Cynulliad Cenedlaethol Cymru
National Assembly for Wales

A profile of long-term and chronic conditions in Wales

June 2005

Preface

This publication is the result of joint working between the National Public Health Service for Wales and the National Assembly for Wales's Statistical Directorate and Health Policy Division. It has built on the joint expertise and experience of these organisations to determine the current position on chronic conditions in Wales. This is the first phase of ongoing work on chronic conditions. It sets the foundation for further work to help inform and support future health and social care planning and service development across Wales.

This profile has benefited from the involvement of many people. Particular acknowledgement goes to:

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Executive summary

This document provides the first profile of chronic conditions in Wales. The terms chronic condition, chronic disease, life-long disease/condition, long-term disease/condition are commonly all used interchangeably.[1] They refer to conditions that are often life-long and limiting in terms of quality of life. This profile forms the initial steps towards identifying a clearer picture of chronic conditions in Wales and their impact, drawing from the existing data sources. It will be supplemented in time by further, more detailed information, as this becomes available.

Currently there are a limited number of data sources that can provide information on chronic conditions in Wales or comparisons across Britain. Much of the information available comes from population surveys, which rely on self-reported data rather than clinical data. The following points provide a broad picture of chronic conditions (excluding mental health and cancer) in Wales:

- One third of adults in Wales (an estimated 800 thousand adults) reported having at least one chronic condition.[2]
- Of people aged over 65 in Wales, two thirds reported having at least one chronic condition, and one third had multiple chronic conditions.[2]
- Over three-quarters of people aged over 85 in Wales reported having a limiting long-term illness.[3]
- For treated chronic conditions in Wales, the most commonly reported by adults is arthritis (14% of the population aged 16 and over) followed by respiratory conditions (13%) and chronic heart conditions (9%).[2]
- Of people aged over 65 in Wales, 34% reported being treated for arthritis, 21% for a respiratory illness and 30% for a heart condition.[2]
- 23% of people in Wales reported having a limiting long-term illness, compared with 18% in England and 20% in both Scotland and Northern Ireland.[4, 5, 6]
- The percentage of people in Wales who reported having a limiting long-term illness varies from 19% in Cardiff to 30% in Merthyr Tydfil.[7]
- Intensive users of inpatient services have on average three chronic problems,[8] about 6% of adults reported having 3 or more chronic conditions.[2]

Although it is difficult to predict the prevalence and impact of chronic conditions in the future, demographic trends indicate that there will be an increasing burden on health and social care services. It is estimated that by 2014, there will be a 12% increase in the number of adults with at least one chronic condition and a 20% increase in those aged 65 and over with a chronic condition.[2, 9]

The accurate monitoring of chronic conditions in the future depends on the development and integration of databases. The General Medical Services Quality and Outcomes Framework (QOF) data will help provide a more accurate picture of *some* chronic conditions in Wales. However, in the review of QOF consideration must be given to the inclusion of conditions such as arthritis. Further analysis of data will be necessary to identify the impact that chronic conditions have on health and social care services.

Crynodeb gweithredol

Darpara'r ddogfen hon y proffil cyntaf o gyflyrau cronig yng Nghymru. Yn gyffredinol, defnyddir y termau cyflwr cronig, afiechyd cronig, afiechyd/cyflwr gydol oes ac afiechyd/cyflwr tymor hir yn rhyngnewidiol. Maent yn cyfeirio at gyflyrau sy'n aml yn para gydol oes ac yn gyfyngus o ran ansawdd bywyd. Ffurfia'r proffil hwn y camau cyntaf tuag at greu darlun mwy eglur o gyflyrau cronig yng Nghymru a'u heffaith, gan dynnu ar ffynonellau data sy'n bodoli eisoes. Gydag amser, caiff gwybodaeth fanylach ei hychwanegu ato pan fydd ar gael.

Ar hyn o bryd, dim ond nifer gyfyngedig o ffynonellau data a all ddarparu gwybodaeth ar gyflyrau cronig yng Nghymru neu gymariaethau ar draws Prydain. Daw llawer o'r wybodaeth sydd ar gael o arolygon poblogaeth, sy'n dibynnu ar ddata hunan-gofnodol yn hytrach na data clinigol. Mae'r pwyntiau canlynol yn rhoi darlun eang o gyflyrau cronig (heb gynnwys iechyd meddwl a chanser) yng Nghymru:

- Dywedodd traean o'r oedolion yng Nghymru (amcangyfrifiad o 800 mil o oedolion) fod ganddynt o leiaf un cyflwr cronig.
- O'r rhai sydd dros 65 oed yng Nghymru, dywedodd dwy ran o dair bod ganddynt o leiaf un cyflwr cronig, a dywedodd traean bod ganddynt fwy nag un cyflwr cronig.
- Dywedodd dros dri chwarter o'r rhai sydd dros 85 oed yng Nghymru fod ganddynt salwch cyfyngus, tymor hir.
- O'r cyflyrau cronig yng Nghymru sy'n cael eu trin, yr un a nodwyd amlaf gan oedolion yw arthritis (14% o'r boblogaeth sy'n 16 oed neu'n hŷn) ac yn dilyn mae cyflyrau anadlu (13%) a chyflyrau cronig y galon (9%).
- O'r rhai sydd dros 65 oed yng Nghymru, dywedodd 34% ohonynt eu bod yn derbyn triniaeth at arthritis, 21% yn derbyn triniaeth at salwch anadlu a 30% yn derbyn triniaeth at gyflwr y galon.
- Dywedodd 23% o bobl yng Nghymru fod ganddynt salwch cyfyngus tymor hir, o'i gymharu â 18% yn Lloegr ac 20% yn yr Alban ac yng Ngogledd Iwerddon.
- Mae canran pobl Cymru a ddywedodd fod ganddynt salwch cyfyngus tymor hir yn amrywio o 19% yng Nghaerdydd i 30% ym Merthyr Tudful.
- Mae gan y rhai sy'n defnyddio'r gwasanaethau cleifion mewnol yn aml dair problem gronig, ar gyfartaledd, gyda thua 6% o oedolion yn dweud bod ganddynt dri chyflwr cronig neu fwy.

Er ei bod hi'n anodd rhagdybio nifer yr achosion ac effaith cyflyrau cronig yn y dyfodol, awgryma tueddiadau demograffig y bydd pwysau cynyddol ar wasanaethau iechyd a gofal cymdeithasol. Erbyn 2014, amcangyfrifir y bydd cynnydd o 12% yn nifer yr oedolion fydd ag o leiaf un cyflwr cronig a chynnydd o 20% yn y rhai dros 65 oed fydd â chyflwr cronig.

Mae monitro cyflyrau cronig yn fanwl gywir yn y dyfodol yn ddibynnol ar ddatblygu a chymathu cronfeydd data. Bydd data Fframwaith Ansawdd a Chanlyniadau (QOF) y Gwasanaethau Meddygol Cyffredinol yn cynorthwyo i ddarparu darlun mwy manwl-gywir o *rai* cyflyrau cronig yng Nghymru. Fodd bynnag, yn yr adolygiad o QOF, rhaid rhoi ystyriaeth i gynnwys cyflyrau fel arthritis. Bydd angen dadansoddi data ymhellach i nodi'r effaith y caiff cyflyrau cronig ar wasanaethau iechyd a gofal cymdeithasol.

1 Context, definitions and data issues

Patterns of disease are continually changing. The burden of disease is shifting from the young to the old and from communicable to non-communicable or chronic conditions.[10] These changes have significant impact in most industrialised societies.[11] People can have more than one condition, particularly as they get older. This makes chronic conditions even more difficult to manage.[2]

Chronic conditions are placing increasing demands on the NHS in Wales, and demographic trends suggest that these are likely to rise (see section 2.2). There are many direct and indirect factors associated with chronic conditions which significantly impact on the health and well being of individuals and on the primary, secondary and social care services supporting them.

1.1 Purpose of document

Policy and service change to ensure effective management of chronic conditions is a priority across Wales. This document will form part of the information needed to help underpin this, and inform future work, providing an overview of current baseline data on the prevalence of (the numbers of people who have) chronic conditions in Wales. It aims to inform health and social care planners and commissioners of the current situation regarding chronic conditions in Wales. This will support future planning and service reconfiguration, building upon more local information from primary and secondary care, local needs assessments and Health, Social Care and Well-Being Strategies. Further work will be needed to ensure a more complete picture and thorough understanding of future need at local and national levels.

This is an initial step to develop a full profile of chronic conditions in Wales. The document is limited to existing data relating to chronic conditions and recognises the deficiencies in these. Further analysis will be needed and, in time, as more improved and reliable data become available, from the aggregation and analysis of primary medical care data, a more accurate picture of chronic conditions across Wales will be produced.

1.2 Definition of long-term and chronic conditions

The terms chronic disease, chronic condition, life-long disease/condition, long-term disease/condition are commonly all used interchangeably.[1] This is confusing and is compounded by terms such as limiting long-term illness which is used by the census and in some surveys. In this document, 'chronic conditions' is used as an overarching term.

Chronic conditions are those which in most cases can not be cured, only controlled. Such conditions are often life-long and limiting in terms of quality of life. The table below illustrates the differences between acute and chronic conditions and helps to clarify what can be regarded as a chronic condition in contrast to acute conditions.

Differences between acute and chronic conditions[12]

	Acute	**Chronic**
Onset	Abrupt	Generally gradual and often insiduous
Duration	Limited	Lengthy and indefinite
Cause	Usually single	Usually multiple and changes over time
Diagnosis and prognosis	Usually accurate	Often uncertain
Technological intervention	Usually effective	Often indecisive; adverse effects common
Outcome	Cure possible	No cure
Uncertainty	Minimal	Pervasive
Knowledge	Professionals knowledgeable, patients inexperienced	Professionals and patients have complementary knowledge and experiences

There are numerous chronic conditions. Some major ones, namely cancer and mental health, are already being addressed in detail within current National Service Frameworks and key policy documents. This document focuses on the following five categories, primarily in adults:

Category	**Examples**
• Respiratory	Asthma, cystic fibrosis, chronic obstructive pulmonary disease (including bronchitis and emphysema)
• Circulatory	Stroke, chronic heart disease
• Neurological	Epilepsy, Multiple Sclerosis, Parkinson's Disease, Alzheimer's Disease
• Musculoskeletal	Arthritis, osteoporosis, spinal injuries
• Endocrinology	Diabetes

1.3 Data issues

This document draws together currently available information relating to chronic conditions in Wales. The type of sources accessed for this document is indicative of the limited amount of data currently available on the prevalence of chronic conditions. Comparisons between Wales and other areas are not always possible due to different data collection methods, and the different definitions of chronic conditions used. There were 10 main data sources; Appendix A lists the data sources and provides further details and caveats to the data.

It is currently difficult to obtain exact figures for the number of people who have any particular disease or condition. Traditionally, the burden of disease has been measured using mortality data. These data have the advantage of being readily available and can be regarded as reliable, objective and accurate. They tend to be a useful indicator of ill-health where disease is acute and where death occurs in a large proportion of those affected. However, many chronic conditions that contribute significantly to population morbidity are not commonly recorded on death certificates, and as a result have not been well measured.[13]

Other sources of data are therefore needed in order to describe the prevalence of chronic conditions. Data tend to fall into two main types: surveys of the population or as a by-product of administrative processes in which data collection is triggered by a particular event such as a visit to a GP or a stay in hospital.[14]

- **Surveys**

Surveys have attempted to fill the gap in knowledge, but are usually dependent upon subjective, self-reported replies and a sufficient response rate. The results usually reflect people's own understanding of their health rather than a clinical assessment of their medical condition.

The document draws heavily on provisional results from the latest Welsh Health Survey (see Appendix A for further details).[15] In the questionnaire, respondents are asked whether they are 'currently being treated' for various conditions. Thus the Survey provides data on individual conditions. Some major chronic conditions, namely cancer and mental health, are already being addressed in detail within current National Service Frameworks and policy documents. Thus where the Welsh Health Survey is the source for data in this document, the term "chronic conditions" excludes these major conditions. Appendix C lists the conditions that have been included/excluded.

In addition to chronic conditions themselves, data are also presented in this document on limiting long-term illness. Although not all chronic conditions would be considered as 'limiting' by those who suffer from them, the terms are often used inter-changeably. Where data are not available for chronic conditions, limiting long-long term illness has been used as a proxy. It is also used to provide geographical comparisons with other regions of Britain, as a question on limiting long-term illness is included in the General Household Survey and in the 2001 census.

- **Administrative records**

At a General Medical Practice level there has been considerable work done to develop disease registers and information is collected relating to a patient's visit to their surgery, which is used by the practice in the care of patients. (Further details on primary care data issues are discussed in Appendix B). There has to date been little systematic collection of these or parts of these data to inform the wider NHS, except:

- Audit data collected to monitor parts of the old GMS contract. These data were not universal and were collected by individual Health Authorities using varying criteria.
- The General Medical Practice Morbidity Database. This is currently in suspension, but data have been used in this document.

Under the new General Medical Services contract's Quality and Outcomes Framework (QOF), information related to some conditions (including coronary heart disease, stroke, diabetes, chronic obstructive pulmonary disease and asthma) will be routinely and consistently available in the future. As a result, more information, both at a national and local level, will thus be available.

Data on all patients admitted to hospital are routinely collected and are held in the central Patient Episode Database for Wales (PEDW). The data are subject to some validation, and are thus a fairly reliable source of information. In order to interrogate the database, it is necessary to select the relevant diagnostic classification codes. However, for chronic conditions, the codes are not always sufficiently specific to identify them. The coding of primary diagnosis is

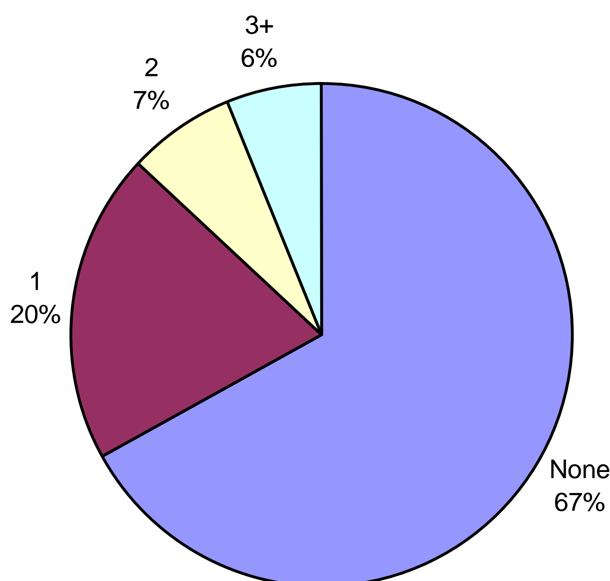
mandatory, therefore once the relevant codes are selected, information based on primary diagnosis should present an accurate picture. It is more difficult to identify whether a chronic condition is a contributory factor in an admission. The quality and level of coding varies across hospitals,[16] thus a chronic condition may not necessarily be recorded as a secondary diagnosis.

2 Overall prevalence

Available comparative data show that the prevalence of limiting long-term illness in Wales is higher than in other regions of the UK, with the exception of the North East (see section 2.1.4). Within Wales there are variations in the prevalence of chronic conditions according to where people live (section 2.1.4), but also according to their socio-economic status (section 2.1.3) and how old they are (section 2.1.1). This section begins with a brief introduction to the overall prevalence in Wales.

Approximately one-third of adults (aged 16 years and over) in Wales, an estimated 800 thousand people, reported having at least one chronic condition, of which 13% have two or more conditions (see figure 1). (See Appendix C for a list of conditions from the Welsh Health Survey classified here as chronic (excludes cancer and mental health)).

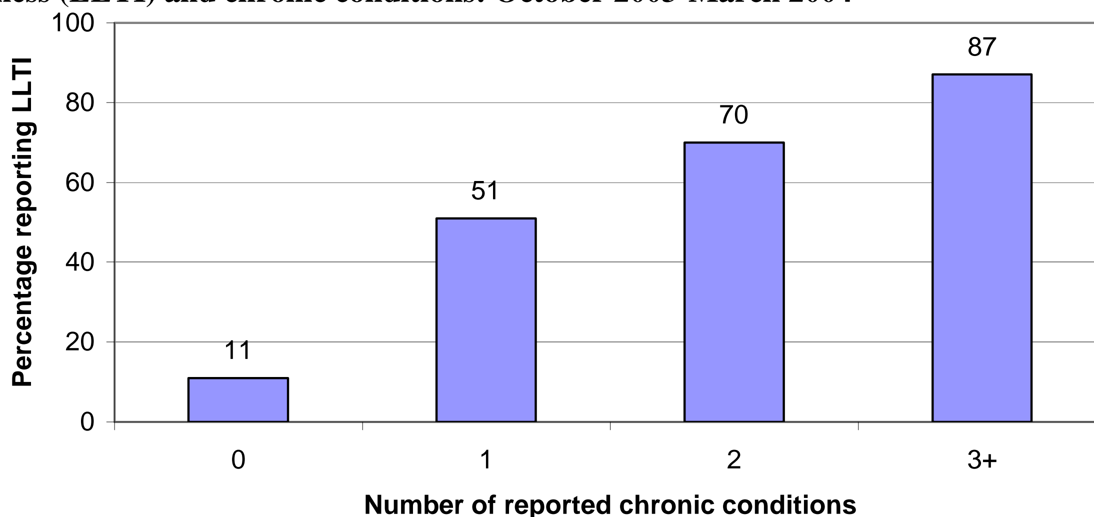
Figure 1. Percentage of adults aged 16 and over in Wales by number of reported chronic conditions: October 2003-March 2004



Source: Welsh Health Survey Oct03-Mar04[2]

Approximately 28% of adults reported a limiting long-term illness.[2] Not all chronic conditions are perceived as limiting, which may explain why the percentage with limiting long-term illness is lower than that for chronic conditions. However, as figure 2 illustrates, the higher the number of chronic illnesses, the more likely the person is to report a limiting long-term illness. 11% of people with no chronic condition (within the definition used in this document) report a limiting long-term illness.

Figure 2. Percentage of adults aged 16 and over in Wales reporting limiting long-term illness (LLTI) and chronic conditions: October 2003-March 2004



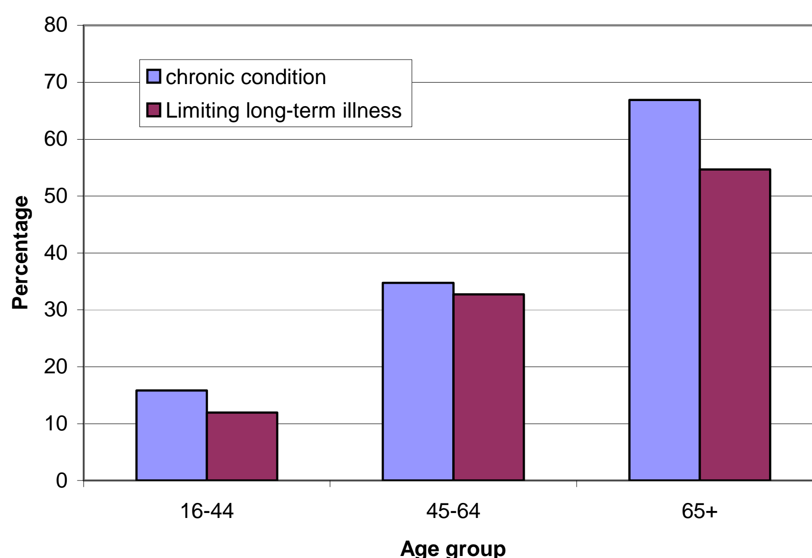
Source: Welsh Health Survey Oct03-Mar04[2]

2.1 Inequalities

2.1.1 Age

The prevalence of chronic conditions increases with age. As figure 3 illustrates, two-thirds of people aged 65 and over have a chronic condition in comparison with only one in six people aged 16 to 44.[2] The actual variation may be wider than it appears, because older people are likely to under-report chronic conditions. It has been shown that they accept limitations to daily activities as part of growing old.[17]

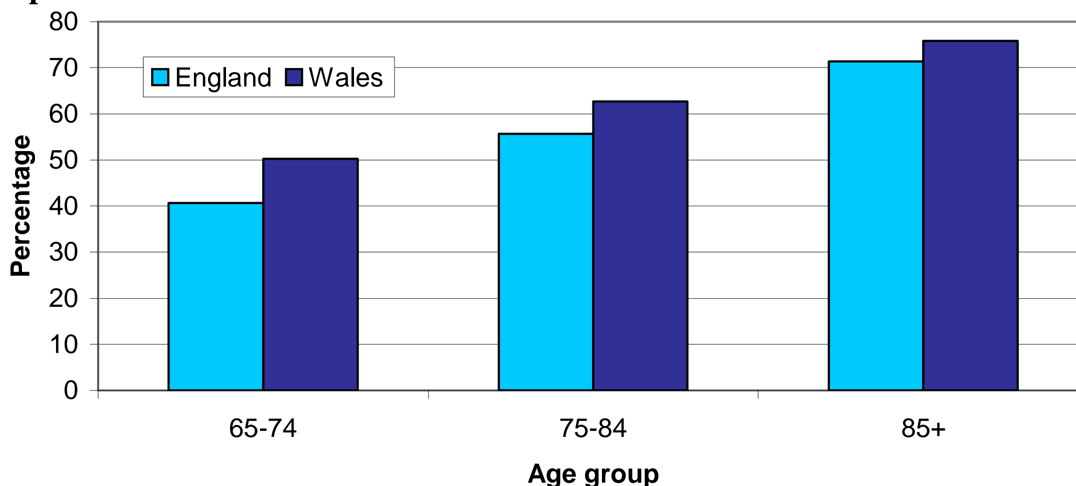
Figure 3. Percentage of adults in Wales reporting limiting long-term illness and chronic conditions by age group: October 2003-March 2004



Source: Welsh Health Survey Oct03-Mar04[2]

Within the older population, chronic conditions are more prevalent in the 85 year olds and over. The sample size of Welsh Health Survey data available for this document is not large enough to allow a more detailed breakdown of chronic conditions in older people, but this should be possible in the future. According to the 2001 Census, 50% of 65-74 year olds in Wales had a limiting long-term illness, but this rose to 63% of 75-84 year olds and 76% of those aged 85 and over (figure 4).[3] The rates are higher than for England in all age groups, but particularly in the 65-74 year olds (England's percentage is 41%). However, the differences between the countries lessen as people get older.

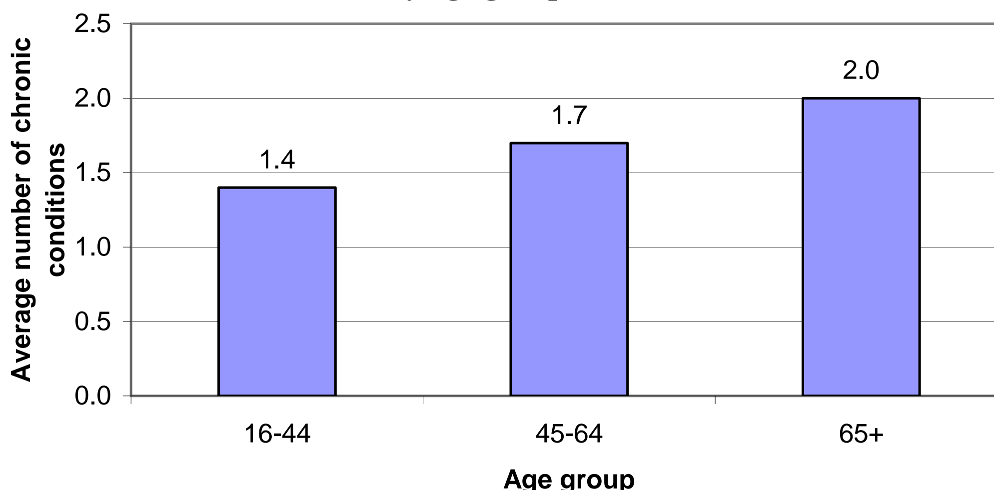
Figure 4. Percentage of older people in Wales reporting long-term limiting illness by age group: 2001



Source: NPHS, based on Census 2001 data[3]

Intensive users of inpatient services have on average three chronic problems; about 6% of adults reported having 3 or more problems (see figure 1).[2] Although the average number of conditions for those reporting a chronic condition is 1.8, the number does increase with age (see figure 5).[2] Over one-third of people aged over 65 years have multiple chronic conditions,[2] which often makes management options complex.

Figure 5. Average reported number of chronic conditions (for those with a chronic condition) in adults in Wales by age group: October 2003-March 2004



Source: Welsh Health Survey Oct03-Mar04[2]

2.1.2 Gender

There is very little difference in the reporting of chronic conditions by sex (table 1).[2]

Table 1. Percentage of adults aged 16 and over in Wales reporting a chronic condition by sex: October 2003-March 2004

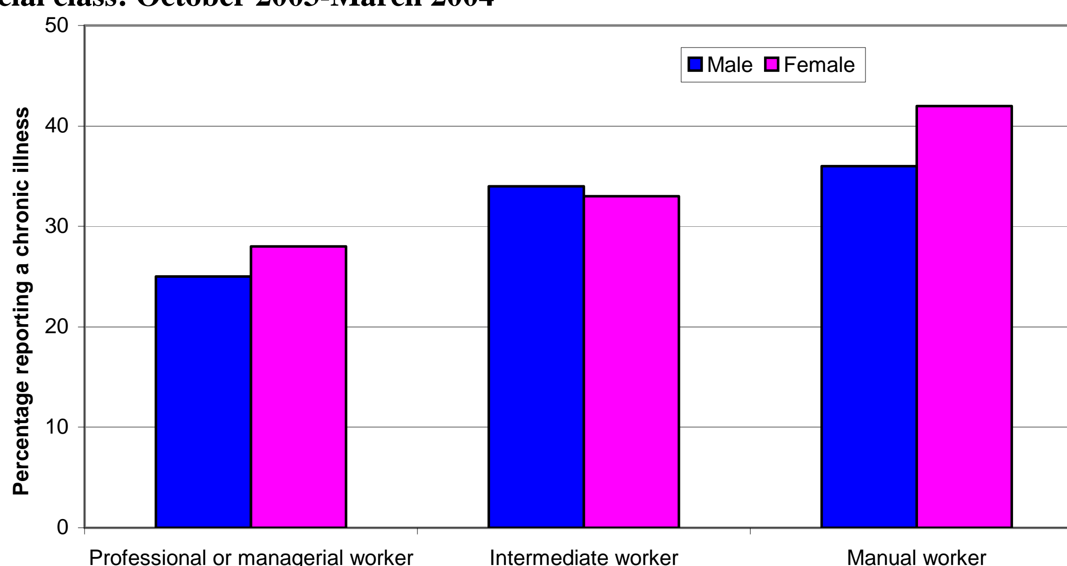
	Males	Females
Chronic condition	32	34
Limiting long-term illness	27	28

Source: Welsh Health Survey Oct03-Mar04[2]

2.1.3 Socio-economic

There has long been a recognition (as was highlighted in the 1980 "Black Report"[18]) of the impact that social class has on health. This is also supported by recent data on self-reported health status.[19] Levels of chronic conditions reported in the Welsh Health Survey are higher in the lower social classes (figure 6).[2]

Figure 6. Percentage of adults aged 16 and over in Wales reporting a chronic condition by social class: October 2003-March 2004

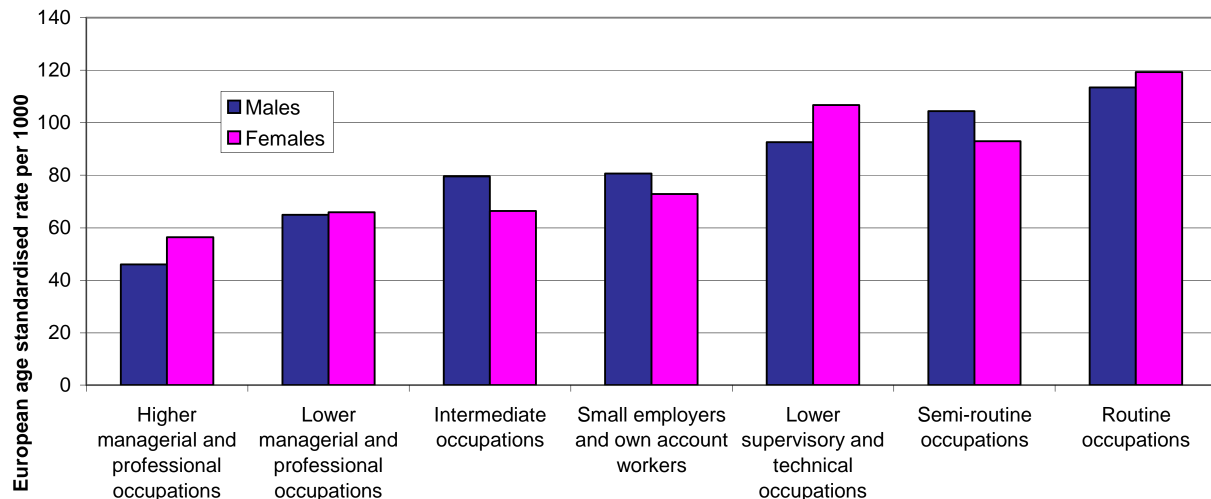


Source: Welsh Health Survey Oct03-Mar04[2]

A recent study[19] using 2001 census data found large social class inequalities* in health (figure 7). Those in routine occupations were more than twice as likely to report 'not good' health compared with those in managerial/professional occupations.

* National Statistics socio-economic classifications were used. Only classes 1 to 7 are shown here. Class 8, long term unemployed and never worked, are not illustrated.

Figure 7. European Age Standardised Rates (per 1,000) of self-reported health 'not good' by social class* in 25-64 year olds in Wales: 2001



* national statistics socio-economic classification

Source: Doran et al, based on Census 2001 data[19]

Material deprivation has also been shown to be associated with limiting long-term illness.[18] The average rate of limiting long-term illness is 40% higher in the 20% of electoral divisions in Wales which are the most deprived, than in the 20% most affluent electoral divisions.[20]

2.1.4 Geographical

The prevalence of chronic conditions varies across the local authorities in Wales (table 2). Table 2 presents both actual numbers of people reporting limiting long-term illness and the percentage of the total population affected. Limiting long-term illness includes problems associated with old age, therefore in order to make valid comparisons between areas, the age structure of the population needs to be taken into account. European Age Standardised Rates (EASRs)♦ are the measure used here in table 2.

Rhondda Cynon Taff had the highest number of people with self-reported limiting long-term illness (over 63 thousand), followed by Cardiff (over 57 thousand people). The local authority with the lowest number of people reporting a limiting long-term illness was the Isle of Anglesey (15 thousand). It must be remembered however, that due to the different population sizes, the picture is slightly different when examining the level of effect on populations. Although Merthyr Tydfil had the fourth lowest number reporting limiting long-term illness, it was the local authority with the highest rate. The average percentage of self-reported limiting long-term illness in all persons in Wales was 23.3%, but this varied from 18.8% in Cardiff to 30% in Merthyr Tydfil (see table 2).[7] The relative rankings of the local authorities are similar when using percentages or European Age Standardised Rates. The most obvious differences occur for Cardiff and Conwy, which have slightly younger and older populations respectively.

♦ The EASR is a directly standardised rate which allows valid comparisons between different populations, by removing the confounding factor of age and standardising to a hypothetical European age structure.

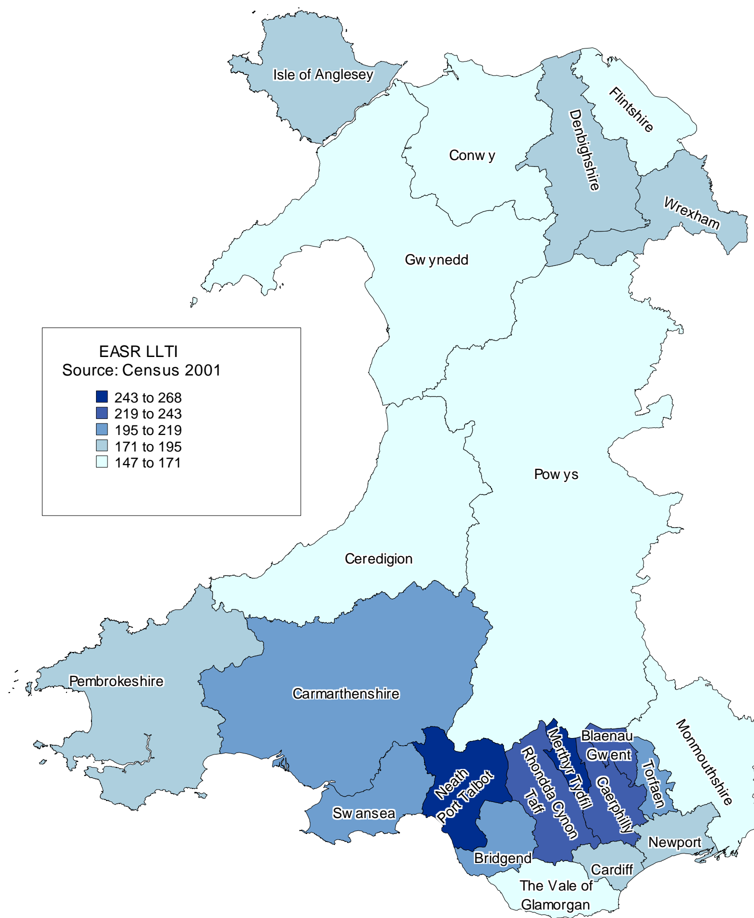
Table 2. All persons with self-reported limiting long-term illness: 2001

	Number in thousands	Percentage of total population	Rank	European Age Standardised Rate/1000	Rank
Blaenau Gwent	19.8	28.3	3	242.7	3
Bridgend	32.2	25.0	7	212.2	7
Caerphilly	44.6	26.3	5	235.2	5
Cardiff	57.5	18.8	22	175.6	14
Carmarthenshire	45.4	26.3	6	208.1	8
Ceredigion	15.5	20.7	16	168.4	17
Conwy	25.7	23.5	10	169.6	16
Denbighshire	21.8	23.4	11	178.2	12
Flintshire	28.5	19.2	20	166.0	18
Gwynedd	24.1	20.6	17	162.2	20
Isle of Anglesey	15.0	22.4	12	175.5	15
Merthyr Tydfil	16.8	30.0	1	267.1	1
Monmouthshire	16.2	19.1	21	147.1	22
Neath Port Talbot	39.5	29.4	2	243.6	2
Newport	29.6	21.6	14	188.0	10
Pembrokeshire	25.5	22.3	13	176.2	13
Powys	25.8	20.4	18	153.9	21
Rhondda Cynon Taff	63.1	27.2	4	238.5	4
Swansea	55.2	24.7	9	203.5	9
The Vale of Glamorgan	23.7	19.9	19	163.0	19
Torfaen	22.6	24.8	8	212.7	6
Wrexham	27.6	21.5	15	182.0	11
Wales	675.7	23.3	n/a	194.0	n/a

Source: National Assembly for Wales (based on 2001 census data)[7] and National Public Health Service[21]

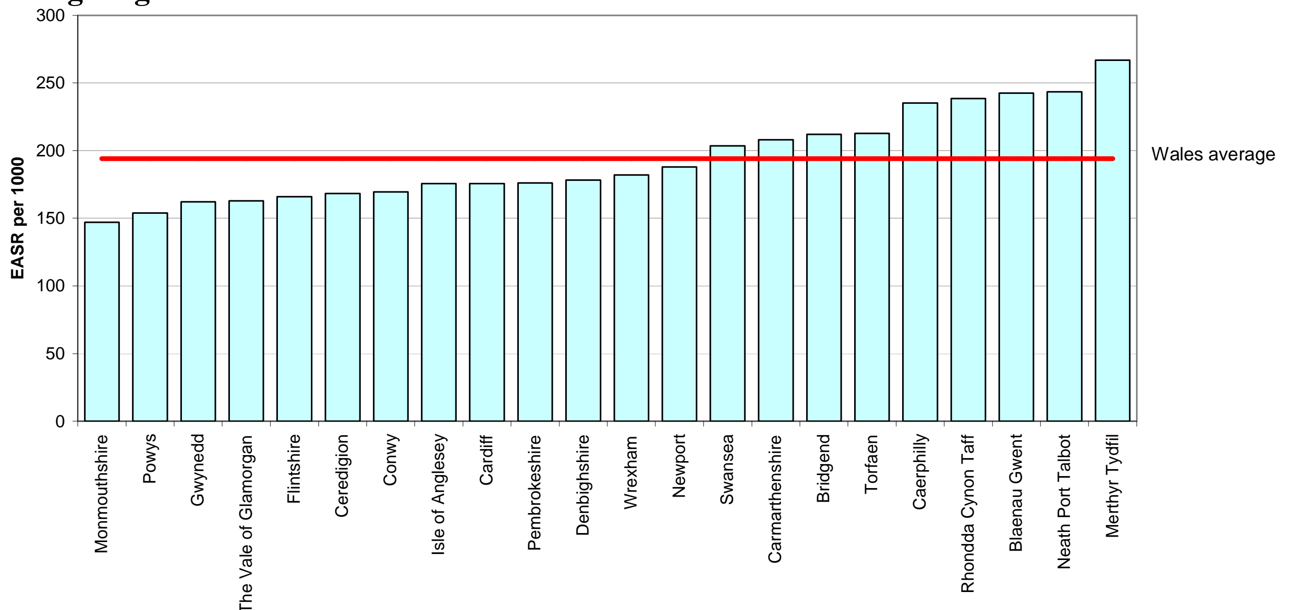
Figures 8 and 9 illustrate that European Age Standardised Rates were highest in the local authorities of the South Wales valleys. The data presented are based on a self-perception of health. The issue is complicated, but it is argued that inequalities in reported ill-health may be related to the situation of the labour market.[22] (This is discussed further in section 5 below, in relation to sickness benefits.)

Figure 8. European Age Standardised Rates (per 1,000) of all persons reporting limiting long-term illness: 2001



Source: National Public Health Service based on 2001 census data[21]

Figure 9. Ranked European Age Standardised Rates (per 1,000) of all persons reporting limiting long-term illness: 2001



Source: National Public Health Service based on 2001 census data[21]

Geographical inequalities in health are evident across the UK. Reported limiting long-term illness is higher in Wales than in Scotland, Northern Ireland and regions of England, except for the North East (table 3).[4] According to the 2001 census, 7 of the highest 8 local authorities in England and Wales (out of a total of 378), and 13 of the highest 50 for the percentage of self-reported limiting long-term illness were in Wales.[4]

Table 3. Percentage of all persons reporting limiting long-term illness: 2001

	%
UK	19
Wales	**23**
Scotland	20
Northern Ireland	20
England	18
- North East	23
- North West	21
- Yorkshire and The Humber	20
- West Midlands	19
- East Midlands	18
- South West	18
- East of England	16
- South East	16
- London	16

Source: Census 2001[4, 5, 6]

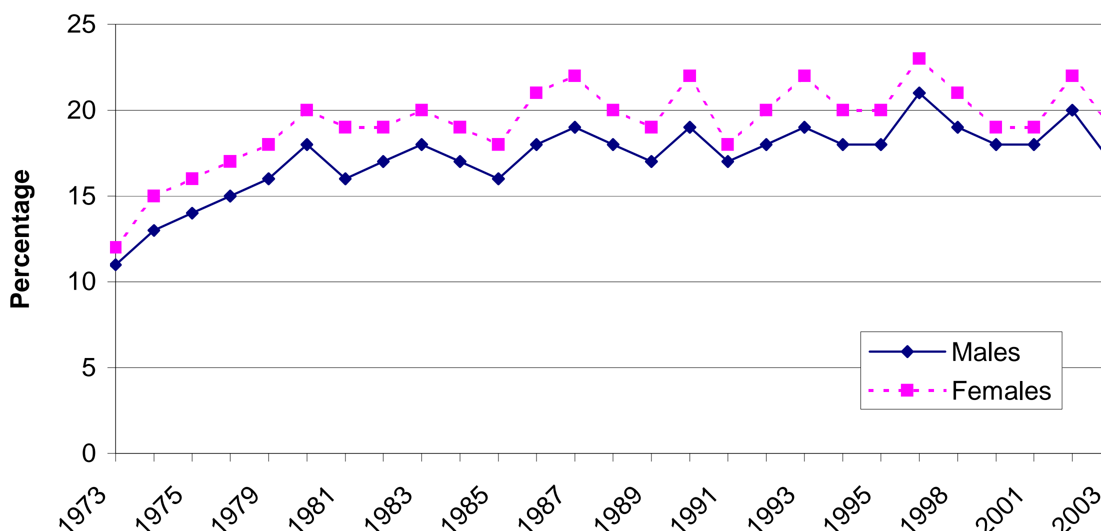
The study into social class inequalities in Britain[19] found that Wales had high rates of poor health[†] in comparison with other regions in all seven social classes.

2.2 Trends

An increase in the prevalence of self-reported limiting long-term illness in Britain in the 1970s and 1980s can be clearly seen (figure 10).[23] This increase was evident in all age groups.[24] The rise was partly due to the ageing population and increased survival, but better detection and/or better data recording could also be contributory factors, as could people's increased expectations about their health.[24] In more recent years, there is no clear pattern, although prevalence has appeared to stabilise.

[†] Based on European Age Standardised Rates of self-reported health 'not good' by social class (national statistics socio-economic classification) in 25-64 year olds.

Figure 10. Trend in percentage of all persons reporting a limiting long-term illness in Britain



Source: General Household Survey[23]

Data for Wales over this long timescale were not readily available, but there is no reason to suggest that the pattern would be different. Data that could be obtained for Wales show an increase over the three years to 2002 (table 4),[25] but a drop for males in 2003 (however sample sizes are fairly small, and the variation may be due to random fluctuation).

Table 4. Trend in percentage of all persons reporting a limiting long-term illness in Wales

	2000	2001	2002	2003
Males	19	23	25	20
Females	21	22	23	23
Persons	20	22	24	22

Source: General Household Survey[25]

Conclusions can not be drawn from these data about future prevalence. It is difficult to predict whether prevalence will continue to increase at previous rates, or what the impact of changes to treatment, services and health promoting measures will be.

The total population of Wales is predicted to increase by 4% over the next decade,[9] however the prevalence of chronic conditions in adults could increase by 12% (see table 5). This is due to the fact that prevalence is highest in older people and that there is an ageing of the population (the number of 65 and over year olds is expected to increase by 20%, over 100 thousand people). This could mean that by 2014 there will be more than 400 thousand people aged 65 and over in Wales who have at least one chronic condition (assuming no change in prevalence). It is difficult to predict the likely impact on services.

Table 5. Predicted change in Welsh population and chronic conditions prevalence: 2003 to 2014

	Number in thousands		
	2003	2014	Predicted change (%)
Total population	2,938	3,046	108 (4)
16 and over year olds	2,361	2,517	156 (7)
- with at least one chronic condition*	781	872	91 (12)
65 and over year olds	514	619	105 (20)
- with at least one chronic condition*	344	415	70 (20)

*based on Welsh Health Survey October 2003-March 2004 data that found 16% of 16-44 year olds, 35% of 45-64 year olds and 67% of the population aged 65 and over with at least one chronic condition. 2014 figures are based on the assumption that there will be no change in prevalence.

Source: GAD[9] and Welsh Health Survey Oct03-Mar04[2]

3 Types of conditions

The Welsh Health Survey currently provides the most detail of individual conditions, and is the main data source in this section. In the future the Quality and Outcomes Framework (QOF) for General Practice will provide clinically validated prevalence data for some of the key chronic conditions. Some initial data from the QOF have been released and are presented in figure 12.

In the previous section it was shown that prevalence increases with age. This is true for nearly all chronic conditions, with the exception of asthma and epilepsy (table 6).[15]

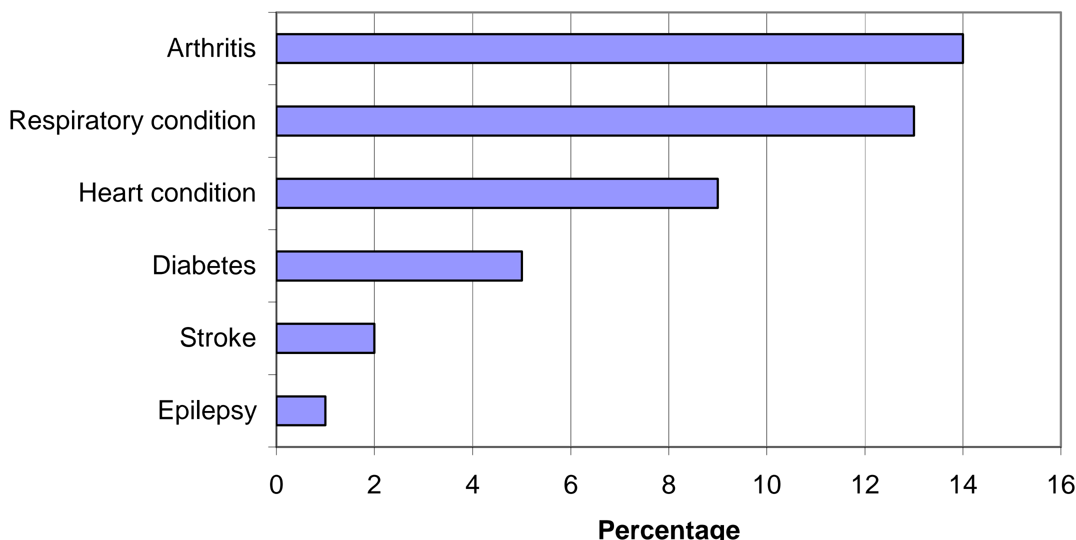
Table 6. Adults aged 16 and over in Wales reporting being treated for chronic conditions: October 2003-March 2004

		Percentage (rounded)				**Number in thousands**‡			
		16-44	**45-64**	**65+**	**Total**	**16-44**	**45-64**	**65+**	**Total**
Respiratory	Asthma	10	8	12	10	105	62	63	230
	Emphysema	0	1	4	1	4	7	20	31
	Pleurisy	0	1	1	1	4	6	5	15
	Bronchitis	1	3	7	3	10	20	37	66
	Other respiratory illness	1	3	6	3	12	21	31	63
	Any respiratory condition*	10	12	21	13	114	86	108	308
Circulatory	Stroke (ever treated)	0	2	9	2	4	13	44	61
	Heart attack (ever treated)	0	5	15	5	4	34	75	113
	Angina	0	5	18	5	4	35	91	130
	Heart failure	0	1	5	2	3	10	26	40
	Other heart condition	1	4	12	4	9	28	62	99
	Any heart condition**	1	9	30	9	12	66	154	233
Neurological	Epilepsy	1	1	1	1	17	9	5	31
Musculoskeletal	Arthritis***	2	17	34	14	27	124	174	325
Endocrine system	Diabetes	1	6	12	5	13	48	61	122

* including any one or more already mentioned in the respiratory category.
** including any one or more already mentioned in the circulatory category, but excluding stroke.
*** excludes back pain.
Source: Welsh Health Survey Oct03-Mar04.[15] Population data from the Office for National Statistics[26]

‡ Extrapolated from 2003 mid-year estimates of population:
16-44 year olds = 1102.6 thousand
45-64 year olds = 744.3 thousand
65 and over year olds = 513.8 thousand
2360.7 thousand

Figure 11. Percentage of adults aged 16 and over in Wales reporting being treated for the commonest chronic conditions: October 2003-March 2004



Source: Welsh Health Survey Oct03-Mar04[15]

The high percentage of people reporting treatment for arthritis (figure 11)[1] is of note, especially as the figures shown here do not include back pain. (Arthritis was not defined in any way in the survey.) Currently, there is no specific requirement within the QOF for General Practice to monitor and treat patients with arthritis in the same systematic way as they are expected to do for those with other chronic conditions such as diabetes or coronary heart disease.

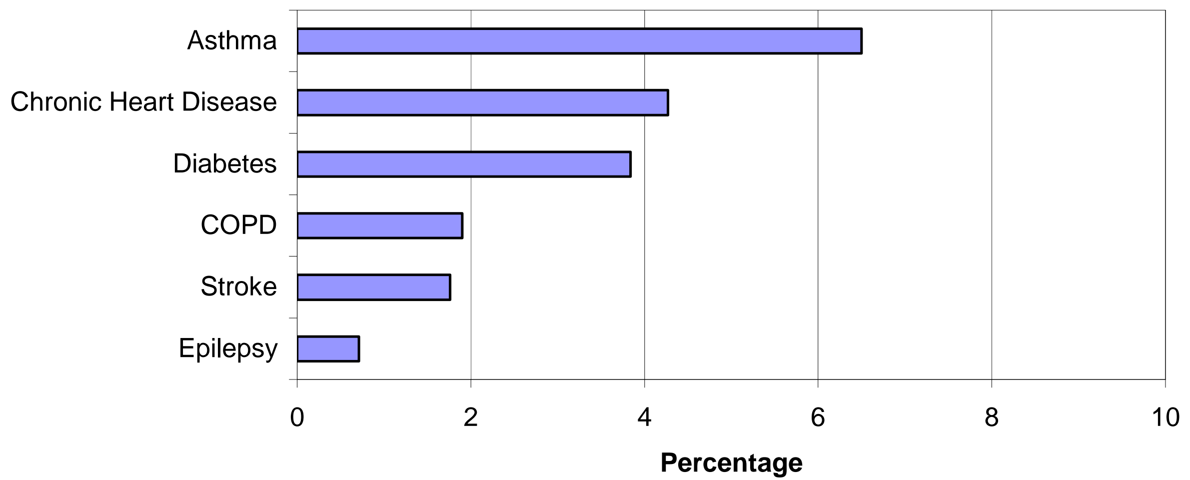
Chronic respiratory conditions are one of the most common of the chronic conditions. This is not unexpected, due to the levels of smoking in Wales[27] and the historical links with exposure to coal mining dust.[28]

The exact prevalence of chronic heart conditions is difficult to determine as there is a substantial amount of undiagnosed and untreated heart disease in the community.[29] A large proportion of deaths are due to acute and unknown illness. In 2002, of the 7,000 deaths from ischaemic heart disease in Wales, over 3,000 were due to acute myocardial infarction.[30] The prevalence of heart disease shown in figure 11 would be much higher (22%) if high blood pressure was included.[15]

Diabetes, as a condition, is a particular concern due to associated problems and the risk of complications, such as coronary heart disease.[31] A recent survey of practices in Wales showed prevalence to be 3.2%,[31] slightly lower than the self-reported rate shown by the Welsh Health Survey.

A limitation with using Welsh Health Survey data is that they are based on subjective self-reporting. In the future, this will be overcome as data will be routinely available through the QOF clinical data recording system. Initial data (based on data from 498 of 503 practices in Wales) again show that epilepsy and stroke are the least common chronic conditions (see figure 12).

Figure 12. Percentage of total patients in Wales being treated for chronic conditions: 1st February 2005



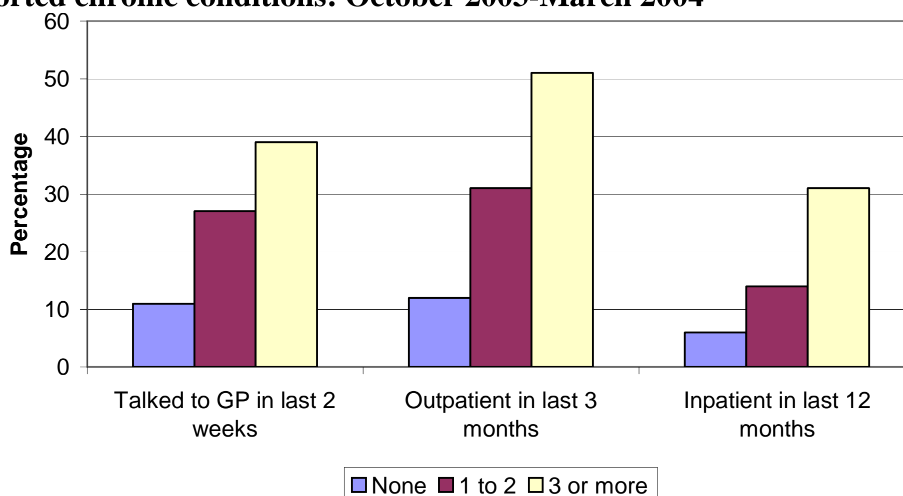
COPD = Chronic Obstructive Pulmonary Disease
Source: GMS QOF returns[32]

4 Health and social care services

Chronic conditions have a direct impact on health and social care services. It has been stated, for example, that "people with any long-term problem are about twice as likely to be intensive users…[of inpatient services]… than those without."[8] Although this section attempts to provide data for the direct effects on services, reliable data, particularly specific to chronic conditions, are difficult to ascertain.

Data on health services utilisation show that usage increases with the number of chronic conditions. For example, the recent Welsh Health Survey found that an outpatient visit in the last three months was reported by 51% of adults with at least 3 chronic conditions, as opposed to only 12% of adults without a chronic condition (figure 13).[2]

Figure 13. Percentage of adults aged 16 and over in Wales using services by number of reported chronic conditions: October 2003-March 2004



Source: Welsh Health Survey Oct03-Mar04[2]

In some cases, patients with chronic conditions can end up in a 'revolving door' situation, experiencing multiple admissions. This has significant implications for the health of individuals and the resources required to treat them. Effective management of chronic conditions can avoid unnecessary complications that require admission and readmission to hospital. Appropriate preventative and intermediate[§,33] care, can help avert a "vicious circle" of care.[**,34] This also includes supporting patients to help self-manage their condition, so that they can maintain their independence and control their need for services.[35]

In Wales, it has been recognised that improving the information and its infrastructure will create integrated person-based information which will, in turn, improve patient care. One of the three Service Improvement Projects which the Informing Healthcare Programme will

[§] 'Intermediate care' refers to a range of usually time-limited services, involving cross-professional and agency working, provided on the basis of a comprehensive assessment, which have a planned outcome of maximising independence, targeting those who would otherwise face a prolonged hospital stay or inappropriate admission.[33]

[**] A "vicious circle" of care is where a failure to invest in preventative and intermediate care drives pressure on hospital care and long-term bed-based social care.[34]

concentrate on is Chronic Disease Management.[36] The benefits will include empowering patients to manage their own healthcare at home.

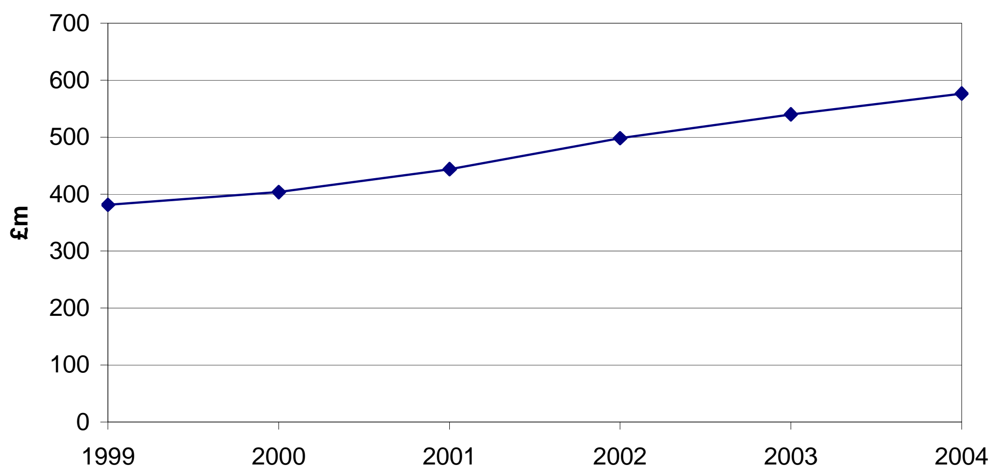
Chronic conditions place considerable demands on services. Disaggregating the available service usage data to examine the effect of a specific chronic condition has not been possible within this profile. It is, however, a future intention to explore which conditions impose the greatest demands.

4.1 Pharmaceuticals

Prescription drugs represent a substantial share of the NHS budget in Wales. In 2002/03, 12% of total health expenditure in Wales was spent on primary care prescribing.[37] It is not possible to disaggregate prescribing for chronic conditions from those for acute illnesses. However, repeat prescriptions are usually for a chronic condition,[38] and studies have reported that repeat prescriptions represent between 75% and 83% of costs.[39]

Over 53 million items were prescribed by GPs in Wales in 2004, an increase of 30% since 1999.[40] The actual costs increased by 51% during this time period, to £576.5 million in 2004 (see figure 14).[††]

Figure 14. Trend in cost of items prescribed by GPs in Wales: 1999-2004



Source: Prescribing Services Unit, Health Solutions Wales[40]

4.2 Primary care

Primary care data are currently limited, as described in section 1.3 above. This profile therefore draws upon that available from the General Practice Morbidity Database (GPMD). The validity of the data is limited by, for example, an uneven coverage across Wales (see Appendix A for further details).

The GPMD provided data for diagnostic category only, not for individual diagnosis. The data show that 14% of adults having a consultation had a respiratory problem recorded (table 7). These respiratory patients also refer to those with acute conditions such as tonsillitis and sinusitis.

[††] Based on cost price of drugs dispensed in the community.

Table 7. Percentage of consultations in adults aged 18 and over by diagnostic category:[‡‡] 2000

	Musculoskeletal	Respiratory	Circulatory	Endocrine
18-44	10	16	2	1
45-64	16	14	8	4
65-74	15	14	14	6
75+	14	12	15	4
Total	13	14	8	4

Source: GPMD

One way in which to obtain more robust data in the future could be though a developed GPMD. In addition, the QOF (Quality and Outcomes Framework) will improve the data availability and quality (see Appendix B). Under the QOF there is a requirement for patients with a chronic condition to have specific tests. As a consequence there has been an increase in biochemistry workloads in relation to chronic conditions since the beginning of 2004.[41,42]

4.3 Secondary care

It has been highlighted that people with chronic conditions are more likely to use secondary care services.[1] The King's Fund study on emergency hospital admissions identified that older people with chronic respiratory conditions and 'acute on chronic' disease accounted for the greatest use of bed days, particularly during the winter months.[43] It has also been estimated that more than 40% of NHS costs for patients with Type 2 Diabetes are associated with inpatient care.[44]

Outpatient datasets are currently not detailed enough to allow analysis by condition. Inpatient datasets are more detailed, but there is no set definition for chronic conditions which may be used simply to identify those hospital spells in which chronic conditions were a factor. Table 8 shows data relating to primary diagnoses, which give an indication of the level of hospitalisations associated with chronic conditions. It must be stressed that some of the observed numbers will have been due to acute events. It should also be noted that the data refer to hospital spells, not individual persons. An individual may be admitted to hospital on more than one occasion during the course of a year. This may especially be the case among persons with chronic conditions.

[‡‡] These data do not necessarily show that the diagnosis was the main reason for the consultation, only that it was recorded that a patient making a consultation suffered from this diagnosis. This depends on the level of coding at the practice.

Table 8. Hospitalisation for selected diagnoses for the population of Wales: 2002

Primary diagnosis*	Number of discharges**	European Age Standardised Rate/1000
All Respiratory Diseases	49,239	1,575
Asthma	4,196	155
All Circulatory Diseases	59,882	1,515
Musculo-skeletal Diseases	17,568	518
Diabetes	4,650	136

* Principal diagnosis for the last episode of the hospital spell.

** The data include inpatients (requiring at least one night's stay at hospital) and daycases (not involving an overnight stay but requiring the use of a bed), but not outpatient appointments.

Source: Healthshow[45]

An in-depth study of Patient Episode Database for Wales data (see Appendix A for details) would be required in order provide a more precise estimate of the number of hospital spells due to chronic conditions. As mentioned in section 1.3 however, the data will not always be detailed enough to determine accurately whether a particular hospital spell was due to a chronic condition.

Emergency admissions are a particular concern in Wales; in 2002 there were nearly 330 thousand emergency admissions to hospital by Welsh residents, a rise of 22% in a decade.[45] Chronic conditions have been highlighted as a cause or contributory factor in a large proportion of emergency admissions. Two thirds of patients admitted as medical emergencies have a worsening of a chronic condition or have a chronic condition.[1] During 2001/02, 5% of all general medical and elderly medical emergency admissions in Wales were for chronic obstructive pulmonary disease.[44]

Poor management of chronic conditions can lead to avoidable emergency admissions to hospital. Admissions can be prevented if patients with a chronic condition are well-managed in primary, community and intermediate care. The Welsh Assembly Government has recognised the impact of chronic conditions on emergency admissions by its 2004/05 Service and Financial Framework (SaFF) target:

> "Health communities to work together to ensure medical emergency admissions are reduced by 5%, against the 2003-04 baseline, through the development and implementation of needs based Chronic Disease Pathways across 5 key areas, in line with central emerging policy and utilising the Quality Framework of the GMS contract.
>
> *(Communities are required to work together to ensure that appropriate primary and intermediate care services are available, in conjunction with effective primary and secondary care interface facilities, to reduce emergency admissions against the 2003-04 baseline. Achievement of this target primarily lies in the provision of admission alternative initiatives to improve the management of chronic disease).*"[46]

Future work would be necessary to explore hospitalisation data in more detail, such as patient based analyses.

4.4 Social care

The burden placed on social care services by chronic conditions is difficult to quantify. Over 90 thousand people aged 65 and over were in receipt of personal social services in 2003/4 in Wales, at a cost of around 240 million pounds.[§§, 47] It is not possible to identify the number needing care because of a chronic condition(s).

It is anticipated that there will be a substantial rise in costs of long-term care[***,33] particularly for older people. A recent report projects that expenditure would need to rise by 315% in real terms between 2000 and 2051 (from around £12.9 billion to £53.9 billion in the UK) to meet demographic pressures and rising costs, assuming that dependency rates, patterns of care and current funding arrangements remain unchanged.[48]

It has been estimated that the time spent by home care services caring for older people in their own homes would need to increase around 140%, from around 2 million to more than 4.8 million hours per week in the UK between 2000 and 2051.[48] 25% of households in the 1998 Welsh House Condition survey reported that at least one household member had a long-term illness.[49] A higher proportion (42%) of households headed by a person aged 60 or over had a person living with them with a long-term illness. This proportion increased to 55% for households headed by a person aged 85 or more.[49]

An extensive amount of informal, unpaid care[†††,50] is provided by family, friends and relatives. According to the 2001 Census, 12% of the population (over 340 thousand people) in Wales were providing unpaid care.[51] Some carers were providing a considerable amount of care; for 3% of the population it amounted to 50 or more hours per week. Carers UK have estimated that the value of carers' support in Wales to be £3.5 billion per year.[52]

[§§] Financial costs based on the returns of only 13 out of the 22 local authorities in Wales.

[***] 'Long-term care' is a general term that describes the care which people need over an extended period of time, as the result of disability, accident or illness to address both physical and mental health needs. It may require services from the NHS and/or social care, and can be provided in a range of settings, such as a NHS hospital, a care home (providing either residential or nursing care), hospice, and in people's own homes.[33]

[†††] A person is a provider to unpaid care if they give any help or support to family members, friends, neighbours or others because of long-term physical or mental health or disability, or problems related to old age. No explicit link can be created to identify whether the person being cared for has poor general health, or a limiting long-term illness.[50]

5 Wider implications

In addition to their direct impact relating to treatment and care services, chronic conditions have indirect effects. For example, there are economic implications as many people with chronic conditions are not able to work and thus have to claim state benefits. The effects of chronic conditions in the wider context are difficult to assess, but this section attempts to provide indicators or proxies.

Table 9 shows information on claimants of key sickness and/or disability benefits (see Appendix A for further details). These benefits are not restricted only to people with chronic conditions. During August 2004, Wales was the country with the greatest proportion (13.1%) of the working age population claiming a key sickness and/or disability benefit.[53] In comparison with other regions of Great Britain, Wales remains the one with the highest proportion, followed by the North East (12.4%).

Table 9. Claimants of key sickness and/or disability benefits by country: August 2004

	Wales	England	Scotland	Great Britain
Number of claimants (000s)	231	2,482	356	3,069
% of working age population	13.1	8.0	11.3	8.6

Source: Department for Work and Pensions[53]

The key sickness and/or disability benefits paid in Wales amounted to an estimated figure of £26 million per week during August 2004.[54] Trend data for Britain illustrate a consistent rise in the number of claimants; in August 1995 there were 2,702 thousand claimants, which means that there was an increase of 14% in just under a decade.[53]

There is some evidence to suggest that, in areas of high unemployment, individuals are being diverted away from unemployment benefits towards sickness benefits.[22] Thus the geographical differences in the numbers in receipt of sickness benefit, could be linked to this. The pattern is particularly evident in areas suffering from a decline in the traditional heavy industries, thus could explain the high levels of sickness reported in South Wales (figure 8).

Survey data are available on self-reported illnesses caused or made worse by work.[55] Approximately 135,000 people in Wales had a work-related illness in the last 12 months (table 10). The rate per 100 people ever employed was 6.2 in 2001/02. The available trend data show no statistically significant difference in this rate since 1990.

Table 10. Estimated number of people (ever employed) in Wales with a self-reported illness caused or made worse by work: 2001/02

	Number in thousands
Bone, joint or muscle problems	61
Breathing or lung problems	17
Stress, depression or anxiety	31
All illnesses	135

Source: Health and Safety Executive [55]

An average of 1.6 days were lost per worker in Wales in 2001/02 due to a self-reported illness caused or made worse by work, an estimated total number of 1.7 million days.[55] The largest number of days lost (990 thousand) were due to stress, depression or anxiety, followed by musculo-skeletal disorders (348 thousand days). Work-related injuries and ill health in Wales cost an estimated 50 to 90 million pounds in 2001/02.[56]

The data showed that, in comparison with the rest of Britain, the rate for Wales was higher than the averages for both England and Scotland, and for Britain as a whole (table 11). Data available for individual types of illnesses showed that the rate for Wales was also higher for breathing or lung problems.[55]

Table 11. Estimated percentage of people ever employed reporting illness caused or made worse by work: 2001/02

	All illnesses	Breathing or lung problems
Wales	6.2	0.77
England	5.4	0.37
Scotland	4.5	0.35
Great Britain	5.3	0.39

Source: Health and Safety Executive[55]

6 Conclusions

This profile presents an overview of chronic conditions in Wales based on existing data sources. It recognises some of the limitations with the data, which are variable and sometimes difficult to compare and interpret, and highlights the need for more consistent and standardised approach. Developments such as the General Medical Services Quality and Outcomes Framework (QOF) will help move towards this.

Chronic conditions have a significant impact on society with approximately one-third of adults in Wales reporting at least one chronic condition. The prevalence of chronic conditions increases with age, as does the probability of having multiple conditions. Limiting long-term illness in Wales is higher than in the rest of Britain. In addition, within Wales there are inequalities in the prevalence of reported limiting long-term illness.

Although it is difficult to predict the prevalence and impact of chronic conditions in the future, demographic trends suggest that there will be an increasing burden on health and social care services. Based on current prevalence figures for chronic conditions, within the next decade there could be 12% more adults with at least one chronic condition. The number of 65 year olds and over in the population has been projected to increase by 20%. This figure extrapolates to an increase of 70 thousand extra older people with a chronic condition.

The most frequently reported chronic conditions are arthritis followed by respiratory conditions and chronic heart conditions. It is important to note that arthritis is not currently included in the QOF. This needs to be addressed in the current review of the QOF.

Chronic conditions have varying impact on individuals' health and on the use of health and social care services. Chronic conditions can be a cause or contributory factor in emergency admissions. The Welsh Assembly Government and Local Health Boards have recognised this and efforts are now being made across Wales to strengthen chronic disease management in the community. There are also other, wider implications of chronic conditions, such as absence from work and sickness benefits.

This profile collates currently available information on chronic conditions in Wales and will help inform future planning. Further work on chronic conditions will need to be undertaken, building on this and other information as this becomes available, to provide a more complete dataset of chronic conditions across Wales.

It is recommended that the next stage undertakes further analysis, including an economic analysis, of the impact of these conditions on service delivery particularly on primary, community and secondary care services. Additional analysis of chronic conditions from the QOF and other primary care data will need to be undertaken. This work will also be supplemented later in the year by a review of service models for managing chronic conditions in the community.

Appendix A

Data sources

Population estimates

Source NS✓	**Office for National Statistics mid year estimates of population**
Period	30th June 2003
Demography	The 'usually resident' population across Britain
Notes	Data are based on the 2001 Census, and are estimated using a 'cohort component' method, allowing for births, deaths and migration.
Web link	http://www.statistics.gov.uk/statbase/Expodata/Spreadsheets/D8558.xls

Population projections

Source NS✓	**Government Actuary Department**
Period	2003 based
Demography	All persons across Britain
Web link	Http://www.gad.gov.uk/Population_Projections/Population_projections_background.htm

Chronic conditions and limiting long-term illness

Source NS✓	**Welsh Health Survey**
Period	October 2003 to March 2004 (provisional results)
Demography	Sample of adults aged 16 and over in private households in Wales. Provisional results based on 7,802 responses.
Caveats	Data are self-reported and are therefore based on individuals' perceptions. Data are subject to sampling error. Chronic conditions are known to be highest in communal establishments,[24] but these have been excluded from the survey. The results are weighted to take account of non-response and selection differentials.
Notes	**Chronic conditions:** Derived variables indicating whether the respondent has a chronic illness (and how many) from a defined list (see Appendix C). Respondents are asked whether they are 'currently being treated' for various illnesses, and if they have ever been treated for a heart attack or a stroke. **Limiting long-term illness:** Data based on the response to a question which required a Yes/No answer: 'Do you have any long-term illness, health problem or disability which limits your daily activities or the work you can do?'
Web link	http://www.wales.gov.uk/keypubstatisticsforwalesdatacollection/health/health-survey/health-survey.htm

Source NS✓	**General Household Survey**
Period	Annually since 1971 (except for 1997/8 and 1999/2000)
Demography	Sample of 13,250 adults aged 16 and over in private households in Britain, of which, around 1,000 are in Wales. For the majority of health questions, information is collected from a responsible adult about all children in the household.
Caveats	Data are self-reported and are therefore based on individuals' perceptions. Data are subject to sampling error. Chronic conditions are known to be highest in communal establishments,[24] but these have been excluded from the survey.
Notes	Respondents are asked 'Do you have any longstanding illness, disability or infirmity? By longstanding, I mean anything that has troubled you over a period of time or that is likely to affect you over a period of time?' It is left to the respondent to define what is meant by longstanding illness, disability or infirmity. Those who report a longstanding illness are then asked if this limits their activities in any way.
Web link	http://www.statistics.gov.uk/ghs

Source NS✓	**Census 2001**
Period	29th April 2001
Demography	All persons across Britain
Caveats	Data are self-reported and are therefore based on individuals' perceptions.
Notes	Data based on the response to a question which required a Yes/No answer: 'Do you have any long-term illness, health problem or disability which limits your daily activities or the work you can do?'
Web link	http://www.statistics.gov.uk/census

Source	**General Practice Morbidity Database**
Period	2000
Demography	38 practices covering 10% of the population of Wales. The age/sex distribution of the GPMD population is similar to that for Wales.
Caveats	Data are subject to sampling error. The data is dependent upon the quality of coding in practices. Not all local health boards had representation (by one or more practices).
Notes	Data collection is currently suspended pending the development of a new data collection system.
Web link	Available on the NHS Wales intranet site, or on request from Health Solutions Wales.

Hospitalisation data

Source	Healthshow: Patient Episode Database for Wales (PEDW). Also includes data from Mersey Clearinghouse (1991/1992-1996/1997) and NWCS' Clearnet (since 1997/98) for data on Welsh residents treated outside of Wales.
Period	2002
Demography	All Welsh residents admitted to hospital.
Caveats	Data from PEDW, the Mersey Clearinghouse, and Clearnet vary in quality and completeness from hospital to hospital.
Notes	The Mersey Clearinghouse was a voluntary system, and figures for Welsh residents treated outside of Wales may be low. Slight increases in numbers may be seen since the addition of data from Clearnet.
Web link	Data presented in this document are from the CD version.

Social Care

Source	Personal Social Service Performance Indicators
Period	2003-04
Demography	People in receipt of personal social services in Welsh local authorities.
Caveats	Financial data presented in this document are based on estimates from 13 local authorities only.
Notes	Data was provided to the Local Government Data Unit – Wales by local authorities using the Performance Management returns.
Web link	http://www.lgdu-wales.gov.uk/eng/Data.asp?cat=54

Key sickness and/or disability benefits

Source NS✓	Department of Work and Pensions: sickness and disability claimant information
Period	August 2004
Demography	5% sample of claimants.
Caveats	Data are subject to sampling error. Expenditure data for these benefits are not available for Wales. The expenditure data presented in this document are estimated as the average amount multiplied by the caseload, and is based on the main benefit claimed only. Benefits are not restricted to those only claiming for a chronic condition. Some, but not all, of these benefit claims will be as a result of a chronic condition.
Notes	Benefits included are: - Incapacity Benefit. People below state pension age who are incapable of work because of sickness or disability for at least 4 days in a row including weekends and public holidays. It is paid when statutory sick pay has ended or the person is not able to claim it.

	- Severe Disablement Allowance. Persons aged 16-64 who have been unable to work for at least 28 weeks in a row because of illness or disability, and are unable to get Incapacity Benefit because they have not paid enough National Insurance contributions. - Disability Living Allowance. Persons aged 16 and over who needed help for 3 months because of a severe physical or mental illness or disability, and likely to need it for at least another 6 months. Claims must be made before the age of 65 years, but persons receiving DLA when they turn 65 can continue to receive the benefit for as long as required. - Income Support with a Disability Premium. People under 60 on a low income and with savings under £8,000.
Web link	http://www.dwp.gov.uk/asd

Work related illness

Source NS✓	Health and Safety Executive: Self-reported Work-related Illness (SWI) survey
Period	2001/02 (questions were asked during December 2001, January and February 2002 and covered the 12 months prior to interview)
Demography	Adults aged 16 and over in private households in Britain who were currently employed or who had been employed in the past.
Caveats	Sample based on 98 thousand adults across Britain. Data are subject to sampling error. Data are based on self-reported illness, giving estimates of the number of people who have conditions that they think have been caused or made worse by work (regardless of whether they have been seen by doctors.)
Notes	Survey is a module of the Labour Force Survey. Sample is selected using a systematic random sample design, and data are weighted according to age, sex and region of residence.
Web link	http://www.hse.gov.uk/statistics http://www.statistics.gov.uk for Labour Force Survey

NS✓ = Illustrates that the data are 'National Statistics.'

All National Statistics are produced in accordance with the 'Framework for National Statistics' and comply with the principles embodied in the 'National Statistics Code of Practice'.[57] They must meet certain criteria, for example, be fit for purpose, methodologically sound, politically independent and transparently produced.

Appendix B

Data issues – Primary care

At a General Medical Practice level there has to date been little systematic collection of data, apart from that collected as a by-product of health authority audit systems which doubled as payments support for the old General Medical Services contract. This information did not have universal geographical coverage, nor consistent collection criteria and methods. Prevalence rates reported by practices showed very wide variation. Sources of primary care data include:

- **General Medical Practice Morbidity Database (GPMD)**

The GPMD downloaded anonymous clinical data from volunteer practices which covered over 10% of the population of Wales, reflecting the overall Welsh age-sex register. It had the advantage that data generated in the process of clinical care was directly downloaded to a single secure database for Wales, housed in Health Solutions Wales. This project has been temporarily suspended pending a review.

- **Quality and Outcomes Framework (QOF)**

From 1st April 2004, a new General Medical Services contract was brought into effect. The contract has a number of aims, including helping to improve the quality and range of services for patients.[58] The Quality and Outcomes Framework (QOF) forms part of the new contract. It is a voluntary system but it provides financial rewards for good practice.[59] There are 4 components of QOF, one of which is clinical standards. Clinical indicators data can be presented by practices for 10 disease categories including: coronary heart disease, stroke, diabetes, chronic obstructive pulmonary disease and asthma.

- **Clinical Audit**

Another consequence of the new GMS contract has been the implementation of Clinical Audit into all practices in Wales. It provides a tool for practices to analyse the data held on patients with coronary heart disease and diabetes. It provides a range of indicators linked to the National Service Frameworks' Clinical Standards. Data from this is submitted to Local Health Boards and it is hoped that this can be collated at a national level to provide some comparative geographical analysis.

- **Disease registers**

Individual general practices have been developing disease registers over a number of years and recently there have been improvements in data quality through the impact of data quality initiatives and the new General Medical Services contract.

Appendix C

List of conditions

Welsh Health Survey (October 2003-March 2004) coding frame for 'chronic conditions'

The third column of the table indicates whether the category listed is included in the definition of chronic conditions used in this document for data sourced from the Welsh Health Survey.

	Description	Included
1	Cancer (neoplasm) including lumps, masses, tumours and growths and benign (non-malignant) lumps and cysts	
2	Diabetes	4
3	Other endocrine/metabolic	
4	Mental illness/anxiety/depression/nerves (nes)	
5	Mental disability	
6	Epilepsy/seizures/convulsions	4
7	Migraine/headaches	
8	Other problems of nervous system	4
9	Cataract/poor eye sight/blindness	
10	Other eye complaints	
11	Poor hearing/deafness	
12	Tinnitus/noises in the ear	
13	Meniere's disease/ear complaints causing balance problems	
14	Other ear complaints	
15	Stroke/cerebral haemorrhage/cerebral thrombosis	4
16	Heart attack/angina	4
17	Hypertension/high blood pressure/blood pressure (nes)	
18	Other heart problems	4
19	Piles/haemorrhoids	
20	Varicose veins/phlebitis in lower extremities	
21	Other blood vessels/embolic	
22	Bronchitis/emphysema	4
23	Asthma	4
24	Hayfever	4
25	Other respiratory complaints	4
26	Stomach ulcer/ulcer (nes)/abdominal hernia/rupture	
27	Other digestive complaints (stomach, liver, pancreas, bile ducts, small intestine - duodenum, jejunum, and ileum)	
28	Complaints of bowel/colon (large intestine, caecum, bowel, colon, rectum)	
29	Complaints of teeth/mouth/tongue	
30	Kidney complaints	
31	Urinary tract infection	
32	Other bladder problems/incontinence	
33	Reproductive system disorders	
34	Arthritis/rheumatism/fibrositis	4
35	Back problems/slipped disc/spine/neck	
36	Other problems of bones/joints/muscles	4
37	Infectious and parasitic disease	
38	Disorders of blood and blood forming organs	
39	Skin complaints	
40	Other complaints	
41	Unclassifiable (no other codable complaint)	
42	Complaint no longer present	

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