Health Survey for England 2018

Background Data Quality Statement

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## Contents

**This is a National Statistics publication** 3  
**Introduction** 4  
**Background** 4  
  - Context 4  
  - Purpose of document 4  
**Assessment of statistics against quality dimensions and principles** 5  
  - Relevance 5  
  - Accuracy and reliability 6  
  - Timeliness and punctuality 7  
  - Accessibility and clarity 7  
  - Coherence and comparability 8  
  - Trade-offs between output quality components 9  
  - Assessment of user needs and perceptions 9  
  - Performance, cost and respondent burden 10  
  - Confidentiality, transparency and security 11  
**Post publication corrections** 13
This is a National Statistics publication

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Statistics. They are awarded National Statistics status following an assessment by the Authority’s regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is NHS Digital’s responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Find out more about the Code of Practice for Statistics at https://www.statisticsauthority.gov.uk/code-of-practice/
Introduction

This document is a background quality report for the Health Survey for England (HSE).

The statistics included in this release are the latest available figures at the time of publication.

Background

Context

The Health Survey for England series was designed to monitor trends in the health, and health related behaviours, of adults and children in England. The survey is used to estimate the proportion of people in England who have specified health conditions, and the prevalence of risk factors and behaviours associated with health conditions. The surveys provide regular information that cannot be obtained from other sources. The surveys have been 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.

The report on the 2018 survey is published on the NHS Digital website at:


Reports about the Health Surveys for England from 2004 onwards are available at:


The content of the survey is described in the publication.

Purpose of document

This paper aims to provide users with an evidence-based assessment of quality of the statistical output included in this report.

It reports against those of the nine European Statistical System (ESS) quality dimensions and principles\(^1\) appropriate to this output. In doing so, this meets NHS Digital’s obligation to comply with the UK Statistics Authority (UKSA) Code of Practice for Statistics\(^2\), and the following principles in particular:

- Trustworthiness pillar, principle 6 (Data governance) which states “Organisations should look after people’s information securely and manage data in ways that are consistent with relevant legislation and serve the public good.”

\(^1\) The original quality dimensions are: relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, and coherence and comparability; these are set out in Eurostat Statistical Law. However more recent quality guidance from Eurostat includes some additional quality principles on: output quality trade-offs, user needs and perceptions, performance cost and respondent burden, and confidentiality, transparency and security.

• Quality pillar, principle 3 (Assured Quality) which states “Producers of statistics and data should explain clearly how they assure themselves that statistics and data are accurate, reliable, coherent and timely.”

• Value pillar, principle 1 (Relevance to Users) which states “Users of statistics and data should be at the centre of statistical production; their needs should be understood, their views sought and acted upon, and their use of statistics supported.”

• Value pillar, principle 2 (Accessibility) which states “Statistics and data should be equally available to all, not given to some people before others. They should be published at a sufficient level of detail and remain publicly available.”

The Health Survey for England was assessed in 2010 by the United Kingdom Statistical Authority (UKSA) for compliance with the Code of Practice and the publication was recommended for continued designation as National Statistics.

Assessment of statistics against quality dimensions and principles

Relevance

This dimension covers the degree to which the statistical product meets user needs in both coverage and content.

Each survey in the series includes core questions and measurements (such as blood pressure, height and weight and analysis of blood and saliva samples), as well as some modules of questions that are on specific topics that vary from year to year.

Frequent topics include:

• height, weight, BMI (body mass index)
• perceptions of own weight and perceptions of child’s weight
• smoking
• exposure of children to second-hand smoke
• alcohol
• fruit and vegetable consumption
• general health, acute sickness and long-standing illness
• General Health Questionnaire (GHQ-12) an indicator of probable mental ill health
• blood pressure and hypertension
• diabetes
• prescribed medicines taken
• well-being
• physical activity
• social care for older people

Most of these are included each year in the survey, but some may be every two, three years or four years. An example of a less frequent but regular topic is the large module of questions about physical activity.

The survey is the main source of data on the prevalence of overweight and obesity and body mass index data on adults in England.
Comparability over time is maintained by using the same questions. If changes are made, these are carefully assessed for possible implications on time series data.

There is also scope to incorporate topics into the questionnaire for just one survey year and a variety of different topics have been reported on over time. Examples are dental health, eye care, and sexual health. Some topics have been put in more than one year such as chronic pain and the prevalence of gambling. Further details can be found in the publications and at http://healthsurvey.hscic.gov.uk/content-by-topic.aspx.

The publication includes trends tables reporting on key elements of the survey every year and the longevity of the survey means there is a long time series of comparable data available. It is one of the longest running health surveys across Europe.

The contents of the publication vary from year to year. Key prevalence measures are included each year and other topics vary to ensure that the wide range of topics is covered over time and also to reflect the inclusion of new topics. NHS Digital consults the HSE Steering Group each year to try and ensure we meet most users’ needs for reporting.

Analysis by region is provided using the former Government Office Regions. Unfortunately, estimates below regional level, e.g. for local authorities, cannot be produced as the HSE sample size is not large enough. The Index of Multiple Deprivation is also available at a grouped level.

**Accuracy and reliability**

*This dimension covers, with respect to the statistics, their proximity between an estimate and the unknown true value.*

**Accuracy of the statistics: estimating and reporting uncertainty**

The figures in this publication come from surveys, which gather information from a sample rather than from the whole population. The sample is designed to be as accurate as possible given practical limitations such as time and cost constraints. Results from sample surveys are always estimates, not precise figures. This can have an impact on how changes in the estimates should be interpreted, especially for short-term comparisons.

As the number of people available in the sample gets smaller, the variability of the estimates that we can make from that sample size gets larger. Estimates for small groups (for example, unemployed people aged from 16 to 17 years), which are based on quite small subsets of the Labour Force Survey sample, are less reliable and tend to be more volatile than for larger aggregated groups (for example, the total number of unemployed people).

As the data are based on a sample (rather than a census) of the population, the estimates are subject to sampling error. The Health Survey for England 2018 used a clustered, stratified multi-stage sample design and 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 calculation of standard errors shown in the tables, and comments on
statistical significance have been included in the report, all of which have taken into account the clustering, stratification and weighting of the data.

In general, attention is drawn to differences between estimates only when they are significant at the 95% confidence level, thus indicating that there is less than 5% probability that the observed difference could be due to random sampling variation when no difference occurred in the population from which the sample is drawn.

A household response rate of 59% was achieved. In total, 8,178 adults and 2,072 children were interviewed, including 4,825 adults and 1,103 children who had a nurse visit. Details of the sample design and survey methods and sampling errors and design effects are in the publication.

The sample was designed to be representative of the population living in private households in England. People living in institutional settings such as residential care homes, offender institutions, prisons, in temporary housing (such as hostels or bed and breakfasts) or sleeping rough are outside the scope of the survey. This should be borne in mind when considering survey findings, especially those for older people, since the institutional population in care homes is likely to be older and, on average, less healthy than those living in private households. The health of other people not covered by the survey might also vary from that of people in private households in some ways.

However, the proportion of these in the England population is very small and so is unlikely to have little impact on most prevalence estimates.

The scope for analyses of some data for children may be limited by relatively small sample sizes.

**Timeliness and punctuality**

*Timeliness refers to the time gap between publication and the reference period. Punctuality refers to the gap between planned and actual publication dates.*

A report about the survey findings and trend data tables are published annually and as soon as possible following completion of fieldwork data collection, data validation and analysis (usually the December following the survey year). Addresses were issued from January to December 2018. Fieldwork was completed in March 2019.

This publication has not suffered any delay compared to the planned and pre-announced release date.

**Accessibility and clarity**

*Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.*

The publication is accessible on the NHS Digital website free of charge. For the first time in 2018, the HSE summary report is being published as an html webpage. Individual reports are released as PDF documents, these include charts to illustrate the survey findings. All tables in the publication are provided in Excel format. These documents are available at:

http://digital.nhs.uk/pubs/hse2018
The publication may be requested in large print or other formats through the NHS Digital's contact centre: enquiries@nhsdigital.nhs.uk (please include ‘Health Survey for England’ in the subject line).

NHS Digital has published reports about each survey since the 2004 survey on its website. Prior to this the Department of Health produced these reports. These are now available via the national archives


Recent HSE publications include findings and metadata at varying levels of detail to suit different readers’ needs. Shorter, less detailed information is available in the:

- summary report of the survey results
- a quick guide introducing the survey and its methods
- online tool to interact with and explore trend data from the survey over the last quarter of a century:

More detailed findings, with key points selected at the front of the reports are published in reports covering different topics which are accompanied by Excel tables. The appendices in the Excel workbooks include tables showing true standard errors, confidence intervals and design effects for key survey measures.

Detailed metadata are published in:

- a Methods report, giving a full account of the technical aspects of the survey including protocols for conducting survey measures such as height and weight.
- A user guide explaining how estimates of the numbers of people with health-related behaviours and in BMI categories were calculated
- Documentation, including questionnaires and fieldwork materials.

**Coherence and comparability**

*Coherence is the degree to which data which have been derived from different sources or methods but refer to the same topic are similar.*  
*Comparability is the degree to which data can be compared over time and domain.*

There have been over twenty-five annual surveys in the series. Since 1995, the surveys have included children who live in households selected for the survey; children aged 2-15 were included from 1995, and infants under two years old were added in 2001.

The data are weighted relative to the size of each group of the population making the results comparable over the time series. Chapter 7 of the Methods report gives further details on the weighting procedures used.

The core topics covered by the survey include: general health, fruit and vegetable consumption, height and weight, obesity and overweight, alcohol consumption and smoking. The trend tables present data for key measures for the years in which they were collected to make comparisons over time more accessible. The number of years of data available varies; from a few years for newer topics such as well-being, to others such as general health, smoking status, height, weight and body mass index, for which data were first collected in 1993 or 1995.
There is a large amount of data available at England level but differences in survey methodology and questionnaire design between this survey and health surveys carried out in other countries may sometimes limit comparisons across countries. Users are advised to check these details when using information from different sources for countries within the United Kingdom and Europe as well as for non-European countries.

**Trade-offs between output quality components**

*This dimension describes the extent to which different aspects of quality are balanced against each other.*

When asking questions about smoking and drinking in a survey there is potential for the methodology to have an impact on how people answer. In particular there was some evidence published previously in the Health Survey for England 2013 report which shows that young people appear less willing to admit to smoking when answering questions at home, particularly in comparison with school-based surveys. The HSE does collect these data via self-completion method to make it easier for respondents to answer honestly.

It is also possible that some question topics in HSE (e.g. smoking, drinking and fruit and vegetable consumption) may be susceptible to social desirability bias, where the individual is tempted to give an answer which is more socially acceptable. Respondents are assured that their answers will be kept private to reduce this temptation.

**Assessment of user needs and perceptions**

*This dimension covers the processes for finding out about users and uses and their views on the statistical products.*

From our engagement with customers, we know that there are many users of these statistics. They are used by the Department of Health and Social Care, Public Health England, NHS England and NHS Improvement, Local Government, NHS, charities, academics, professional groups, the public and the media. Uses of the data include: informing, monitoring and evaluating policy; monitoring the prevalence of health or illness and changes in health or health related behaviours e.g. smoking; comparing local indicators with national figures; informing the planning of services; and writing media articles. Universities, charities and the commercial sector use the data for health and social research. The survey data are also used for teaching purposes and by students in their work. The Media use the data to underpin articles in newspapers, journals etc.

NHS Digital tries to engage with users of these statistics to gain a better understanding of the uses and users and to ensure these statistics remain relevant and useful.

Feedback on the 2016 statistical publication was sought via a survey which was open from 27 April until 20th July 2018. There were 40 responses, mostly from the public sector and academic users and a few from members of the public. They found the publications useful for their work and told us which topics they found most useful. The 10 most popular topics were overweight and obesity, physical activity, smoking, alcohol, general health, diabetes, longstanding illness, cardio-vascular disease, fruit and vegetable consumption, and blood pressure. Over half were interested in having new

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trend tables showing undiagnosed diabetes and cholesterol levels and these new tables were included in the 2017 publication and are in the 2018 publication.

In 2016 users were consulted about proposed cuts to the survey and a report on the findings is available on the NHS Digital website at http://content.digital.nhs.uk/media/22910/Health-Survey-for-England-HSE-Survey-Consultation-Report/pdf/HSE-Report-on-the-Consultation.pdf. The style of the report was also part of a wider consultation from NHS Digital. The proposal for HSE was in section A3.

In 2013 there was a consultation looking at how the survey findings were used and what user priorities were for future surveys and this influenced its future size and design and reports. A report from the 2013 consultation is available through the following link: http://content.digital.nhs.uk/article/3659/Health-Survey-for-England. In 2013 the majority of respondents rated the survey publications as very good or good. We capture information on the number of unique page views the reports and tables received and this survey is one of our most frequently viewed publications. In the six months following the 2016 HSE publication there were 10,400 downloads of its documents or tables.

We received many enquires for data from the survey each year. We also received some comments, feedback and suggestions from other users of the report as ad-hoc requests via email.

The survey questionnaire and content of the report is discussed and agreed with a steering group which contains representatives from NHS Digital, Department of Health and Social Care, Public Health England, NHS England and NHS Improvement, academia, Local Government Public Health, other government departments as well as the contractor carrying out the survey.

NHS Digital is keen to gain a better understanding of the users of this publication and of their needs; feedback is welcome and may be sent to enquires@digital.nhs.uk (please include ‘Health Survey for England’ in the subject line).

**Performance, cost and respondent burden**

*This dimension describes the effectiveness, efficiency and economy of the statistical output.*

Data for the Health Survey for England (HSE) 2018 were collected from the population living in private households in England.

As in previous years, the HSE 2018 used a stratified random probability sample of households. The sample comprised 9,612 addresses selected at random in 534 postcode sectors. Adults and children were interviewed in households identified at the selected addresses. To limit the burden of responding for parents, no more than four children in each household were selected at random: up to two children aged between 0 and 12, and up to two aged between 13 and 15.

Data collection comprised an interview, followed by a visit from a specially trained nurse for all those who agreed. The nurse visit included additional questions, measurements, collection of blood samples from adults, and collection of saliva samples from adults and from children aged between 4 and 15.
A household response rate of 59% was achieved. In total, 8,178 adults and 2,072 children were interviewed, including 4,825 adults and 1,103 children who had a nurse visit.

**Confidentiality, transparency and security**

_The procedures and policy used to ensure sound confidentiality, security and transparent practices._

The data contained in this publication are National Statistics. The code of practice for statistics is adhered to from collecting the data to publishing.


**The addresses and names of people who take part are held securely by the survey contractor.**

As for all NHS Digital publications the risk of disclosing an individual’s identity has been assessed, an annual risk assessment is undertaken prior to publication which addresses any potential issues around disclosure. Information is presented at a high level of aggregation in the reports and tables and data are never presented in a form that can reveal any personal information that could be used to identify individuals.

NHS Digital plans to make a respondent level data file (microdata) for HSE 2018 which is disclosure controlled and does not identify individuals available for specific research projects. The HSE is a long survey and only some of the results are included in the reports and data tables. Copies of the anonymised and disclosure-controlled datasets can be made available for specific research projects and teaching requirements. For the latest information about dissemination of the 2018 data please see the HSE website [https://digital.nhs.uk/data-and-information/areas-of-interest/public-health/health-survey-for-england-health-social-care-and-lifestyles](https://digital.nhs.uk/data-and-information/areas-of-interest/public-health/health-survey-for-england-health-social-care-and-lifestyles). Past HSE datasets are available via the UK Data Service at [http://discover.ukdataservice.ac.uk/series/?sn=2000021](http://discover.ukdataservice.ac.uk/series/?sn=2000021). Disclosure control for HSE datasets was reviewed in 2017 and advice from ONS Statistical Disclosure control unit taken.


Please see links below to relevant NHS Digital policies:

- **Disclosure Control Procedure**
- **Revisions Procedure**
- **Statement of compliance with the Pre-release Order**
- **Statement of uses and users**
- **Statistical Governance Policy**
Freedom of Information Process
content.digital.nhs.uk/foi

A Guide to Confidentiality in Health and Social Care

Privacy and Data Protection
content.digital.nhs.uk/privacy
Post publication corrections

Update 4th December 2019
An error was identified in the gambling information originally published on 3rd December 2019. This error related to information on gambling in the last 12 months, by age and sex. Indicative changes in published numbers were as follows:

- The number of adults who participated in some form of gambling in the last 12 months has been revised from 53% to 54%.
- The number of adults who participated in some form of gambling in the last 12 months, excluding the National Lottery, has been revised 39% to 40%.
- Other figures have changed by a maximum of 2 percentage points.

The Adults’ health-related behaviours topic report and data tables, and the summary report were reissued.

The supplementary analysis on gambling data tables were also reissued. The affected figures were prevalence of ‘No gambling activity in the last 12 months’ in tables, 1, 5 and 6.

Update 9th December 2019
An error was identified in the supplementary analysis on gambling data tables originally published on 3rd December 2019.

Tables 7 and 15 were reissued to correct an error identified in the calculation of the number of at-risk gamblers and the number of problem gamblers.

Update 30th January 2020
An error was identified in the section on ‘Estimated weekly alcohol consumption, by age and sex’ within the ‘Adults’ health-related behaviours’ topic report. In paragraphs 2 and 3, alcohol consumption in a usual week was incorrectly described as alcohol consumption in the last week. This has now been corrected and the report reissued. Alcohol consumption was described correctly elsewhere in the report and data tables.

Update 15th April 2020
An error was identified in the supplementary analysis on gambling data tables originally published on 3rd December 2019.

Table 4 was reissued as there were 3 missing values relating to problem gambling prevalence rates in 16-24-year-olds. There was no incorrect data present and the missing values could be calculated using other cell values in the table.
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