



**Health Survey for England**

**2012**

Volume 1

**Health, social care  
and lifestyles**

A survey carried out on behalf of the Health and  
Social Care Information Centre

*Joint Health Surveys Unit*

**NatCen**  
Social Research that works for society



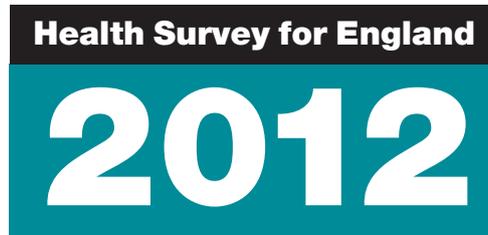
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# Health Survey for England 2012

Volume 1

## Health, social care and lifestyles

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Volume 1

# Health, social care and lifestyles

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## Foreword

This report presents the findings of the twenty-second annual survey of health in England. I am pleased to present this important research which has been undertaken on behalf of the Health and Social Care Information Centre (HSCIC).

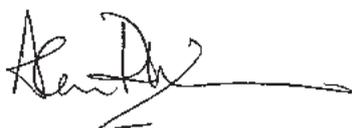
The Health Survey for England collects information about a new representative sample of the general population each year, both adults and children. It is vital to our understanding of the health and health-related behaviours of the public in England and helps to ensure that policies are informed by these data.

The survey combines information gathered through interviewing the sampled participants, including a wealth of socio-demographic variables, with objective measures of health, such as height and weight, and blood pressure measurements. Thus we can look at how people's health is related to their characteristics and circumstances.

The primary focus of the Health Survey for England in 2012 was physical activity. Adults and children were asked to recall their physical activity over recent weeks to establish how many meet recommended activity levels to improve health. Physical activity has become an increasingly important public health issue as successive governments attempt to reduce the levels of child and adult obesity – and being physically active also brings many other physical and mental health benefits. Increasing physical activity has been a subject of public health promotion policies and government health strategies in England since the early 1990s. It is essential to monitor progress towards targets for increasing levels of physical activity among the population, and the Health Survey for England plays an important role as a monitoring tool. This year the physical activity questionnaire was revised in line with changing recommendations about the types of activity that adults and children should be doing, and the results presented in this report have been analysed to reflect latest recommendations about levels of activity.

I would like to thank everyone who has contributed to this valuable report: colleagues in the HSCIC and our counterparts in the Joint Health Surveys Unit of NatCen Social Research and UCL (University College London); the dedicated and skilled interviewing force; and finally the anonymous participants from across England who gave up their time to take part in the survey and various health tests. All of these contribute to produce a source of public health information of enormous value and benefit to protect and improve the health of every one of us.

**Alan Perkins**



Chief Executive  
Health and Social Care Information Centre

## Editors' acknowledgements

We wish to thank, first of all, all those who gave up their time to be interviewed and who welcomed interviewers and nurses into their homes. We should also like to acknowledge the debt the survey's success owes to the commitment and professionalism of the interviewers and nurses who worked on the survey throughout the year.

We should like to thank all those colleagues who contributed to the survey and this report. In particular we would like to thank:

- The authors of all the chapters: Sally Bridges, Melanie Doyle, Elizabeth Fuller, Craig Knott, Jennifer Mindell, Alison Moody, Alice Ryley, Shaun Scholes, Carla Seabury, Heather Wardle, Rachel Whalley.
- Cathy Coshall, Claire Deverill and Lynne Gold whose hard work and support have been crucial in preparing and managing the survey data.
- Other research colleagues, especially Julia Hall, Kevin Pickering, Evie Calcutt, Barbara Carter-Szatynska, Emmanouil Stamatakis.
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Last, but certainly not least, we wish to express our appreciation of the work of the staff at the Health and Social Care Information Centre at all stages of the project, and in particular the contributions made by Vicky Cooper, Paul Eastwood, Paul Glossop, Victoria Jones, Sarah McDiarmid, Bethan Thomas, Steve Webster and Sam Widdowfield.

*Rachel Craig, Jennifer Mindell*

## Notes

1. The data used in the report have been weighted. The weighting is described in Volume 2, Chapter 7 of this report, Methods and documentation. Both unweighted and weighted sample sizes are shown at the foot of each table. The weighted numbers reflect the relative size of each group in the population, not numbers of interviews made, which are shown by the unweighted bases.
2. Children's data each year have been weighted to adjust for the probability of selection, since a maximum of two children are selected in each household. This ensures that children from larger households are not under-represented. Since 2003, as for adults, non-response weighting has also been applied.
3. Six different non-response weights have been used: for the interview stage, for the gambling data, for the nurse visit, and for the blood, urine and cotinine samples.
4. Apart from tables showing age breakdowns, data for adults have been age-standardised for men and for women separately. This allows comparisons between groups, (such as different strategic health authorities or household income categories), after adjusting for the effects of any differences in their age distributions. When comparing data for the two sexes, it should be remembered that no standardisation has been introduced to remove the effects of the sexes' different age distributions. See Volume 2, Chapter 8.4 of this report.
5. The following conventions have been used in tables:
  - no observations (zero value)
  - 0 non-zero values of less than 0.5% and thus rounded to zero
  - [ ] used to warn of small sample bases, if the unweighted base is less than 50. If a group's unweighted base is less than 30, data are normally not shown for that group.
6. Because of rounding, row or column percentages may not add exactly to 100%.
7. A percentage may be quoted in the text for a single category that aggregates two or more of the percentages shown in a table. The percentage for the single category may, because of rounding, differ by one percentage point from the sum of the percentages in the table.
8. Values for means, medians, centiles and standard errors are shown to an appropriate number of decimal places. Standard Error may sometimes be abbreviated to SE for reasons of space.
9. 'Missing values' occur for several reasons, including refusal or inability to answer a particular question; refusal to co-operate in an entire section of the survey (such as the nurse visit or a self-completion questionnaire); and cases where the question is not applicable to the participant. In general, missing values have been omitted from all tables and analyses.
10. The group on which the figures in each table are based is stated at the upper left corner of the table.
11. The term 'significant' refers to statistical significance (at the 95% level) and is not intended to imply substantive importance.

# Introduction

# 1

## 1.1 The Health Survey for England series

The Health Survey for England (HSE) comprises a series of annual surveys, of which the 2012 survey is the twenty second. All surveys have covered the adult population aged 16 and over living in private households in England. Since 1995, the surveys have also covered children aged 2-15 living in households selected for the survey. Since 2001, infants aged under 2 have been included as well as older children.

The HSE is part of a programme of surveys currently commissioned by the Health and Social Care Information Centre (HSCIC), and before April 2005 commissioned by the Department of Health (DH). The surveys provide regular information that cannot be obtained from other sources on a range of aspects concerning the public's health, and many of the factors that affect health. The series of Health Surveys for England was designed to:

1. Provide annual data from nationally representative samples to monitor trends in the nation's health;
2. Estimate the proportion of people in England who have specified health conditions;
3. Estimate the prevalence of certain risk factors associated with these conditions;
4. Examine differences between subgroups of the population (e.g. by age, sex or income) in their likelihood of having specified conditions or risk factors;
5. Assess the frequency with which particular combinations of risk factors are found, and in which groups these combinations most commonly occur;
6. Monitor progress towards selected health targets;
7. (Since 1995) measure the height of children at different ages, replacing the National Study of Health and Growth; and
8. (Since 1995) monitor the prevalence of overweight and obesity in children.

Each survey in the series includes core questions and measurements such as blood pressure, anthropometric measurements and analysis of blood and saliva samples, as well as modules of questions on specific issues that vary from year to year. In some years, the core sample has also been augmented by an additional boosted sample from a specific population subgroup, such as minority ethnic groups, older people or children; there was no boost in 2012.

The Health Survey for England has been designed and carried out since 1994 by the Joint Health Surveys Unit of NatCen Social Research and the Research Department of Epidemiology and Public Health at UCL (University College London).

## 1.2 The 2012 survey

### 1.2.1 Topics

As well as core topics including social care, the focus for the 2012 survey was physical activity. Additional non-core modules of questions were also included, covering average weekly alcohol consumption, gambling, well-being, and sexual health.

## Physical activity

Questions were included about adults' self-reported leisure and occupational physical activity in the last month, comparing this with the current UK guidelines for aerobic activity, muscle-strengthening activity, and in older people, exercise to improve balance and co-ordination. Children aged 13-15 were asked about their own activity over the last week, and parents answered on behalf of children aged 2-12.

In 2011, the Chief Medical Officers of the four UK countries introduced revised guidelines for physical activity<sup>1</sup> that reflect current evidence on what is needed to benefit health and the incremental benefits from undertaking physical activity. These include guidelines on aerobic activity; muscle-strengthening activities; and activities to improve balance and co-ordination.

Physical activity was selected as a major focus of the HSE 2012 because it coincided with the London 2012 Olympic and Paralympic Games. One of the planned legacies from the London 2012 Games was an increase in sports and exercise participation, including active travel (walking and cycling), by the general public across the country.<sup>2</sup>

Lack of physical activity is the fourth most important risk factor worldwide for chronic, non-communicable diseases, after tobacco use, raised blood pressure, and hyperglycaemia (raised blood sugar).<sup>3</sup> Worldwide, it accounts for 6% of the burden of disease from ischaemic heart disease,<sup>4</sup> 7% of Type 2 diabetes, and 10% of breast and colon cancers. It is estimated to have caused more than 5.3 million premature deaths worldwide in 2008 (9% of all premature deaths).<sup>5</sup> In the UK, inactivity has been estimated to cause 3% of disability-adjusted years of life lost in 2002 and a direct cost to the NHS of £1.1 billion,<sup>6</sup> with indirect costs to society bringing this cost to a total of £8.2 billion.<sup>7</sup>

Physical inactivity contributes to a wide range of diseases, including psychological distress<sup>8</sup> and depression,<sup>9</sup> as well as being a major cause of obesity<sup>10</sup> and diabetes.<sup>5,11</sup> Conversely, regular physical activity brings a wide range of health benefits.

In recent years, sedentary behaviour (characterised by activities involving prolonged sitting) is emerging as a potentially important risk factor for chronic disease in its own right, over and above lack of physical activity of moderate to vigorous intensity.<sup>12,13</sup> Even among adults who meet public health physical activity guidelines, those who spend more time being sedentary are more likely to be obese<sup>10</sup> and to have worse physical and mental health outcomes<sup>14,15</sup> than their peers who spend less time sitting down.

Physical activity is also important in children. Habits track from childhood to adulthood,<sup>16</sup> so active children are less likely to suffer the adverse health consequences of physical inactivity in adulthood.

The periodic measurement of adult physical activity through the Health Survey for England provides valuable evidence for the prevalence of physical activity in the context of wider public health. In particular, the survey includes occupational activity for adults, as well as housework and DIY in the overall measure of physical activity - aspects of 'everyday' activity unlikely to be promoted through any community-based intervention but necessary for an understanding of overall volumes of activity.

### 1.2.2 Sample size

Data collection involved an interview, followed by a visit from a specially trained nurse for all those who agreed. The nurse visit included measurements and collection of blood and saliva or urine samples, as well as additional questions.

A total of 8,291 adults and 2,043 children were interviewed. A household response rate of 64% was achieved. 5,470 adults and 1,203 children had a nurse visit. It should be noted that, as in 2011, there was no child boost sample in 2012. Thus the scope for analyses of some data for children may be limited by relatively small sample sizes.

## 1.3 Ethical approval

Ethical approval for the 2012 survey was obtained from the Oxford A Research Ethics Committee (reference number 10/H0604/56).

## 1.4 2012 survey design

### 1.4.1 The sample

The survey was designed to yield a representative sample of the general population living in private households in England. More detailed information about survey design is presented in Volume 2 of this report, Chapters 2-7.

Those living in institutions were outside the scope of the survey. This should be borne in mind when considering survey findings since the institutional population is likely to be older and, on average, less healthy than those living in private households.

A random sample of 9,024 addresses was selected from the Postcode Address File (PAF), using a multi-stage sample design with appropriate stratification. Addresses in smaller strategic health authorities (North East, South East Coast and South Central) were over-sampled to provide a minimum sample size (of approximately 700 adults) in each strategic health authority for regional analyses. 564 postcode sectors were selected, and 16 addresses were issued in each.

Where an address was found to have multiple dwelling units, one was selected at random. Where there were multiple households at a dwelling unit, a single household was selected at random.

Each individual within a selected household was eligible for inclusion. Where there were more than two children in a household, two were randomly selected for inclusion, to limit the burden on any household.

### 1.4.2 Fieldwork

#### *Interview*

A letter stating the purpose of the survey was sent to each sampled address before the interviewer visited. The interviewer sought the permission of each eligible selected adult in the household to be interviewed, and both parents' and children's consent to interview selected children aged up to 15.

Computer assisted interviews were conducted. The content of the interview is detailed in Volume 2, Chapter 3; full documentation is provided in the Appendices to Volume 2.

Adults were asked core modules of questions on general health, social care, alcohol consumption and smoking. Participants were also asked about physical activity. Additional questions on regular drinking were included to supplement core questions about the heaviest drinking day in the last week and frequency of alcohol consumption. Self-reported height and weight was established early in the interview, to provide a comparison with the height and weight measurements which were taken later.

Children aged 13-15 were interviewed themselves, and parents of children aged 0-12 were asked about their children, with the interview including questions on general health and physical activity.

Adults and children aged 8-15 were asked to fill in a self-completion booklet during the interview. For adults this covered the GHQ-12 (12-item General Health Questionnaire), EQ-5D (5-dimension Euroqol questionnaire including the Visual Analogue Scale assessing health state), gambling, sexual health, perception of own and child's weight, sexual orientation and religion. For children and some young adults details of drinking and smoking were also collected by self-completion.

In addition, adults were asked to complete a short self completion booklet in the nurse visit, containing the Warwick-Edinburgh mental well-being scale (WEMWBS). This was included in the nurse visit to avoid too long a self-completion booklet during the initial interview.

Interviewers measured the weight of all participants, and the height of all aged 2 and over.

### **Change to longstanding illness questions**

In 2012, the questions on longstanding illness were changed to be consistent with the harmonised disability questions designed for use in social surveys, as recommended by the proposed Disability, Health and Carers Primary Standards in 2011.<sup>17</sup> The new questions explicitly ask about physical and mental health, separate the concept of disability from illnesses or health conditions, and refer to illnesses or conditions 'lasting or expected to last 12 months or more' rather than 'over a period of time'. Further details are provided in Volume 2, Chapter 3, Section 3.4 and in Appendix D to Volume 2.

### **Nurse visit**

Nurse visits were offered to all participants. At the nurse visit, questions were asked about prescribed medication and use of nicotine replacement products, plus the WEMWBS self-completion booklet (see details about the interview above). For infants, additional information was collected on immunisations and measurements at birth.

Nurses took waist and hip measurements for those aged 11 and over and measured the blood pressure of those aged 5 and over.

Adults aged 16 and over were asked to provide non-fasting blood samples (for the analysis of total and HDL cholesterol and glycated haemoglobin) and urine samples (for the analysis of sodium, potassium and creatinine). Samples of saliva (for the analysis of cotinine, a derivative of nicotine) were taken from children aged 4-15. Written consent was obtained for these samples. Details of the analysis of these samples are provided in Volume 2, Chapter 9.

### **Interview length**

Interviews could be conducted with between one and four persons per session; the most common session types were with one or two individuals. Interview length for a single adult averaged around 50 minutes, and for two people (including at least one adult) interview length averaged around 60-65 minutes. Nurse visits were conducted with a single individual at a time, and the nurse visit for adults who took part in all the measurements averaged 30 minutes.

Interviews with children were shorter than with adults, and the interview length varied with age as some modules were only asked of older children. When children were interviewed without adults, the average interview length was around 10-15 minutes for a single child aged 8-15, and around 20 minutes for two children of this age.

## **1.5 Survey response**

Interviews were held in 5,219 households with 8,291 adults aged 16 and over, and 2,043 children aged 0-15. 5,470 adults and 1,203 children had a nurse visit. More detailed information on survey response can be found in Volume 2, Chapter 6.

Response to the survey can be calculated in two ways: at a household level and at an individual level. Interviews were carried out at 64% of sampled eligible households (after removing vacant addresses etc). Interviews were obtained with 85% of adults and 92% of (sampled) children in 'co-operating' households (where at least one person was interviewed).

The assumption is made that households where the number of adults and children was not known contained, on average, the same number of adults and children as households where it was known. On this basis, the individual response rate, based on all eligible households, was estimated to be 56% among adults and 62% among (sampled) children.

Table 1A		
Individual response for adults aged 16 and over		
	Adults in all eligible households	Adults in co-operating households
	%	%
Interviewed	59	85
Height measured	49	74
Weight measured	48	72
Saw nurse	37	56
Waist and hip measured	36	55
Blood pressure measured	36	55
Blood sample taken	28	42
Urine sample taken	32	48

Table 1B		
Individual response for children aged 0-15		
	Children in all eligible households	Children in co-operating households
	%	%
Interviewed	62	92
Height measured (aged 2 and over)	41	71
Weight measured	47	70
Saw nurse	37	54
Saliva sample taken (aged 4 and over)	n/a	45
Blood pressure measured (aged 5 and over)	n/a	50
Waist and hip measured (aged 11 and over)	n/a	50

Table 1A shows individual response rates to the different stages of the survey for adults. The first column gives the individual response rates based on all adults in all eligible households, and the second column gives individual response rates for adults in co-operating households.

Table 1B shows the equivalent response rates to the different stages of the survey for children, with response rates based on all children in all eligible households in the first column, and response rates in co-operating households in the second column. Note that it is not possible to estimate response rates based on all eligible children for saliva samples, waist and hip and blood pressure measurements, as only certain age groups are eligible for these.<sup>18</sup> The response rates for these measures in co-operating households are based on the appropriate age groups.

## 1.6 Data analysis

### 1.6.1 Introduction

The HSE is a cross-sectional survey of the population. It examines associations between health states, personal characteristics and behaviour. However, such associations do not necessarily imply causality. In particular, associations between current health states and current behaviour need careful interpretation, as current health may reflect past, rather than present, behaviour. Similarly, current behaviour may be influenced by advice or treatment for particular health conditions.

### 1.6.2 Weighting the samples

#### *The overall sample*

Weights were calculated at the household level and at the individual participant level. The household weight corrected for the probability of selection where additional dwelling units or households were identified at a selected address. Calibration weighting was also used for adults to reduce non-response bias resulting from differential non-response at the household level, based on the age and sex profile of the residents and the region in which the household was situated. In participating households 85% of adults were interviewed, and weights were therefore also calculated at an individual level to correct for non-response within participating households.

### **The child sample**

Weights for the child sample adjust for the probability of selection for children in larger households, and ensure that the profile of children selected for the survey matches the profile of all children. As the level of response for obtaining a child interview in participating households was relatively high (92%), no additional non-response weighting was undertaken for the sample of children.

### **Non-response weighting for the nurse visit and samples**

Further weights were calculated, as well as weights to allow for non-response at the interview stage. These were to adjust for non-response to the nurse visit, obtaining a blood, urine or saliva sample, and completing the self-completion gambling questions.

Further details on the weighting procedures are given in Volume 2, Chapter 7.

## **1.6.3 Weighted and unweighted data and bases in report tables**

All 2012 data in this report are weighted (apart from response tables). Both weighted and unweighted bases are given in each table in the report. The unweighted bases show the number of participants involved. The weighted bases show the relative sizes of the various sample elements after weighting, reflecting their proportions in the population in England, so that data from different columns can be combined in their correct proportions.

Non-response weighting was introduced to the HSE in 2003, and has been used in all subsequent years. In this report, chapters focus on 2012 results, but in a small number of chapters trend tables are presented. In tables for adults, results from 2003 onwards are weighted. For tables showing trends in children's data, results for years up to and including 2002 have selection weighting only, and results for 2003 onwards have both selection and non-response weighting.

## **1.6.4 Age as an analysis variable**

Age is a continuous variable but results are presented in this report by age groups. Age in HSE reports always refers to age at last birthday.

## **1.6.5 Age standardisation**

Adult data have been age-standardised throughout the 2012 report to allow comparisons between groups after adjusting for the effects of any differences in their age distributions. When different sub-groups are compared in respect of a variable on which age has an important influence, any differences in age distributions between these sub-groups are likely to affect the observed differences in the proportions of interest.

It should be noted that all analyses in the report are presented separately for men and women. All age standardisation has been undertaken separately within each sex, expressing male data to the overall male population and female data to the overall female population. When comparing data for the two sexes, it should be remembered that no standardisation has been introduced to remove the effects of the sexes' different age distributions.

Details of the direct standardisation method used are given in Volume 2, Chapter 8.

## **1.6.6 Standard analysis breakdowns**

For most tables in this report, three standard analysis breakdowns have been used as well as age. These are region, equivalised household income and Index of Multiple Deprivation.

### **Region**

Analysis by region is provided throughout the report. The former Government Office Regions have been used.

Both observed and age-standardised data are provided by region in the tables. Observed

data can be used to examine actual prevalence or mean values within a region, needed, for example, for planning services; age-standardised data are required for comparisons between areas to exclude age-related effects, and are discussed in the report text.

It should be noted that base sizes for regions are often relatively small, and caution should be exercised in examining regional differences. In 2012, strategic health authorities (SHAs) were used as the basis for sampling, and the smaller SHA areas (the North East, South East Coast and South Central) were over-sampled to provide a minimum unweighted sample size of approximately 700 adults; the weighting process adjusted for this.

### ***Equivalised household income***

The second standard breakdown is equivalised household income. Household income was established by means of a show card (see field documents in Appendix A) on which banded incomes were presented. This can be used as an analysis variable, but there has been increasing interest recently in using measures of equivalised income that adjust income to take account of the number of persons in the household. To derive this, each household member is given a score based, for adults, on the number of adults apart from the household reference person, and for dependent children, on their age. The total household income is divided by the sum of the scores to provide the measure of equivalised household income. All individuals in each household were allocated to the equivalised household income quintile to which their household had been allocated.

It should be noted that around 19% of adults live in households where no information is provided on income, and are therefore excluded from the breakdown by equivalised household income.

Further details about equivalised household income are given in the Glossary in Volume 2, Appendix C.

### ***Index of Multiple Deprivation***

The Index of Multiple Deprivation 2010 combines a number of indicators, chosen to cover a range of economic, social and housing issues, into a single deprivation score for each small area in England. This allows each area to be ranked relative to others according to their level of deprivation.<sup>19</sup> Seven distinct domains have been identified in the English Indices of Deprivation; Income Deprivation, Employment Deprivation, Health Deprivation and Disability, Education Skills and Training Deprivation, Barriers to Housing and Services, Living Environment Deprivation, and Crime. Individual domains can be used in isolation as measures of each specific form of deprivation, as well as using the single overall Index of Multiple Deprivation (IMD).<sup>20</sup>

The Index is used widely to analyse patterns of deprivation, identify areas that would benefit from special initiatives or programmes and as a tool to determine eligibility for specific funding streams. In this report quintiles of IMD are used to give an area-level measure of socio-economic status, as opposed to the household-level measure of equivalised household income.

#### **1.6.7 Logistic regression analysis**

Logistic regression modelling has been used in some chapters to examine the factors associated with selected outcome variables, after adjusting for other predictors. A description of logistic regression is provided in Volume 2, Chapter 8, Section 8.7, as well as in the relevant chapters.

#### **1.6.8 Statistical information**

The HSE 2012 used a clustered, stratified multi-stage sample design. In addition, weights were applied when obtaining survey estimates. One of the effects of using the complex design and weighting is that standard errors for survey estimates are generally higher than the standard errors that would be derived from an unweighted simple random sample of the same size. The calculations of standard errors shown in tables, and comments on statistical

significance throughout the report, have taken the clustering, stratification and weighting into account. Full details of the sample design and weighting are given in Volume 2, Methods and documentation.

The ratio of the standard error of the complex sample to that of a simple random sample of the same size is known as the design factor. Put another way, the design factor (or 'deft') is the factor by which the standard error of an estimate from a simple random sample has to be multiplied to give the true standard error of the complex design. The true standard errors and defts for the HSE 2012 have been calculated for selected survey estimates presented in the topic chapters, and are shown in Volume 2, Tables 15-25.

### 1.6.9 Presentation of results

Commentary in the report highlights differences that are statistically significant at the 95% level. It should be noted that statistical significance is not intended to imply substantive importance.

A summary of findings is presented at the beginning of each chapter. Following the chapter introduction and details of methods and definitions, the results are outlined in detail; a discussion section at the end of most chapters makes comparisons with other data sources and trend data, and sets the results in a broader context. Tables at the end show the results discussed in the chapter, and as well as prevalence percentages, means and standard errors are presented when appropriate.

### 1.6.10 Availability of further data

As with surveys from previous years, a copy of the HSE 2012 data will be deposited with the UK Data Service. Copies of anonymised data files can be made available for specific research projects through the Data Service.<sup>21</sup>

In addition, trend tables showing data for key variables collected every year ('core' modules) for adults and children are available on the Health and Social Care Information Centre's website.<sup>22</sup>

## 1.7 Content of this report

This volume contains chapters with substantive results from the HSE 2012, and is one of two volumes based on the survey, published as a set as the *Health Survey for England 2012*:

1. Volume 1: Health, social care and lifestyles<sup>23</sup>
2. Volume 2: Methods and documentation<sup>24</sup>

Volume 2 gives full details of the survey methods and documentation. This includes a description of the survey design and response rates; sampling errors; analysis of non-response; description of weighting procedures; and information on laboratory techniques and quality control of analysis of blood, urine and saliva samples. Appendices to Volume 2 are as follows:

- Appendix A: Questions asked by interviewers and nurses and copies of other key fieldwork documents
- Appendix B: Protocols for measurements
- Appendix C: Glossary
- Appendix D: Previous and new questions on longstanding illnesses/conditions.

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## **NatCen Social Research**

[www.natcen.ac.uk](http://www.natcen.ac.uk)

NatCen Social Research is the largest independent social research institute in Britain, carrying out research that works for society. NatCen specialises in research in public policy fields such as health and well-being, society and social change, children and young people, income and work, crime and justice. We offer the full range of quantitative and qualitative research services. Our team includes survey methodologists, data analysts and policy sector specialists. As well as research staff, NatCen has a national panel of over 1,000 interviewers and 150 nurses who work on health-related surveys.

## **Research Department of Epidemiology and Public Health, UCL (University College London)**

[www.ucl.ac.uk/epidemiology](http://www.ucl.ac.uk/epidemiology)

The Research Department of Epidemiology and Public Health, chaired by Professor Richard Watt, is a leading centre for research into the social determinants of health, and has a strong interdisciplinary structure. The Department houses 180 staff in 11 main research groups, including the Joint Health Surveys Unit, part of the Health and Social Surveys Research Group (HSSRG). The HSSRG studies population health (including health behaviours and treatments) and inequalities in health. Much of the group's research is carried out using large population surveys that collect data on health, economic and social issues, using a variety of survey methods and statistical techniques, while qualitative methods are also used by the group. The group is multidisciplinary, with epidemiology, sociology, statistics, public health nutrition, demography and geography all represented.

The **Joint Health Surveys Unit** has been created by NatCen Social Research and the Health and Social Surveys Research Group within the Research Department of Epidemiology and Public Health at UCL. The JHSU enables collaborative working, combining the strengths and talents of each organisation, to carry out major health surveys such as the Health Survey for England.



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