	5.6	32.5	35.9	9.9	42.6	60.9	13.4	15.6
Cynon Valley	621	674	24.0	3.4	27.5	15.2	4.5	30.0	31.8	10.5	35.9	65.4	9.2	16.8
Merthyr Tydfil & Rhymney	1,063	725	24.4	4.9	31.9	21.8	4.7	32.2	33.9	10.9	42.3	62.4	12.7	20.7
Caerphilly	842	876	22.9	5.3	25.8	17.6	4.4	32.3	31.8	12.9	38.1	66.7	9.4	16.1
Islwyn	611	644	22.7	6.3	29.5	19.2	4.5	28.1	33.4	10.7	42.4	64.4	11.2	18.4
Blaenau Gwent	982	738	25.2	4.6	28.4	18.9	5.8	30.6	35.9	11.7	41.0	63.4	11.8	17.1
Torfaen	878	792	23.1	4.6	24.7	18.7	4.4	24.4	31.3	11.8	35.1	65.4	8.3	16.1
Monmouth	917	857	18.7	4.8	19.0	9.5	2.5	22.1	27.2	12.2	32.4	72.7	5.8	9.7
Newport East	656	714	18.8	5.9	25.5	11.5	3.0	24.3	33.0	9.2	34.2	71.3	9.3	11.4
Newport West	744	812	19.6	4.9	22.5	15.5	3.1	26.5	31.5	10.7	33.3	68.8	6.4	12.7
Wales	29,874	29,874	20.8	5.2	23.1	13.6	3.7	25.0	30.4	10.8	34.1	68.6	8.0	12.7

SF-36 scores

	Physical Functioning	Role Physical	Bodily Pain	General Health	Vitality	Social Functioning	Role Emotional	Mental Health	Physical component summary score	Mental component summary score
Assembly electoral region										
North Wales	77.9	76.1	70.5	68.2	58.5	78.7	82.9	73.6	48.7	50.4
Mid & West Wales	77.7	74.2	70.2	67.8	58.6	78.6	81.2	73.7	48.2	50.2
South Wales West	74.4	72.2	67.4	65.9	55.8	75.6	80.3	71.7	47.5	49.6
South Wales Central	77.8	75.8	70.2	66.7	56.0	76.7	79.5	71.4	48.9	49.0
South Wales East	74.3	71.9	66.7	63.8	54.3	74.3	78.0	70.0	47.4	48.5
Assembly regional committee area										
South West Wales	74.8	72.1	67.9	66.1	56.7	76.1	80.3	72.4	47.4	49.9
South East Wales	76.1	74.0	68.5	65.4	55.2	75.6	79.1	70.8	48.2	48.8
North Wales	77.9	76.2	70.5	68.3	58.5	78.7	82.9	73.5	48.7	50.4
Mid Wales	80.0	75.8	71.8	68.9	59.7	80.4	81.4	74.1	48.9	50.2
Assembly constituencies										
Ynys Mon	76.6	74.8	71.3	70.5	61.6	79.9	85.2	74.9	48.6	51.8
Caernarfon	79.4	76.4	70.7	69.2	60.5	80.8	85.0	75.1	48.5	51.4
Conwy	78.4	73.5	70.0	68.5	58.2	78.1	81.0	73.7	48.5	50.4
Clwyd West	76.7	72.5	69.7	68.4	58.5	77.8	82.4	74.4	48.1	51.0
Vale of Clwyd	76.5	74.8	69.8	66.9	57.8	78.6	82.5	72.9	48.3	49.8
Delyn	78.7	76.5	69.5	66.9	57.9	77.1	82.2	73.2	48.4	49.8
Alyn & Deeside	79.9	80.3	72.2	69.1	58.0	79.7	83.4	73.4	49.4	50.0
Wrexham	78.0	77.7	70.0	66.6	56.9	78.0	82.1	71.8	48.8	49.7
Clwyd South	77.1	78.1	70.8	68.2	57.7	78.1	82.2	72.7	49.5	49.8
Meirionnydd Nant Conwy	77.8	74.0	70.4	68.9	60.6	79.0	79.9	73.9	48.4	50.1
Montgomeryshire	82.1	77.0	72.6	70.0	59.7	81.2	81.6	74.4	49.3	50.1
Brecon and Radnorshire	78.9	76.2	71.5	68.6	58.6	80.5	83.0	74.1	48.6	50.3
Ceredigion	80.0	76.1	72.0	68.5	60.0	80.4	81.0	73.9	49.0	50.1
Preseli Pembrokeshire	78.6	77.4	72.1	70.6	61.1	80.7	85.6	75.2	48.7	51.4
Carmarthen W & S Pems	76.4	73.3	71.0	67.9	59.3	77.6	80.4	74.0	48.0	50.2

SF-36 scores

	Physical Functioning	Role Physical	Bodily Pain	General Health	Vitality	Social Functioning	Role Emotional	Mental Health	Physical component summary score	Mental component summary score
Carmarthen East & Dinefwr	78.3	71.9	69.8	67.1	57.1	78.2	82.0	73.3	47.8	50.0
Llanelli	70.6	68.3	63.2	61.8	53.9	72.3	75.7	70.9	45.9	49.2
Gower	77.9	73.5	69.8	69.1	58.7	79.0	82.6	74.5	48.1	50.9
Swansea West	75.4	71.7	69.4	64.8	56.7	75.9	78.1	72.4	47.7	49.4
Swansea East	73.7	72.1	65.7	64.5	54.7	74.3	80.6	69.7	47.5	49.3
Neath	73.1	72.5	66.6	65.7	55.5	74.9	79.6	70.5	47.0	49.4
Aberavon	68.5	67.1	62.7	63.2	53.6	71.4	77.7	70.9	45.5	49.6
Bridgend	77.1	75.0	69.9	67.2	55.5	77.6	81.8	72.5	48.5	49.3
Ogmore	73.7	72.2	66.6	65.9	55.1	74.5	80.9	71.0	47.4	49.1
Vale of Glamorgan	80.0	79.7	72.6	69.9	60.1	81.8	85.1	74.7	49.8	51.0
Cardiff South & Penarth	75.5	74.6	69.0	65.4	54.4	74.9	80.8	70.4	48.1	48.8
Cardiff Central	84.8	80.8	76.2	69.0	58.2	79.1	79.4	72.0	51.2	48.1
Cardiff North	81.6	77.7	73.2	68.3	58.6	81.2	81.4	73.6	49.2	49.8
Cardiff West	76.3	74.5	68.2	65.5	54.5	73.8	77.5	70.1	48.3	48.1
Pontypridd	78.8	77.1	71.1	68.2	56.2	77.8	80.4	72.2	49.4	49.2
Rhondda	69.1	64.4	61.3	59.6	50.2	68.0	70.3	66.9	45.7	47.2
Cynon Valley	73.1	73.7	68.0	64.7	54.0	74.1	78.2	69.6	47.7	48.8
Merthyr Tydfil & Rhymney	69.4	67.7	62.9	60.1	51.6	69.0	73.9	66.6	46.3	47.0
Caerphilly	71.5	71.2	63.6	63.1	52.7	71.9	77.4	69.2	46.8	48.2
Islwyn	70.7	68.0	64.6	61.3	53.0	71.6	76.4	69.8	46.1	48.5
Blaenau Gwent	69.9	65.7	63.3	60.9	52.2	69.7	74.3	67.8	45.9	47.5
Torfaen	76.3	75.1	68.3	63.0	53.7	74.4	79.2	69.0	48.0	47.9
Monmouth	80.9	75.6	71.4	67.6	58.3	81.8	83.1	74.1	48.7	50.4
Newport East	76.4	74.7	69.2	66.5	56.6	77.5	80.8	71.6	48.3	49.5
Newport West	77.6	75.2	69.4	66.7	55.9	77.2	77.5	71.1	48.6	48.5
Wales	76.5	74.2	69.1	66.5	56.6	76.8	80.4	72.0	48.2	49.5

	Green vegetables/salad 6/7 days/week	Smokers	Harmful alcohol consumption ⁽¹⁾	No weekly exercise	BMI <20 underweight	BMI 25+ overweight obese	Very/fairly satisfied with GP	Very/fairly dissatisfied with GP	Satisfied with dentist	Very/fairly satisfied with in-patient care	Very/fairly dissatisfied with in-patient care	carer
Assembly electoral region												
North Wales	28.1	26.5	12.8	12.5	5.0	52.3	87.1	4.6	92.5	86.5	5.3	7.2
Mid & West Wales	29.7	25.0	12.0	12.7	4.9	55.9	87.7	5.2	91.5	87.7	6.3	7.4
South Wales West	20.6	26.4	14.2	14.9	4.6	57.6	86.5	5.1	94.6	87.5	6.0	8.5
South Wales Central	20.8	28.5	16.1	13.4	5.5	53.7	84.9	6.5	93.2	84.5	7.7	7.4
South Wales East	20.6	27.4	13.4	14.3	4.7	57.4	83.5	6.4	92.8	84.1	9.7	7.3
Assembly regional committee area												
South West Wales	23.7	26.2	13.0	15.0	4.7	57.1	87.3	5.0	93.7	87.5	6.8	8.1
South East Wales	20.6	27.8	14.8	13.7	5.0	55.9	84.4	6.4	93.2	84.8	8.2	7.4
North Wales	28.2	26.5	12.7	12.4	5.1	52.4	87.1	4.6	92.5	86.3	5.4	7.3
Mid Wales	32.3	23.6	12.4	11.0	5.1	53.0	87.0	5.2	89.9	87.9	4.8	7.5
Assembly constituencies												
Ynys Mon	29.9	30.1	11.2	13.4	3.9	54.3	89.9	3.3	92.5	85.3	9.7	6.9
Caermarfon	27.2	27.1	12.5	15.0	3.6	52.1	88.7	2.8	92.0	88.8	1.9	7.6
Conwy	30.8	26.1	14.7	10.6	8.1	47.1	85.1	4.0	92.0	86.8	6.6	7.4
Clwyd West	34.0	24.1	12.3	12.7	4.8	52.1	88.1	5.2	93.3	86.2	3.7	8.1
Vale of Clwyd	27.4	29.1	8.9	13.4	5.6	50.6	86.6	5.6	92.5	79.0	11.6	8.1
Delyn	26.3	25.7	13.2	9.8	4.9	56.3	87.3	4.5	91.1	86.4	4.0	6.6
Alyn & Deeside	25.9	27.0	14.2	12.4	4.4	50.8	83.3	7.0	93.6	88.6	7.7	6.9
Wrexham	25.0	26.4	16.1	11.0	4.7	54.8	87.0	4.6	93.6	94.7	0.0	6.3
Clwyd South	25.7	23.4	12.1	14.2	5.1	53.3	88.9	4.0	91.3	82.8	2.3	7.0
Meirionnydd Nant Conwy	35.9	27.0	12.3	14.5	4.0	57.3	87.6	4.0	90.2	86.7	5.8	9.6
Montgomeryshire	31.9	23.9	12.0	9.9	5.6	50.7	83.5	7.1	89.1	87.7	5.0	7.3
Brecon and Radnorshire	32.3	20.7	12.8	10.4	4.5	55.1	85.8	5.5	91.0	88.3	3.2	6.8
Ceredigion	30.9	24.1	12.0	10.3	6.0	51.6	90.1	4.2	90.3	85.6	7.2	7.4
Preseli Pembrokehire	30.9	25.1	10.6	10.4	3.9	59.7	87.7	5.6	93.3	87.5	8.9	7.0
Carmarthen W & S Pems	28.5	26.3	12.1	14.3	4.0	54.5	90.4	3.3	89.9	88.9	6.2	7.0

⁽¹⁾ 15 units per week or more for women, 22 or more for men.

	Green vegetables/ salad 6/7 days/week	Smokers consumption ⁽¹⁾	Harmful alcohol	No weekly exercise	BMI<20 under- weight	BMI 25+ overweight obese	Very/fairly satisfied with GP	Very/fairly dissatisfied with GP	Satisfied with dentist	Very/fairly satisfied with in- patient care	Very/fairly dissatisfied with in- patient care	carer
Carmarthen East & Dinefwr	30.9	25.0	12.0	13.2	4.5	56.2	89.3	4.0	92.9	80.3	10.6	5.6
Llanelli	19.5	27.9	12.2	19.0	5.9	61.8	85.9	7.5	94.3	92.7	3.9	9.5
Gower	25.1	23.9	13.5	11.1	4.5	52.0	85.5	5.4	94.1	88.6	6.0	7.5
Swansea West	24.7	27.9	18.1	12.5	7.4	48.4	86.5	5.4	95.1	88.0	6.2	7.5
Swansea East	16.1	28.8	12.2	17.0	4.2	61.6	86.7	4.3	93.7	79.3	8.8	9.3
Neath	21.0	23.5	12.9	17.5	3.9	60.7	86.9	4.6	93.3	89.9	4.9	7.9
Aberavon	16.3	27.9	12.7	20.9	3.4	60.6	87.6	4.7	96.3	90.6	6.6	11.3
Bridgend	21.1	24.6	12.7	9.6	4.5	59.7	86.1	5.6	95.3	93.0	2.3	6.3
Ogmore	18.6	28.8	17.8	18.0	4.2	61.8	86.4	5.5	95.1	82.1	7.7	11.0
Vale of Glamorgan	24.7	26.9	16.3	12.0	3.9	52.5	89.2	4.2	92.6	88.6	6.7	6.6
Cardiff South & Penarth	19.3	31.9	15.4	14.8	6.0	54.5	86.7	5.1	94.8	75.1	14.8	8.0
Cardiff Central	21.4	29.2	16.9	8.5	7.3	42.5	86.0	5.6	93.6	79.9	8.3	5.5
Cardiff North	22.6	24.8	17.7	9.7	7.3	49.4	85.7	5.4	93.7	87.3	3.7	6.6
Cardiff West	21.2	28.4	16.3	13.0	4.3	55.1	82.7	7.6	95.2	90.6	3.6	6.6
Pontypridd	20.1	26.7	16.3	12.5	5.3	59.3	88.0	5.2	91.8	84.1	10.3	8.6
Rhondda	16.9	31.3	14.5	22.8	5.1	57.9	77.8	10.8	93.1	80.8	9.9	8.0
Cynon Valley	18.5	30.2	14.4	17.1	4.1	60.4	80.1	9.6	90.7	90.2	3.9	9.5
Merthyr Tydfil & Rhymney	18.3	31.0	13.4	20.2	5.1	56.9	80.6	7.7	91.7	83.4	8.2	8.1
Caerphilly	17.2	27.1	14.0	16.1	3.5	60.5	77.8	10.6	93.4	81.7	14.4	8.9
Islwyn	20.3	26.6	14.6	15.8	3.2	60.9	80.9	6.9	94.4	86.7	6.8	9.0
Blaenau Gwent	15.8	30.1	13.0	16.2	4.4	59.6	81.3	7.1	93.5	83.2	9.8	7.9
Torfaen	18.1	27.4	11.3	14.0	4.8	57.0	86.1	4.1	91.3	80.0	12.1	6.3
Monmouth	34.2	24.4	13.0	8.4	5.7	52.1	88.7	4.6	92.9	83.6	8.8	5.5
Newport East	20.1	28.5	15.5	12.7	5.3	57.0	83.2	7.1	93.4	87.8	8.1	6.1
Newport West	19.3	25.3	12.8	11.8	5.4	55.9	88.3	3.4	91.7	89.4	6.6	7.1
Wales	23.9	26.8	13.8	13.5	5.0	55.2	85.8	5.6	92.9	86.0	7.0	7.5

⁽¹⁾ 15 units per week or more for women, 22 or more for men.

	Currently with:													
	Unweighted base	Weighted base	Ever treated for heart disease	Ever treated for cancer	Respiratory illness	Mental illness	Diabetes	Arthritis	Back pain	Varicose veins	Long-term limiting illness	20 or more teeth	Eyesight difficulty	Hearing difficulty
Health Authority														
North Wales	6,743	6,764	20.1	5.5	20.8	11.5	3.5	23.4	29.2	11.1	32.5	69.1	6.6	11.4
Dyfed Powys	4,885	4,970	21.5	5.3	21.0	12.5	3.5	23.2	29.9	11.2	33.6	66.3	7.0	11.2
Morgannwg	4,957	5,131	21.1	4.8	25.1	13.7	4.1	26.6	32.3	11.3	36.0	67.5	8.8	13.4
Bro Taf	7,508	7,413	20.0	5.1	23.7	14.7	3.5	24.9	29.5	9.7	32.7	71.4	8.7	12.9
Gwent	5,781	5,597	21.7	5.2	25.2	15.9	4.0	27.0	31.8	11.3	36.6	67.4	8.8	14.7
Unitary Authorities														
Anglesey	1,014	675	22.3	6.4	22.4	9.8	3.0	22.3	29.0	10.8	32.6	68.1	6.6	12.0
Gwynedd	1,218	1,216	19.4	5.1	20.9	9.9	3.8	22.9	27.2	11.4	31.5	70.8	6.5	10.6
Conwy	1,068	1,174	21.8	7.2	21.2	13.0	4.1	24.6	30.1	12.8	36.7	65.4	5.8	10.9
Denbighshire	980	935	19.5	6.1	20.4	11.7	3.5	25.2	30.6	11.1	35.1	67.0	6.7	10.7
Flintshire	1,439	1,490	18.9	4.6	19.5	11.2	3.2	22.1	29.6	10.3	29.4	72.7	6.3	9.6
Wrexham	1,024	1,275	19.9	4.7	21.2	12.7	3.3	23.8	29.0	10.5	31.2	68.9	7.8	14.9
Powys	1,282	1,302	19.7	4.2	18.8	10.2	3.4	20.2	29.3	11.8	30.7	69.0	5.5	9.3
Ceredigion	989	753	19.1	4.4	20.5	12.4	2.0	20.7	28.9	10.2	30.3	67.2	5.8	9.0
Pembrokeshire	1,164	1,153	22.7	6.4	20.7	13.2	3.6	24.0	29.6	11.6	33.1	67.3	7.7	10.8
Carmarthenshire	1,450	1,762	23.1	5.7	23.0	13.7	4.3	25.8	31.0	10.8	37.4	63.4	8.2	13.8
Swansea	2,298	2,377	19.2	5.0	23.3	13.3	4.0	25.6	30.3	10.9	35.3	69.2	7.3	12.2
Neath & Port Talbot	1,413	1,425	23.4	5.1	28.5	15.0	5.1	29.1	36.5	12.5	38.0	63.4	10.4	14.9
Bridgend	1,246	1,329	22.3	4.2	24.7	13.0	3.2	25.5	31.4	10.6	35.1	68.9	9.7	13.9
Vale of Glamorgan	1,166	1,198	18.6	5.3	19.8	10.5	2.4	22.6	29.4	9.8	30.4	73.4	7.1	10.9
Cardiff	3,159	3,208	18.1	5.3	22.2	14.0	3.1	21.3	26.0	8.9	29.4	76.0	7.2	10.9
Rhondda, Cynon, Taff	2,271	2,446	22.4	4.7	26.0	16.0	4.5	29.0	32.8	10.3	35.9	66.2	10.4	15.0
Merthyr Tydfil	912	561	23.7	4.9	30.2	21.6	4.5	33.1	34.7	11.9	42.7	63.5	13.3	19.4
Caerphilly	1,604	1,684	23.2	5.7	28.4	18.7	4.5	30.4	32.3	11.5	40.0	65.1	10.2	17.8
Blaenau Gwent	982	738	25.2	4.6	28.4	18.9	5.8	30.6	35.9	11.7	41.0	63.4	11.8	17.1
Torfaen	1,012	908	23.0	4.5	24.5	18.7	4.6	25.2	31.2	11.8	36.4	65.6	8.0	14.9
Monmouthshire	946	896	17.8	5.2	19.0	8.1	2.0	20.2	26.4	11.8	29.8	74.0	7.2	10.8
Newport	1,237	1,371	19.6	5.3	24.0	14.3	3.2	26.5	32.9	10.1	34.6	69.3	7.1	11.9
Wales	29,874	29,874	20.8	5.2	23.1	13.6	3.7	25.0	30.4	10.8	34.1	68.6	8.0	12.7

SF-36 scores

	Physical Functioning	Role Physical	Bodily Pain	General Health	Vitality	Social Functioning	Role Emotional	Mental Health	Physical component summary score	Mental component summary score
Health Authority										
North Wales	77.9	75.9	70.4	68.3	58.6	78.6	82.7	73.6	48.7	50.4
Dyfed Powys	77.7	74.3	70.2	67.7	58.5	78.6	81.3	73.7	48.2	50.2
Morgannwg	74.3	72.1	67.4	65.8	55.7	75.6	80.2	71.7	47.4	49.6
Bro Taf	77.3	75.3	69.7	66.3	55.8	76.1	79.3	71.2	48.7	48.9
Gwent	74.8	72.3	67.1	64.1	54.6	74.8	78.3	70.3	47.5	48.6
Unitary Authority										
Anglesey	76.6	74.8	71.3	70.5	61.6	79.9	85.2	74.9	48.6	51.8
Gwynedd	79.7	75.2	71.0	69.0	60.3	79.7	82.6	74.3	48.8	50.6
Conwy	75.9	72.5	68.9	67.8	57.6	77.4	81.1	73.7	47.8	50.6
Denbighshire	77.6	74.9	70.2	68.4	59.0	79.6	83.6	74.1	48.5	50.6
Flintshire	79.3	78.6	70.9	68.1	57.9	78.5	82.9	73.3	48.9	49.9
Wrexham	77.3	77.9	70.4	67.0	57.1	77.7	81.9	72.0	49.2	49.6
Powys	80.4	76.7	72.1	69.3	59.2	81.0	82.4	74.3	49.0	50.2
Ceredigion	80.0	76.1	72.0	68.5	60.0	80.4	81.0	73.9	49.0	50.1
Pembrokeshire	77.9	74.9	71.3	69.5	60.2	79.4	82.8	74.6	48.4	50.8
Carmarthenshire	74.6	71.3	67.4	65.0	56.2	75.7	79.7	72.5	47.0	49.8
Swansea	75.7	72.5	68.4	66.2	56.8	76.5	80.5	72.3	47.8	49.9
Neath & Port Talbot	71.0	70.0	64.8	64.5	54.6	73.3	78.7	70.7	46.3	49.5
Bridgend	75.2	73.4	68.5	66.3	55.1	76.2	81.1	71.6	48.0	49.1
Vale of Glamorgan	79.6	78.0	72.3	69.3	59.2	80.6	84.3	74.3	49.4	50.7
Cardiff	80.0	77.7	71.9	67.3	56.7	77.7	79.9	71.6	49.4	48.8
Rhondda, Cynon, Taff	74.1	72.1	66.9	64.6	53.6	73.5	76.7	69.9	47.8	48.5
Merthyr Tydfil	69.5	68.2	62.7	60.8	51.8	69.2	75.5	67.1	46.2	47.4
Caerphilly	71.0	69.5	64.0	61.9	52.7	71.4	76.2	69.0	46.5	48.1
Blaenau Gwent	69.9	65.7	63.3	60.9	52.2	69.7	74.3	67.8	45.9	47.5
Torfaen	75.8	74.3	67.9	62.9	53.7	74.6	79.2	69.2	47.9	48.1
Monmouthshire	81.7	76.8	72.3	68.8	59.0	82.1	83.4	74.7	49.0	50.6
Newport	76.8	74.7	68.9	66.2	55.9	77.1	78.7	70.9	48.4	48.8
Wales	76.5	74.2	69.1	66.5	56.6	76.8	80.4	72.0	48.2	49.5

	Green vegetables/salad 6/7 days/week	Smokers consumption ⁽¹⁾	Harmful alcohol consumption ⁽¹⁾	No weekly exercise	BMI <20 underweight	BMI 25+ overweight obese	Very/fairly satisfied with GP	Very/fairly dissatisfied with GP	Satisfied with dentist	Very/fairly satisfied with in-patient care	Very/fairly dissatisfied with in-patient care	carer
Health Authority												
North Wales	28.6	26.6	12.8	12.6	5.0	52.6	87.1	4.6	92.3	86.5	5.3	7.3
Dyfed Powys	29.2	24.8	11.9	12.6	4.9	55.8	87.7	5.3	91.6	87.8	6.3	7.3
Morgannwg	20.5	26.3	14.1	14.8	4.6	57.7	86.5	5.0	94.6	87.5	6.1	8.4
Bro Taf	20.8	28.7	15.9	13.9	5.5	53.7	84.6	6.6	93.2	84.4	7.6	7.5
Gwent	20.7	27.1	13.4	13.7	4.6	57.6	83.7	6.3	92.8	84.3	9.9	7.3
Unitary Authority												
Anglesey	29.9	30.1	11.2	13.4	3.9	54.3	89.9	3.3	92.5	85.3	9.7	6.9
Gwynedd	28.7	26.7	13.5	14.5	4.6	53.3	87.9	2.9	90.5	89.4	3.8	8.3
Conwy	34.9	25.5	11.9	12.1	6.4	49.4	85.9	5.4	93.7	84.1	5.7	8.0
Denbighshire	28.9	27.5	10.7	12.3	5.1	51.8	87.4	5.1	92.6	82.6	8.8	8.0
Flintshire	26.1	26.4	13.7	11.2	4.6	53.4	85.2	5.8	92.5	87.6	5.9	6.7
Wrexham	24.6	25.1	14.2	12.9	4.9	53.8	88.1	4.2	92.3	88.0	1.3	6.3
Powys	32.3	22.2	12.3	10.1	5.0	53.1	84.8	6.3	90.1	88.1	4.0	7.1
Ceredigion	30.9	24.1	12.0	10.3	6.0	51.6	90.1	4.2	90.3	85.6	7.2	7.4
Pembrokeshire	31.0	25.8	11.1	11.6	3.8	58.2	89.0	4.4	92.2	87.7	7.3	7.3
Carmarthenshire	25.0	26.3	12.1	15.9	5.1	58.1	87.9	5.5	92.9	88.3	7.0	7.3
Swansea	22.1	26.8	14.6	13.5	5.3	53.9	86.2	5.0	94.3	85.0	7.1	8.1
Neath & Port Talbot	18.8	25.5	12.8	19.0	3.7	60.6	87.2	4.7	94.7	90.3	5.8	9.5
Bridgend	19.6	26.3	14.5	12.7	4.2	61.5	86.2	5.3	95.2	88.3	4.8	7.9
Vale of Glamorgan	25.7	26.1	16.4	12.2	4.2	51.5	89.1	4.1	92.9	85.2	8.5	6.9
Cardiff	20.7	28.8	16.7	10.9	6.4	50.3	85.0	6.1	94.3	84.1	7.0	6.6
Rhondda, Cynon, Taff	18.7	29.3	15.2	17.7	4.9	59.0	82.7	8.3	91.9	85.0	7.7	8.9
Merthyr Tydfil	19.9	31.1	13.1	19.8	5.7	55.0	81.3	7.2	92.1	82.0	8.3	8.1
Caerphilly	17.9	27.2	14.2	16.5	3.4	60.9	79.0	9.1	93.5	84.1	11.3	8.8
Blaenau Gwent	15.8	30.1	13.0	16.2	4.4	59.6	81.3	7.1	93.5	83.2	9.8	7.9
Torfaen	19.5	27.3	11.8	13.6	4.7	57.1	85.5	4.6	91.4	80.1	11.6	5.9
Monmouthshire	33.1	23.8	12.0	8.5	5.4	53.2	88.3	4.9	92.4	84.4	8.9	6.0
Newport	19.2	27.3	14.6	12.4	5.6	55.8	86.6	4.7	92.8	88.9	7.2	6.7
Wales	23.9	26.8	13.8	13.5	5.0	55.2	85.8	5.6	92.9	86.0	7.0	7.5

⁽¹⁾ 15 units per week or more for women, 22 or more for men.

		Currently with:														
		Unweighted base	weighted base	Ever treated for heart disease	Ever treated for cancer	Respiratory illness	Mental illness	Diabetes	Arthritis	Back pain	Epilepsy	Stroke	Parkinson's disease	Pressure sores	Varicose veins	Long-term limiting illness
Male																
18-24		1,181	1,571	1.3	0.4	18.3	6.1	0.6	0.6	12.4	1.0	0.1	-	-	0.7	8.4
25-34		1,785	2,703	2.7	0.6	16.0	8.6	0.5	4.8	21.4	1.1	0.2	-	0.1	1.4	14.2
35-44		2,090	2,482	7.8	1.6	17.1	11.3	1.3	10.8	31.9	1.2	0.0	-	0.1	3.9	21.0
45-54		2,511	2,452	17.9	2.7	19.3	13.0	3.6	24.1	34.0	1.2	0.4	0.1	0.3	7.3	31.7
55-64		2,269	1,902	35.6	6.1	30.1	17.3	7.6	40.3	40.9	0.7	1.8	0.1	0.2	11.2	53.5
65-74		2,019	1,607	49.5	9.5	37.8	11.7	11.1	42.8	33.7	1.1	3.4	0.8	0.5	13.2	63.5
75+		1,169	1,027	49.4	11.8	38.4	11.6	8.7	41.8	27.9	0.4	5.2	1.7	0.6	14.3	71.1
All		13,323	14,422	19.8	3.7	23.5	11.5	4.0	21.3	29.2	1.0	1.2	0.2	0.2	6.6	33.6
Female																
18-24		1,577	1,451	1.8	0.7	18.8	9.4	0.6	2.0	15.7	0.5	0.0	-	0.1	2.2	8.7
25-34		2,396	2,574	4.6	1.9	18.1	12.7	0.8	5.2	22.0	0.8	0.0	-	0.0	5.6	13.7
35-44		2,699	2,479	7.9	3.8	17.0	17.5	1.2	11.0	28.2	0.7	0.2	-	0.2	10.6	19.3
45-54		2,967	2,464	16.7	6.7	19.0	18.3	2.1	28.1	36.0	0.7	0.6	0.0	0.1	14.8	32.7
55-64		2,415	1,965	30.9	8.4	25.1	16.6	6.0	45.2	37.5	0.7	1.1	0.2	0.2	23.4	44.7
65-74		2,266	1,876	45.6	11.8	32.0	15.2	7.8	55.3	40.8	1.0	2.1	0.6	0.2	24.9	58.1
75+		1,826	1,908	52.5	13.8	33.4	18.0	7.5	60.2	41.3	0.6	4.9	0.9	1.2	24.0	74.3
All		16,551	15,452	21.7	6.5	22.7	15.7	3.4	28.4	31.6	0.8	1.2	0.2	0.3	14.8	34.6
All People																
18-24		2,758	3,022	1.5	0.6	18.6	7.7	0.6	1.3	14.0	0.7	0.1	-	0.0	1.4	8.5
25-34		4,181	5,277	3.6	1.2	17.0	10.6	0.6	5.0	21.7	1.0	0.1	-	0.1	3.5	13.9
35-44		4,789	4,961	7.8	2.7	17.0	14.4	1.2	10.9	30.1	1.0	0.1	-	0.1	7.2	20.1
45-54		5,478	4,916	17.3	4.7	19.2	15.7	2.8	26.1	35.0	1.0	0.5	0.1	0.2	11.1	32.2
55-64		4,684	3,868	33.2	7.3	27.6	16.9	6.8	42.8	39.1	0.7	1.4	0.2	0.2	17.4	49.1
65-74		4,285	3,482	47.4	10.8	34.7	13.6	9.3	49.5	37.5	1.0	2.7	0.7	0.3	19.5	60.6
75+		2,995	2,936	51.4	13.1	35.2	15.7	8.0	53.7	36.6	0.5	5.0	1.2	1.0	20.6	73.2
All		29,874	29,874	20.8	5.2	23.1	13.6	3.7	25.0	30.4	0.9	1.2	0.2	0.2	10.8	34.1

SF-36 scores

	20 or more teeth	Eyesight difficulty	Hearing difficulty	Physical functioning	Role physical	Bodily pain	General health	Vitality	Social functioning	Role emotional	Mental health	Physical component summary score	Mental component summary score
Male													
18-24	99.4	3.8	3.5	94.4	94.5	85.2	77.3	68.7	87.8	87.4	75.9	54.8	50.7
25-34	96.3	3.9	4.7	92.4	89.8	80.8	74.5	63.9	85.2	88.2	74.8	53.2	50.2
35-44	88.4	4.6	8.3	88.8	86.1	75.9	70.8	61.6	82.9	85.6	73.6	51.6	49.9
45-54	72.8	5.4	13.1	80.6	79.0	68.9	65.4	58.5	79.0	84.1	73.0	48.3	50.2
55-64	52.4	6.9	20.6	65.5	59.9	59.1	57.2	54.4	71.4	77.4	72.5	42.2	50.8
65-74	31.9	7.5	24.9	60.2	49.5	60.0	56.9	55.1	72.2	76.6	76.4	39.9	52.8
75+	16.0	13.4	35.6	48.8	36.7	59.1	54.6	51.4	65.4	66.9	75.1	36.2	51.7
All	71.4	6.0	13.9	79.3	76.4	71.0	66.9	59.7	78.8	82.9	74.2	48.7	50.6
Female													
18-24	99.3	5.4	3.3	92.5	92.4	81.6	72.7	59.9	81.8	80.8	69.5	54.3	46.8
25-34	97.6	5.5	4.7	89.5	87.6	79.3	74.3	56.7	80.5	82.6	70.0	53.0	47.3
35-44	91.5	6.4	6.4	86.5	84.1	74.6	71.7	56.4	79.4	81.7	69.3	51.4	47.6
45-54	71.5	7.8	8.4	76.9	72.8	65.3	65.5	53.1	75.5	78.6	69.6	46.9	48.3
55-64	46.8	9.1	11.5	66.6	63.9	60.8	62.3	54.8	74.7	78.8	71.7	43.3	50.9
65-74	25.4	12.9	15.7	54.7	49.2	55.9	56.6	50.4	70.2	73.0	71.7	38.8	51.3
75+	13.2	22.9	32.8	37.4	29.5	50.0	49.7	43.5	59.1	60.4	68.7	32.8	49.0
All	66.1	9.8	11.6	73.9	72.0	67.2	66.1	53.8	74.8	77.9	70.0	47.6	48.4
All people													
18-24	99.3	4.6	3.4	93.5	93.5	83.5	75.1	64.5	84.9	84.3	72.9	54.6	48.8
25-34	96.9	4.7	4.7	91.0	88.7	80.1	74.4	60.4	82.9	85.4	72.5	53.1	48.8
35-44	90.0	5.5	7.4	87.7	85.1	75.2	71.3	59.0	81.2	83.7	71.4	51.5	48.8
45-54	72.1	6.6	10.7	78.7	75.9	67.1	65.5	55.8	77.3	81.3	71.3	47.6	49.3
55-64	49.6	8.0	16.0	66.1	61.9	60.0	59.7	54.6	73.1	78.1	72.1	42.8	50.9
65-74	28.4	10.4	20.0	57.3	49.3	57.8	56.7	52.6	71.1	74.7	73.9	39.4	52.0
75+	14.2	19.6	33.8	41.5	32.1	53.2	51.5	46.3	61.3	62.8	71.0	34.0	50.0
All	68.6	8.0	12.7	76.5	74.2	69.1	66.5	56.6	76.8	80.4	72.0	48.2	49.5

	Green vegetables/salad 6/7 days/week	Smokers	Harmful alcohol consumption ⁽¹⁾	No weekly exercise	BMI <20 underweight	BMI 25+ overweight obese	Very/fairly satisfied with GP	Very/fairly dissatisfied with GP	Satisfied with dentist	Very/fairly satisfied with in-patient care	Very/fairly dissatisfied with in-patient care	carer
Male												
18-24	12.7	31.0	26.8	5.2	9.2	31.7	77.4	7.4	93.5	78.2	9.5	1.7
25-34	11.8	31.4	23.4	7.5	3.1	58.8	76.6	9.3	89.9	86.2	5.6	2.6
35-44	16.2	33.3	22.6	9.9	1.0	68.3	79.0	7.5	91.7	78.2	14.6	4.2
45-54	21.2	31.7	22.5	14.8	1.4	70.3	84.6	5.7	92.8	82.6	8.5	6.8
55-64	26.2	29.1	15.2	20.4	1.7	71.2	89.6	3.9	93.1	88.1	4.9	9.4
65-74	26.3	20.1	10.0	21.8	2.5	65.4	92.7	2.8	94.1	93.8	3.1	10.2
75+	30.6	15.8	6.4	36.4	6.6	51.3	93.7	3.2	93.9	92.6	2.8	12.7
All	19.3	29.0	19.4	13.5	3.1	61.4	84.1	6.1	92.4	87.5	6.2	6.1
Female												
18-24	17.3	30.5	19.2	4.2	16.4	26.5	79.1	7.4	92.3	72.8	13.3	2.3
25-34	16.4	31.3	9.1	4.3	7.0	42.9	83.4	6.9	93.3	82.0	8.0	5.3
35-44	25.1	28.0	10.1	6.2	4.6	48.2	85.4	6.3	93.0	80.0	11.3	9.0
45-54	34.1	27.6	9.8	10.1	3.1	57.6	88.0	5.1	93.1	82.4	9.6	12.7
55-64	39.0	23.6	4.9	13.7	3.3	61.1	90.7	3.6	94.3	90.9	5.7	14.8
65-74	33.8	19.6	3.4	25.3	4.9	59.2	91.7	3.3	94.6	92.1	2.2	9.1
75+	32.5	10.7	2.2	53.0	12.5	44.3	92.8	4.0	93.7	91.6	4.7	6.9
All	28.1	24.8	8.4	13.6	6.8	49.2	87.2	5.2	93.4	85.0	7.6	8.9
All people												
18-24	14.9	30.8	23.1	4.7	12.6	29.2	78.4	7.4	92.9	74.8	11.9	2.0
25-34	14.0	31.3	16.4	6.0	5.0	51.1	80.5	7.9	91.8	83.2	7.3	3.9
35-44	20.7	30.7	16.4	8.1	2.8	58.4	82.6	6.9	92.4	79.4	12.5	6.6
45-54	27.7	29.6	16.2	12.5	2.2	64.0	86.4	5.4	93.0	82.5	9.1	9.7
55-64	32.7	26.4	10.0	17.1	2.5	66.2	90.2	3.7	93.7	89.5	5.3	12.1
65-74	30.3	19.9	6.5	23.6	3.7	62.2	92.2	3.1	94.4	92.9	2.6	9.6
75+	31.8	12.5	3.7	47.4	10.3	46.9	93.1	3.7	93.8	92.0	3.9	9.0
All	23.9	26.8	13.8	13.5	5.0	55.2	85.8	5.6	92.9	86.0	7.0	7.5

⁽¹⁾ 15 units per week or more for women, 22 or more for men.

Appendix 4

Technical report of the Welsh Health Survey

This appendix provides some technical information about the 1998 Welsh Health Survey, including how it was carried out, how the responses were analysed, and details about an additional small survey of people who didn't respond to the survey. It also includes some information about potential survey error, a brief outline of the SF36 summary health status measures used in the report, and a copy of the survey questionnaire.

The contract for the survey was awarded to NOP Research Group.

1. Sampling and confidentiality

The sample for the survey was drawn from the most recent available electoral registers (compiled in Autumn 1997) which were purchased from each local authority. For the 1995 Welsh Health Survey, the electoral register used as a sampling frame was over a year and a half out of date by the time questionnaires were sent out. This had a negative impact on the response rate achieved as many chosen respondents had since died or moved on. Purchasing a more up to date register provided a better sampling frame which was reflected in the overall level of response achieved.

In order to increase the scope for disaggregation of results at local level, smaller council areas were over-sampled. A target for the minimum achieved sample in each unitary authority area was set at 900 respondents, assuming an overall response rate of 55% and a similar distribution of response between areas. Achieving at least 900 responses in each unitary authority entailed over-sampling in seven areas - Anglesey, Denbighshire, Ceredigion, Merthyr Tydfil, Blaenau Gwent, Torfaen and Monmouthshire. The sample in remaining areas was distributed according to their share of the population aged 18 and over (mid 1997).

The sampling fraction was calculated by dividing the total electorate for each council by the required sample size and then rounding this figure down to the nearest whole number. The target issued sample was 50,000 but in practice the rounding down of the sampling fraction added very slightly to the issued sample (50,023). This figure represented one in every 45 adults in Wales.

Unitary Authority	Actual sample selected
Isle of Anglesey	1,647
Gwynedd	1,911*
Conwy	1,712
Denbighshire	1,595
Flintshire	2,415
Wrexham	2,023
Powys	1,960
Ceredigion	1,554
Pembrokeshire	1,841
Carmarthenshire	2,718*
Swansea	3,779*
Neath Port Talbot	2,310
Bridgend	2,023
Vale Of Glamorgan	1,855
Cardiff	5,353
Rhondda, Cynon, Taff	3,823*
Merthyr Tydfil	1,682
Caerphilly	2,782
Blaenau Gwent	1,729
Torfaen	1,689
Monmouthshire	1,494
Newport	2,140
Total for Wales	50,035*

(* A de-duplication exercise checked this sample against that drawn earlier in the year for the pilot postal survey. Twelve records were found in both databases and these were removed from the main survey before questionnaires were despatched. The actual issued sample for the 1998 Welsh Health Survey was 50,023. Two records were removed in Gwynedd, four from Carmarthen and three each from Swansea and Rhondda, Cynon, Taff.)

Each name and address on the survey was given a unique five-digit identifier and linked to an electoral division code. The main despatch began on 1 May 1998, the postcard reminder was sent out from 25 May and the final questionnaire reminders went out from 18 June. A further copy of the Welsh and English versions of the questionnaire was sent with the final reminder. These questionnaires were given a different (but computer-matched) serial number so that later responders, i.e. those who returned the second copy of the questionnaire, could be identified.

Although the sample drawn from the electoral register was named and correspondence was addressed by name to the person sampled, respondents remained anonymous (there was nowhere on the questionnaire for their names to be written), and all the information supplied was treated in the strictest confidence.

The unique identifying number attached to each questionnaire was used in conjunction with a separate list (or 'sample database') of the selected names and addresses to avoid unnecessarily sending reminders to people who had already responded. The sample database of names and addresses was kept separate from the datafile of returned processed questionnaires, and returned questionnaires were stored and analysed by people who did not have access to the list of names. At the end of the survey this sample database of names and addresses was electronically deleted from the computer in a way which ensured it cannot be recovered. As a result, the link between names and address and individual replies was completely and permanently broken.

Although medical records were not used at any stage of the 1998 Welsh Health Survey, a copy of the final questionnaire was sent to every GP via the internal distribution procedures of the five health authorities. A covering letter from the Chief Medical Officer for Wales explained the purpose of the survey so that GPs would be able to deal with most of the queries that might be raised by respondents if anyone discussed the questionnaire with their family doctor.

2. The questionnaire and piloting

Most of the illness and service use questions from 1995 were retained in order to give some comparability with the first Welsh Health Survey, although some other sections were removed or altered. As in 1995, the questionnaire included the standard set of health status questions known as SF-36 (described later in this appendix).

The draft questionnaire was prepared by NOP in consultation with the Welsh Office and was used in two separate piloting exercises. In the first instance, a small-scale version of the main survey methodology was used as a postal test of the survey. A total of 265 names were taken systematically from the electoral register in each of four constituencies across Wales (Caernarfon, Swansea East, Cynon Valley and Carmarthen West and South Pembroke) and each sampled elector was given a unique four digit identifier. Welsh and English versions of the questionnaire were initially despatched to the 1060 individuals along with a covering bilingual letter from the Chief Medical Officer for Wales and a return envelope to a postbox number in Cardiff.

The returned pilot questionnaires were automatically forwarded to NOP's Chelmsford office by the Post Office. The forwarding process was, to begin with, very unsatisfactory as batches of questionnaires appeared every few days with no deliveries in between. Strong representations were made to the Post Office and the service improved significantly - there were no forwarding problems at the main stage of the project.

Once questionnaires arrived at NOP, the unique identifying number was entered onto a returns database to ensure that no reminders were despatched. Non-contacts such as packages returned marked "not known at address" or from calls made to the survey Helpline were also logged on the database. Once the initial volume of returns had peaked, a bilingual reminder postcard was sent selectively to non-responders. This process led to further returns before a final selective reminder was sent out - this included a covering letter, copies of both English and Welsh

questionnaires and another return envelope. A total of 605 completed questionnaires were received at NOP by the end of the pilot postal survey - this represented an unadjusted response rate of almost 60%. After removal of notified deaths and movers, the response rate rose to 63%.

The postal pilot survey questionnaires were processed and the data were examined to check for missing values as well as the level of filtering errors and multiple answers at single-response questions.

In tandem with the postal test, a personal placement pilot survey took place in the same four constituencies. Four NOP interviewers, including two who were bilingual, placed the questionnaire with a broad cross-section of the population in each area - two fieldworkers operated in largely Welsh-speaking areas while the other two worked in mainly English-speaking locations. The interviewers showed respondents an adapted version of the initial covering letter used on the postal pilot survey and offered either the English or the Welsh version of the questionnaire for completion. In most cases, interviewers were present while respondents completed the document but in some instances they returned at a later date to collect the questionnaire. A total of 21 English language questionnaires were completed along with 15 copies of the version in Welsh.

The interviewers noted any problems raised by respondents as they completed the questionnaire and then went back through the document with all pilot participants to check for any other areas of confusion and ambiguity. Following the fieldwork, the interviewers attended a debriefing session at the Welsh Office, where they described their experiences to the survey team.

The two stages of the pilot survey led to a number of amendments being made to the questionnaire - these were partly concerned with layout and partly with the wording of questions or response codes. The despatch and return process for the main survey was the same as for the pilot exercise, other than the inclusion of a credit card size insert in the first mailing on behalf of Health Promotion Wales.

3. Helpline

On a survey of this scale covering the sometimes sensitive area of personal health, it is inevitable that a significant number of people would have a query that they would like to raise with those responsible for the project. Both the pilot and main stage surveys therefore made use of the Helpline facility arranged by the Welsh Office with Health Information Wales / Health Promotion Wales. The distribution of calls was very similar to that found on the 1995 survey, i.e. a peak soon after the postcard reminder caused by people requesting a further copy of the questionnaire. A breakdown of the timing and reasons for calls is shown below.

	May	June	July	Total
Request for another questionnaire	17	553	1	571
Adressss died/moved	29	154	52	235
Refusal to take part	7	197	53	257
Too elderly/ill to take part	43	108	132	283
Needed help to answer questionnaire	49	40	23	112
Had already returned survey	1	118	33	152
Query about confidentiality	36	54	74	164
Total	182	1,224	368	1,774

Two thirds of the calls received came in June and were heavily concentrated in days following the despatch of reminders. On these days, Welsh Office staff supplemented those of Health Information Wales in order to cope with the volume of calls. 164 calls concerned the confidentiality. In many cases, callers were unhappy because they saw a contradiction between receipt of a reminder and that the information accompanying the questionnaire which stated that responses could not be traced back to individuals. Callers who were still concerned after speaking to the helpline were contacted directly by the survey manager who explained the confidentiality measures in place.

The Helpline team sent information about calls to NOP by email as soon as was practical. This process was particularly valuable when reminders were being prepared. A record of relevant calls was kept by NOP in the form of final outcomes, e.g. died, moved, refused to participate, etc. so that the survey response rate could be more accurately calculated.

4. Response details

The main stage of the 1998 Welsh Health Survey produced 29,874 properly completed questionnaires. Although the initial despatch began on 1 May, the first returns were not forwarded to NOP by the Royal Mail until 11 May. The weekly response is shown below, through to the middle of August (29,624 completed returns). Thereafter, questionnaires were still included while the coding, data entry and data analysis was being carried out (250 additional returns).

Week beginning	Questionnaires received
11 May	4,755
18 May	3,057
25 May *	4,109
01 June	3,646
08 June	2,405
15 June *	2,456
22 June	773
29 June	288
06 July	5,085
13 July	1,992
20 July	596
27 July	325
03 August	137

* reminders sent

The table below shows the final breakdown by unitary authority of the response to the survey, reflecting returns to NOP and also those calls to the Helpline that could be attributed to a particular Council area. The contact rate percentage is unadjusted and varies across Wales from a high of 65.4% in Powys to a low of 50.4% in

Wrexham. The unadjusted average across the survey was just under 60%. As noted, the survey design over-sampled in some Council areas and under-sampled in others. Had the survey been conducted on a representative basis across Wales (as in 1995), the estimated unadjusted response would have been 59%, compared with the figure of 56% achieved in 1995.

	Total Issued	Moved	Dead	Ill	Refused	Not delivered*	Contacts	Contact rate %
Anglesey	1647	47	9	8	18	5	1014	61.6
Gwynedd	1909	49	9	15	23	4	1218	63.8
Conwy	1712	41	9	12	39	16	1068	62.4
Denbighshire	1595	44	17	10	30	8	980	61.4
Flintshire	2415	64	9	8	42	25	1439	59.6
Wrexham	2023	44	7	6	16	6	1024	50.6
Powys	1960	52	8	9	24	9	1282	65.4
Ceredigion	1554	51	9	6	23	10	989	63.6
Pembrokeshire	1841	36	6	5	33	17	1164	63.2
Carmarthenshire	2714	33	15	9	27	43	1450	53.4
Swansea	3776	84	10	16	55	34	2298	60.9
Neath & Port Talbot	2310	33	9	20	25	18	1413	61.2
Bridgend	2023	46	12	6	32	11	1246	61.6
Vale of Glamorgan	1855	42	7	9	21	3	1166	62.9
Cardiff	5353	160	15	10	79	26	3159	59.0
Rhondda, Cynon, Taff	3820	59	16	9	39	11	2271	59.5
Merthyr Tydfil	1682	40	8	10	15	5	912	54.2
Caerphilly	2782	60	13	9	44	29	1604	57.7
Blaenau Gwent	1729	25	8	4	22	10	982	56.8
Torfaen	1689	17	3	5	23	6	1012	59.9
Monmouthshire	1494	23	9	5	21	14	946	63.3
Newport	2140	34	9	8	39	11	1237	57.8
Wales	50023	1084	217	199	690	321	29874	59.7

(The undelivered category covers letters returned marked "address unknown").

In addition to the detailed figures shown above, further non-contact information was received from, or on behalf of, a substantial number of people who did not leave a respondent name, address or identity number with the Helpline team: 136 were too ill or too elderly to take part, 45 refused, 27 deaths were notified, 7 people had moved out of Wales, 4 were too young and 3 were away during the survey period.

The adjusted overall response rate after the removal of notified deaths and movers is 61%.

Every sampled individual was sent questionnaires in both Welsh and in English but the large majority of the returns were the English version - out of 29,874 completed questionnaires, 1,200 (4.0%) were the Welsh language version. There was some variation in terms of language version used across the 22 unitary authorities, but in

no council area were more than one-in-five returns in Welsh. The highest level of Welsh language returns were in the (majority Welsh-speaking) areas of Gwynedd, Anglesey and Ceredigion, while the lowest figures were recorded by the authorities in South-east Wales.

	English version	%	Welsh version	%
Anglesey	883	87.1	131	12.9
Gwynedd	981	80.5	237	19.5
Conwy	1002	93.8	66	6.2
Denbigh	927	94.6	53	5.4
Flintshire	1417	98.5	22	1.5
Wrexham	994	97.1	30	2.9
Powys	1234	96.3	48	3.7
Ceredigion	862	87.2	127	12.8
Pembroke	1126	96.7	38	3.3
Carmarthen	1345	92.8	105	7.2
Swansea	2240	97.5	58	2.5
Neath Port Talbot	1384	97.9	29	2.1
Bridgend	1226	98.4	20	1.6
Vale of Glamorgan	1142	97.9	24	2.1
Cardiff	3069	97.2	90	2.8
Rhondda, Cynon, Taff	2220	97.8	51	2.2
Merthyr Tydfil	897	98.4	15	1.6
Caerphilly	1578	98.4	26	1.6
Blaenau Gwent	973	99.1	9	0.9
Torfaen	1007	99.5	5	0.5
Monmouth	940	99.4	6	0.6
Newport	1227	99.2	10	0.8
All-Wales	28674	96.0	1200	4.0

5. Coding, data entry and analysis

The returned envelopes were opened at NOP's Chelmsford office and the contents were split into three categories: completed questionnaires; non-contacts such as information about deaths and moves; and questionnaires that had been defaced in some way, such as the removal of the serial number. The completed questionnaires were then coded, where possible, for social class (25,614 questionnaires) and for the nature of any complaints about the NHS and other services (5,526 complaints). Questionnaires completed in Welsh were translated by a translation agency before being coded. Social class was coded based on the respondent's occupation and using the 1991 (OPCS) Standard Occupational Classification (the six categories derived are summarised in chapter 5). The code frame for complaints was based upon that used in 1995 (see chapter 3).

Coded question responses were entered onto NOP's in-house computer system using a key-to-disk method with 10% verification of data entry. The data were then

checked against a specially written edit that was agreed with the Welsh Office in order to isolate errors, omissions, inconsistencies and out-of-expected range responses (e.g. questionnaires completed by a 15 year old).

The vast majority of the editing issues were dealt with by means of forced specifications. Where a height or weight figure was considered to be implausible (e.g. 3 feet in height or 600 lbs in weight) the relevant columns in the data were blanked off. Single-code questions with multiple answers were edited by taking the worst case scenario, e.g. if someone coded at question 31 ('do you have any mental or nervous illness...?') for depression and no mental/nervous illness, the latter response was edited out. In almost all cases, such editing affected well under 0.1% of the overall sample.

Most of the edits removed unnecessary responses such as people who had not visited their GP in the last 12 months giving a satisfaction measure. In a small number of cases the impact was more marked - for example, in the number making complaints about services. In the raw data only 607 people answered 'Yes' to question 6b ('if you were not satisfied have you made a complaint?'). However, about twice as many answered questions 6c or 6d (which asked how satisfied they were with the way the complaint was handled and its outcome) and, where these respondents were blank at 6b, they were all edited to give a 'Yes' response at 6b. The edited figure answering 'Yes' at q6b is 1280.

It is the nature of self-completion surveys that although they are the most cost-effective means of generating very large samples, there is inevitably a substantial element of missing data, not just where someone has failed to follow a filter instruction but also where a respondent has not answered a question asked of the entire sample. On occasions it is possible to correct some of these errors (such as where people did not answer a question about whether they drank alcohol (question 45) but then went on to give details of their average alcohol consumption (questions 46a and 46b)), but in the majority of cases it is necessary to accept higher levels of missing values than with face-to-face or telephone surveys.

Questions with a high level of missing values in the raw survey data included those in grid formats where it was often the case that items lower down the grid were answered by fewer people than those towards the top. An exception to this general rule was the question on exercise where substantial numbers left the vigorous exercise item blank but answered the items about more gentle forms of exercise. As in 1995, the first few questions in each section were generally completed more comprehensively than those later in the section, e.g. visiting GPs had a lower level of missing values than the later questions on out-patient services. In cases like this, it is likely that missing values reflect non-applicability.

A small number of additional variables were derived for inclusion in the final survey datafile. These included calculating Body Mass Index (a standard for defining obesity - equal to a respondent's weight (in kilograms) divided by the square of their height (in metres)) and classifying respondents according to their score; indicating the heaviest form of exercise they had taken part in; indicating their level of alcohol consumption according to defined limits; etc.

The clean data were weighted using mid year population estimates for sex and age within each of the 22 unitary authorities - the matrix was designed in such a way as

to correct for the deliberate under-sampling and over-sampling of the councils. The weighted data were then used in the preparation of output to a specification agreed with the Welsh Office.

The survey output also included SPSS data on CD, including an edited version (which excluded the four-digit electoral division code) for use by certain agreed organisations and for depositing with the ESRC data archive (there was also a restricted version for Welsh Office use which included the electoral division code). Neither version of the CD contained any information relating to the names of respondents or to their addresses, and on completion of the survey, NOP's original sample database of names and addresses was destroyed.

6. Non-response surveys

The 1998 project included surveys of non-response - these took place after both the pilot and main stage postal studies. For the pilot work, 25 electors from each of the four areas who had not replied to any of the mailings were included in the non-response survey, i.e. 100 individuals in total. The addresses were issued to NOP interviewers and at least five calls were made at each one in order to make contact with the named person. Where contact was made, interviewers tried to administer a short questionnaire that included a number of items about receiving and returning the document as well as several questions that covered some of the key morbidity issues from the postal survey.

A total of 45 interviews were obtained, while 20 of the issued electors were no longer at the address, 12 were away from home or on holiday, 3 were not available after five calls, 4 refused to talk to the interviewer in person and 1 by proxy, 4 addresses were empty or demolished, 3 people had died and there were 8 other non-contact outcomes.

The main purpose of the pilot non-response survey was to test people's reactions to being followed-up in this way - if there had been a substantial adverse reaction, it is unlikely that the main non-response study would have been carried out. In practice only one or two people objected to being traced in the pilot test and it was agreed that the non-response work should be extended to the main postal survey. The returned questionnaire responses were entered onto the computer system in the same way and with the same level of verification as the postal survey. The data was not edited as the pilot was testing the principle of the non-response check rather than the answers to the questions.

The composition of the main non-response survey sample was not determined until the postal survey was effectively completed. Given the particularly low level of response in the Wrexham area, it was decided to boost the issued sample of non-respondents in that council and then distribute the rest of the sample evenly across the remaining 21 unitary authorities. In practice, this meant the systematic selection of 100 non-responders in Wrexham and 43 elsewhere, giving an issued total of 1003 electors for the main non-response survey.

Fieldwork for the main study was along the same lines as for the pilot work with up to five calls being made before an address could be considered as a non-contact.

The interviewing for this study took place in October 1998 and the response rate information is given in the table below.

<i>Issued sample</i>	1003	100%
Interview obtained	601	60.0%
Moved	123	12.3%
Not available after 5+ calls	104	10.4%
Respondent refusal	43	4.3%
Respondent died	19	1.9%
Proxy refusal	17	1.7%
Away/on holiday	17	1.7%
Empty/demolished	13	1.3%
Respondent too ill	9	0.9%
Other non-contact outcomes	57	5.7%

After removal of deaths and movers from the non-response sample, the real contact rate works out at almost 70%, surprisingly high given that these people had not responded to any of the previous personalised mailings.

Data entry and verification of the main non-response questionnaires followed the same process as the postal survey. A specially-prepared computer edit was prepared to identify errors, omissions and inconsistencies and these were corrected where possible. The data was weighted to restore the population balance between the 22 council areas, and output was prepared to a specification agreed with the Welsh Office.

The results of the non-response survey showed that almost two-thirds of those interviewed (63%) confirmed that they had received the postal questionnaire - one person in five (19%) claimed not to have seen the questionnaire before while the remainder couldn't remember. Of those who did receive the questionnaire, 15% said that they had completed and returned it as requested.

In cases where the questionnaire had been received but not returned, the main reasons given were that it appeared to be too long and complicated (17%) and that the potential respondent simply couldn't be bothered (27%). Nine percent of this group were too ill or disabled to complete the form while one person claimed that it had been eaten by her dog.

A large majority of the non-response sample (91%) were happy to answer some questions about their general health and use of NHS services, and they were asked a simplified subset of questions from the main postal survey. The responses to the specific morbidity questions asked suggest that those interviewed face-to-face as part of the non-response survey generally reported that they were in better health than those completing the postal questionnaire during the main survey - this was particularly the case with regard to heart disease. The table below summarises the figures from both studies.

	Non-response survey (face-to-face interview)	Main postal survey (self-completion of questionnaire)
Base (maximum)	552	29,874
	%	%
Heart disease	6	21
Cancer	3	5
Chest/breathing problems	15	23
Mental/nervous illness	10	14
Diabetes	2	4
Arthritis	19	25
Back pain	32	30
Seen GP in last 3 months	43	47
In-patient in last 12 months	13	13

However, it should be noted that the questions in the non-response survey were simplified from those used in the main postal survey, which may impact on the responses given. In addition, data for the two studies were collected using different methodologies (self-completion of postal questionnaire versus face-to-face interview), to which people may respond differently. For instance, there is some research to suggest that SF-36 health status scores tend to be lower (suggesting poorer perceptions of health) in self-completion than interview data. Although SF-36 questions were not asked in the non-response survey, and this particular effect is not therefore seen, it is not known whether the comparability of responses to other questions might be similarly affected.

7. Survey error, confidence intervals and significance testing

As with any survey, there is potential error associated with the results of the Welsh Health Survey. This should be borne in mind when considering its results, and when making comparisons between the two surveys conducted in 1995 and 1998. The major causes of potential error in the survey are:

- statistical sampling error. Any estimates derived from a sample survey may differ from the true population figures because they are based on a sample, rather than a full count of every member of the population. In general, the smaller the sample size, the larger the potential error;
- non-response. An earlier section of this appendix details how certain characteristics of those who responded to the survey differ from those who did not. Generally, respondents had poorer health than non-respondents and used health services more;
 - other non-sampling error:
 - the Welsh Health Survey relies on a self-completion questionnaire. People's perceptions of their own health and the health services they use are important, but they may change over time for a variety of reasons;

- the questionnaire is not straightforward and people's understanding of particular questions or willingness to give personal information affect any estimates derived. The layout and design of the 1998 survey were altered from 1995 in an attempt to improve clarity and some minor changes resulted from interviews with respondents to the pilot survey. Again, it is not possible to assess the impact of differences and error of this kind on the results of the two surveys.

Some account of sampling error can be taken by calculating a confidence interval for an estimate, which is an interval within which it is fairly certain the true population figure lies. The following table gives approximate 95% confidence intervals for percentages based on a particular sample size (the width of the interval depends on the value of the estimated percentage and the sample size on which the percentage was based). For example, an estimated percentage of 25% based on a sample of 1,000 has a 95% confidence interval of +/-2.7% (i.e. 22.3% - 27.7%).

sample size	100	200	400	600	800	1,000	2,000	3,000	5,000	10,000	15,000	20,000	25,000	30,000
5%	4.3	3.0	2.1	1.7	1.5	1.4	1.0	0.8	0.6	0.4	0.3	0.3	0.3	0.2
10%	5.9	4.2	2.9	2.4	2.1	1.9	1.3	1.1	0.8	0.6	0.5	0.4	0.4	0.3
15%	7.0	4.9	3.5	2.9	2.5	2.2	1.6	1.3	1.0	0.7	0.6	0.5	0.4	0.4
20%	7.8	5.5	3.9	3.2	2.8	2.5	1.8	1.4	1.1	0.8	0.6	0.6	0.5	0.5
25%	8.5	6.0	4.2	3.5	3.0	2.7	1.9	1.5	1.2	0.8	0.7	0.6	0.5	0.5
30%	9.0	6.4	4.5	3.7	3.2	2.8	2.0	1.6	1.3	0.9	0.7	0.6	0.6	0.5
35%	9.3	6.6	4.7	3.8	3.3	3.0	2.1	1.7	1.3	0.9	0.8	0.7	0.6	0.5
40%	9.6	6.8	4.8	3.9	3.4	3.0	2.1	1.8	1.4	1.0	0.8	0.7	0.6	0.6
45%	9.8	6.9	4.9	4.0	3.4	3.1	2.2	1.8	1.4	1.0	0.8	0.7	0.6	0.6
50%	9.8	6.9	4.9	4.0	3.5	3.1	2.2	1.8	1.4	1.0	0.8	0.7	0.6	0.6
55%	9.8	6.9	4.9	4.0	3.4	3.1	2.2	1.8	1.4	1.0	0.8	0.7	0.6	0.6
60%	9.6	6.8	4.8	3.9	3.4	3.0	2.1	1.8	1.4	1.0	0.8	0.7	0.6	0.6
65%	9.3	6.6	4.7	3.8	3.3	3.0	2.1	1.7	1.3	0.9	0.8	0.7	0.6	0.5
70%	9.0	6.4	4.5	3.7	3.2	2.8	2.0	1.6	1.3	0.9	0.7	0.6	0.6	0.5
75%	8.5	6.0	4.2	3.5	3.0	2.7	1.9	1.5	1.2	0.8	0.7	0.6	0.5	0.5
80%	7.8	5.5	3.9	3.2	2.8	2.5	1.8	1.4	1.1	0.8	0.6	0.6	0.5	0.5
85%	7.0	4.9	3.5	2.9	2.5	2.2	1.6	1.3	1.0	0.7	0.6	0.5	0.4	0.4
90%	5.9	4.2	2.9	2.4	2.1	1.9	1.3	1.1	0.8	0.6	0.5	0.4	0.4	0.3
95%	4.3	3.0	2.1	1.7	1.5	1.4	1.0	0.8	0.6	0.4	0.3	0.3	0.3	0.2

Tests were carried out by NOP on several questions to check whether any difference between the answers in the 1995 survey and 1998 survey were statistically significant. If a difference is not statistically significant (at the 95% confidence level), it implies that the difference is too small for us to be 95% sure that it is due to a real change, and not due to sampling error. Differences which are statistically significant are marked with an asterisk in chapter 7 of the report.

8. SF36 Health status questions

The SF-36 is a standard set of 36 health status questions asking respondents about their own perception of their physical and mental health and the impact it has on their daily lives. It is a well documented measure, developed in America, aiming to provide a set of questions which can be self-completed by the respondent in a short time while retaining high levels of reliability and validity.

Responses can be combined to produce 8 component scores for the following aspects of health and well-being (each component having a score ranging from 0 to 100, with 0 and 100 representing the worst and best possible states respectively):

Physical functioning	Extent to which health limits physical activities
Role - physical	Extent to which physical health interferes with work
Bodily pain	Effect of pain on normal activities
General Health - Perceptions	Personal evaluation of health
Vitality	Feeling energetic rather than weary
Social functioning	Extent to which normal social activities are limited
Role - emotional	Extent to which emotional problems interfere with work
Mental health	General mental health including depression and anxiety

In turn, these can be combined to produce 2 summary measures of physical and mental health - the Physical Component Summary (PCS) and Mental Component Summary (MCS), both of which are standardised to have a mean of 50 in the general United States population.

In this report, the PCS and MCS are used as summary measures of the health status of different cross-sections of the population of Wales.

9. Survey questionnaire

The postal questionnaire used for the survey asked the following questions:

The NHS and other services

These questions are about your experience of NHS services, such as your doctor, hospital, or Casualty. Questions 1 to 5 ask about how satisfied you are with each of these parts of the NHS

-
- 1a** When did you last talk to your family doctor (GP) about your own health?
Please circle one number only
- | | | | | |
|------------------------------|-------|---|-------------------|--|
| In the past 3 months | ..... | 1 | | |
| In the past 3-12 months | ..... | 2 | | |
| Over 12 months ago or never | ..... | 3 | go to question 2a | |
| Not registered with a doctor | ..... | 4 | go to question 2a | |
- 1b** How satisfied are you with the services given by your family doctor (GP)?
Please circle one number only
- | | | | | |
|----------------|------------------|------------------------------------|---------------------|-------------------|
| Very satisfied | Fairly satisfied | Neither satisfied nor dissatisfied | Fairly dissatisfied | Very dissatisfied |
| 1 | 2 | 3 | 4 | 5 |
-
- 2a** When did you last stay in hospital as an in-patient (that is staying overnight or longer)?
Please circle one number only
- | | | | | |
|-----------------------------|-------|---|-------------------|--|
| In the past 3 months | ..... | 1 | | |
| In the past 3-12 months | ..... | 2 | | |
| Over 12 months ago or never | ..... | 3 | go to question 3a | |
- 2b** How satisfied were you with the service and care given by the hospital?
Please circle one number only
- | | | | | |
|----------------|------------------|------------------------------------|---------------------|-------------------|
| Very satisfied | Fairly satisfied | Neither satisfied nor dissatisfied | Fairly dissatisfied | Very dissatisfied |
| 1 | 2 | 3 | 4 | 5 |
-
- 3a** When did you last go to a Casualty Department (or Accident & Emergency Unit) to be treated?
Please circle one number only
- | | | | | |
|-----------------------------|-------|---|-------------------|--|
| In the past 3 months | ..... | 1 | | |
| In the past 3-12 months | ..... | 2 | | |
| Over 12 months ago or never | ..... | 3 | go to question 4a | |
- 3b** How satisfied were you with the service and care given by the Casualty Department?
Please circle one number only
- | | | | | |
|----------------|------------------|------------------------------------|---------------------|-------------------|
| Very satisfied | Fairly satisfied | Neither satisfied nor dissatisfied | Fairly dissatisfied | Very dissatisfied |
| 1 | 2 | 3 | 4 | 5 |
-
- 4a** When did you last go to hospital as an out-patient (include having an operation or treatment, then going home the same day)?
Please circle one number only
- | | | | | |
|-----------------------------|-------|---|------------------|--|
| In the past 3 months | ..... | 1 | | |
| In the past 3-12 months | ..... | 2 | | |
| Over 12 months ago or never | ..... | 3 | go to question 5 | |

4b How satisfied were you with the service and care given by the hospital?

Please circle one number only

Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied
1	2	3	4	5

5 If you have used any of these services in the past 12 months, were you satisfied, or not satisfied, with the service and care given?

Please circle one number for each service you have used

	I was satisfied with the service	I was not satisfied with the service
a Optician	1	2
b Dentist	1	2
c Chiropodist	1	2
d Health visitor or district nurse	1	2
e Home help or family aid	1	2
f Meals on wheels	1	2
g Social worker or welfare officer	1	2
h Mental health worker (e.g. psychologist, community psychiatric nurse)	1	2
i Midwife	1	2
j Alternative medical worker (e.g. homeopath, osteopath, chiropractor)	1	2
k Speech or occupational therapist	1	2
l Physiotherapist	1	2

6a If you were not satisfied with any of the services we have asked you about in questions 1 to 5, please say what was wrong. (If you were satisfied or did not use these services, please go to question 7)

Which service?

Comments

6b If you were not satisfied with any of these services, have you made a complaint?

Please circle one number only

Yes	1	
No	2	go to question 6e

- 6c** How satisfied were you with the way your complaint was dealt with?
Please circle one number only
- Completely satisfied 1
Partly satisfied 2
Not satisfied 3
- 6d** And how satisfied were you with the outcome of your complaint?
Please circle one number only
- Completely satisfied 1 now go to question 7
Partly satisfied 2 now go to question 7
Not satisfied 3 now go to question 7
- 6e** Why didn't you make a complaint?
Please circle all numbers that apply
- I didn't think the complaint was serious enough 1
I didn't know who to complain to 2
I didn't know how to go about complaining 3
I was worried about what might happen if I complained . 4
Other reason 5
-

Dentist

- 7** Have you been to the dentist in the past 12 months?
Please circle one number only
- Yes 1 go to question 9
No 2
-
- 8** If you have not been to the dentist in the past 12 months, please say why
Please circle all numbers that apply
- I always feel worried about going to the dentist 1
I don't need to go 2
It can be hard to fix a time when I can go 3
I can't find an NHS dentist 4
I can't find a dentist I like 5
I can't find a dentist who will register me 6
Treatment is expensive 7
It's a long way to go 8
Another reason 9
- } now go to question 10
-
- 9** If you have been to the dentist in the past 12 months, where was it?
Please circle one number only
- My own dentist 1
In a clinic (but not in a hospital) 2
In a hospital 3
Visited by a dentist where I live 4
-
- 10** How many of your own natural teeth do you have?
(Filled and capped teeth count as your own, false teeth and dentures don't)
Please circle one number only
- I have 20 or more of my own teeth 1
I have less than 20 of my own teeth OR mainly
false teeth or dentures 2

Medicines

By medicines we mean anything you take or that you put on your skin, such as tablets, powders, creams and sprays, to treat a medical condition.

- 11** During the past 4 weeks have you bought any medicine?
(Don't count anything that you got with a prescription, even if you had to pay for it)
Please circle one number only
- | | | |
|-----|---|-------------------|
| Yes | 1 | |
| No | 2 | go to question 14 |
-
- 12** If you have bought medicines in the past four weeks, which of these kinds did you buy? (If you have bought more than one medicine in the past 4 weeks, please circle all the numbers that apply.)
Conventional medicines, e.g. aspirin, eye-drops,
antacids, cough medicine
- | | |
|--------------------------------|---|
| Herbal | 1 |
| Homeopathic | 2 |
| Mineral or vitamin supplements | 3 |
| | 4 |
-
- 13** Where did you buy the medicine?
Please circle all numbers that apply
- | | |
|--|---|
| A small local chemist or pharmacy | 1 |
| A large chemist or pharmacy chain
(like Boots, Superdrug or Lloyds) | 2 |
| A supermarket | 3 |
| Somewhere else | 4 |
-
- 14** Are you on any regular medication prescribed by a doctor?
(Regular means for a year or more)
Please circle one number only
- | | |
|-----|---|
| Yes | 1 |
| No | 2 |
-

General Health

The following are general questions which ask for your views about your health, how you feel, and how well you are able to do your usual activities. You need not spend too much time answering each question, as your first answer is likely to be the best.

- 15** In general, would you say your health is . . . ?
Please circle one number only
- | | |
|-----------|---|
| Excellent | 1 |
| Very good | 2 |
| Good | 3 |
| Fair | 4 |
| Poor | 5 |
-
- 16** Compared to one year ago, how would you rate your health in general now?
Please circle one number only
- | | |
|---------------------------------------|---|
| Much better now than one year ago | 1 |
| Somewhat better now than one year ago | 2 |
| About the same | 3 |
| Somewhat worse now than one year ago | 4 |
| Much worse now than one year ago | 5 |

Health & Daily Activities

- 17** The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

Please circle one number on each line

	Yes - limited a lot	Yes - limited a little	No - not limited at all
a Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	..... 1	..... 2	..... 3
b Moderate activities, such as moving a table, pushing a vacuum cleaner, gardening, or playing golf	.... 1	..... 2	..... 3
c Lifting or carrying shopping	..... 1	..... 2	..... 3
d Climbing several flights of stairs	..... 1	..... 2	..... 3
e Climbing one flight of stairs	..... 1	..... 2	..... 3
f Bending, kneeling, or stooping	..... 1	..... 2	..... 3
g Walking more than a mile	..... 1	..... 2	..... 3
h Walking half a mile	..... 1	..... 2	..... 3
i Walking one hundred yards	..... 1	..... 2	..... 3
j Bathing or dressing yourself	..... 1	..... 2	..... 3

- 18** During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

Please circle one number on each line

	Yes	No
a Cut down on the amount of time you spent on work or other activities	..... 1	..... 2
b Accomplished less than you would like	..... 1	..... 2
c Were limited in the kind of work or other activities	. 1	..... 2
d Had difficulty performing the work or other activities (for example, it took extra effort)	..... 1	..... 2

- 19** During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

Please circle one number on each line

	Yes	No
a Cut down on the amount of time you spent on work or other activities	..... 1	..... 2
b Accomplished less than you would like	..... 1	..... 2
c Didn't do work or other activities as carefully as usual	..... 1	..... 2

20 During the past 4 weeks, to what extent have your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?

Please circle one number only

Not at all	Slightly	Moderate	Quite a bit	Extremely
1	2	3	4	5

21 How much bodily pain have you had during the past 4 weeks?

Please circle one number only

None	Very mild	Mild	Moderate	Severe	Very severe
1	2	3	4	5	6

22 During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Please circle one number only

Not at all	Slightly	Moderate	Quite a bit	Extremely
1	2	3	4	5

Your feelings

23 These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, Please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks . . .

Please circle one number on each line

All of the time	Most of the time	A good bit of the time	Some of the time	A little bit of the time	None of the time
--------------------	---------------------	---------------------------	---------------------	-----------------------------	---------------------

- a Did you feel full of life? . . . 1 2 3 4 5 6
 - b Have you been a very nervous person? 1 2 3 4 5 6
 - c Have you felt so down in the dumps that nothing could cheer you up? 1 2 3 4 5 6
 - d Have you felt calm and peaceful? 1 2 3 4 5 6
 - e Did you have a lot of energy? 1 2 3 4 5 6
 - f Have you felt downhearted and low? 1 2 3 4 5 6
 - g Did you feel worn out? . . . 1 2 3 4 5 6
 - h Have you been a happy person? 1 2 3 4 5 6
 - i Did you feel tired? 1 2 3 4 5 6
-

24 During the past 4 weeks, how much of the time have your physical health or emotional problems interfered with your social activities (like visiting friends or relatives)?

Please circle one number only

- All of the time 1
- Most of the time 2
- Some of the time 3
- A little of the time 4
- None of the time 5

Your Health In General

25 How true or false is each of the following statements for you?

Please circle one number on each line

	Definitely true	Mostly true	Don't know	Mostly false	Definitel false
a I seem to get ill a little easier than other people	1	2	3	4	5
b I am as healthy as anybody I know	1	2	3	4	5
c I expect my health to get worse	1	2	3	4	5
d My health is excellent	1	2	3	4	5

26 In the past year, have you had 2 weeks or more during which you felt sad, unhappy, or depressed; or when you lost all interest or pleasure in things that you usually cared about or enjoyed?

Please circle one number only

Yes	1
No	2

27 Do you have any long-term illness, health problem, or handicap which limits your daily activities or the work you can do? (Please include any problems that are due to old age.)

Please circle one number only

Yes	1
No	2

Illnesses

These questions are about any illnesses or disabilities you may have. Please include only illnesses or disabilities that a doctor has treated you for.

28 Have you ever been treated for any of these HEART DISEASES?

Please circle all numbers that apply

Yes Angina	1
Heart attack (or coronary)	2
Heart failure	3
High blood pressure (or hypertension)	4
Another heart disease	5
No, have not had any heart diseases	6

29 Have you ever been treated for CANCER?

Please circle all numbers that apply

Yes Lung cancer	1
Breast cancer	2
Bowel cancer	3
Skin cancer	4
Another kind of cancer	5
No have not had cancer	6

30 Do you have any of these CHEST troubles or BREATHING difficulties now?
Please circle all numbers that apply

- Yes Asthma 1
 - Cystic fibrosis 2
 - Emphysema 3
 - Pleurisy 4
 - Tuberculosis (TB) 5
 - Spells of bronchitis for over 3 years 6
 - Another chest or breathing problem 7
 - No do not have any chest or breathing problems ... 8
-

31 Do you have any MENTAL or NERVOUS ILLNESS now that you have had for 3 months or more?
Please circle all numbers that apply

- Yes Depression 1
 - Anxiety 2
 - Alzheimer's disease 3
 - Schizophrenia 4
 - Another mental or nervous illness 5
 - No do not have any mental or nervous illness 6
-

32 Do you have any of these conditions now?
Please circle all numbers that apply

- Yes Arthritis 1
 - Back pain 2
 - Epilepsy or fits 3
 - Stroke 4
 - Parkinson's disease 5
 - Pressure sores or bed sores 6
 - Varicose veins 7
 - No do not have any of these conditions 8
-

33 Do you have DIABETES?
Please circle one number only

- Yes and it's treated by injection 1
- Yes and it's treated by tablets 2
- Yes and it's treated by diet only 3
- No do not have diabetes 4

34a Have you had any accident, injury, or poisoning, needing hospital treatment or a visit to Casualty in the past 3 months? If you have had more than one injury, please think of the most recent one.

Please circle all numbers that apply

- Yes the injury was a:
- Break or fracture 1
 - Poisoning 2
 - Head injury 3
 - Cut or puncture 4
 - Burn 5
 - Another kind of injury 6
- No have not had any of the above injuries or accidents 7 now go to question 35a

34b Where did the accident, injury or poisoning take place?

Please circle one number only

- In the home 1
- In traffic 2
- At work or in school 3
- Somewhere else 4

35a Have you had a stomach upset with diarrhoea in the past 3 months, which you think was due to something you ate?

Please circle one number only

- Yes and it was in this country 1
- Yes and it was when I was abroad 2
- No 3 go to question 36

35b Did you see a doctor about it?

Please circle one number only

- Yes 1
- No 2

36 If you have any other illness or disability, Please say what it is.
Please write in the space provided

37 Do you hide any health problems you might have from any of these people?

Please circle one number on each line

- | | No | Yes - a
mental or
nervous illness | Yes - a
physical
illness | Does not
apply to me |
|-------------------------------------|---------|---|--------------------------------|-------------------------|
| a Your husband, wife
or partner | 1 | 2 | 3 | 4 |
| b Close family or friends | .. 1 | 2 | 3 | 4 |
| c Other friends or
acquaintances | 1 | 2 | 3 | 4 |
| d Employer | 1 | 2 | 3 | 4 |
| e Your family
doctor (GP) | 1 | 2 | 3 | 4 |

38 Is your eyesight good enough to see the face of someone across a room?
 (With glasses or contact lenses if you usually wear them.)
Please circle one number only

Yes	1
Yes, with difficulty	2
No	3

39 Can you hear what is said in a chat with another person?
 (With a hearing aid if you usually wear one.)
Please circle one number only

Yes	1
Yes, with difficulty	2
No	3

40a Are you a carer? Please circle one number only
 (A carer is someone whose life is restricted in some way because they look after a person who is mentally or physically disabled, or who is limited in what they can do by illness or old age.)

Yes	1
No	2

go to question number 41

40b How old is the person you look after?
 (If you look after more than one person, give the details of the youngest.)

Please write their age in the box

40c And are they male or female?
 Please circle one number only

Male	1
Female	2

40d In what way are they ill or disabled?
 Please circle all numbers that apply

Mental illness	1
Learning disability	2
Stroke	3
Alzheimer's disease	4
Another illness or disability	5

40e About how long do you spend each week looking after or helping this person? This includes time when you just need to be there, time travelling to and from their home, but does not include time when you are sleeping.
Please circle one number only

Less than five hours per week	1
5-9 hours a week	2
10-19 hours a week	3
20-34 hours a week	4
35-49 hours a week	5
50-99 hours a week	6
100 or more hours a week	7
It varies but usually less than 20 hours a week	8
It varies but usually more than 20 hours a week	9
Other	0

- 41** Does anyone less than 18 years old live with you, in your household?
Please circle one number only
 Yes 1
 No 2 go to question 44

- 42** Have any of the under 18s had wheezing or whistling in the chest in the last 12 months?
Please circle one number only
 Yes 1
 No 2 go to question 44

- 43** Please give the sex and age of any under 18s who have had wheezing or whistling in the chest in the last 12 months. (Each column represents one person. If there are more than four under 18s who have ever had wheezing or whistling in the chest, please enter the four oldest)

	<i>Person 1</i>	<i>Person 2</i>	<i>Person 3</i>	<i>Person 4</i>
43a Are they male or female?	Male ..1 Female .2	Male ...1 Female .2	Male ....1 Female ..2	Male ...1 Female .2
43b Age in whole years (please put 0 for babies under 1 year old)				
43c In the last 12 months has the wheezing ever been so bad that they could manage only one or two words at a time between breaths?	Yes ....1 No ....2	Yes .....1 No .....2	Yes .....1 No .....2	Yes ....1 No ....2
43d Has this person ever had asthma?	Yes ....1 No ....2	Yes .....1 No .....2	Yes .....1 No .....2	Yes ....1 No ....2

Exercise

(These questions are about your recent exercise. The information will help in health promotion.)

- 44** During the past 7 days, how many times did you exercise lasting at least 30 minutes?
Please circle one number only
- | | | | | |
|--|-------------------------|------------------|------------------------|-----------------------|
| | Never in
past 7 days | Once
or twice | Three or
four times | Five times
or more |
|--|-------------------------|------------------|------------------------|-----------------------|
- a Vigorous exercise,
 for example: running, jogging,
 squash, swimming lengths, 1 2 3 4
 aerobics, fast cycling, football.
- b Moderate exercise,
 for example: fast walking, dancing,
 gentle swimming, golf,
 heavy housework,
 heavy gardening, (e.g. digging) 1 2 3 4
- c Light exercise, for example:
 walking at an average pace,
 table tennis, light housework,
 light gardening (e.g. weeding) 1 2 3 4

Alcohol

- 45** How often on average do you drink alcohol? (Remember to include any alcohol you drink at home)

Please circle one number only

- Never 1 go to question 47
 Special occasions only 2
 Less than once a week 3
 Weekends only 4
 Weekends and occasionally during the week 5
 Most days 6
 Every day 7

PLEASE USE THE FOLLOWING TABLE TO ANSWER THE NEXT QUESTION

1 pint of beer, lager, cider =	1/2 pint beer, lager, cider =	1 glass wine, sherry, vermouth =	Single spirit measure (whisky, gin, vodka, etc.) =	Double spirit measure =
2 units	1 unit	1 unit	1 unit.	2 units

- 46a** In a typical seven day week, how many units of alcohol would you drink (including weekends)?

Please circle one number for a whole week

- None 1 now go to question 47
 1-7 units 2
 8-14 units 3
 15-21 units 4
 22-35 units 5
 36-50 units 6
 51 units or more 7

- 46b** Of this, how many units would you drink in a typical weekend period (include Friday evening through to Sunday evening)?

Please circle one number for a weekend

- None 1
 1-4 units 2
 5-9 units 3
 10-20 units 4
 21 units or more 5

- 47** How often (if at all) do you usually eat each of these foods?

Please circle one number on each line

- | | 6/7 days
a week | 4/5 days
a week | 2/3 days
a week | About once
a week | About once
or twice
a month | Rarely
or never |
|---|--------------------|--------------------|--------------------|----------------------|-----------------------------------|--------------------|
| Potatoes,
(e.g. boiled or jacket
but NOT fried) | 1 | 2 | 3 | 4 | 5 | 6 |
| Green vegetables
or salad
(e.g. cabbage, lettuce) | 1 | 2 | 3 | 4 | 5 | 6 |
| Fresh citrus fruit
(e.g. oranges,
grapefruit, satsuma) .. | 1 | 2 | 3 | 4 | 5 | 6 |
| Other fresh fruit
(e.g. apple, pear,
banana) | 1 | 2 | 3 | 4 | 5 | 6 |

Smoking

- 48 Which one of these best describes you?
Please circle one number only
- | | |
|--|---|
| I smoke daily | 1 |
| I smoke occasionally but not every day | 2 |
| I used to smoke daily but do not smoke at all now | 3 |
| I used to smoke occasionally but do not smoke at all now | 4 |
| I have never smoked | 5 |
-
- 49 How many other people in your household smoke now?
Please circle one number only
- | | |
|----------------------------|---|
| 0 people | 1 |
| 1 person | 2 |
| 2 people | 3 |
| 3 or more people | 4 |
-

Questions about you

This information will be used to compare the health of different groups of people and the types of service they need.

- 50 Are you . . . ?
Please circle one number only
- | | |
|------------------|---|
| Male | 1 |
| Female | 2 |
-

- 51 How old were you on your last birthday?
Please write in whole years

Age years

WOMEN GO TO QUESTION 52: MEN GO TO QUESTION 53

- 52 Are you pregnant at the moment?
Please circle one number only
- | | |
|---------------|---|
| Yes | 1 |
| No | 2 |
-

- 53 How tall are you?
- ft in OR cm
-

- 54 How much did you weigh when you last weighed yourself?
- St lb. OR kg
-

- 55 Are you currently.....?
Please circle one number only
- | | |
|---|---|
| Single | 1 |
| Divorced or separated | 2 |
| Widowed | 3 |
| Married or living as a couple | 4 |

56 The list opposite has been copied from the 1991 census.
Please circle the answer you feel best describes you. The information everyone gives will be used to assess health needs and also to show us if any groups of people are under-represented in the survey.

Please circle one number only

White	1
Black - Caribbean	2
Black - African	3
Black - other	4
Indian	5
Pakistani	6
Bangladeshi	7
Chinese	8
Other group (Please state)	9

57 Thinking now about your home, which of these best describes you?

Please circle one number only

I own it or live with the person who owns it (include homes being bought with a mortgage)	1
It is rented from the local Council	2
It is rented from a Housing Association or Housing Trust	3
It is rented from a private landlord	4
Other (e.g. live rent free or home comes with job)	5

58 When was the house or block you live in actually built?

Please circle one number only

Before 1919	1
1919 to 1944	2
1945 to 1964	3
1965 or later	4

59 Which of these best describes you?

Please circle one number only

Employed	
Self-employed	1
Employed full-time (30 hours a week or more)	2
Employed part-time (less than 30 hours a week)	3
On a work-related training scheme	4
Not employed	
Retired	1
Waiting to start a job that I have accepted	2
Unemployed for fewer than 12 months and have looked for work in the past 4 weeks	3
Unemployed for 12 months or more and have looked for work in the past 4 weeks	4
Can't work because of long-term disability or ill health	5
Caring for my home and family or dependants	6
Full-time student	7
Other	8

- 60** Have you ever been in paid employment?
Please circle one number only
 Yes 1
 No 2 go to question 65
-
- 61** If yes, please give the title of your present or most recent paid job and describe what you actually do (did).
 Job title:
 Job description:

-
- 62** In your present or most recent job, are (were) you....?
Please circle one number only
 A manager 1
 A foreman or supervisor 2
 An employee (other than manager or foreman) 3
 Self-employed 4
-
- 63** Do (did) you work in . . . ?
Please circle one number only
 A large organisation (25 or more employees) 1
 A small organisation (fewer than 25 employees) 2
 On your own (self employed and no employees) 3
-
- 64** Not counting what you plan to do, is (or was) your job a permanent job or was there some way in which it was not permanent?
 Please circle one number only
 Permanent 1
 Not permanent (e.g. seasonal, contract, temping, casual) 2
-
- 65** This survey may be repeated in the future to see how the health of people in Wales has changed and how services have improved. As people are picked at random it is very unlikely that you would be picked twice, but it is just possible.
 Would you answer the questions if you were picked again?
Please circle one number only
 Yes 1
 Maybe 2
 No 3
-

THANK YOU AGAIN FOR YOUR HELP

If someone else has helped you to read this form or to fill it in, Please tick this box

NOW PLEASE RETURN THIS QUESTIONNAIRE IN THE FREEPOST ENVELOPE
PROVIDED (no stamp is needed)
THANK YOU

If you have any questions about this survey or need any help,
please ring Health Information Wales on freephone 0800 665544

or write to:-

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