



# Herefordshire Health and Well-being Survey 2011 Final Report (Version 1.2)

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# 1. Key Facts

This report presents the detailed findings of the 2011 Herefordshire Health and Well-Being Survey. The survey is a source of information about the health of people in Herefordshire, the extent to which they use health services and their attitude towards some of the lifestyle factors that can affect their health.

The survey was based on a sample of the general adult population (aged 16 years and over) living in private households in Herefordshire.

The main chapters of the report focus on:

- health status, illnesses and other conditions
- health-related lifestyle
- health service use

This summary presents key findings from the main chapters of the report. For further information chapters 4 to 6 each begin with a summary of the main findings presented in the body of the text.

# Health status, illnesses and other conditions

- Over half of adults reported that their health in general was excellent or very good, while less than a fifth reported fair or poor health.
- Men enjoy significantly better mental health than women.
- Between a fifth and a quarter of adults reported having a limiting long-term illness.
- Almost 20% of adults are currently being treated for high blood pressure.

# **Health-related lifestyle**

- Over 1 in 5 adults reported that they currently smoke and almost a quarter of adult non-smokers reported being regularly exposed to other people's tobacco smoke indoors or outdoors.
- Around 2 in 5 adults reported drinking above the recommended guidelines on at least one day in the past week, including around a fifth who reported binge drinking<sup>1</sup>.
- 36% of adults reported eating the recommended five or more portions of fruit and vegetables on the previous day and around 1 in 3 adults reported meeting the guidelines for physical activity<sup>2</sup> in the past week.

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<sup>&</sup>lt;sup>1</sup> See Glossary (Appendix A) for definition)

<sup>&</sup>lt;sup>2</sup> See Glossary (Appendix A) for definition)

- Around 55% of adults were classified as overweight or obese<sup>3</sup>; 23% of women were classified as obese compared with 18% of men.
- In general, men were significantly more likely to smoke and to drink alcohol at above guideline levels and were significantly more likely to be either overweight or obese. Yet they are also significantly more likely to meet physical activity guidelines.

#### Health service use

- 15% of adults reported that they had talked to a GP and 9% to a practice nurse about their own health in the past two weeks.
- 8% of adults reported being in hospital as an inpatient in the past 12 months, 8% as a day patient, and 27% attended as an outpatient.
- Around 16% of adults had attended Casualty/A&E departments in the past 12 months. 4% of adults had attended hospital in the last 3 months due to an accidental injury or poisoning.
- 48% of adults reported being on regular medicine prescribed by their doctor.

<sup>&</sup>lt;sup>3</sup> See Glossary (Appendix A) for definition)

# 2. INTRODUCTION

#### 2.1 BACKGROUND

The Herefordshire Health and Well-being Survey (HH&WS) was conducted in two phases. Phase I ran from 8<sup>th</sup> November 2010 until 31<sup>st</sup> March 2011 and Phase 2 from 1st April 2011 to 30<sup>th</sup> September 2011. The Survey was designed to generate information on the health, well-being and lifestyle of the residents of Herefordshire aged 16 years and over. This report presents the results of both phases of the Survey and provides a valuable 'snapshot' of various aspects of the health and well-being of Herefordshire's residents. The data can be used to:

- provide estimates of health and health-related lifestyle for Herefordshire residents:
- enable analysts to examine differences in health and health-related lifestyle between population sub-groups by place and person;
- provide evidence to inform policies and strategies for promoting better health;
- provide a measurement of need for health care for resource allocation;
- inform the Joint Strategic Needs Assessment produced jointly by the NHS Herefordshire and Herefordshire Council.

The Survey was commissioned in summer 2010 by NHS Herefordshire and Herefordshire Council. The project management steering group included representatives from the Public Health Department and from Herefordshire Council Research Team, and the Public Experience Manager. Approval for the Survey was granted by the NHS National Research Ethics Service South Birmingham Research Ethics Committee. The Survey was conducted by NatCen on behalf of NHS Herefordshire and Herefordshire Council.

#### 2.2 OVERVIEW OF SURVEY DESIGN

The Survey was based on a sample of adults aged 16 years and over living in private households throughout the County. A sample of addresses was extracted from the small user Postcode Address File (PAF), which is an up to date list of all known addresses in the United Kingdom and is maintained by the Post Office. The version used for this survey did not include residential institutions, which are home to about 1.6% of the 16+ population in Herefordshire. People living in institutions - particularly the elderly - are likely to experience poorer health than residents in private households. For this reason, it should be borne in mind that the results of this survey apply only to private household residents and may well underestimate the prevalence of certain conditions in the population as a whole.

Each address selected for inclusion in the sample was visited by NatCen field staff; some addresses were found not to be private households, or were of buildings that were either derelict, or empty, or second homes, or not yet built. These were all ineligible for further consideration. If an address contained three or less households then all households were included. If an address contained more than three resident households then three would be randomly selected for the Survey using a standard social survey technique called a Kish Grid. This was to prevent too much geographical or social "clumping" that may lead to bias in survey results. The majority of addresses related to homes with one resident private household. All selected households were then approached by the field staff for further consideration.

Attempts were made to collect information both on the household and on each resident aged 16 or over living within that household. First, the field staff completed a survey form with information gathered during a face-to-face interview with a responsible individual in the household. Self-completion questionnaires were then left for each adult aged over 16 years asking questions about health, health service use and lifestyle. The questionnaires were collected by the interviewer at a subsequent date. As the personal questionnaires were reliant on self-completion, the responses reflect the individual's own views about their health status rather than any clinical assessment of their condition. The topics covered by the two questionnaires are listed in Tables 2.1a, 2.1b and 2.2.

The survey results were weighted to take into account differential non-response<sup>4</sup> and differences between the age / gender profile of the sample population and that of the underlying population of the County. Weighting is discussed in more detail in section 7.6.

During the fieldwork across both phases, 1178 eligible households were selected, of which 943 (80%) eventually took part in the Survey. The number of individuals aged 16+ identified within these households was 1,765, of whom 1,578 (89%) returned completed questionnaires.

Further details of the survey methodology are given in chapter 7 of this report.

#### 2.3 INFORMATION GATHERED BY THE SURVEY

Two guestionnaires formed the main survey tools. These can be seen at Appendix C.

The first questionnaire was conducted face to face with a responsible adult from the household. Some basic administrative details needed for the conduct of the survey were collected; these are not detailed here. Then some basic information about the composition of the household was requested. These questions are listed in Table 2.1a.

Table 2.1a: Information gathered about the household

Information		Notes				
For oach	Sex					
For each household	Age	This procedure identified				
member	Years resident at this address	individuals eligible for				
aged 16+	General health	participation in the Survey				
aged 101	Need for care					
For each	Sex	Children ware evaluded from the				
household	Age	Children were excluded from the Survey but their existence within				
member	Years resident at this address	the household was used to				
aged under	General health	determine the household type				
16	Need for care	determine the nodseriold type				
	Tenure of the dwelling					
For the	Person responsible for paying rent	To establish which household				
household	or mortgage	member is the household				
	Person with highest income	reference person (HRP) <sup>5</sup>				

<sup>&</sup>lt;sup>4</sup> It is a common feature of social surveys that propensity to respond or participate is related to an individual's age, gender and socio-economic group. Older, well-educated, wealthy females are much more likely to respond than younger, poorly educated, males of low economic status.

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<sup>&</sup>lt;sup>5</sup> See Glossary (Appendix A).

Using the information gathered above the household representative person (HRP) was identified. Further questions were asked about this person to establish the socioeconomic status of the household. These questions are listed in Table 2.1b.

Table 2.1b: Topics asked about the Household Reference Person

Information		Notes				
	Employment status  Length of time out of work if unemployed	To establish the National Statistics Socio-Economic Classification				
	Length of time since last worked for HRP who is retired or otherwise economically inactive	(NS-SEC) <sup>6</sup> of the HRP.  The main groups are:				
For the Household	What the organisation / firm HRP worked for did.	<ul><li>Managerial and professional,</li><li>Intermediate occupations,</li></ul>				
Reference Person	Job title  Qualifications / training required for the job	small employers and own account workers  • Lower supervisory and technical				
	Whether employed or self- employed	occupations • Semi-routine and routine				
	Management and supervisory responsibilities  Part time or full time	occupations     Never worked / unemployed /     students / not classified				

The questions asked about the health and well-being of each individual aged 16 and over in the household via the self-completion questionnaire are shown in Table 2.2.

Table 2.2: Topics covered in questions on the self-completion form

Topic	Subjects
	Contact with GP in previous fortnight
	Contact with practice nurse in previous fortnight
	Use of Casualty / A&E in past twelve months
	NHS & private outpatient treatment in past twelve months
	NHS & private day patient treatment in past twelve months
	NHS & private inpatient treatment in past twelve months
	Use of NHS & private dentist services in past twelve months
Use of	Use of NHS & private chiropodist services in past twelve months
various	Use of NHS & private physiotherapist services in past twelve months
health	Use of NHS & private osteopath / chiropractor services in past twelve
services	months  Lieu of entirion convices in last twelve months
	Use of optician services in last twelve months
	Use of health visitor, district nurse, community nurse services in last
	twelve months
	Use of GP out of hours services in last twelve months
	Use of NHS Direct in last twelve months
	Use of pharmacist in last twelve months
	Flu vaccination in last twelve months <sup>7</sup>

<sup>&</sup>lt;sup>6</sup> See Glossary (Appendix A)

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<sup>&</sup>lt;sup>7</sup> The results of the question about flu vaccination are not included in this report because of small numbers as a result of flu vaccine only being offered to eligible groups of people.

Use of medicines	Purchase of conventional, herbal, homeopathic medicines or mineral / vitamin supplements in past four weeks				
medicines	Regular medication on prescription				
	Ever had treatment for heart attack, cancer or stroke				
Chronic	Current treatment status for angina, heart failure, high blood pressure, other heart condition, asthma, emphysema, pleurisy, chronic bronchitis, other respiratory illness				
illnesses and conditions	Current treatment status for depression, anxiety, other mental illness, arthritis, back pain, epilepsy or fits, varicose veins				
	Diabetes status and means of control				
	Whether being treated for other long term illness or condition				
_	Accidents, injuries and poisoning in past three months				
Accidents,	Nature of incident				
injuries and	Location of incident				
poisoning	Food poisoning in past three months and whether doctor consulted				
	· · · · · · · · · · · · · · · · · · ·				
Eyesight,	Eyesight				
hearing &	Hearing and hearing aids				
dentition	Number of natural teeth				
	Own classification of health status				
	Changes in health over past twelve months				
	Limitations of health on vigorous activities, housework, carrying				
Health &	groceries, climbing stairs, flexibility, walking, bathing & dressing				
Well-being	Physical health in past four weeks and impact on regular activities				
(using	Emotional health in past four weeks and impact on regular activities				
SF36 <sup>8</sup> )	Impact of physical and emotional health on social activities in past				
01 00 )	four weeks				
	Pain in past four weeks				
	Depression and anxiety in past four weeks				
	Perceptions of general health and limiting long term illness				
	Past and present smoking habits				
Smoking	Exposure to cigarette smoke				
Silloking	Changes in smoking habits in past twelve months				
	Reasons for trying to give up smoking (or not)				
	Alcoholic drinking frequency in past 12 months				
Drinking	Past drinker or not				
	Consumption of alcohol in past week				
Fruit & vegetable consumption	Amount of various types of fruit and vegetables eaten on previous day				
Exercise	Amount of light, moderate, and vigorous exercise in past week				
Carers	Amount of care given				
	Gender				
D	Age				
Biometric	Current pregnancy status				
data	Height				
	Weight				
Socio-	Ethnic group				
demographic	Economic activity				
and	Highest level of educational qualification				
economic	·				
data	Professional qualifications				
L	1				

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 $<sup>^{8}</sup>$  Explained in Section 4.1 of this report

#### 2.4 KEY QUALITY INFORMATION

Several features of the data collection and analysis need to be borne in mind when interpreting the results of the Survey.

- 1. A small proportion of people were ineligible for inclusion in the Survey as they lived at addresses not listed on the small user PAF post code address file. It should be noted that people resident in care homes are generally likely to be in poorer health than those in private households.
- 2. The data collected on the Survey forms relies on self-completion and individual self-assessment of health status rather than on professional clinical judgement.
- 3. Survey results are weighted to take into account unequal selection of different gender / age groups and differential non-response. Weights are used to ensure that the age and sex distribution of the sample population matches that of the underlying 16+ years private household population of Herefordshire.
- 4. Not every question was answered by every person in the sample and the percentages presented in this report are based on the number who answered the question under discussion. Nil answers have been omitted from all tables and analysis. Usually answers are missing because respondents could not or would not answer a particular question, or the routing of the questions was such that they were not expected to answer.
- 5. There is always a degree of uncertainty about the accuracy of a sample estimate of prevalence and whether it reflects the true value in the underlying population. Therefore, a range of likely values is often presented with a prevalence figure where it is either considered useful to highlight statistically significant variation (eg between sex-specific rates of prevalence) or to illustrate a relatively wide range of likely values and set the sample rate in some context. This range of values is the 95% confidence interval, shown as (CI xx xx%). Two modes of calculating these have been used, a standard calculation which also takes into account the way the Survey was designed, and a method called Wilson Score a methodology frequently used in medical statistics. In practice, they give very similar results. Further details are given in Section 7.
- 6. Rounding of percentages may result in figures that do not exactly equal 100%. Some percentage figures taken from the Tabular Report supplied by NatCen are presented in rounded form. Others, taken from the Technical Report (also supplied by NatCen or calculated independently), are shown to one decimal place.
- 7. As part of a quality assurance process, various checks were made on the validity of the results of the survey. This survey is the first of its kind carried out in Herefordshire and the results cannot be compared directly with similar work to check for plausibility but, where possible, results were compared with those of the Welsh Health Survey 2010<sup>9</sup> which uses the same questionnaire and methodology across a much larger sample of 15,000 adults. In all cases, the results of the

<sup>&</sup>lt;sup>9</sup> The Welsh Health Survey 2010 report can be accessed at http://wales.gov.uk/topics/statistics/publications/healthsurvey2010/?lang=en

Herefordshire survey were sufficiently similar to those of the Welsh survey to increase confidence in their reliability. Although other data on prevalence of disease and lifestyle behaviours in Herefordshire do exist, they are not comprehensive and were collected by different methodologies for different purposes, eg payments to GPs. Therefore, it is felt that direct comparisons with the survey outcomes would be inappropriate.

8. The data for each survey member in the sample was given a weight to compensate for any under- or over-representation of particular socio-demographic groups in the sample when calculating the prevalence within the population of a particular disease or lifestyle behaviour. The rationale for applying weights and the methodology for calculating them are described in Section 7. Checks were made on the weights attached to each sample member to ensure that the health and lifestyle behaviour of any individual was not given undue importance in estimating averages or prevalence for the population as a whole.

# 3. DEMOGRAPHIC CHARACTERISTICS OF HEREFORDSHIRE AND THE SURVEY

#### 3.1 POPULATION OF HEREFORDSHIRE

A variety of statistics about the socio-demographic characteristics of the survey participants and the households in which they reside were collected as part of the study. These are listed in Tables 3.1 and 3.2. The socio-demographic profile of the sample can be compared with other known data to ensure that the sample is representative of the private household population of Herefordshire. The best comprehensive range of statistics about the demographic and socio-economic characteristics of the population, including the total population of Herefordshire, is collected every ten years in the Census, under the auspices of the Office for National Statistics (ONS). The most recent Census took place in March 2011 and detailed results will not be available until 2013. When they are released it will be possible to compare the sample profile with that of Herefordshire's private household population.

In between the census years, ONS update the estimated total population of the County on an annual basis with an effective date of June 30<sup>th</sup>, mid-year. The estimated population is broken down by gender and five year age bands. These mid-year estimates are released about twelve months after the year they relate to. So, although this survey took place in Autumn 2010, the latest set of population estimates available at the time was mid-year 2010.

The Survey was concerned with the health and well-being of the **private household population** (**PHH**) aged 16 years and over. The ONS mid-year estimated population is a measure of <u>all</u> residents including those living in communal establishments as well as those living in private households. The only available breakdown of the total residents of the County into private household residents and those living in communal establishments is from the Census of population – and the latest available Census information at the time of this survey was from the 2001 Census.

Most of the communal establishment population aged 16+ years in Herefordshire live in nursing or care homes. In other parts of the country prisons, university halls of residence and other institutions may house substantial numbers of non-private household population.

The 2010 mid-year estimates of the total population of Herefordshire were adjusted by the Herefordshire Council Research Team to remove the estimated communal establishment population. Assumptions were made that:

- 1. the demographic profile of persons aged under 75 resident in communal establishments would not have changed since the 2001 Census either in total number, gender breakdown, or age breakdown;
- 2. the proportions of older people, in age groups 75 and over resident in communal establishments would not have changed since the 2001 Census.

The resultant estimate of the total PHH in 2010 was 146,158, broken down by gender and age group is shown in table 3.1.

Table 3.1: Estimated PHH, mid-2010

Age Group	16-24	25-34	35-44	45-54	55-64	65-74	75+	Total 16+
Male	8,526	7,916	11,195	12,901	12,939	10,070	7,388	70,935
Female	8,044	7,703	11,906	13,331	13,495	10,495	10,249	75,223
Total	16,570	15,619	23,101	26,232	26,434	20,565	17,637	146,158

#### 3.2 SAMPLE POPULATION

The age and gender breakdown of the sample is shown in table 3.2. It can be seen that the different gender / age groups are not represented equally in the sample. For example only 0.89% of 16-24 year old males are represented compared with 1.30% of females over 65 years. Weighting was used to correct any bias arising from the differences in distribution of gender and age groups between the sample and the underlying private household population from which the sample was drawn. The weighting methodology is described in Section 7.6.

Table 3.2: Age and gender breakdown of the sample and proportion of underlying Private Household Population

	accitora i oparation					
Age Group		16-24	25-44	45-64	65+	Total 16+
Mala	Number in sample	76	163	268	208	715
Male	Proportion of PHH in sample	0.89%	0.85%	1.04%	1.19%	
_	Number in sample	81	204	309	269	863
Female	Proportion of PHH in sample	1.01%	1.04%	1.15%	1.30%	
Total		157	367	577	477	1578

# 4. HEALTH STATUS, ILLNESSES AND OTHER CONDITIONS

#### 4.1 SUMMARY

- Over half of adults reported that their health in general was excellent or very good, while less than a fifth reported fair or poor health.
- Mean physical and mental health status scores for women were lower than those for men, indicating poorer health and well-being among women. Men enjoy significantly better mental health than women.
- Between a fifth and a quarter of adults reported having a limiting long-term illness.
- Around 20% of adults reported currently being treated for high blood pressure, 11% for a respiratory illness, 8% for a mental illness, 8% for a heart condition, 8% for arthritis, 8% for back pain and 7% for diabetes.
- 5% of adults reported receiving treatment for cancer at some point in their lives.

# 4.2 MENTAL AND PHYSICAL WELL-BEING (SF-36 version 2®)

The questionnaire included a standard set of 36 health and well-being questions known as SF-36 v.2®. The responses to these questions were then processed to produce two summary scores, the Physical Component Summary (PCS) score and the Mental Component Summary (MCS) score. These measure physical and mental well-being respectively. The population "norm" for each is estimated to be 50; higher scores indicate better health and well-being and lower scores suggest relatively poor health and well-being.

The full list of questions is included in the questionnaire attached at Appendix C. In summary, the questions covered:

- categories of general health (from excellent to poor);
- changes in general health over the previous twelve months;
- limitations imposed by health problems in undertaking vigorous physical activities, moderate activities, lifting and carrying groceries, climbing stairs, bending, kneeling and stooping, walking, bathing or dressing;
- limitations on accomplishments at work and other activities in the past four weeks caused by physical health problems;
- limitations on accomplishments at work and other activities in the past four weeks caused by emotional problems;

- degree to which physical health and emotional problems have interfered with social activities in the past four weeks;
- experience of bodily pain and the impact of pain on normal work activities in the past four weeks;
- prevalence of various mood states in the past four weeks;
- perception of health in comparison with that of other people;
- expectations of change in health.

Although there were 1,578 individuals in the sample, not all answered all the SF-36 v.2 questions completely and it was not possible to calculate the PCS and the MCS in these cases. It was only possible to calculate PCS for 1,492 individuals and MCS for 1,491 individuals.

The estimated PCS and MCS scores for males and females (and All) are shown in figure 4.1.

- In terms of the PCS, there is a small difference between males (50.4; CI 49.5 to 51.2) and females (49.5; CI 48.7 to 50.6), but both are close to the population "norm" of 50.
- Whereas with regards to MCS the males had a higher score 52.5 (CI 51.7 to 53.2) than the population "norm" of 50, and females had a score of 49.8 (CI 49.0 to 50.6). These results suggest better mental wellbeing for males.

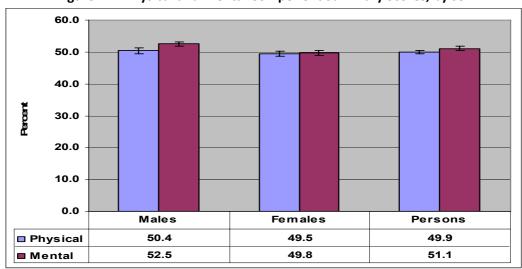


Figure 4.1: Physical and Mental Component Summary Scores, by sex

#### Physical Component Summary Score, by age group and sex

• In general, although declining slowly throughout adulthood, physical capacity scores are above the norm of 50, for both genders until their mid-50s (figure 4.2).

From 55-59 onwards male PCS is below the norm and from 60-64 onwards female PCS is below the norm. However, male PCS is higher than female PCS for the young retired age group, 65-69 and 70-74 (figure 4.2).

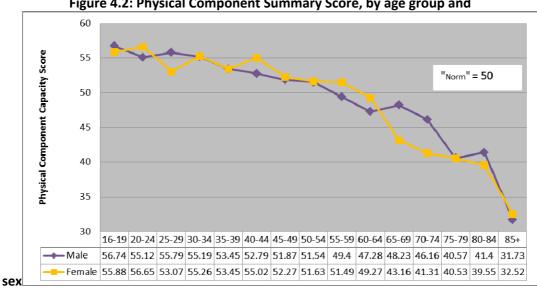
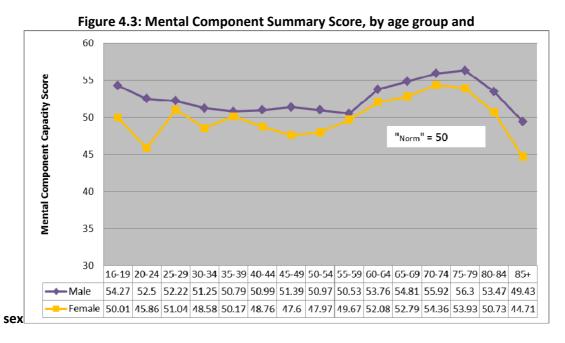


Figure 4.2: Physical Component Summary Score, by age group and

#### Mental Component Summary Score, by age group and sex

- The male MCS is consistently higher than the female for all age groups. The pattern of change with age is the same for both sexes; relatively constant until late middle age (55-59) then increasing in early old age to a peak at 75-79 before falling rapidly in extreme old age (figure 4.3).
- The average MCS scores for younger females show some peaks and troughs - these may be due to sampling errors.



The rest of this section presents a summary of the answers to the questions underlying the calculation of the PCS and MCS scores. The results for each of the 36 SF36v2 questions are based on the data for all who answered each question, not just those who answered all 36 questions.

When adults were asked about their health;

- over half of them (53%) classified their health as "very good" or "excellent", and
- nearly three-quarters (73%) thought that there had been no change in their health over the previous twelve months (figure 4.4).

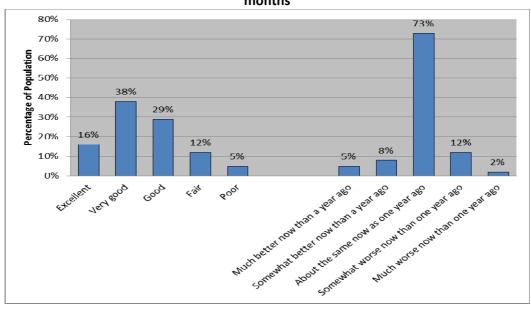


Figure 4.4: Self reported current health status and change in previous 12 months

When asked whether health problems limited their ability to undertake a range of ten normal daily activities involving walking, climbing stairs or carrying;

- The majority of adults were able to carry out moderate activities (such as hoovering, playing golf), to lift and carry groceries, to walk a mile, to climb several flights of stairs and to bathe and dress themselves.
- Just over half (46%) were able to undertake vigorous activities such as running, lifting heavy objects or partaking in strenuous sports.
- Almost a quarter of adults were prevented to some extent from undertaking even moderate activity.
- 12% were limited in their ability to bathe and dress themselves.

The full set of results is shown in figure 4.5.

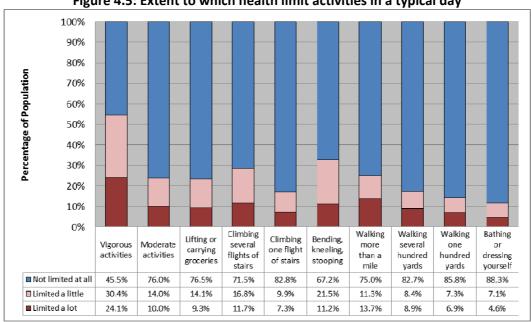


Figure 4.5: Extent to which health limit activities in a typical day

When asked about the amount of the time in the past four weeks in which physical health had interfered with work or regular daily activities, the options for responding ranged from "All of the time" to "None of the time";

- 9-12% indicated that they faced limitations all or most of the time in the amount of time spent on work/activities, in what they could accomplish, in the kind of work undertaken or in actually performing the work/activities.
- The majority were not limited at all in the amount of time spent on work or other activities (73%), or in accomplishing what they would like (65%), or in the kind of work undertaken (70%) and 70% had no difficulty in performing work or other activities.

In Figure 4.6 the full set of results on the amount of time physical health problems had interfered with normal work or daily activities.

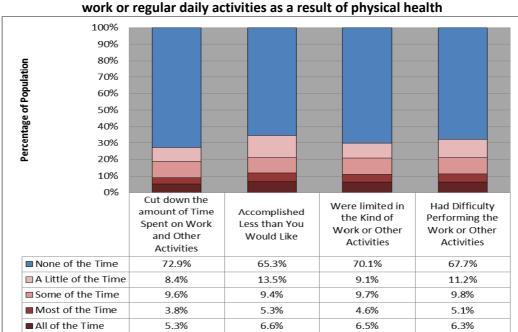


Figure 4.6: Amount of time in the previous four weeks that there were problems with work or regular daily activities as a result of physical health

When asked about the amount of the time in the past four weeks in which emotional problems, such as depression or anxiety, had interfered with work or regular daily activities, the options for responding ranged from "All of the time" to "None of the time":

- Well over three-quarters of adults indicated that emotional problems did not interfere with the amount of time they spent on work or other activities (82%), or with what they accomplished (77%) or with the care they took over their work and other activities (81%).
- 4%-7% indicated that they faced limitations all or most of the time in the amount of time spent on work/activities (5%), in what they could accomplish (7%), or in how carefully they did their work(4%).

The full set of results is shown in figure 4.7.

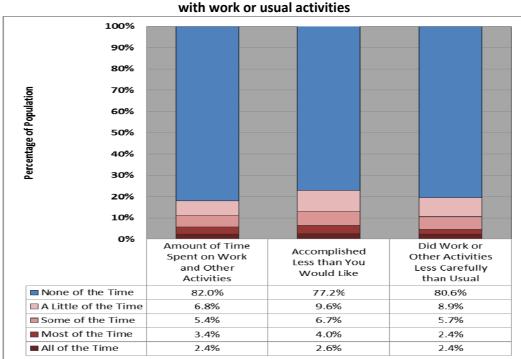


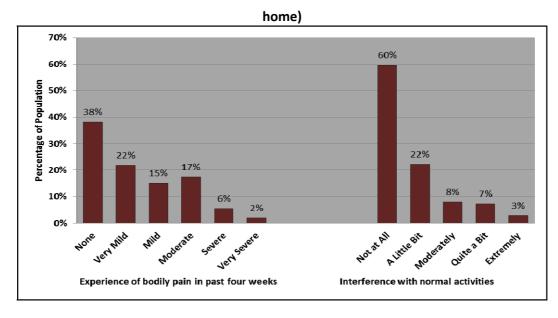
Figure 4.7: Amount of time in previous four weeks that emotional problems interfered with work or usual activities

When asked how much body pain you had in past four weeks and how much it interfered with normal work:

- 75% reported having experienced no more than mild bodily pain in the past four weeks
- 61% agreed that bodily pain had not interfered with their normal work or other activities.

The full set of results is shown in figure 4.8.

Figure 4.8: Experience of bodily pain in previous 4 weeks and extent to which pain interfered with normal work (both inside and outside the

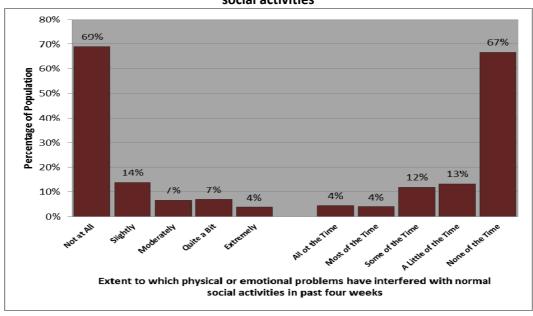


On a question of physical health or emotional problems interfering with normal social activities;

- over two-thirds of the adults had not experienced sufficient physical health or emotional problems to cause interference with normal social activities in the previous four weeks.
- 4 % reported that social life was interfered with all the time.

The full set of results is shown in figure 4.9.

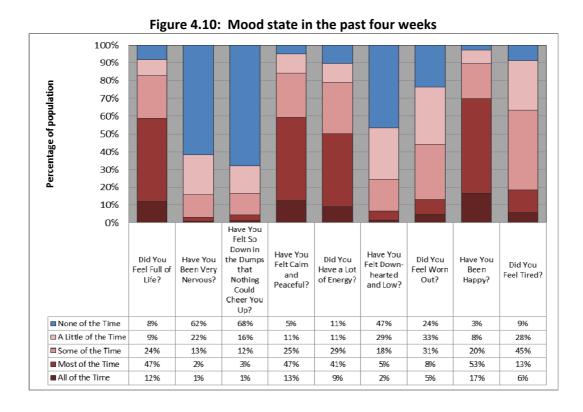
Figure 4.9: Extent to which physical health or emotional problems interfered with normal social activities



Respondents were asked a series of nine questions relating to their moods in the past four weeks;

- Over half (59%) felt 'full of life' all or most of the time but 8% did not feel 'full of life' at all. Energy wise,
- 50% had 'a lot of energy' all or most of the time, but 11% did not feel this way any of the time.
- Some people (3%) had not been happy any of the time; at the other end of the spectrum 70% had been happy at least most, if not all, of the time.
- Over half (60%) had felt 'calm and peaceful' most or all of the time, but 5% reported they had not felt like this any of the time.
- 3% had felt 'very nervous' all or most of the time but 62% had not felt 'very nervous' any of the time.
- Feeling 'downhearted and low' had afflicted 7% of individuals all or most of the time. Just under half (46%) had not felt this way any of the time.
- 4% had been 'so down in the dumps that nothing could cheer you up' either all or most of the time but 68% had not experienced this mood at all.
- Feeling 'tired' or 'worn' out was not uncommon. 13% said they felt 'worn out' all or most of the time and 19% had been 'tired' for all or most of the time.

The full set of results, including proportions and bar charts, is shown in figure 4.10.



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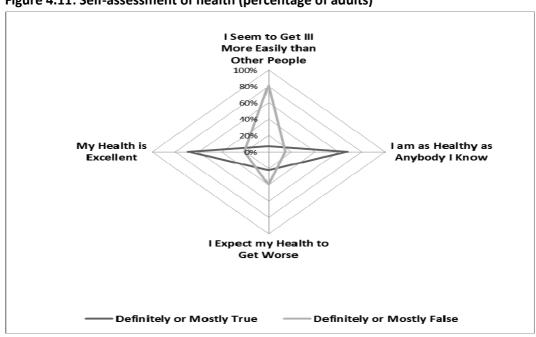
The last four questions of the SF-36 v.2 related to the respondent's individual self-assessment of their health in comparison with anybody they knew, whether they agreed their health was excellent and their expectations of worsening health. The results are detailed in Table 4.2 and summarised graphically in figure 4.11.

- The majority disagreed with the statement that they got ill more easily than other people
- 68% thought that it was true to say that they were as healthy as anybody they knew.
- Almost 70% thought it was definitely or mostly true to say that their health was excellent.
- Nearly a quarter thought their health would decline in the future.

Table 4.2: Assessment of current health compared with others and expectations of change

Statement	Definitely True	Mostly True	Don't Know	Mostly False	Definitely False
I seem to get ill more easily than other people	2%	5%	12%	19%	62%
I am as healthy as anybody I know	32%	36%	17%	7%	8%
I expect my health to get worse	8%	14%	38%	12%	28%
My health is excellent	22%	47%	10%	10%	11%

Figure 4.11: Self-assessment of health (percentage of adults)



#### 4.3 ILLNESSES AND OTHER CONDITIONS

The questionnaire asked respondents a series of questions about whether they had ever been treated for, or were currently receiving treatment for, a variety of specific diseases and conditions.

# Heart conditions and high blood pressure

- Around 20% of adults reported currently being treated for high blood pressure: 18% of men and 20% of women (figure 4.12).
- 8% of adults reported being currently treated for a heart condition (excluding high blood pressure; 10.1% of men and 6.6% of women (figure 4.12).
- 3% of adults reported ever having been treated for a heart attack.
- 3% of adults reported currently being treated for angina, 1% for heart failure, and 4% for any other form of heart condition.

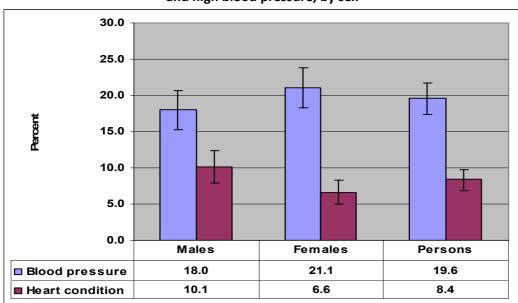


Figure 4.12: Percentage of adults who reported being treated for a heart condition, and high blood pressure, by sex

### Respiratory illnesses

- Around 11% of adults reported currently being treated for any form of respiratory illness.
- 8% of adults reported currently being treated for asthma.

 2% of adults reported currently being treated for either emphysema or bronchitis and 3% for any other form of respiratory illness.

#### **Mental illnesses**

- Overall around 8% of adults reported currently being treated for any form of mental illness.
- Women were significantly more likely to be receiving treatment for a mental illness – 10.6% compared to 5.9% of men (figure 4.13)
- 6% of adults reported currently being treated for depression and 5% for anxiety.

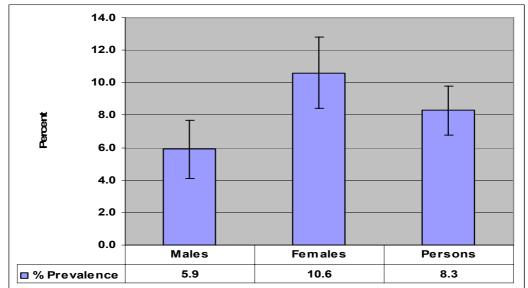


Figure 4.13: Percentage of adults who reported being treated for a mental illness, by sex

# **Limiting long-term illness**

Limiting long-term illness is defined as a health problem or disability which limits daily activities or work (including problems arising from old age).

- Between a fifth and a quarter of adults reported having a limiting long-term illness with no significant variation by sex (figure 4.14).
- Adults who reported having a limiting long-term illness were asked to specify
  the type of illness which was the main cause of their limitation. By far the
  most common form of illness specified was musculoskeletal problems (49%
  of those with a limiting long-term illness), followed by nervous system
  disorders (9%) and heart and circulatory system diseases (8%).

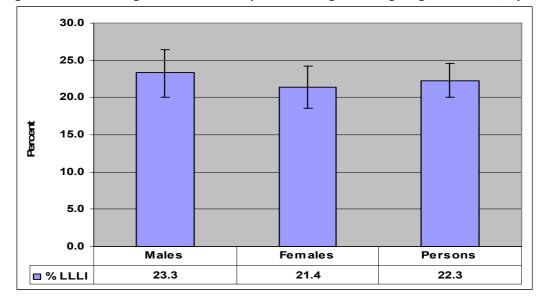


Figure 4.14: Percentage of adults who reported having a limiting long-term illness, by sex

#### Other illnesses

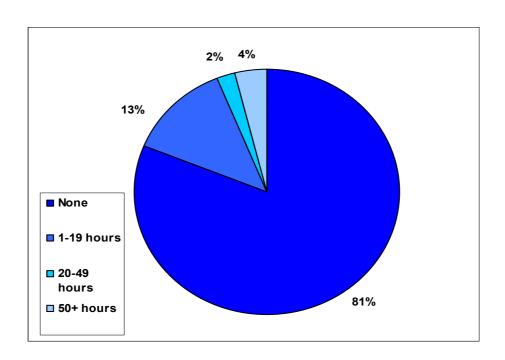
- Around 5% of adults reported they had at some point received treatment for cancer and 3% for stroke.
- Significantly more women reported currently receiving treatment for arthritis 10.6% compared to 5.4% of men.
- 8% of adults reported currently receiving treatment for back pain.
- 7% of adults reported currently receiving treatment for diabetes. Of those receiving treatment 72% controlled their condition by tablets, 41% by diet and 21% by injection.
- Around 44% of adults reported currently being treated for any form of chronic or long-term illness; 21% reported currently suffering from more than one illness.

#### **4.4 CARERS**

In the context of this survey, a carer is defined as someone who gives help or support to family members, friends, neighbours or others because of long-term physical or mental ill-health or disability, or problems related to old age. Any caring activities which form part of paid employment are specifically excluded. Individuals have indicated whether they are carers or not based upon their own self-assessment.

19% of adults reported undertaking some caring activities. For the majority of carers (around 70%), these duties take up less than 20 hours per week.

Figure 4.15: Percentage of adults who reported undertaking carer duties, by hours per week



# 5. HEALTH-RELATED LIFESTYLE

#### **5.1 INTRODUCTION**

This chapter focuses on the reported health-related lifestyles of adults.

The survey asked adults (aged 16 years and over) about their lifestyle, including questions about their exposure to other people's tobacco smoke. In addition, respondents were asked to provide their height and weight.

#### **5.2 SUMMARY**

- Over 1 in 5 adults reported that they currently smoke.
- Almost a quarter of adult non-smokers reported being regularly exposed to other people's tobacco smoke indoors or outdoors.
- Around 2 in 5 adults reported drinking above the recommended guidelines on at least one day in the past week, including around a fifth who reported binge drinking.
- 36% of adults reported eating the recommended five or more portions of fruit and vegetables on the previous day.
- Around 1 in 3 adults reported meeting the guidelines for physical activity in the past week.
- Around 55% of adults were classified as overweight or obese, including 1 in 5 adults classified as obese. 23% of women were classified as obese compared with 18% of men.
- In general, men were significantly more likely to smoke and to drink alcohol at above guideline levels and were significantly more likely to be either overweight or obese. Yet they were also significantly more likely to meet physical activity guidelines.

#### 5.3 SMOKING

The questionnaire included a section on past and present smoking habits and exposure to smoke from others (passive smoking). Smokers were asked where they smoked, whether they had tried to give up and whether their smoking habits had changed in the past 12 months. Smokers were also asked if they wanted to give up and their reasons for doing so.

#### **Smoking status**

• 21% of adults reported that they currently smoked (figure 5.1).

- 17% of adults smoke on a daily basis.
- 29% of adults reported that they had given up smoking, and 61% of current smokers reported that they would like to quit.

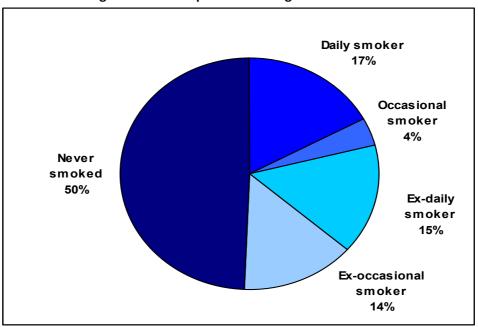


Figure 5.1: Self-reported smoking status of adults

# Smoking by sex

• Overall a significantly higher proportion of men were smokers compared with women (figure 5.2).

# Where people smoke

• Overall, 72% of smokers reported smoking indoors in the past week, 95% outdoors.

#### Giving up smoking

- 61% of smokers reported that they would like to give up smoking.
- 31% of smokers had tried to give up in the last year.

#### Exposure to other people's smoke

 Overall, 14% of adult non-smokers reported being regularly exposed to other people's tobacco smoke indoors, and 24% indoors or outdoors.

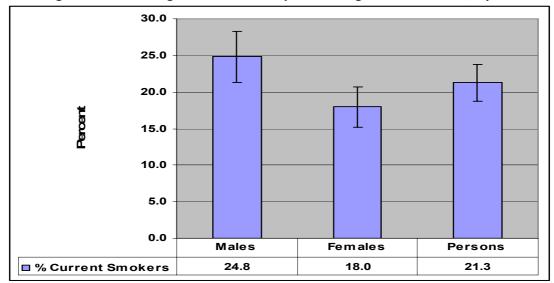


Figure 5.2: Percentage of adults who reported being a current smoker, by sex

#### **5.4 ALCOHOL**

The questionnaire included a section on drinking habits in the past 12 months and also on current alcohol intake based on the previous week's consumption.

- 10% of adults reported that they hadn't drank at all, and a further 34% reported that they drank less than once a week in the past 12 months (figure 5.3)
- 26% of adults reported drinking alcohol on average once or twice a week, while 11% of adults reported drinking alcohol almost every day.
- 40% of all adults (ie including non-drinkers) reported drinking above the recommended guidelines on at least one day in the past week, including 19% who reported binge drinking (drinking more than twice the daily guidelines). However, they do not necessarily drink at these levels regularly.
- Overall, men were significantly more likely than women to report drinking above the recommended guidelines on at least one day in the past week (46% of men compared with 34% of women), and to report binge drinking (25% of men, 14% of women) (figure 5.4).
- Recommendations on sensible drinking relate to regularly drinking above the daily guidelines of 4 units (men) or 3 units (women). The survey provides some information on volume of alcohol consumption and on drinking regularity, but not on the combination of the two (so it does not identify those who regularly consume large volumes of alcohol).

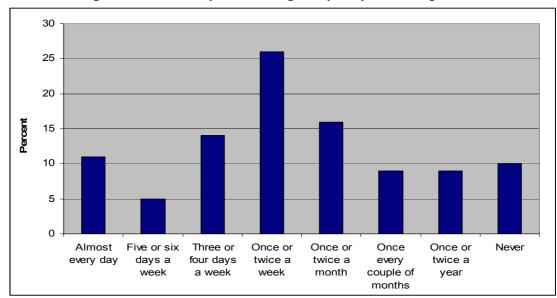
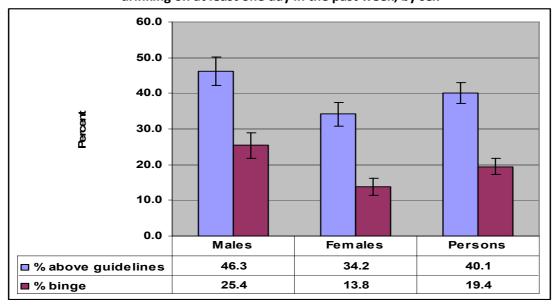


Figure 5.3: Adults' reported average frequency of drinking alcohol

Figure 5.4: Percentage of adults who reported drinking above guidelines and binge drinking on at least one day in the past week, by sex



#### 5.5 FRUIT AND VEGETABLE CONSUMPTION

The questionnaire included a short section on fruit and vegetable consumption for the previous day.

- 36% of adults reported eating five or more portions of fruit and vegetables the previous day.
- 64% of adults reported consuming less than five portions of fruit or vegetables on the previous day and 6% consumed no fruit or vegetables at all.

#### **5.6 EXERCISE**

The questionnaire asked a series of questions regarding the frequency and intensity of exercise performed in the previous week.

- 34% of adults reported meeting the guidelines for physical activity, ie at least 30 minutes of at least moderate intensity physical activity on five or more days a week (figure 5.6).
- Overall, a significantly higher proportion of men (43%) than women (25%) met the guidelines.
- Almost 3 in 10 adults had not met physical activity guidelines on any day in the past week.
- Some adults (9%) reported that they had done no exercise or physical activity in the past week, and a further 19% had done no more than light activity.

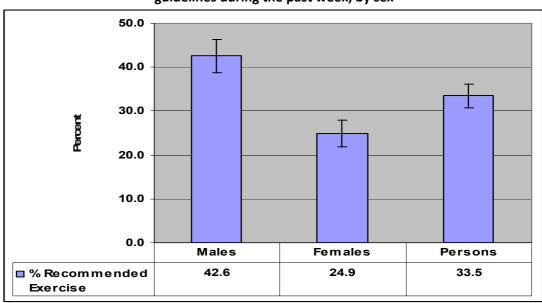


Figure 5.6: Percentage of adults who reported meeting physical activity guidelines during the past week, by sex

# **5.7 BODY MASS INDEX**

The questionnaire asked respondents for their height and weight. From this data a body mass index (BMI<sup>10</sup>) was calculated. The BMI is calculated as weight (kg) divided by squared height (m<sup>2</sup>). BMI was calculated for all respondents, excluding pregnant women and those who did not answer.

<sup>&</sup>lt;sup>10</sup> See Appendix A for definition of BMI.

• In total, 54% of adults were classified as overweight or obese (a BMI of 25 to under 30), including 20% of adults classified as obese (a BMI of 30 and over) (figure 5.7).

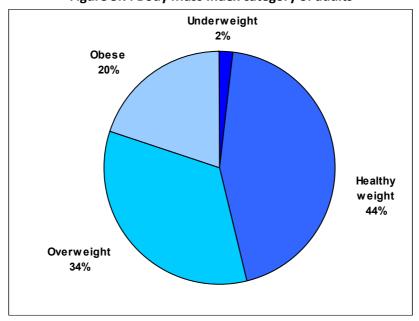


Figure 5.7: Body Mass Index category of adults

• Men were significantly more likely to be overweight than women. However, women were more likely to be obese (figure 5.8).

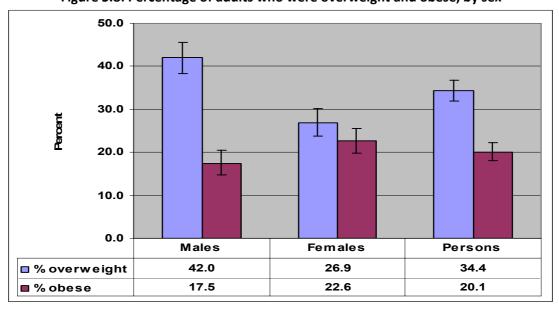


Figure 5.8: Percentage of adults who were overweight and obese, by sex

# 6. HEALTH SERVICE USE

# **6.1 INTRODUCTION**

The questionnaire asked participants a series of questions about their uptake in the past 2 weeks of a range of primary care health services, the use made of hospital and other services (e.g., dentistry) in the past 12 months, and about consumption of medicines in the past 4 weeks.

#### **6.2 SUMMARY**

- 15% of adults reported that they had talked to a GP and 9% to a practice nurse about their own health in the past two weeks.
- 8% of adults reported being in hospital as an inpatient in the past 12 months, 8% as a day patient, and around a guarter attended as an outpatient.
- Around 16% of adults had attended Casualty/A&E departments in the past 12 months. 4% of adults had attended hospital in the last 3 months due to an accident<sup>11</sup>.
- Women were significantly more likely to make use of the services of a pharmacist, a dentist or an optician.
- 48% of adults reported being on regular medicine prescribed by their doctor and 36% reported buying medicine (excluding prescription medicine) in the past 4 weeks.

#### **6.3 USE OF GP SERVICES**

In the past 2 weeks:

- 15% of adults reported that they had talked to a GP about their own health; a fifth of these attending more than one such appointment.
- Almost 7 in 10 of those attending a GP appointment had received a prescription.
- Almost 1 in 10 adults reported that they had talked to a practice nurse at the GP surgery about their own health; a fifth of these attending more than one such appointment.

<sup>&</sup>lt;sup>11</sup> Note: Includes accident, injury or poisoning needing hospital treatment or a visit to Casualty/A&E.

#### **6.4 USE OF HOSPITAL SERVICES**

In the past 12 months:

- Around 27% of adults had attended the outpatient department of a hospital; 7% of these attendances had been paid for privately.
- Around 8% of adults had been admitted to hospital as a day patient; 9% of these treatments had been paid for privately.
- Around 8% of adults had been admitted to hospital as an inpatient; 5% of these stays had been paid for privately.
- Around 16% of adults had attended Casualty/A&E; almost a quarter of these attending on more than one occasion.

In the past 3 months:

- 4% of adults reported that they had attended hospital due to an accident.
- 41% of these hospital attendances were due to accidents in the home, and a further 24% due to accidents at work or in school.

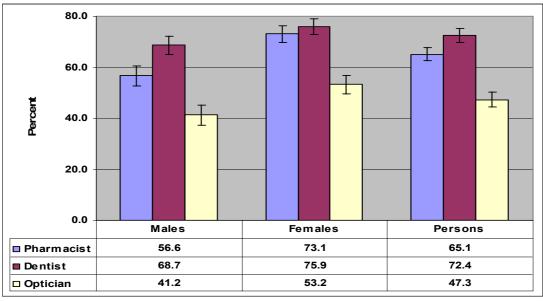
#### 6.5 USE OF OTHER SELECTED HEALTH SERVICES

In the past 12 months:

- 65% of adults reported using a pharmacist (figure 6.1).
- 72% of adults reported using a dentist.
- 47% of adults visited an optician.
- Women were significantly more likely to make use of the above services.
- 13% of adults reported using a health visitor, district or other community nurse.
- 11% and 7% of adults respectively reported using the GP out of hours and NHS Direct services.

• The survey also covered a range of other services including physiotherapist (13%), chiropodist (11%) and osteopath/chiropractor (8%).

Figure 6.1: Percentage of adults who reported uptake of selected health services in the past 12 months, by sex



#### **6.6 MEDICINES**

In the past 4 weeks:

- 36% of adults reported buying medicine (excluding prescription medicine).
- Of those buying medicine, 92% had bought conventional medicines eg aspirin, 27% mineral or vitamin supplements, 10% herbal medicines and 3% homeopathic medicines.

#### Also:

• 48% of adults reported being on regular (for a year or more) medicine prescribed by their doctor.

# 7. TECHNICAL SUMMARY

#### 7.1 INTRODUCTION

This chapter details some of the technical information about the Survey. It draws upon a technical report produced by NatCen.

The chapter includes information on sampling, fieldwork, response, data preparation, weighting and sampling errors.

# 7.2 SAMPLING

The Survey was carried out in two phases; the first phase ran from November 2010 until the end of March 2011. The second phase started in April and ran until the end of September 2011. The sampling procedure for each phase aimed to produce a sample of at least 600 adults aged 16 years and over who live in Herefordshire. Ideally, the sample would reflect the gender, age, and social characteristics of the population. The sample for each phase was achieved by selecting 650 households by a method known as interval sampling from the postcode address file (PAF) and approaching any resident adults for inclusion in the Survey.

For Phase 1, the first address was selected at random from the list of 78,513 addresses on the PAF. From that point in the list of addresses, about every 120<sup>th</sup> or 121<sup>st</sup> address was selected. For Phase 2, addresses that had been selected for Phase 1 were removed from the PAF list of addresses to avoid any households being sampled again. An address was then selected at random and, from that point in the list, every 199<sup>th</sup> or 120<sup>th</sup> address was selected. This ensured more representative samples - though still incorporating a random element of selection - than if a simple random sample had been picked, which could have resulted in some 'clumping' of addresses.

Some addresses were found to be ineligible for various reasons, and some were found to contain two households. Some households refused to take part. The following table shows the outcome of the approach to the 1300 addresses issued to field staff across both phases, and how the final number of households taking part in the Survey resulted. If there were more than three households at an address, a Kish Grid was used to randomly select three households to participate in the Survey.

**Table 7.1: Household Response** 

Addresses Issued	1300
Addresses not containing an eligible household (because dwelling was not yet built, dwelling was demolished or derelict, or vacant, or empty, or non-residential, or was a holiday home etc)	132
Addresses found to contain two or more households	9
Total number of eligible households (= 1300 -132 + 9)	1177
Unproductive households (because no contact could be made, or because there were language difficulties, or members of the household were physically or mentally unfit, or various other reasons)	41
Households refusing to participate	185
Households participating (= 1177 – 41 – 185)	943
Response Rate as a proportion of eligible sample of households	80.1%

### 7.3 FIELDWORK

NatCen have years of experience of conducting similar surveys in Wales and used 12 of their trained social survey interviewers - some of whom had experience gained on the Welsh Health Surveys - to undertake the fieldwork. All the interviewers were CRB checked and briefed on the purpose of the Survey and given instructions on how to proceed if an interpreter was needed or they came across a household where they had concerns about the safety of a child or vulnerable adult. The field staff were managed locally and worked to performance targets aimed at achieving a high response rate.

The fieldwork period for Phase 1 was originally intended to run from October 2010 to March 2011 but the start was delayed until 8<sup>th</sup> November 2010.

The addresses were allocated to interviewers in monthly workloads and checks continually made on progress.

A few days before attempts were made to contact a household the interviewer alerted the potential respondents with a letter from the Interim Director of Public Health explaining the purpose of the Survey and giving the interviewer's name. The letter also contained answers to frequently asked questions about the Survey and contact details of a NatCen employee for further help or information. An example letter is contained in Appendix B.

Once contact had been made with a household the interviewer conducted a short face to face interview with an adult (aged 18 years or over) and then, if the household agreed to participate, left a self-completion questionnaire, together with a sealable envelope and survey information leaflet, for each member of the household aged 16 years or above.

If the interviewer established that a language interpreter was required, the interpretation service was provided via Herefordshire Council and the questionnaire completed via a face to face interview. Translations were provided of the advance letter and information leaflet.

Interviewers were also trained to complete the questionnaire with any respondent who was unable to do so for themselves due to eyesight problems, physical impairment, literacy problems or other reasons.

The interviewer was required to establish whether any household member lacked the mental capacity to give their informed consent to participate in the Survey. Any such individuals were not asked to complete a questionnaire and were recorded as ineligible to participate in the Survey.

Participation in the Survey was entirely voluntary and confidentiality was assured. Only those who carried out the interviews and those who needed to check or process the data had access to names and addresses, and no individual outside of NatCen had such access.

Interviewers were expected to make between 6 and 9 calls to a household at different times of the day and different days of the week in order to achieve contact. If this was not achieved the address was removed from the Survey.

The questionnaires were collected by the interviewer at an agreed appointment. If no contact could be made at this stage reminders were sent by post and arrangements made for postal response. Quality checks on the fieldwork were in place.

### 7.4 RESPONSE

The total number of eligible adults aged 16 and over identified during contacts made to households was 1,765. Thirty-three refused to participate, questionnaires were not returned from a further 106, and 48 were classified as otherwise unproductive (eg the individual was away during the survey period). This left 1,578 participants, well above the 1,200 target across both phases of the Survey. The overall response rate was 89.4% but varied between men and women, and younger and older people. The response rates for different gender / age groups are shown in table 7.2 below.

Table 7.2: Percentage response rates by age group and gender

	16-24 years	25-44 years	45-64 years	65+ years	All ages
Male	76.8%	81.9%	91.5%	90.8%	82.2%
Female	85.3%	87.9%	93.4%	93.7%	91.3%
All	80.9%	85.2%	92.5%	92.4%	89.4%

#### 7.5 DATA PREPARATION

The household questionnaires were entered onto in-house computers via manual data entry. Accuracy was assured by using double entry keying, ie each form was keyed in twice, and a computer programme checked automatically for errors and omissions.

The self-completion individual questionnaires were scanned into a computer automatically by a specialist contractor. There were automatic checks for consistency and to ensure completion instructions had been followed correctly. Where individuals had written in numbers or free text manual checks were made on the accuracy of the scanning.

Measures were in place to ensure secure storage of both paper questionnaires and electronic data, and for destruction of questionnaires once they were no longer needed.

Some tick boxes and text required manual coding, e.g. turning employment information from various questions into NS-SEC code, or converting an illness into the appropriate International Classification of Diseases (ICD) group. This was undertaken by skilled data coders with experience of the Welsh Health Survey.

# 7.6 WEIGHTING THE SAMPLE

Weighting is a technique used to adjust an achieved survey sample to reflect the population of interest (in this case people living in private households in Herefordshire) in terms of characteristics known to relate to the survey outcomes. It thereby helps to correct for distortions caused by differential non-response which might otherwise lead to biased estimates (in this case of outcomes such as the prevalence of a health condition or lifestyle factor).

Usually, when a sample is used to calculate a prevalence which can then be applied to an entire population, the individuals in the sample contribute equally to the calculation of the prevalence. But if the sample is unbalanced then the prevalence rate calculated from it will be biased as the population is not fairly represented. The following very simple, hypothetical example, illustrates the point.

Suppose the prevalence of a condition is 50% for over 65s and 20% for under 65s and 25% of the population are over 65 and 75% are younger. Then the overall prevalence rate is

 $((75 \times 0.2) + (25 \times 0.5)) = 27.5\%$ . But suppose we didn't know what the prevalence was and we were using the sample to estimate it and the sample contained 40% over 65 year olds and 60% under 65 year olds. Then the estimated prevalence would be  $((60 \times 0.2) + (40 \times 0.5)) = 32\%$ . Therefore the prevalence rate has been over estimated because of the imbalance of age groups in the sample compared with the underlying population. In the calculation each individual in the sample made an equal contribution to the calculation irrespective of whether the individual belonged to an under- or over- represented group. To circumvent this problem, the contribution of each individual in the sample can be changed from equality. The factors used to reflect the contribution are called weights. If an individual in the sample comes from a group that is under represented, he/she is allocated a weight greater than 1 as he/she needs to reflect all the population in the group who are not in the sample. Conversely, if an individual in the sample comes from a group that is over represented, he/she is allocated a weight less than 1.

In the example above, if the weights of 1.25 are applied to the under 65's and 0.625 to the over 65's, then the calculation of the prevalence becomes  $((1.25 \times 60 \times 0.2) + (0.625 \times 40 \times 0.5)) = 27.5\%$  - the unbiased estimate. The method for calculating the weights to correct for the imbalance in the age distribution is to divide the proportion of the underlying population in a particular age group by the proportion of the sample in the same age group. 25% of the underlying population were over 65 years but only 40% of the sample population. The weight is calculated as 25/40 = 0.625. Similarly, 75% of the underlying population were under 65 years but only 60% of the sample. Therefore the weight is calculated as 75/60 = 1.25. The weights used are the inverse of the probability of response. In terms of health and well-being, the prevalence of a particular disease or lifestyle may be related to demographic characteristics such as age, gender, socio-economic status, type of dwelling or area of residence. For example, the incidence of dementia is age-related.

There are two main reasons why a sample may be imbalanced in terms of the demographic characteristics of the underlying population. Firstly, the methodology by which individuals are chosen to take part in the Survey may result in a sample that generates results which may not reflect the whole population. Secondly, participation in a Survey is usually entirely voluntary and selected individuals may choose not to take part. Different groups within the population have varying propensities to co-operate, linked with their gender, age, or social class.

For the Herefordshire Health & Well-being Survey, NatCen devised a sampling methodology to generate, as far as is possible, a representative sample and field staff encouraged selected individuals to participate.

NatCen examined the issue of differential non-response between socio-demographic subsections of the sample and underlying population. Using an advanced statistical technique called weighted logistic regression (which requires a specialist computer package) NatCen calculated the probability that an individual from a particular socio-demographic group would return a questionnaire. NatCen were able to achieve this through the collection of a limited amount of data on all household members from responding households. This information included gender, age, number of years resident at an address, general health, and whether they needed care for reasons of sickness or disability.

The interviewer also asked the household reference person for their ethnicity and about their current or last job to enable the NS-SEC to be established. NatCen were then able to classify the household into one of 7 types as shown in the following table:

Household Types				
Туре	Composition			
One adult	Person aged 16-59, no children			
Two adult	Two persons aged 16-59, no children			
Large adult	Three or more persons aged 16-59, no children			
Small family	Either one or two adults and one or two children			
Large family	Either 1 or more adults and 3 or more children, OR 3 or more adults and 2 or more children			
Older adult couple	Two adults aged 60 or over, no children			
Older single adult	One adult aged 60 or over, no children			

The analysis resulting from applying weighted logistic regression indicated the following:

- Women were more likely to respond than men, 91.3% compared with 87.2%.
- Older people were more likely to respond than younger people, 92.4% of those aged 65+ years compared with 80.9% of 16-24 year olds.
- Managers and professionals were more likely to respond than other NS-SEC groups.
   People who had never worked, the unemployed and students were less likely to respond,
- People with less than good general health were more likely to respond than those with good general health,
- People in families were more likely to respond than individuals living in households where there were no children.

NatCen then calibrated the weights from the non-response model to correct for imbalance in terms of gender and age between the sample population and the underlying population. The underlying population numbers were based on the latest available mid-year estimates from the Office for National Statistics (ONS). These were June 2010 estimates which fell before the sampling period of November 2010 to September 2011. The 2010 population figures were adjusted by the Herefordshire Council Research Team to extract the population not living in private households, ie people living in care homes or other institutions. The calibration weighting ensured that the weighted sample came to the same total as the number of individuals in the sample, 1,578.

Within the Survey sample, all the individual non-response rates and calibration weights were less than 2 and the highest combined weight was 2.97. This is generally considered evidence of good sample design and field work - were there a high proportion of individuals in the sample with associated weights greater than 4, then it would be prudent to re-examine the sample design and effectiveness of the field work. It should be noted, however, that high weights could still emerge from good quality survey designs.

#### 7.7 SAMPLING ERRORS

When a survey is carried out, various sources of error can affect the ultimate results.

Data coding errors were minimised by techniques discussed in section 7.5.

The major source of error is sampling error which is the difference between the estimate of a factor (such as average age or prevalence of a disease) derived from a random sample, and the factor value that is true for the population as a whole. The larger the random sample, the more likely it is that the factor value calculated from the sample population will be nearer that for the population as a whole. There is a statistical technique to calculate the sampling error, called the standard error or se(p), for the estimated prevalence of a factor. The standard error measures the precision with which the estimates from the sample approximate to the true population values. This is calculated using the equation:

Se(p) =  $\sqrt{(p(100-p)/n)}$  where p is a percentage and n is the size of the sample.

So if 22% of a sample of 550 people smoke, the standard error is calculated as:

```
\sqrt{(22(100-22)/550)} = 1.77\%
```

In Herefordshire Health & Well-being Survey, the sample is not a simple random sample. Although the initial address was selected randomly and interval sampling used to ensure households were not geographically clustered together, there will be links between individuals within the same household included within the sample. They are likely to be similar in age and lifestyle behaviours, such as eating habits and smoking behaviour. Consequently there is a risk of increasing in the sampling error. The way the individuals in the sample are weighted also affects the standard error. Taken together, the household clustering effect and the weighting effect are known as the 'design effect', or DEFT which is the number by which the standard error has to be multiplied to derive the "true" standard error.

#### **Confidence Intervals**

As there is a standard error associated with each proportion calculated from the sample, a confidence interval can be calculated around the survey estimate. The confidence interval is the range within which the true value for the proportion is likely to fall. The confidence intervals presented in this report have been calculated using two closely related formulae which, where tested with these data, have yielded similar results.

In general, the following standard error is used to calculate the confidence interval through the following formula:

Confidence interval =  $p + /- 1.96 \times DEFT \times se(p)$ 

Where p = the estimated proportion, DEFT = the design effect, se(p) = standard error

Using the above example and supposing the DEFT = 1.06, then the 95% confidence interval for the proportion of people who smoke is

```
22% +/- 1.96 x 1.06 x 1.77% = 18.3% to 25.7%
```

The DEFTs, true standard errors and 95% confidence intervals were calculated for many key variables by NatCen and have been published in the Technical Report. The largest DEFT, 1.26, was applied to the confidence intervals for the estimate of current smokers. The lowest DEFTs (nearer 1.0), are associated with prevalence of disease where incidence is unlikely to be influenced by others in the home.

Where NatCen did not provide a calculation of the confidence interval, the Wilson Score method was used to calculate the range of likely true prevalence. This algorithm is widely used in medical statistics and gives a more accurate result for small samples than the standard calculation. For large samples the Wilson Score Method converges to the standard formula. Software to calculate Wilson confidence intervals was available in-house. Where the formula could be tested on survey data the results were almost identical as the sample is large, but any figure given an associated Wilson confidence interval does not have an associated DEFT applied to the confidence interval.

# **APPENDIX A: GLOSSARY**

This glossary explains terms used in the report, other than those fully described in particular chapters.

#### **Adults**

Adults are defined as persons aged 16 years or over.

# Adult Body Mass Index (BMI) classification

The Body Mass Index (BMI) is calculated as weight (kg) divided by squared height (m<sup>2</sup>). BMI was calculated for all respondents, excluding pregnant women and those who didn't answer. The proportion of adults who were overweight and obese was calculated according to the UK national BMI percentiles classification below.

Underweight (BMI <18.5)
Healthy weight (BMI 18.5 - <25)
Overweight (BMI 25 - <30)
Obese (BMI 30 and over)
Morbidly obese (BMI 40 and over)

# **Alcohol Consumption**

Definitions of above guidelines alcohol consumption are as follows:

	Men	Women
Hazardous Drinking	between 22 and 50 units of alcohol per week	between 15 to 35 units of alcohol per week
Harmful Drinking	more than 50 units of alcohol per week	more than 35 units of alcohol per week
Binge Drinking Is the consumption of at least twice the daily recommended amount of alcohol in a single drinking session	8 or more units in a single session	6 or more units in a single session

Source: Department of Health

#### Household

A household is defined as a person or group of people for whom the accommodation is the only or main residence, and who either share at least one meal a day or share the living accommodation.

# **Household Reference Person (HRP)**

The Household Reference Person (HRP) is the householder (person in whose name the property is owned or rented) with the highest income. If there is more than one householder and they have the same income, the eldest is taken as the Household Reference Person.

#### International Classification of Diseases (ICD)

A classification system for coding diseases and health problems used internationally and maintained by the World Health Organization (WHO). The Survey makes limited use of groups approximating to ICD chapter headings when covering chronic and long-term limiting illness. The groups used are shown below (along with selected examples of diseases for illustrative purposes). Further information is available at the WHO website<sup>1</sup>.

Condition group	Examples
Neoplasms and benign growths	Cancer, after effects of cancer
Endocrine and metabolic diseases	Diabetes, thyroid
Mental disorders	Depression, dyslexia
Nervous system	Epilepsy, multiple sclerosis
Eye complaints	Cataract, glaucoma
Ear complaints	Deafness, Meniere's disease
Heart and circulatory system	Angina, stroke, blood pressure
Respiratory system	Asthma, bronchitis, hayfever
Digestive system	Stomach ulcer, bowel complaints
Genito-urinary system	Kidney complaints, reproductive system disorders
Musculoskeletal system	Arthritis, back problems
Infectious diseases	Glandular fever, herpes
Blood and related organs	Anaemia, haemophilia
Skin complaints	Eczema, corns

# **NS-SEC (National Statistics Socio-Economic Classification)**

The National Statistics Socio-Economic Classification (NS-SEC) is an occupationally based classification of social position that was introduced in 2001 for use in official statistics and surveys. There are fourteen operational categories representing different groups of occupations and a further three residual categories for full time students and occupations that cannot be classified due to lack of information or other reasons.

# The main groups are:

- Managerial and professional,
- Intermediate occupations, small employers and own account workers
- Lower supervisory and technical occupations
- Semi-routine and routine occupations
- Never worked / unemployed / students / not classified

Full details of NS-SEC are in the Office for National Statistics guide 'The National Statistics Socio-Economic Classification User Manual'<sup>2</sup>

# **REFERENCES AND NOTES**

- 1. World Health Organisation: International Classification of Diseases. www.who.int/classifications/icd/en/
- 2. ONS: National Statistics Socio-Economic Classification. www.ons.gov.uk

# **APPENDIX B: Quality Assurance Steps for Health and Well-being Survey**

Objective	Method	QA Standard	Person Signing Off	Action if QA Standard not met
Verify all the data has been received	Count the number of cases in the spread sheet equates number stated by NatCen in Technical Report	All cases should be present	Ok - IG	Contact NatCen – Is there an error in the technical report? Is the received database complete?
been received	Check that all the expected variables have been received by looking at columns in the database compared with the variable list	All variables should be present.	OK -IG	Report missing data to NatCen
	Produce a frequency distribution in SPSS of the two sets of weights and the combined weights.	All weights should be less than 4.0	Greatest combined weight = 2.92 IG	Go to step 2
Verify the weighting is not leading to biased results	<ol> <li>For individuals with weights &gt; 4.0, look at the characteristics.</li> <li>For any unusual characteristic, compare weighted and unweighted prevalence rate. Eg 20 year old who has had a stroke, very elderly person doing vigorous exercise on a daily basis</li> </ol>	Heavily weighted individuals should not be biasing the results.	Not applicable	Discuss with NatCen. If not happy about a weight. If one is changed, all would need to be recalculated to compensate and ensure age / sex distribution was same as underlying private household populations.
Verify the statistical methodology used in the technical report is appropriate.	Sampling	Interval sampling used with random starting point. Methodology for households in multiple occupation appropriate.	OK - IG	Discuss with NatCen
	Fieldwork	Carried out as per tender	OK - IG	Discuss with NatCen

Objective	Method	QA Standard	Person Signing Off	Action if QA Standard not met		
	Response Rate	>70% or falling off significantly from previo surveys	>80%, Discuss with reasons and		NatCen for ed next steps	
	Check that the differences between health and care needs of responders and non-responders is not significant	Chi-Square 5% significa	No significant differences	the non-respon		
	Check variables included in non- response model	Variables for inclusion in model should represent characteristics of individual traditionally associated differential response.	Accepted (IG)	Discuss with	NatCen	
Verify the statistical methodology used in the technical report is appropriate. – cont.	Check parameters associated with variables in non-response model	Parameters should be in the right direction, ie reflect what is known about non-response.  No one parameter should be >10.0		All looks plausible (IG)	Discuss with NatCen impact on results	
	Check calibration weightings lead to accurate age / sex marginal distributions of private household population – particularly if new population estimates have become available	If different test effect on one or two distr variables known to be related to age / gender – should be < would be <		oblem was identicular identicu	Discuss with NatCen if recalibration necessary	
	Examine DEFTs – not very important as these affect confidence intervals rather than the estimated values.	Look for DEFTs <0.9, and therefore narrowing		Lowest DEFT is 0.97	Will this impa conclusions? Is it plausible May prefer to 1.0 to be on	· <del>?</del> ?

Objective	Method	QA Standard	Person Signing Off	Action if QA Standard not met
Check data – original variables	Run frequency distributions on all original variables	eg maximum alcohol consumption at a level that should have resulted in death!	All OK (IG)	Discuss with PCT and, if necessary, NatCen about what should be done with individual. Options are – remove from survey, change weighting, live with it, or apply survey average or other value. Note what change is made.
	Check derived variables calculated correctly	Syntax correct and correctly applied	ALL OK (IG)	Report back to NatCen
Check data – derived variables	Run frequency distribution on derived variables	No anomalous individuals / data		Discuss with PCT and, if necessary, NatCen about what should be done with individual. Options are – remove from survey, change weighting, live with it, or apply survey average or other value. Note what change is made.
Check Tabular Report	SPSS frequencies / crosstabs on each variable in Tabular Report	Result in Tabular Report can be replicated	Minor errors found in Tabular Report. Discussed with NatCen and Tabular Report amended.	Report back to NatCen if error suspected
·	Check Phase 2 Tabular Report with Phase I	Phase 2 prevalences should be within confidence limits of Phase I	All within CIs (IG)	Consider why difference may occur. It may be due to seasonal or other factors and be genuine. If concerned, discuss with NatCen.
Check Tabular Report and Technical Report are consistent	For prevalences in Technical Report, check values are same as in the Tabular Report	Figures in Tabular Report should be same as in Technical report, rounded to nearest whole number	One difference found and reported to NatCen. Tabular report was amended.  (IG)	Triangulate with SPSS result – bring any differences to NatCen's attention.

Objective	Method	QA Standard	Person Signing Off	Action if QA Standard not met
	Check results against other known data captured using similar methodology	Eg previous surveys asking same question. Welsh Health Survey	All results consistent with WHS	If new data is plausible accept. If not plausible refer to Steering Group for decision
Benchmarking	Check results against other known data captured using similar methodology	Should be reconcilable		Go to step 2.
•	2. Investigate whether differences are due to data collection timing, methodology of collecting data, survey questions, reasons other data was collected, likely biases, differences in population from who data was collected.	Differences can be explained		Use HWB survey data with caution and treat with circumspection until further research can verify result.
	Check tables consistent with NatCen tabular report	Consistent values	IG/PS	Correct Final Report and repeat checking
	Check graphs in final report	Graphs match tables	DH/AM	Correct and repeat
Final Report	Oncok graphs in iliai report	Titles are appropriate	DH/AM	checking
	Ensure narrative is clear relevant, well written and correct	Proof Read by different individuals including people not involved in writing report	LL/JB/AM LL/JB/AM LL/JB/AM LL/JB/AM	Correct and repeat proof reading

Que	stio	nnai	re to	be :	filled	l in k	oy:					

This page to be removed by the interviewer when collecting the questionnaire. If you are returning the questionnaire by post, please remove this sheet before sending.

# CONFIDENTIAL

# HEREFORDSHIRE HEALTH & WELL-BEING SURVEY

# **QUESTIONNAIRE**

# **About the survey**

Some questions you may have about this survey are answered in the accompanying leaflet. Should you have any further queries or if you need help to understand this document, or would like it in another format or language, please contact:

Katharine Sadler on 0207 549 7102,

or email katharine.sadler@natcen.ac.uk

Alternatively, you may write to her at the address given in the leaflet.

Serial Number  Date of placement  Day  Month  Year  Interviewer I.D. Number  Day  Day  Day  Day  Day  Day  Day  Da		Male	Female 1	2038	2039-41 Age
Date of placement  Day  Month  Year  Interviewer I.D. Number  Day  Month  Year  1  2025	Serial Number		2001-00		2010 2008-009  CKL Person Number
Interviewer I.D. Number	Date of placement	Day	Month	Year	2013-018
	Interviewer I.D. Number				1

2011-012

To be collected on:



Chairman: Mrs Joanna Newton MA (Cantab) Chief Executive: Mr Chris Bull



Working together for the people of Herefordshire

# **HOW TO COMPLETE THIS QUESTIONNAIRE**

The questionnaire should be completed by the person named on the front page.

Most questions can be answered by simply ticking the box alongside the answer that applies to you.

You are sometimes told to skip over some questions in this survey. When this happens, you will see an arrow (→) with a note that tells you what question to answer next, like this:

Exan	nple questions (please do not fill in)
E1	Do you live in a house or a flat?
E2	How many bedrooms are there in your house?  Please write in  2 bedrooms
E3	Do you own any of the following forms of transport?  Tick one box on each row Yes No Car V   Bicycle   Bicycle

Don't worry if you make a mistake; simply cross out the mistake and tick the correct box.

When you have completed it, please return the questionnaire to the interviewer (or in the envelope provided if sent to you in the post).

This questionnaire is about you. Please answer about yourself and your health only.

# **HEALTH SERVICE USE**

1	a	During the <b>2 weeks ending yesterday</b> , did you talk to a family doctor (GP) about your own health either in <b>person</b> or by <b>telephone</b> ?	
		Tick one only	
		Yes $\Box$ 1 $\rightarrow$ Go to 1b	2051
		No ☐ 2 → Go to 2a	
1	b	How many times did you talk to a family doctor (GP) about your own health in these <b>2 weeks</b> ?	
		Please write in number	2052-
			053
1	c	As a result of speaking to a family doctor (GP) about your own health in these <b>2 weeks</b> , did they give (send) you a prescription?	
		Tick one only	
		Yes 1	2054
		No 2	
2	2a	During the <b>2 weeks ending yesterday</b> , did you see a practice nurse or other nurse at the GP surgery about your own health?	
		Tick one only	
		Yes ☐ 1 → Go to 2b	2055
		No $\square_2 \rightarrow Go \text{ to } 3a$	
2	2b	How many times did you see a practice nurse or other nurse at the GP surgery about your own health in these <b>2 weeks</b> ?	
		Please write in number	
			2056- 057
3	Ba	During the <b>last 12 months</b> , did you attend the <b>Casualty/A&amp;E</b> department of a hospital as a patient?	
		Tick one only	
		Yes $\Box$ 1 $\rightarrow$ Go to 3b	2058
		No	
3	Bb	How many times did you go to Casualty/A&E altogether in the last 12 months?  Please write in number	
			2059- 060
		3	

4a	During the <b>last 12 months</b> , did you attend the <b>outpatient</b> department of a hospital as a patient (apart from straightforward ante- or post-natal visits)?	
	Tick one only	
	Yes $\square$ 1 $\rightarrow$ Go to 4b	2061
	No $\square$ 2 $\rightarrow$ Go to 5a	
4b	Did you have any <b>outpatient</b> visits in the <b>last 12 months</b> that were paid for privately?  Tick one only	
	Yes, at least one paid for privately	2062
	No, all visits under the NHS 2	
	No, all visits under the Nilo = 2	
5a	During the <b>last 12 months</b> , have you been in hospital for treatment as a <b>day patient</b> , that is admitted to a hospital bed or day ward, but not required to remain overnight?	
	Tick one only	
	Yes ☐ 1 → Go to 5b	2063
	No □ 2 → Go to 6a	
5b	Did you have any <b>day patient</b> treatments in the <b>last 12 months</b> that were paid for privately?	
	Tick one only	
	Yes, at least one paid for privately 1	
	No, all treatments under the NHS 2	2064
6a	During the <b>last 12 months</b> , have you stayed in hospital as an <b>inpatient</b> , overnight or longer?	
	Tick one only	
	Yes $\square$ 1 $\rightarrow$ Go to 6b	2065
	No $\square_2 \rightarrow Go \text{ to } 7a$	
	140 <u> </u>	
6b	Did you have any <b>inpatient</b> stays in the <b>last 12 months</b> that were paid for privately?  Tick one only	
	Yes, at least one paid for privately 1	2066
	No, all stays under the NHS 2	
		Spare 2067- 77
	4	



		Did not use	Tick one box on NHS treatment only	Private treatment only	Both NHS and private treatment
	Dentist	1	2	3	<u> </u>
	Chiropodist	1	_ 2	3	4
	Physiotherapist	1	2	3	4
	Osteopath/chiropractor	1	_ 2	3	4
7b	During the last 12 month	n <b>s</b> , have <b>you</b> use	ed any of these se  Tick one box of  Yes	_	rself?
	Optician		1	2	
	Health Visitor, District Nu other community nurse	rse or	1	2	
	GP out of hours services		1	2	
	NHS Direct (National NH	S telephone help	oline) 🔲 1	2	
	Pharmacist including local in large stores and super prescribed medicine, ask medicines kept behind the	markets (eg pick ed for advice, bo	ed up		
8	Have you had a flu jab in	the last 12 mon	ths? Tick one only		
			Yes 1		
			No 2		

# **MEDICINES**

9a	During the <b>past 4 weeks</b> have you bought any medicine? (Don't count anything that you got with a prescription)	
	Tick one only	
	Yes $\Box$ 1 $\rightarrow$ Go to 9b	
	No $\square$ 2 $\rightarrow$ Go to 9c	
9b	If you have bought medicines in the past 4 weeks, which of these kinds did you buy?	
	Tick all that apply	
	Conventional medicines, eg aspirin, eye-drops, antacids, cough medicine	
	Herbal 2	
	Homeopathic 3	
	Mineral or vitamin supplements 4	
9с	Are you on any <b>regular</b> medication prescribed by a doctor? (Regular means for a year or more)	
	Tick one only	
	Yes ☐ 1	
	No 🔲 2	
	ILLNESSES AND OTHER HEALTH PROBLEMS	
10a	Have you ever been treated for any of these?	
	Tick one box on each row Yes No	
	Heart attack 1 1 2	
	Stroke 1 2	
	Sticke L 1 L 2	

10b Are you currently being treated for any of these?			
	one box o Yes	n each row No	
Angina	1	2	2101
Heart failure	1	2	2102
High blood pressure (or hypertension)	1	2	2103
Another heart condition	1	2	2104
Asthma	1	2	2105
Emphysema	1	2	2106
Pleurisy	1	2	2107
Spells of bronchitis that have lasted over 3 years	1	2	2108
Another respiratory illness	1	2	2109
<b>10c</b> Are you <b>currently</b> being treated for any of these?			
		n each row	
	Yes	No	
Depression	1	2	2110
Anxiety	1	2	2111
Another mental illness	1	2	2112
Arthritis	1	2	2113
Back pain	1	2	2114
Epilepsy or fits		2	2115
Varicose veins	1	2	2116
10d Are you currently being treated for diabetes?			
	one only		
		Go to 10e	2117
No	<u> </u>	• Go to 11a	
10e How is your diabetes controlled?			Spare 2118- 120
Tick all	that app	ly	
Injection	1		2121- 123
Tablets	2		
Diet	3		
7			



11a	Yes	long-term illness not listed in  one only	2124
11b	Please specify the main illness below. Please write in onl	y one illness.	2125 2126-
			129 Spare 2130- 134
12a	Have you had any accident, injury or poisoning needing I Casualty/A&E in the last 3 months?	nospital treatment or a visit to	
		one only	
	Yes	☐ 1 → Go to 12b	2135
	No	☐ 2 → Go to 13a	
12b	What was the accident, injury or poisoning?		
		that apply	
	Break or fracture	1	2136- 141
	Poisoning	2	
	Head injury with concussion	3	
	Cut or puncture	4	
	Burn	5	
	Another kind of injury	6	
12c	Where did the <b>most recent</b> accident, injury or poisoning Tick	take place?	
	In the home	1	2142
	In traffic	_ 2	
	At work or in school	3	
	Somewhere else	4	
13a	Have you had a stomach upset with diarrhoea in the <b>last</b> due to something you ate?	3 months, which you think was	
	Tick all	that apply	
	No	☐ 1 → Go to 14	2143- 145
	Yes, in this country	2 → Go to 13b	
	Yes, abroad	☐ 3 → Go to 13b	
	8		

13b If yes, did you see a doctor about it?  Tick one only  Yes  1  No  2	2146
Is your eyesight good enough to see the face of someone across a room?  (With glasses or contact lenses if you usually wear them)  Tick one only  Yes	2147
15a Do you have any difficulty with your hearing? (Without a hearing aid if you usually wear one)  Tick one only  Yes □ 1 → Go to 15b  No □ 2 → Go to 16	2148
Tick one only  Yes, most of the time ☐ 1 → Go to 15c  Yes, some of the time ☐ 2 → Go to 15c  No, but have tried one ☐ 3 → Go to 16  No, never ☐ 4 → Go to 16	2149
<ul> <li>15c If you usually wear a hearing aid, do you have any difficulty with your hearing while wearing the aid?</li> <li>Tick one only</li> <li>Yes</li></ul>	2150
16 How many of your own natural teeth do you have? (Filled and capped teeth count as your own, false teeth and dentures don't)  Tick one only  I have 21 or more of my own teeth	2151

# YOUR HEALTH AND WELL-BEING

Questions 17 – 27 are from SF-36v2® Health Survey © 1996, 2000 by QualityMetric Incorporated – All rights reserved SF-36v2® is a trademark of QualityMetric Incorporated

how	se questions ask for your views about your health. This information will help keep track of you feel and how well you are able to do your usual activities. For each of the following stions, please tick the one box that best describes your answer.					
17		? one only Good	Fair P	oor e		
	1 2	3	4	5	2152	
18	Compared to one year ago, how would	•	r health in genera	al now?		
	Much better now that	an one year ag	go 🗌 1		2153	
	Somewhat better now that	an one year ag	go 🗌 2			
	About the same a	as one vear ac	ао 🗌 з			
	Somewhat worse now that					
	Much worse now that	an one year ag	<b>jo</b> 🗀 5			
19	The following questions are about activit Does your health now limit you in thes			cal day.		
	Tick one box on each row Yes, Yes, No, Iimited limited not limited					
		Yes,	Yes,	No,		
а	Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	Yes, limited	Yes, limited	No, not limited	2154	
a b	lifting heavy objects, participating	Yes, limited a lot	Yes, limited a little	No, not limited at all	2154	
	lifting heavy objects, participating in strenuous sports  Moderate activities, such as moving a table, pushing a vacuum cleaner,	Yes, limited a lot	Yes, limited a little	No, not limited at all		
b	lifting heavy objects, participating in strenuous sports  Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	Yes, limited a lot	Yes, limited a little	No, not limited at all	2155	
b	lifting heavy objects, participating in strenuous sports  Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf  Lifting or carrying groceries	Yes, limited a lot	Yes, limited a little	No, not limited at all	2155	
b c d	lifting heavy objects, participating in strenuous sports  Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf  Lifting or carrying groceries  Climbing several flights of stairs	Yes, limited a lot	Yes, limited a little	No, not limited at all	2155 2156 2157	
b c d	lifting heavy objects, participating in strenuous sports  Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf  Lifting or carrying groceries  Climbing several flights of stairs  Climbing one flight of stairs	Yes, limited a lot	Yes, limited a little	No, not limited at all	2155 2156 2157 2158	
b c d e f	lifting heavy objects, participating in strenuous sports  Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf  Lifting or carrying groceries  Climbing several flights of stairs  Climbing one flight of stairs  Bending, kneeling, or stooping	Yes, limited a lot	Yes, limited a little	No, not limited at all	2155 2156 2157 2158 2159	
b c d e f	lifting heavy objects, participating in strenuous sports  Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf  Lifting or carrying groceries  Climbing several flights of stairs  Climbing one flight of stairs  Bending, kneeling, or stooping  Walking more than a mile	Yes, limited a lot	Yes, limited a little	No, not limited at all	2155 2156 2157 2158 2159 2160	
b c d e f g	lifting heavy objects, participating in strenuous sports  Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf  Lifting or carrying groceries  Climbing several flights of stairs  Climbing one flight of stairs  Bending, kneeling, or stooping  Walking more than a mile  Walking several hundred yards	Yes, limited a lot	Yes, limited a little	No, not limited at all	2155 2156 2157 2158 2159 2160 2161	

20	During the <b>past 4 weeks</b> , how much problems with your work or other rehealth?		activities as	•	of your phys	-	
		All of the time	Most of the time	Some of the time	A little of the time	None of the time	
а	Cut down on the <b>amount of time</b> you spent on work or other activities	1	2	3	4	5 2	2164
b	Accomplished less than you would like	1	2	3	4	5 2	2165
С	Were limited in the <b>kind</b> of work or other activities	1	2	3	4	5 2	2166
d	Had <b>difficulty</b> performing the work or other activities (for example, it took extra effort)	1	2	3	4	5 2	2167
21	During the <b>past 4 weeks</b> , how much problems with your work or other reproblems (such as feeling depress)	egular daily	activities as	•		•	
			Tick one	box on ea	ich row		
		All of the time	Most of the time	Some of the time	A little of the time	None of the time	
а	Cut down on the <b>amount of time</b> you spent on work or other activities			Some of	A little	the time	2168
a b	time you spent on work or	the time	the time	Some of the time	A little of the time	the time	2168
	time you spent on work or other activities  Accomplished less than you	the time	the time	Some of the time	A little of the time	the time	2169
b	time you spent on work or other activities  Accomplished less than you would like  Did work or other activities	the time	the time  2  2  2  vour physical	Some of the time	A little of the time	the time  5 2  5 2  5 2  roblems	2169
b	time you spent on work or other activities  Accomplished less than you would like  Did work or other activities less carefully than usual  During the past 4 weeks, to what expenses the second of the	the time	the time  2  2  2  vour physical h family, frier	Some of the time  3 3 health or eds, neight	A little of the time	the time  5 2  5 2  5 2  roblems  bups?	2169
b	time you spent on work or other activities  Accomplished less than you would like  Did work or other activities less carefully than usual  During the past 4 weeks, to what exinterfered with your normal social activities less carefully than usual	the time  1  1  2  2  2  2  2  3  1  1  1  1  1  1  1  1  1  1  1  1	the time  2  2  2  2  2  2  2  2  2  4  2  4  2  4  4	Some of the time  3 3 4 health or ends, neight	A little of the time  4  4  emotional productremely	the time  5 2  5 2  5 2  roblems  bups?	2169
b c 22	time you spent on work or other activities  Accomplished less than you would like  Did work or other activities less carefully than usual  During the past 4 weeks, to what exinterfered with your normal social at the interfered with your nor	the time  1 1 2 2 2 2 2 2 3 2 3 3 3 3 3 3 4 4 4 Tick one of the time  Tick one of the ti	the time  2  2  2  2  2  2  4  2  4  2  4  2  4  4	Some of the time  3 3 4 health or ends, neight	A little of the time  4  4  emotional productremely	the time  5 2  5 2  7 5 2  roblems pups?	2169

24	During the <b>past 4 weeks</b> , how much (including both work outside the hon	ne and house	ework)?	our norma	al work	
		ick one only Moderately	Quite a		remely	2173
25	These questions are about how you past 4 weeks. For each question, p way you have been feeling. How mu	lease give th	e one answ	er that cor	nes closest	
		All of the time	Tick or Most of the time	Some of the time	A little of the time	None of the time
а	Did you feel full of life?		2	3	4	2174
b	Have you been very nervous?					2175
С	Have you felt so down in the dumps that nothing could cheer you up?	1		3	4	2176
d	Have you felt calm and peaceful?	1	2	3	<u> </u>	5 2177
е	Did you have a lot of energy?	1	2	3	4	5 2178
f	Have you felt downhearted and low?	1	2	3	4	2179 5
g	Did you feel worn out?	1	2	3	4	2180 5
h	Have you been happy?	1	2	3	4	2181 5
i	Did you feel tired?	1	2	3	4	5 2182
26	During the past 4 weeks, how much problems interfered with your social  All of Most of the time the time			iends, rela No ne the		tional
		_				
27	How TRUE or FALSE is <b>each</b> of the	Definitely true		you? ne box on e Don't know	each row Mostly false	Definitely false
а	I seem to get ill more easily than other people	1		3	4	2184
b	I am as healthy as anybody I know	1	2		4	2185
С	I expect my health to get worse	1	2	3	4	2186
d	My health is excellent	1	_ 2		4	2187
		12				

28a	28a Do you have any long-term illness, health problem or disability which limits your daily activities or the work you can do? (Include problems which are due to old age)						
	Tick one only						
	Yes ☐ 1 → Go to 28b	0400					
	No $\square$ 2 $\rightarrow$ Go to 29	2188					
	140 L 2 7 G0 t0 29						
28b	If you have limitations in any of your daily activities or work, which long-term illness, health problem or disability is the <b>main</b> cause? Please write in only one illness.						
		2189					
		2190- 193					
		Spare 2194- 199					
	SMOKING						
29	Which one of these best describes you?						
	Tick one only						
	I smoke daily ☐ 1 → Go to 30	2200					
	I smoke occasionally but not every day ☐ 2 → Go to 30						
	I used to smoke daily but do not smoke at all now ☐ 3 → Go to 35						
	I used to smoke occasionally but do not smoke at all now ☐ 4 → Go to 35						
	I have never smoked ☐ 5 → Go to 35						
30	During the <b>7 days ending yesterday</b> , did you smoke in any of these places?						
	Tick one box on each row						
	Yes No/Does not apply						
	Outdoors Outside at home 1 2	2201					
	Other places outdoors	2202					
	Indoors In own home 1 2	2203					
	In other people's homes 1 2	2204					
	Whilst travelling by car 1 2	2205					
	Other places indoors	2206					
		Spare 2207- 09					
	13						

31	Have you tried to give up smoking in the last 12 months?  Tick one	only
	Yes	
	No 🗆	
		-
32	Compared with <b>this time last year</b> , do you?  Tick one	only
	Smoke more now	
	Smoke about the same now	
	Smoke less now	
33	Would you like to give up smoking altogether?  Tick one	only
		1 → Go to 34 2212
		2 → Go to 35
		2 7 60 10 00
34	What are your main reasons for wanting to give up?  Tick all that	t anniv
	Because of a health problem I have at present	
	Better for my health in general	28
	Less risk of getting smoking related illnesses	
		04
	Financial reasons	
	Worried about the effect on my children	06
		07
	Other reasons	08
25		· · · · · · · · · · · · · · · · · · ·
35	Are you regularly exposed to other people's tobacco smoke i  Tick one k	n any of these places?
	Yes	
	Outdoors Outside at home	not apply
	Other places outdoors	
	Indoors In own home	
	In other people's homes	
	Whilst travelling by car	
	Other places indoors	
		Spare 2235- 49
	14	

# **ALCOHOL**

36	How often have you had an alcoholic drink of any kind du	ring the last 12 months?	
	Almost every day		2250-
	Five or six days a week		51
	Three or four days a week		
	Once or twice a week	□ 04 → Go to 38	
	Once or twice a month	□ 05 → Go to 38	
	Once every couple of months	☐ 06 → Go to 38	
	Once or twice a year	☐ 07 → Go to 38	
	Not at all in the last twelve months	□ 08 → Go to 37	
37	Have you always been a non-drinker, or did you stop drin	king for some reason?	
	Always a non-drinker	☐ 1 → Go to 40a	2252
	Used to drink but stopped	☐ 2 → Go to 40a	
38	Did you have an alcoholic drink of any kind in the last 7 c	days?	
	Tick o	one only	
	Yes	☐ 1 → Go to 39a	2253
	No	2 → Go to 40a	
	45		
	15		

Please write in day
Write in how much of each type of alcohol you drank on that day.  Write in how much you drank (use any of the measures below)
Normal strength beer, lager, stout, cider or shandy (less than 6% alcohol). Exclude bottles/cans of shandy You can include half pints under pints, eg "11/2"  Large cans or bottles or bottles  Very cans of shandy alcohol). Exclude bottles/cans of shandy alcohol
Strong beer, lager, stout or cider  (6% alcohol or more), such as Tennants Super, Special Brew, Diamond White  You can include half pints under pints, eg "11/2"
Large glasses glasses glasses (250ml) (175ml)  Wine, including champagne and Babycham You can write in parts of a bottle, eg "1/2"  Large glasses (250ml) (175ml) (125ml)  Wine, including champagne and Babycham (175ml)
Measures or shots (count doubles as 2 singles)  Spirits or liqueurs, such as gin, whisky, rum, brandy, vodka, tequila, Baileys, Archers
Fortified wines, such as sherry, port, vermouth, Martini, Cinzano, Dubonnet  Small glasses (count doubles as 2 singles)
Alcopops (alcoholic soft drink), such as WKD, Bacardi Breezer, Smirnoff Ice, Archers Aqua, Reef
Other kinds of alcoholic drink  Write in name of drink  Glasses  Count doubles  as 2 singles)  Large cans Small cansor bottles  or bottles
2



#### FRUIT AND VEGETABLES

Note: A tablespoon is a size bigger than a spoon you would use to eat soup or

breakfast cereal **40a** Using the measures below, how much of the following did you eat **yesterday**? Please read through the whole list before answering Write in number (or "0" if none eaten) Small bowlfuls of salad small bowlfuls 2321-Tablespoons of potatoes 2323-24 tablespoons Include potatoes in other dishes Tablespoons of other vegetables 2325tablespoons (raw, cooked, frozen or tinned) Tablespoons of pulses such as baked beans. 2327tablespoons red kidney beans, lentils, chickpeas, daal Tablespoons of vegetables or pulses in other dishes 2329-30 tablespoons made mainly from vegetables or pulses Do not include potatoes If no vegetables eaten yesterday, please tick 2331 **40b** Using the measures below, how much of the following did you eat **yesterday?** Please read through the whole list before answering Write in number (or "0" if none eaten) Average handfuls of very small fresh fruit, handfuls 2332such as grapes, berries 2334-35 Small fruit, such as plums, satsumas whole fruit 2336-Medium fruit, such as apples, bananas, oranges whole fruit Half (1/2) large fruit, such as grapefruit half fruit Average slices of a very large fruit, such as melon slices 2340-2342-43 Tablespoons of frozen or tinned fruit tablespoons Average handfuls of **dried fruit**, such as raisins, apricots handfuls Tablespoons of fruit in other dishes made mainly from fruit 2346-47 tablespoons such as fruit salad or fruit pies Small glasses of fruit juice small glasses If no fruit eaten **yesterday**, please tick

# **EXERCISE**

	Include physical activity which is part of you	r job	Tic	k all d	lays th	nat ap	ply		
	Light exercise / activity	Mon	Tue	Wed	Thu	Fri	Sat	Sun	
	For example Housework (eg hoovering, dusting), walking at an average pace, golf, light gardening (eg weeding)	01	02	03	04	05	06	07	235 64
	If no light exercise in the <b>last 7 days</b> , please tick	08	3						
41b	During the <b>7 days ending yesterday</b> , on which physical activity <b>for at least 30 minutes</b> ?  Blocks of activity lasting at least 10 minutes, who counted towards the full 30 minutes.  Include physical activity which is part of your	ich wei	e dor		he sa	me da	ay, car		
	Moderate exercise / activity	Mon	Tue	Wed	Thu	Fri	Sat	Sun	
	For example Heavy housework (eg spring cleaning, walking with heavy shopping), fast walking, dancing, gentle swimming, heavy gardening (eg digging)	01	02	03	04	05	06	07	236 78
	If no moderate exercise in the last 7 days, please tick	o	8						
41c	During the <b>7 days ending yesterday</b> , on which physical activity <b>for at least 30 minutes</b> ?  Blocks of activity lasting at least 10 minutes, who counted towards the full 30 minutes.  Include physical activity which is part of your	ich wei	e dor		the sa	me da	ay, car		
	Vigorous exercise / activity	Mon	Tue	Wed	Thu	Fri	Sat	Sun	
	For example Running, jogging, squash, swimming lengths, aerobics, fast cycling, football	01	02	03	04	05	06	07	237 92



	CARERS		
42	Do you look after, or give any help or support to others because of long-term physical or mental it to old age? <i>Do not count anything you do as property to old age?</i> Tick time sponton No Yes, 1-19 hours a week Yes, 20-49 hours a week Yes, 50+ hours a week Yes, 5	ill-health or disability, or problems related part of your paid employment  ent in a typical week  1 2 3	2393
	ABOUT YO	U	
43	Are you? Male 1	Female 2	2394
44	How old were you on your last birthday?	Please write in whole years  Age years	2395- 97
45	Women only: Are you currently pregnant?	Tick one only  Yes	2398
46	How tall are you?  feet inches	OR centimetres	2399 2400- 01 2402- 04
47	How much do you weigh?  stone pounds	OR kilograms	2405- 06 2407- 08 2409- 11

B. Mixed/multiple ethnic groups  White and Black Caribbean   05  White and Asian   07  Any other Mixed/multiple ethnic background, write in   08  C. Asian or Asian British  Indian   09  Pakistani   10  Bangladeshi   11  Chinese   12  Any other Asian background, write in   13  D. Black or Black British  African   14  Caribbean   15  Any other Black/African/Caribbean background, write in   16  E. Other ethnic group  White and Black Caribbean   05  White and Black African   09  Pakistani   10  Bangladeshi   11  Chinese   12  Any other Asian background, write in   13  E. Other ethnic group
Pakistani 10 Bangladeshi 11 Chinese 12 Any other Asian background, write in 13  D. Black or Black British African 14 Caribbean 15 Any other Black/African/Caribbean background, write in 16
Caribbean 15 Any other Black/African/Caribbean background, write in 16
E. Other ethnic group  Arab 17
Any other ethnic group, write in 18

49	Which of these descriptions applies to w	∕hat you w	vere doing last week	?	
			Tick fi	rst to apply	
	Going to school or college full-time (including on vacation)				2414- 15
	In paid employment or self-employment	` ,	• • • • • • • • • • • • • • • • • • • •	02	
	On a Government scheme for employm		ng	03	
	Doing unpaid work for a business that y or that a relative owns	ou own,		04	
	Waiting to take up paid work already ob	tained		05	
	Looking for paid work or a Government			06	
	Intending to look for work but prevented or injury (sick or injured for 28 days or le		orary sickness	07	
	Permanently unable to work because of	long-term	sickness or disability	08	
	Retired from paid work			09	
	Looking after the home or family  Doing something else			10	Spare
	Doing contenting cloc			11	2416- 19
50	Which of these qualifications do you have	/e?			
	Tick all the qualifications that apply or, if		ified their nearest equ	ıivalent	2420-
	Thore are the quantitations that apply of, if	not spec	med, then hearest equ	iivaiciit	43
	1+ O levels/CSEs/GCSEs (any grades)	01	NVQ Level 1, Found	dation GNVQ	07
	5+ O levels, 5+ CSEs (grade 1), 5+ GCSEs (grade A-C), School Certificate	02	NVQ Level 2, Interm	nediate GNVQ	08
	1+ A levels/AS levels	03	NVQ Level 3, Advar	iced GNVQ	09
	2+ A levels, 4+ AS levels, Higher School Certificate	04	NVQ Levels 4-5, HN	IC, HND	10
	First Degree (eg BA, BSc)	05	Other Qualifications Guilds, RSA/OCR, E		11
	Higher Degree (eg MA, PhD, PGCE, post-graduate certificate / diplomas)	06	No Qualifications		12
		21			

51	Do you have any of the following professional qualifications?  Tick all the boxes that apply			2444- 55
	No Professional Qualifications	01	Qualified Dentist	04
	Qualified Teacher Status (for schools)	02	Qualified Nurse, Midwife, Health Visitor	05
	Qualified Medical Doctor	03	Other Professional Qualifications	06
52	If at some future date we wanted to ask you to take part in a further health-related study, may we contact you to see if you are willing to help again?  Tick one only  Yes   1			
			No 2	2456

# THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

Please return the questionnaire to the interviewer (or in the envelope provided if sent in the post)





