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Technical Report (Updated)

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National Survey for Wales 2016-17

Technical Report

Authors:

Martina Aumeyr

Zoe Brown

Robert Doherty

Andy Fallows

Tom Pegg

Rafael Perez-Dominguez

Ria Sanderson

Lloyd Shemwell

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Views expressed in this report are those of the authors and not necessarily those of the Welsh Government

For further information please contact:

Chris McGowan

National Survey team

Welsh Government

Cathays Park

Cardiff

CF10 3NQ

Tel: 03000 251 067

Email: chris.mcgowan@gov.wales

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Glossary

Term	Definition
Blaise	Statistics Netherland Blaise Enterprise 4.8
CAP	Computer assisted personal interviewing
CASI	Computer assisted self-interviewing
IM	Interviewer manager
LA	Local authority
National Survey	National Survey for Wales
ONS	Office for National Statistics
PAF	Royal Mail Postcode Address File
SPSS	Statistical Package for the Social Science – IBM SPSS Statistics
WG	Welsh Government
WIMD	Welsh Index of Multiple Deprivation

1. Introduction and survey overview

The new National Survey for Wales, 2016 onwards

- 1.1 The National Survey is a new survey conducted by the Welsh Government (WG), succeeding five surveys previously commissioned by WG and three of its sponsored bodies (Natural Resources Wales, Sport Wales, Arts Council of Wales). The survey provides key evidence on people's views and well-being to inform and shape decision-making by public bodies in Wales.
- 1.2 The intention of this new survey is to meet the information needs of WG more effectively, and at the same time reduce burden on respondents and overall survey costs. This change in strategy follows a comprehensive 2014 review¹ on the options available for future implementation of large scale surveys in Wales.
- 1.3 The surveys brought together are:
- National Survey (2012-15)
 - Welsh Health Survey
 - Active Adults Survey
 - Arts in Wales Survey
 - Welsh Outdoor Recreation Survey
- 1.4 Survey users and stakeholders range from WG policy teams to external organisations that have an interest in the National Survey, such as local authorities, health organisations, third sector bodies, service providers, and universities.²

Overview of the 2016-17 National Survey

- 1.5 The first year of the new survey, carried out by the Office for National Statistics (ONS), ran from the end of March 2016 to end March 2017. It involved conducting 10,493 interviews of people aged 16 and over based on a randomly-selected sample of residential addresses across Wales.
- 1.6 Interviews were carried out face-to-face by ONS trained interviewers using portable computers. The average duration of the interview was 45 minutes, except for October to December 2016 when it was 50 minutes. This was because an extra

¹ Smith, P. Nicolaas, G.; Sturgis, P. (2014); Options for carrying out large-scale surveys in Wales: A report for the Welsh Government, 27 November 2014, Publication number 101/2014,

<http://gov.wales/docs/caecd/research/2014/141127-options-carrying-out-large-scale-surveys-wales-en.pdf>

² Silvia Manclossi S. (2017); National Survey for Wales. Summary of user feedback: 2016-17 National Survey output options. Welsh Government, 16 January 2017, Publication number 01/2017,

<http://gov.wales/docs/caecd/research/2017/170116-national-survey-2016-17-survey-output-options-en.pdf>

module of questions was added for that quarter (see section 4). The survey consisted of a total of 66 main modules plus the additional module. These were designed to cover the range of topics specified by WG and its sponsored bodies such as:

- health (e.g. diet, alcohol consumption, smoking, and physical activity);
- child health, childcare, and education;
- sports participation;
- use of and satisfaction with public services;
- finances and poverty;
- wellbeing and loneliness;
- internet access and use; and
- environment.

- 1.7 The survey questionnaire and all supporting materials were available as standard in both Welsh and English (pilot and mainstage survey), with interviews also offered in other languages with the help of an interpreter if required. Furthermore, for some topics sub-sampling was used to collect robust estimates at national level as efficiently as possible.
- 1.8 A total sample of 21,000 addresses, drawn from the Post Office small users Post code Address File, was used in the survey. An additional boost sample was added between January and March 2017 in areas where response was lower than predicted. The sample was stratified by the 22 Welsh local authorities (LAs) with survey effort approximately proportional to the LA population size with oversampling to ensure a minimum effective sample size of 250 in smaller LAs and a minimum effective sample size of 750 in Powys.³ The number of interviews achieved in each LA over the whole survey year ranged from 336 in the Vale of Glamorgan to 734 in Cardiff with the exception of Powys, where 1,212 successful interviews were recorded over the year).
- 1.9 A small pilot was carried out in January 2016 to test the survey on ONS' systems and processes. The pilot also helped to further optimise the questionnaire content and improved survey materials, and provided an indication of the average interview length.

³ This was to enable sufficiently precise estimates at Health Board level for Powys and to avoid interview length in Powys being unduly long due to subsampling.

- 1.10 Further research, survey optimisation and other development work was carried out by ONS during the survey period. This included a split-sample incentive experiment and the subsequent introduction of a conditional incentive for the survey, the introduction of an omnibus module on tax awareness, updates to survey materials, training of interviewers, a sample boost, and the set up of data processing systems, which will be covered in the relevant sections of this report.
- 1.11 Fieldwork was issued on a continuous monthly basis with some cases being reissued the following month if likely to achieve positive outcomes.

Structure of the report

- 1.12 This report is intended to provide a clear and accessible description of the approach taken to collecting and processing the data.
- 1.13 Following the introductory chapter, this report is divided into a further seven chapters:
- **Chapter 2** ('Survey development work') includes an overview of how the survey design was developed, as well as further development work conducted during 2016-17.
 - **Chapter 3** ('Sampling') describes the process of selecting addresses for the survey.
 - **Chapter 4** ('Questionnaire content and development') looks at both the process of developing questions for topic areas to include in the survey, and the development and testing that was conducted on the survey questionnaire and its computer implementation.
 - **Chapter 5** ('Fieldwork') covers the process of preparing interviewers for fieldwork, fieldwork procedures, interview numbers, response rates, and interview timings.
 - **Chapter 6** ('Data processing and output') gives an overview of the process of how the datasets were prepared and finalised.
 - **Chapter 7** ('Weighting and non-response') describes the weighting process.
 - **Chapter 8** ('Summary and recommendations') provides an overview of how the first survey year went and considers potential implications for the 2017-18 survey year.

2. Development work

- 2.1 As the National Survey 2016-17 is a new survey replacing five separate surveys previously commissioned by WG and its partner organisations, a considerable amount of development work was carried out by a range of organisations prior to the start of the field work in March 2016. Further development work was carried out over the course of the first fieldwork year between end of March 2016 and March 2017.

Survey development prior to April 2016

- 2.2 In May 2014 WG commissioned a [review](#) looking into options of collecting required information more cost effectively⁴. It was decided that the option providing the best value for money, whilst retaining the required level of data quality, was to replace the following five surveys with a single new survey:
- The previous **National Survey (2012-2015)** covered policy-relevant topics and views of public services in a 25 minute face-to face interview, involving 14,500 interviews per year.
 - The **Welsh Health Survey** investigated a range of health-related issues and use of health services in a short face-to-face interview by one person per household, followed by a self-completion questionnaire for all household members, involving 15,000 adults and 3,000 children every year.
 - The **Active Adults Survey** collected information on participation levels in a wide range of sports and other physical activities, covering views of 8,000 respondents in 20 minute face-to-face interviews in 2014.
 - The **Arts in Wales Survey** explored levels of people's engagement with and their attitudes towards the arts in Wales, involving 7,000 15 minute face-to-face interviews every five years.
 - The **Welsh Outdoor Recreation Survey** contained questions around the use and barriers to use of outdoor spaces in Wales, the health and economic benefits of outdoor activities, and attitudes towards environment. Carried out every three years, the survey covered 6,400 15-20 minute telephone interviews.

⁴ Smith P., Nicolaas G., Sturgis P., *Options for carrying out large-scale surveys in Wales: A report for the Welsh Government*. Welsh Government, Social Research Number 101/2014

- 2.3 The new National Survey combines all of the above surveys into a single face-to-face random probability sample survey, similar in design to the previous National Survey (2012-2015). The next steps in developing the new survey were as follows.
- In 2015, WG commissioned the National Centre for Social Research (NatCen) to conduct a review of the draft questionnaire⁵ for the new National Survey comparing approaches of selected modules with those of other surveys, reviewing certain questions for risks of mode effects, reviewing the questionnaire to identify overlaps, proposing a structure that minimised risks of context effects, providing timing estimates, and testing the overall flow of the questionnaire.
 - Due to the substantial re-design of not only the questionnaire but also the whole survey itself, WG commissioned the contractor for the 2012-15 National Survey, TNS BRMB, to carry out a large scale field test⁶ between May and September 2015. The field test was designed to provide more accurate question and questionnaire timings, identify issues with the questionnaire, test alternative wordings for certain questions, test the field materials, and gain feedback from respondents. The field test was also used as an opportunity to run experiments on specific design elements such as the use of incentives and update of a computerised self-completion module. Findings from the field test also provided an indication of the likely response rate of the new survey, informed analysis of discontinuities between the predecessor surveys and the new National Survey, and provided design effects on the precision of new survey estimates.
 - Further substantial questionnaire development work was carried out in parallel with and following the large scale field test, to ensure that the questionnaire for 2016-17 met emerging policy needs.
 - In September 2015 WG commissioned the ONS to conduct the survey from 2016 to 2021 (with the option to extend for one more year). Before the start of fieldwork in March 2016, the survey was set up on ONS systems, whereby the questionnaire was programmed into the relevant software that ONS uses to conduct computer assisted person interviewing (CAPI) and self-interviewing (CASI) (see Chapter 4), survey field materials were further developed (see Chapter 5), interviewers were recruited and briefed (see Chapter 5) and a small-scale field pilot was conducted in January/February 2016. The pilot was primarily

⁵ Ardenne J., McManus S., Doyle M., A review of the draft questionnaire for the National Survey for Wales, 2016 onwards, Welsh Government, Social Research Number 21/2015

⁶ Hanson T., Sullivan S., *National Survey for Wales Field Test, Technical Report*, Welsh Government, Social Research Number 19/2016

to test the survey on ONS' systems, but it also provided additional questionnaire timings. The pilot report⁷ highlighted recommendations for further optimisation of the questionnaire and survey materials, which were applied ahead of the survey launch at the end of March 2016.

Survey development - April 2016 to March 2017

Incentive experiment

- 2.4 The large scale field test assessed the effect of a conditional £10 incentive and found a statistically significant positive increase on response rates (over 4 percentage points) for respondents who were offered an incentive.⁸ Before a decision was made on whether an incentive would be introduced as standard on the National Survey, and if so what size the incentive should be, a second split sample experiment was run on the main survey between July and October 2016 to test the effect of a £5 conditional incentive.
- 2.5 The experiment was set up so that every address with an odd quota⁹ number was offered an incentive in the advance letter, and addresses with an even quota number were not. This ensured that the experimental conditions were not confounded with other factors such as interviewer ability or geographical area. Respondents in the experiment group were asked for their contact details at the end of the interview in order to send them a £5 voucher within a few weeks of the interview, either by email or post depending on respondent preference. Vouchers could be used at a range of high street shops or online.
- 2.6 The experiment was originally due to run to December 2016 but due to response rates being lower than expected, a decision was taken to terminate the experiment at the end of October 2016. In order to help boost response, a £10 incentive conditional on participation was then introduced for the full sample from November 2016 onwards. The incentive was offered to all households in the advance letter they received prior to an interviewer visiting the selected address. The respondent would receive the incentive in form of a voucher a few weeks after completion of the interview.

⁷ ONS National Survey for Wales Research Team, *National Survey for Wales – 2016 Pilot test: Executive Summary*, Welsh Government, Social Research Number 55/2016

⁸ Hanson T., Sullivan S., [National Survey for Wales Field Test, Technical Report](#), Welsh Government, Social Research Number 19/2016, p.83

⁹ Each quota contained between 20 and 30 addresses on average.

- 2.7 Due to the early end of the experiment, the experiment sample size consisted of 7,071 households across the two conditions. In order to detect a significant difference in response of about three percentage points, an effective sample size of around 8,600 cases in total would have been required. However, due to the small difference in response detected in this experiment (i.e. 1.5 percentage points), the sample size is too small to provide statistically significant results. However, the data collected for this experiment is of use for further research into this issue.
- 2.8 Table 2.1 shows the comparative fieldwork figures for the experiment and control groups. The incentive appears to have had minor if any impact on response rates. Whilst response was around 1.5 percentage points higher for the experiment group compared to the control group, this difference is not statistically significant. Further analysis also highlighted variations in response by LA as well as by month when comparing the control group with the experiment group.

Table 2.1: Incentive experiment response comparison

Group	Addresses	Ineligible	Interviews	Contact rate	Cooperation rate	Response rate
Incentive	3,604	378	1,772	91.6%	60.0%	54.9%
No Incentive	3,467	353	1,664	91.8%	58.2%	53.4%

3. Sampling

Sample design

- 3.1 The National Survey is designed to be representative of all adults aged 16 or over living in private households in Wales. The annual sample is therefore set up as a stratified, single-stage random selection of addresses across Wales.
- 3.2 The sample was drawn from the Royal Mail Small Users Postcode Address File (PAF)¹⁰, whereby all residential addresses and types of dwellings were included in the sample selection process as long as they are listed as individual addresses.¹¹ If included as individual addresses on the PAF, residential park homes and other dwellings were included in the sampling frame.
- 3.3 Sampled addresses were then clustered quarterly to ensure field work is allocated effectively.
- 3.4 The sample was stratified by LA using an allocation designed to ensure a minimum effective sample size was achieved in each LA, based on the estimated response rate (250 in each LA except Powys, where the minimum effective sample size is 750 in order to provide sufficiently precise estimates at local health board level).¹² Population density and size at LA level were taken into consideration when drawing the sample, but some areas (e.g. small LAs) were oversampled in order to achieve samples large enough to ensure robust estimates.
- 3.5 The sample was initially allocated using a proportionate allocation, meaning that the sample size in each LA is proportional to size based on the number of addresses in that LA. To ensure the minimum effective sample size in each LA, the allocation was then modified as follows:
 - a) LAs where the minimum effective sample size was not likely to be achieved were identified.
 - b) In those LAs, the sample size was set to this minimum and the rest of the sample was allocated with probability proportional to size.

¹⁰ See <https://licensing-centre.poweredbypaf.com/>

¹¹ Residential addresses means private households across Wales. It excludes institutional accommodation (e.g. care homes, halls of residence, prisons, hotels and B&Bs, and army bases). People in institutional accommodation are typically not included in social surveys.

¹² The complex nature of the sample design must be taken into account when computing the potential range of sampling errors. The impact of the design is often represented by the 'design effect' statistic. For example, a design effect of 1.3 indicates that the actual sample size should be divided by 1.3 to obtain the statistically *effective sample size*. The statistically effective sample size is the equivalent simple random sample size that would yield the same magnitude of sampling errors. The design effect varies for each measure in the survey.

c) Steps (a) and (b) were conducted iteratively until the minimum effective sample size was achieved for all LAs.

- 3.6 The LAs that were oversampled in this way were Isle of Anglesey, Blaenau Gwent, Ceredigion, Denbighshire, Gwynedd, Merthyr Tydfil, Monmouthshire, Pembrokeshire, and Torfaen.
- 3.7 Within each sampled household, an individual interview was attempted with one adult aged 16 or over. Where a household contained more than one adult (aged 16 and over), a single adult was randomly selected.

Selection of addresses (including reserve sample)

- 3.8 21,082 addresses were selected for the main sample, stratified by LA (see previous section). To select addresses for inclusion in survey, the PAF was ordered by postcode and a systematic sample¹³ of addresses was selected from each LA using the calculated sample size in each LA. Addresses sampled within the last four years for any ONS social survey or for the 2012-15 National Survey for Wales were excluded using the ONS Social Survey Used Address File, a list of addresses sampled for social surveys run by the ONS. Addresses selected for National Survey for Wales (2012-15) were also included on the Used Address File and will not be reselected for the survey for four years after they were initially sampled.¹⁴
- 3.9 A second sample equal to that of the main sample was drawn, also stratified by LA, through the method outlined above, albeit independently from the main sample. Given the uncertainties around variation in response and eligibility rate, this reserve sample was selected to provide a sample for the 2016 pilot and other circumstances, for example where additional cases are needed to achieve required interview numbers (see section 3.10). As it was unknown at the time the reserve sample was drawn, in which area additional cases may be required, the sample was drawn of equal size to provide the opportunity to boost the sample at any given point and any area required. However, only a small proportion of the overall reserve sample would ever be used.

¹³ Addresses are ordered by postcode, followed by randomly choosing a starting point in this list and subsequently selecting every nth address (depending on the required proportion within each LA).

¹⁴ The exact period for which addresses are excluded from re-selection varies from survey to survey.

Table 3.1: Number of addresses included in main sample by LA

Local authority	Issued sample size
Anglesey	794
Blaenau Gwent	760
Bridgend	718
Caerphilly	870
Cardiff	1,759
Carmarthenshire	1,104
Ceredigion	805
Conwy	765
Denbighshire	739
Flintshire	845
Gwynedd	889
Merthyr Tydfil	721
Monmouthshire	580
Neath Port Talbot	785
Newport	780
Pembrokeshire	925
Powys	2,379
Rhondda Cynon Taf	1,308
Swansea	1,477
Torfaen	748
Vale of Glamorgan	596
Wrexham	735
Total	21,082

- 3.10 The full main sample for 2016-2017 (Table 3.1) was issued across the survey year. However, as the response to the survey was lower in some LAs than originally assumed (see section 5), it was agreed between ONS and WG to issue a proportion of the reserve sample in quarter 4, to ensure that the effective minimum sample size was achieved across all LAs. Accordingly 659 cases from the reserve sample were issued between January and March 2017.

- 3.11 The number of additional cases to be issued was estimated by ONS Methodology. Based on these estimates it was determined that additional quotas were required in the following LAs:
- Blaenau Gwent
 - Merthyr Tydfil
 - Monmouthshire
 - Vale of Glamorgan
- 3.12 For other LAs it was agreed to boost existing quotas by adding a number of addresses to the quotas already assigned. For three LAs the number of interviews achieved was deemed sufficient not to require any of the reserve sample to be issued. These were:
- Gwynedd
 - Pembrokeshire
 - Powys
- 3.13 Table 3.2 provides an overview of the total and average monthly reserve sample issued in the last quarter as well as the number of quotas these were made up of.

Table 3.2: Reserve sample quotas by LA

Local authority	Issued reserve sample size	Average issued reserve sample per month	Number of full reserve quotas required	Number of individual reserve addresses required in addition to reserve quotas
Anglesey	2	1	0	2
Blaenau Gwent	109	36	4	19
Bridgend	20	7	0	20
Caerphilly	42	14	0	42
Cardiff	8	3	0	8
Carmarthenshire	4	1	0	4
Ceredigion	2	1	0	2
Conwy	15	5	0	15
Denbighshire	2	1	0	2
Flintshire	3	1	0	3
Gwynedd	0	0	0	0
Merthyr Tydfil	59	20	2	1
Monmouthshire	126	42	5	8
Neath Port Talbot	30	10	0	30
Newport	72	24	0	72
Pembrokeshire	0	0	0	0
Powys	0	0	0	0
Rhondda Cynon Taf	6	2	0	6
Swansea	6	2	0	6
Torfaen	33	11	0	33
Vale of Glamorgan	117	39	4	16
Wrexham	3	1	0	3
Total	659	220	15	299

- 3.14 In Powys, Pembrokeshire and Isle of Anglesey, a single quota of addresses was removed from each sample. The decision to remove quota from these areas was informed by the numbers of interviews achieved between quarters 1 and 3, as it was estimated that to achieve the required number of interviews a smaller sample in quarter 4 would be adequate.
- 3.15 Table 3.3 provides an overview of the issues sample per calendar month, including the issued reserve sample in quarter 4.

Table 3.3: Issued sample by month

Month	Addresses (main sample)	Addresses removed from main sample	Boost addresses (reserve sample)	Addresses issued (with reserve sample)
April 2016	1,732	0	0	1,732
May 2016	1,747	0	0	1,747
June 2016	1,773	0	0	1,773
July 2016	1,754	0	0	1,754
August 2016	1,800	0	0	1,800
September 2016	1,739	0	0	1,739
October 2016	1,778	0	0	1,778
November 2016	1,709	0	0	1,709
December 2016	1,758	0	0	1,758
January 2017	1,776	-24	210	1,962
February 2017	1,780	-25	228	1,983
March 2017	1,736	-25	221	1,932
Total	21,082	-74	659	21,667

Sample batching and allocation

- 3.16 The main 2016-2017 sample was divided into quotas (address clusters) and then allocated to months. The quotas were allocated based on their average WIMD¹⁵ score ensuring that there was a mixture of high, low and medium scoring quotas within each quarter for each LA. It was deemed that the spread across LAs and WIMD scores would ensure that the quarterly sample is representative of the population. As not all areas are covered in each quarter, the quarterly sample is clustered.
- 3.17 These quotas were allocated by Interviewer Managers (IMs) to Field Interviewers who would then work to achieve response from these issued addresses across the month.
- 3.18 Quota sizes averaged between 20 and 30 cases. The largest quota allocated in 2016-17 was 39 cases. The number of addresses allocated per month from the main sample ranged between 1,709 (November 2016) and 1,800 (August 2016).
- 3.19 Some addresses, which did not have a successful outcome during the survey month, but based on their outcome and notes from the interviewer were assessed as still having reasonable probability of achieving an interview, were reissued to

¹⁵ Welsh Index of Multiple Deprivation

Field Interviewers the following month. This assessment considered the outcome at mainstage, including for cases that were non-contacts and circumstantial refusals (e.g. on holiday, or currently ill), and information provided by the mainstage interviewer on the likelihood of success if the case was reissued.

- 3.20 Usual ONS practice for social surveys is for reissues to be allocated and attempted roughly three weeks after the end of the survey month, ideally by the same interviewer. However, since other considerations, such as availability of field force, have to be taken into account, a reissued case may be pursued by a different interviewer. In some circumstances, and at the discretion of interviewer managers, cases can be reissued to a different or more experienced interviewer. Interviewers are then allowed around 10 days to attempt to achieve an interview before returning their re-issue casework back to the head office.
- 3.21 Due to the survey still bedding in during the first quarter of the 2016-2017 field work, it was agreed that a more flexible approach would be taken to the allocation of reissues. Addresses identified as eligible for reissue between April and November 2016 were allocated at various times during quarter 2 and quarter 3 at the discretion of IMs. Interviewers were also given a longer period to attempt to obtain interviews for these cases.
- 3.22 From quarter 4 onwards, reissue procedure returned to standard ONS practice.

Selection of dwelling units, households and individuals

- 3.23 In circumstances where an interviewer found more than one dwelling (e.g. a block of flats) or more than one household (e.g. two or more bedsits) at a sampled address, a single dwelling/household was randomly selected using a Kish Grid¹⁶. Interviewers were instructed to inform head office in such circumstances for head office to update the sample register (in the instance of multiple addresses) and also to provide support, if necessary, where it was not clear how the random selection should be carried out (e.g. where flats or household units were not numbered).
- 3.24 Within the sampled household, one adult (aged 16 and over) was interviewed for the survey. If there was more than one person aged 16 and over resident at the address a respondent was randomly selected, again using a Kish Grid.

¹⁶ A Kish Grid is a table of random numbers used in the process of randomly selecting members within a households, or residential units within a dwelling.

- 3.25 In order to make the person selection using the Kish Grid, interviewers were instructed to ask the responding household member about the ages of all household members (aged 16 and over) and rank them from oldest to youngest. Based on this information, and the address number assigned to the address within the quota, the Kish Grid would indicate which resident was eligible to be interviewed.
- 3.26 For example, if the address number in the quota was 4, and there were three residents aged 16 and over at the address, the random number taken from the Kish Grid indicates that the second oldest resident (2) would be the selected respondent (see Annex A).

4. Questionnaire content and development

Overview of the questionnaire

- 4.1 The survey design is based on a single questionnaire administered to one randomly selected adult aged 16 or over in each sampled household. The questionnaire content was developed by WG and the three sponsored bodies. An initial review was carried out by the National Centre for Social Research (NatCen) prior to the start of the large scale field test.¹⁷ The [questionnaire](#) covers a range of different topics, including public services, well-being, personal health, arts, sport and outdoor recreation. A full list of the modules included in the final questionnaire, and a brief description of the type of questions included in each, is included later in this section.
- 4.2 A small scale pilot was conducted by ONS in January – February 2016 to test the questionnaire worked well, as well as testing fieldwork processes.

Questionnaire content and development

- 4.3 Questions for the new National Survey were largely taken from the five predecessor surveys, with some questions taken also from other large-scale surveys. Most of the changes to the questionnaire were informed by the outcome of the large scale test. However, a number of new questions and topic areas were added or removed based on changing policy needs within WG and sponsored bodies.

Split sample test for experimental questions

- 4.4 A set of experimental questions were tested during the 16/17 survey year as part of the alcohol consumption module. The previously-used alcohol consumption questions, taken from the Health Survey for England, asked respondents how much they usually drank of a certain kind of alcohol, followed by an instruction listing the different types of the relevant alcoholic drink. The experimental questions aimed to simplify these questions by combining the question wording and the instruction into one sentence, reducing the length of these questions. A sub-sampling indicator was programmed into the questionnaire script with the purpose of randomly selecting a sixth of respondent who would be asked the set of experimental questions, with the remainder of respondents being asked the original questions. Results from the

¹⁷ Full details of the NatCen review were compiled in a report which can be accessed via the Welsh Government website: <http://gov.wales/docs/caecd/research/2015/150327-draftquestionnaire-review-national-survey-2016-onwards-en.pdf>

experimental questions and the original questions will inform the design of the 17/18 survey questionnaire.

Self-completion modules

- 4.5 Around 90% of the interview was set up for CAPI administered by the interviewer. The remaining 10% was via respondent self-completion using the interviewer laptop (CASI). A split sample experiment was conducted as part of the large scale field test assessing respondent behaviour when answering certain sensitive questions in CASI versus CAPI mode. The outcome of this experiment highlighted that the consent rate of around 75% to CASI mode were, in comparison to other surveys, (e.g. Crime Survey for England and Wales 90%) relatively low. Older age groups in particular were less likely to agree to complete this part of the questionnaire themselves.¹⁸
- 4.6 The findings from the large scale field test were taken into account when finalising the CASI section for the 2016-17 National Survey questionnaire. Only questions that were considered to be the most sensitive (e.g. Warwick-Edinburgh Mental Wellbeing Scale, ethnicity, sexual orientation) were included in the CASI module.
- 4.7 At the start of the module the interviewer would read out a question asking for consent for the respondent to self-complete the following set of questions. If consent was obtained, the laptop was handed over to the respondent who was then asked to complete a number of practice questions to familiarise themselves with the data entry. This was followed by the actual CASI questions. At the end of the module the respondent was asked to end the CASI module, which then automatically locked responses for confidentiality reasons so the interviewer was not able to see them, and to hand the laptop back to the interviewer.
- 4.8 In cases where the respondent did not consent to enter their answers, the interviewer offered to carry out the module in CAPI mode, whereby the script would skip the test questions. The respondent also had the option of refusing to respond to the CASI module altogether. During the 2016-2017 fieldwork year, 73% of respondents completed the module in CASI mode, with 18% agreeing to complete it in CAPI mode with the help of the interviewer, and 9% refusing to complete this section in any mode.

¹⁸ Hanson T., Sullivan S., *National Survey for Wales Field Test, Technical Report*, Welsh Government, Social Research Number 19/2016, p. 80

- 4.9 The CASI module was placed immediately after the CAPI section, with the consent and re-contact questions placed at the end of the interview in order to improve the questionnaire flow.

Introduction of a questionnaire omnibus module

- 4.10 In April 2018, WG is due to gain devolved power over certain taxes (Stamp Duty and Landfill Tax) with the approval of the National Assembly for Wales. This change led to a policy need to understand the population's awareness of tax devolution. Therefore, a new set of questions was added as an omnibus module for the third quarter of the first survey year (October to December 2016) to provide a baseline on tax awareness amongst the population in Wales. The same module will be added again in the second fieldwork year to monitor and assess the impact of communication strategies in raising awareness of this policy.
- 4.11 In February to March 2016, ONS cognitively tested the new set of questions during. The aim of the cognitive testing exercise¹⁹ was to develop and test questions about taxation in order to produce a viable module for inclusion in the National Survey, as well as to provide indicative timings for the module. Twenty interviews with adults aged 16 or older were conducted (in two waves of 10 interviews, to allow changes made to questions after the first 10 interviews to be tested again).
- 4.12 Whilst the omnibus module with the tax awareness questions ran from October to December 2016, a small number of reissued cases for some of these survey months stayed in the field until March 2017.
- 4.13 Further information on the content of the final 16-17 questionnaire and the background to questions asked in the survey can be found on the WG website²⁰.

Questionnaire programming and testing

- 4.14 The questionnaire was scripted by ONS and administered using Statistics Netherlands Blaise Enterprise 4.8 ("Blaise").
- 4.15 The WG identified a number of questionnaire modules where survey estimates are only required at national, local health board, or regional level. Therefore, some questionnaire modules were not asked of all respondents, which helped to keep the average interview length down to around 45 minutes. Relevant sections were programmed to be asked of a randomly selected sub-sample of respondents only,

¹⁹ Palmer K., Rotaru V., Aubrey-Smith S., National Survey for Wales – [Report on the testing of tax awareness questions: Executive Summary](#), Welsh Government, Social Research Number 54/2016

²⁰ <http://gov.wales/statistics-and-research/national-survey/content-materials/materials-2016-17/?lang=en>

and occasionally within bespoke geographies. Annex B provides an overview of sub-sampled modules, the required annual sample size, and geographical considerations.

- 4.16 When programming the questionnaire script in Blaise, ONS included a number of soft and hard checks so that interviewers would be alerted to cases where a combination of answers would be unlikely or unfeasible. Where a combination of answers was unlikely, a soft check alerted the interviewer to the answers provided and asked them to double check the response before proceeding - but allowed them to proceed if this information was confirmed to be correct (e.g. interviewer enters a date of birth giving an age of 120 years). A hard check was triggered when it was apparent that the combination of answers provided was not possible (for example a son/daughter had been coded as being older than their mother/father). In these cases the interviewer could not proceed through the rest of the questionnaire until this information had been corrected. These checks ensured that inconsistencies in the data would be dealt with at the interviewing stage improving the quality of the data.
- 4.17 To ensure that the final script was running smoothly and was set up according to specification the following checks were conducted by ONS and WG:
- **Question text** – that this matched the questionnaire specification throughout.
 - **Question routing** – that the script had been programmed in accordance with the specified routing – this was tested by using a number of different household and response scenarios.
 - **Question numbers/names** – that these matched the numbers/names in the questionnaire specification where relevant.
 - **Screen display** – that questions were formatted according to ONS standard and displayed clearly avoiding any unnecessary scrolling for interviewers.
 - **Response lists** – that these matched the questionnaire specification and were displayed clearly avoiding any unnecessary scrolling for interviewers.
 - **Interviewer instructions** – that these were clear and matched the questionnaire specification.
 - **Showcard references** – that the numbers matched both the questionnaire specification and the set of showcards.
 - **Textfill** – that any questions or text within questions were being displayed correctly.

- **CAPI checks** – that all soft and hard checks in the CAPI were being triggered when applicable.
- **Script movement/reliability** – that the script allowed interviewers to move forwards (and back, if they needed to amend the information entered) without loss of data or other errors.
- **Language selection** – that the data collection tool allowed interviewers to select a language at the beginning of the interview and remain in this language, and toggle between English and Welsh if required by the respondent.
- **Translation** – that the questionnaire flowed well in both Welsh and English.

- 4.18 In addition to the above checks, ONS also ran a 'data flooding' exercise on the final main stage script, which generated a number of dummy interviews. This acted as a final check that all questionnaire routing, in particular routing for sub-sampled sections based on randomisation, was set-up as specified.
- 4.19 A raw SPSS²¹ data set (.sav) based on the first 250 interviews was also provided to WG to check the frequencies at each question and sub-sampling fractions. These stages of checking were used to identify problems with the CAPI script.

Showcards

- 4.20 Two sets of showcards, i.e. respondent visual aids providing question choices or contextual information (e.g. size of food portions), were developed. The “main” showcard set comprising question-specific aids was produced in an A4 bilingual booklet. A second “core” set included two common scoring lists that were included throughout the questionnaire. The core set was also produced in an A4 bilingual format. All showcards can be found on the WG website.²²

Welsh translation

- 4.21 WG provided a questionnaire specification that was translated into Welsh. The aim was to have a Welsh language version of the questionnaire that could be understood across all parts of Wales. The translated version was provided to ONS once the specification for the English version of the questionnaire was finalised. Where questions were taken from previous bilingual surveys, established

²¹ Statistical Package for the Social Science. IBM SPSS Statistics

²² All showcards can be found at <http://gov.wales/docs/caecd/research/2016/160817-national-survey-2016-17-showcards-ency.pdf>.

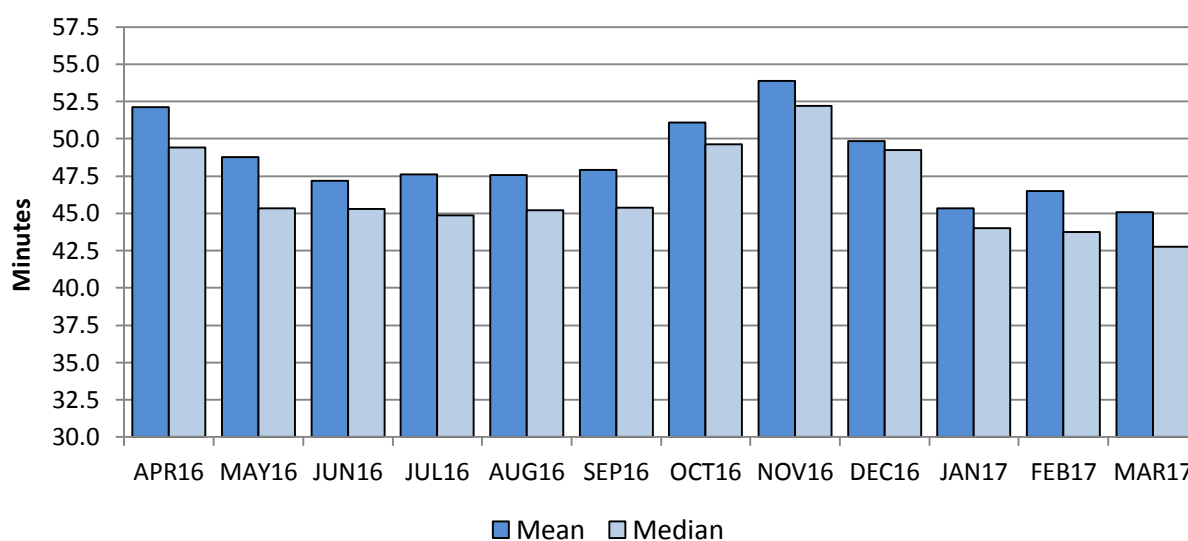
translations were used for consistency and continuity purposes. For any new or amended questions, WG used certified translators ensuring that the same terminologies were used throughout the questionnaire. Both ONS and WG research teams had access to Welsh speakers for quality assurance of the translation, as well as minor clarifications and alterations.

- 4.22 ONS used the English questionnaire specification to set up the questionnaire routing. The Welsh text was later included in the relevant place holders within the script, with relevant adjustments made to text fills to accommodate Welsh grammatical differences. The English language and the Welsh language version of the CAPI were tested independently.
- 4.23 Interviewers coded the respondent's preferred language at the start of the interview. The Blaise program allowed interviewers to toggle between English and Welsh for any question at any point throughout the questionnaire. This was intended to help in situations where respondents choosing to do the interview in one language but requiring an instant translation of a question or specific wording for anything that they may have had trouble understanding in the chosen interview language.
- 4.24 If the interview needed to be delivered in a language other than English or Welsh, interviewers read out the questions in English and an interpreter translated accordingly. This would either be another member of the respondent's household or the interviewer could use a telephone translation service to complete the interview. In these situations certain modules considered as sensitive were not asked to avoid issues around confidentiality through disclosing information to a third person.
- 4.25 The questionnaire was translated by a WG contractor, the advance material by an ONS contractor. Further tweaks/small changes applied to either questionnaire or advance materials were made by both the WG and ONS teams.

Interview timings

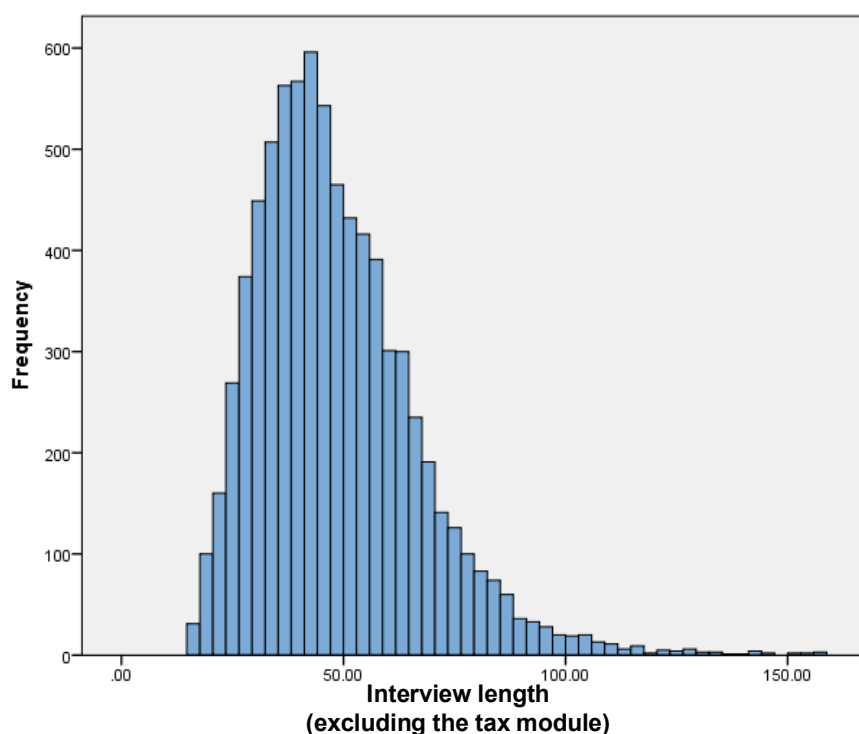
- 4.26 A number of timing points were included in the questionnaire to measure the length of each section. In addition to that, audit trail data was used to estimate the total questionnaire length as well as length of individual questions where timing points were not accurate enough. Figure 4.1 shows the change of mean and median questionnaire length over the course of the survey year, showing that the interview length decreased after the initial survey bedding in period (April/May 2016). The graph also illustrates the increase of interview length with the introduction of the omnibus module during the third quarter.

Figure 4.1: Average interview length by survey month



- 4.27 Annex C provides an overview of the median and mean length of each section of the questionnaire. These figures represent the average timings for each section across the full sample, which means that where certain questions were not asked (e.g. as a result of sub-sampling) of a respondent, the question time was set to zero for relevant cases.
- 4.28 As explained in section 4.15, a sub-sampling approach was applied to the survey, resulting in certain modules being asked of some respondents but not others. Figure 4.2 provides an overview of the distribution of interview length for the survey month without the additional tax module (April to September 2016 and January to March 2017). The median interview length was around 45 minutes, with 50% of respondents having an interview lasting between 36 and 58 minutes.

Figure 4.2: Distribution of interview length (excluding tax module months)



Changes to the questionnaire

4.29 A number of changes were introduced to the questionnaire during the survey year; the changes were implemented as part of the incentive trial, the inclusion of the tax awareness omnibus module and changes in the sub-sampling fractions. The main changes consisted in the following:

- June 2016 - Incentive added to the questionnaire for half of sample.
- August 2016 - Apprentice question added to differentiate between types of apprenticeships.
- October 2016 - Tax awareness module was added.
- October 2016 - Hospitals sub-sample was removed and asked of all, to ensure that the annual subsample was sufficiently large given lower than anticipated response
- October 2016 - 'Visits to the outdoors' sub-sample was removed and asked of all
- October 2016 - Household deprivation questions routing for pensioners changed to only be asked of pensioners who have dependent children.
- November 2016 - Incentive amount increased from £5 to £10 and offered to all respondents.
- November 2016 GP and local health service subsamples increased

5. Fieldwork

Recruitment of interviewers

- 5.1 All ONS interviewers are directly-employed members of staff, who are salaried based on their contracted hours (including interviewing time as well as time for travelling and administrative purposes). They are not paid specific fees per achieved interview and other specific survey activities. Instead their salary covers, all duties associated with their posts including training, preparation of work, travelling to locations, etc. Furthermore, interviewers are flexible in the hours they work to fit in with demand and calling patterns required to optimise field work and promote data quality.
- 5.2 Interviewer vacancies were advertised on the Civil Service Jobs²³ site. Typically after an initial round of application screening and selection, successful candidates are invited to a competency-based interview held by telephone, in order to speed up the process of getting suitable people into posts.
- 5.3 Recruitment, training and briefing of new interviewers started before the survey began in March 2016 and continued throughout the survey period. Before new interviewers were briefed on the National Survey, they had to complete standard ONS interviewer training, which included working on quotas for other surveys run by ONS such as the Labour Force Survey.
- 5.4 A total of 110 interviewers and 8 interviewer managers and have been briefed on the National Survey since March 2016, with 12 interviewers leaving over the year, leaving a total of 98 (Table 5.1). There were six Welsh speaking interviewers and one Welsh speaking interview manager.

²³ <https://www.civilservicejobs.service.gov.uk>

Table 5.1: Number of interviewers by months of survey²⁴

Month	Total number of ONS interviewers in Wales	Number of interviewers assigned to the survey *
March/April 2016	59	47
May	67	45
June	67	57
July	72	58
August	75	54
September	75	56
October	75	59
November	75	56
December	85	63
January 2017	90	56 (65)*
February	90	64
March	98	65

* Interviewer numbers in this column only cover interviewers working on the survey during the mainstage field months. In January 2017, nine additional interviewers were working on the pilot test for the 17/18 survey.

Briefing of interviewers

5.5 All interviewers attended a briefing day. The content of the briefing day covered:

- **Background to the survey** – explaining the policy need for this survey, development stages of the new survey, its content based on the five predecessor surveys, as well as its survey design and methodology.
- **Call requirements and documents** – highlighting fieldwork procedures, in particular where they differed from ONS standard procedures such as the use and administration of survey materials.
- **Questionnaire content** – providing an overview of all areas in the questionnaire plus some background information on sub-sampled modules, specifically highlighting sections that required more detailed briefing on how they needed to be administered.
- **CASI administration** – explaining the content and sensitivity of questions in this section, explaining the purpose of practice questions, and how to help respondents complete in CASI.

²⁴ Number of interviewers in the table below refer to head counts rather than full-time equivalent (FTE) numbers. Interviewers' hours are, on average, 0.6 FTE.

- **Data linkage** – explaining the importance and benefit of linking survey data with other administrative records, providing background information of planned data linkage for National Survey data, explaining the handling of the data linkage show card, leaflet and flow chart.
- **Group exercises** – encouraging interviewers to practice the Kish Grid selection based on some example household scenarios, as well as practicing door-step scenarios with different types of potential respondents.
- **Field administration** – covering general information on survey administration.

5.6 Prior to the briefings, interviewers were provided with learning material in the form of training cases, and a Survey Information Material (SIM) document containing details of the survey scope, stationery, field periods, questionnaire help notes and survey administration information. For further information on the scope of the survey please refer to the WG website, where a document covering the reasons for including the various questions (which formed the basis of the SIM) is available.²⁵ The SIM can be made available on request.

5.7 Prior to the introduction of the module on tax awareness, the incentive experiment running from July to October 2016, and the subsequent roll out of the incentive to all respondents a written briefing was issued to interviewers informing them of the background and content of change to the questionnaire or relevant process.

Supervision and quality control

5.8 ONS uses an established set of measures to keep track of the quality of their interviewers' work. The key features of this approach are:

- using clear targets against which interviewer performance can be monitored;
- quality control checks with participants to understand how they experienced the interview; and
- regular performance reviews to get a more qualitative understanding of how interviewers are doing.

5.9 While quality indicators are essential in monitoring the key aspects of interviewers' work, there are some aspects of fieldwork quality that can only be assessed by speaking to participants themselves.

²⁵ <http://gov.wales/docs/caecd/research/2016/161201-national-survey-2016-17-background-to-questions-en.pdf>

- 5.10 To do this ONS uses a 'call-back' system whereby up to 10% of all productive cases are contacted by telephone and asked a short set of questions to ensure quality standards and processes are being met. The results of quality control calls are included in interviewers' performance review. If there is any reason for immediate concern, the case is escalated instantly.
- 5.11 The addresses selected for re-contact were selected systematically based on a rotating approach and ensured that all interviewers have their work validated on a regular basis. Approximately 10% of the case work interviewers worked on over the course of the 16-17 survey year were checked, and all of the addresses were verified as valid interviews.

Fieldwork dates, management and procedures

- 5.12 The fieldwork dates for the National Survey were end March 2016 (giving around a week extra compared with the standard fieldwork year, to allow more time for the survey to bed in) to March 2017. Advance letters and survey leaflets were sent by ONS field office approximately two weeks prior to the start of each month field period. Interviewers were responsible for sending out follow up letters to the addresses in their assigned quotas. This ensured that delivery of the materials could be timed to coincide closely with when interviewers planned to make their calls.
- 5.13 Interviewers were encouraged to start their assignments as soon as possible in the month of issue and were given one calendar month to cover each assignment and send back their final outcomes. However, the exact fieldwork period set for an interviewer to work each assignment varied depending on the number of addresses assigned and extensions granted to complete quotas or scheduled appointments.
- 5.14 A proportion of unproductive addresses, usually non-contacts or refusals on first issue, were re-scattered to field interviewers as reissues subsequent to the end of the main stage period. Re-issued addresses were prioritised based on the likelihood of achieving successful interview. Re-issue remarks were provided by the original interviewer at main stage on a standardised scoring scale.
- 5.15 Interviewers called at different times of day and on different days of the week, including weekends and evenings. Interviewers should aim to make minimum of six calls during a mainstage month, with at least two calls on a weekday evening or at the weekend (after 6pm) before cases could be coded as non-contact. There was

no maximum limit on the number of calls with interviewers being instructed to continue to call at addresses while they felt there was still a chance of making contact. Where interviewers were not able to make enough calls or feel that there is value in pursuing the case further for other reasons (e.g. respondent currently ill or on holiday), the case was re-issued in the next fieldwork month. A record of the time, date and outcome of the call was documented, and calling patterns were regularly checked as part of the interviewers performance management review. During 2016-17 interviewers made on average three calls to either achieve an interview, determine that the case was ineligible or a refusal. Six calls were made on average for non-contacts at mainstage, with suitable cases being reissued to ensure that hard-to-reach cases were covered in the survey population.

- 5.16 Fieldwork was managed on a daily basis by a team of Interview Managers working with an overall Field Project Manager. Members of the ONS National Survey Field and Research teams oversaw fieldwork and monitored the rate of progress on a daily basis. Weekly updates were sent to WG including the overall rate of progress against targets and a breakdown of the figures at LA level.

Fieldwork documents

- 5.17 Survey documents used for the large scale field test in 2015 had to be up-dated to reflect various changes including that the survey was now conducted by ONS. As part of this process, ONS and WG reviewed the content and design of all survey materials and agreed a number of changes to improve these documents. ONS wished to align all advance materials with its standard procedures whilst still meeting WG requirements. As a result, the wording of the WG-branded advance letter was changed, and the layout and content of the accompanying survey leaflet was amended by reducing text and adding more visual elements such as infographics and a visual link to Wales on the front page. In addition, a second ONS branded advance letter and leaflet was introduced to the survey design, which was part of ONS standard procedures but tailored to the National Survey in terms of its content and design. Finally, the data linkage leaflet and showcard were further amended, and a new 'thank you' leaflet was added to the set of survey materials for the National Survey. All survey material was tested as part of the pilot test in January/February 2016 and finalised prior to the start of the main stage fieldwork at the end of March 2016.

- 5.18 The WG branded advance letter and leaflet were posted centrally by the head office 10 days before the start of the mainstage month, interviewers were furnished with a stock of ONS branded advance letters and leaflets which were posted by the interviewer a week before their first visit to the addresses of their assigned quotas.

Field advance materials

- 5.19 Due to a change of WG branding guidelines mid 2016, all WG branded advance material was up-dated slightly for the start of the second quarter (July onwards). This mainly involved a minor change in the appearance and repositioning of the WG logo. The versions of all survey material used from July onwards are included in Annexes D to G.
- 5.20 The full set of documents used for this survey shown in Table 5.2, along with a brief description of each document.

Table 5.2: Survey materials

Document	Description
WG advance letter (see Annex D)	<ul style="list-style-type: none">• Sent in advance to all sampled addresses• Informs household that address had been selected to take part in the survey• Includes basic information about the survey• Dual language• During the incentive experiment, two different versions were used – one mentioned the incentive, the other did not
WG leaflet (see Annex E)	<ul style="list-style-type: none">• Sent with the advance letter.• Includes more detail on points covered in the letter, data infographics examples and contact information• Dual language
ONS advance letter (see Annex F)	<ul style="list-style-type: none">• Sent by interviewers before calling at the address.• Similar content as the WG advance letter• Dual language
ONS leaflet (see Annex F)	<ul style="list-style-type: none">• Sent by interviewers before calling at the address.• Explaining why the address was selected and why participation is important• Dual language

Survey envelope	<ul style="list-style-type: none"> • Used for posting advance letters/leaflets • Includes Welsh Government and ONS logo on the front
Core showcards	<ul style="list-style-type: none"> • Single laminated A4 card showing the two common lists that were included throughout the questionnaire. • Dual language
Main showcards	<ul style="list-style-type: none"> • This included all prompted response lists aside from those included in the core showcards • A dual-language A4 booklet
Survey Interview Manual	<ul style="list-style-type: none"> • A set of instructions provided to interviewers. • This included further detail on the survey requirements / procedures to follow
Calling today cards; Appointment card; Broken Appointment card; and General Message pad	<ul style="list-style-type: none"> • Interviewers were provided with ONS standard field material, which they could leave at addresses where there was no answer to say they had called, confirm details of an interview appointment, leave reminders or general messages to respondents • Dual language
Data linkage documents (Annex G)	<ul style="list-style-type: none"> • Interviewers were provided with a number of documents relating to the data linkage process, to help familiarise themselves with this and for providing information to respondents • The documents provided were: a data linkage showcard, and a flowchart. • Dual language
A5 work sheets	<ul style="list-style-type: none"> • Used for each addresses in the interviewer's assignment. • A Kish Grid was included providing interviewers with the relevant random numbers for the respective address in their quote to allow them to select the correct household and individual at the sampled address. • During the incentive experiment, the assignment sheet indicated which addresses were being offered an incentive
Kish Grid (see Annex A)	<ul style="list-style-type: none"> • A pre-assigned table of random numbers to identify the person to be interviewed at each address. A 40 addresses grid was used based on the maximum number of addresses in a quota.

- | | |
|--|--|
| Infographic sheets and Crib sheet for interviewers | <ul style="list-style-type: none"> • A brief infographic sheet of previous WG / sponsored body survey results. • Intended to help with refusal conversions. • Dual language |
| Thank you leaflet (Annex H) | <ul style="list-style-type: none"> • ‘Thank You’ leaflets, handed out by the interviewer at the end of the interview. • The leaflet thanked the participant for their participation and provided contact details for organisations providing further information and support on subject areas related to the survey. |

Web pages about the survey

- 5.21 The WG website hosts information on survey information specific to respondents (www.gov.wales/nationalsurveyinfo). This web address is highlighted in survey materials as an additional source of information for respondents and to reassure them that the survey is genuine.
- 5.22 In addition to that ONS set up a webpage hosted on the ONS website (<https://www.ons.gov.uk/surveys/informationforhouseholdsandindividuals/householdandindividualsurveys/nationalsurveyforwales>) specifically for the National Survey, to inform respondents and the general public about ONS’ role as the organisation commissioned to conduct this survey on behalf of WG.
- 5.23 A separate set of web pages aimed at survey users rather than respondents is hosted at <http://www.gov.wales/nationalsurvey>. This includes background information on the survey, a description of the survey method and questionnaire coverage, latest news (for example, when new data or reports are being release), results and reports from the development work, and further information on data linkage. Electronic copies of the survey materials are also included on the website.
- 5.24 Information on these web pages is available in Welsh and English.

Welsh language and other language interviews

- 5.25 All respondents were offered the opportunity to complete the interview in English or Welsh. To ensure that the survey was accessible in Welsh, all survey documents were provided in both Welsh and English. Furthermore a number of interviewers

were Welsh native speakers or learners at different levels. In total six interviewers were trained to conduct Welsh-language interviews.

- 5.26 The survey leaflet provided a Freephone number that respondents could call to arrange for a Welsh-speaking interviewer. Welsh language interview requests where the original interviewer was a trained Welsh language interviewer were completed by the same interviewer. Alternatively, for cases where the interviewer assigned to the address was not trained in Welsh language interviews, the interviewer was instructed to contact the ONS Field Office to log the request. The record was then immediately passed to a Welsh-speaking interviewer who could contact the respondent directly and arrange to conduct the interview on a suitable day for the respondent.
- 5.27 In a small number of cases respondents were not able to complete the interview in English or Welsh (Table 5.3). In these cases the interview was conducted with the help of a household translator (aged 14 or over), who translated the questions into the respondent's chosen language and then passed their answers back to the interviewer in English.
- 5.28 In such situations, the questionnaire script automatically routed out a number of sensitive questions in these interviews. These were questions that were felt to be inappropriate to ask in the presence of other household members or interpreters (e.g. Warwick-Edinburgh Mental Wellbeing Scale, experience of loneliness, sexual identity).

Table 5.3: Language of interview

Language	Frequency	Percent
English	10,337	98.5
Welsh	152	1.4
Other	4	< 0.1
Total	10,493	100.0

Process of making contact at a sampled address

- 5.29 Interviewers were issued with address sheets for each address in their quota including the address information as well as a Kish Grid with the random numbers for the relevant address in their quota, to enable them to select the right household and individual at the sampled address (see section 3.22). In addition, interviewers used the questionnaire tool on their laptop to record call attempts made, as well as information on the household composition when contact was made.

5.30 Interviewers needed to go through the following steps when calling at a sampled address:

- 1. Confirming the address:** The first task for interviewers was to confirm the address for themselves before making contact, to ensure they were calling at the correct address and then to confirm this with someone living at the address when introducing the survey.
- 2. Confirming address eligibility:** For each address interviewers needed to confirm that it was traceable, residential and occupied as a main residence.
- 3. Recording number of dwelling units:** Interviewers needed to establish the number of dwelling units at the address. In most cases this was one; if it was more than one (most commonly when an address had been split into flats) they were asked to inform head office, who would up-date and re-issue the quota accordingly with one of the addresses selected at random.
- 4. Recording the number of households:** In a small number of cases it may be possible that more than one household lives in a single dwelling unit. ONS uses the standard household definition from the Census for England and Wales, which defines a household as: *'a group of people (not necessarily related) living at the same address who share cooking facilities and share a living room or sitting room or dining area'*. In cases where there was more than one household at a sampled address, interviewers were instructed to use the Kish Grid to establish which household unit would be the correct one to select. Interviewers were advised to re-confirm their household selection with head office in particular if the selection process was unclear (e.g. if the units were not enumerated).
- 5. Recording the number of adults aged 16 or over:** Following the dwelling unit and household selection, the interviewer then needed to establish the number of adults (aged 16 and over) living at the selected address and their respective ages in order to rank them from the oldest to the youngest. Once this was done one person had to be selected at random using the Kish Grid provided. In households where there was only one adult aged 16 or over, no person selection was required.
- 6. Gaining parental permission:** In cases where the selected respondent was aged 16 or 17 and living with a parent/guardian, the interviewer needed to gain parental permission before undertaking an interview. To do this they needed to enter the name of the person giving permission and their relationship to the

respondent into the CAPI questionnaire. No signature was required to support this.

7. Recording the respondent's chosen interview language: The interviewer confirmed at door step what the respondents preferred choice of language for the interview is. At the start of the interview the interviewer indicated the language of choice in the CAPI questionnaire, to ensure the remainder of the questionnaire appears in the correct language (Welsh or English). For languages other than Welsh and English, the questionnaire was displayed in English but delivered with the help of an interpreter (see section 5.22).

Sample outcomes

5.31 A total of 48.4% of the issued sample resulted in successful interviews (Table 5.4). The second most frequent outcome was refusals to interview, including broken appointments, which accounted for over 27% of the issued sample and 30% of the eligible sample. Non-contacts accounted for around 6.7% of the issued sample and 7.6% of the eligible sample. Tables 5.4 and 5.5 show the sample outcomes for all sampled addresses.

Table 5.4: Sample outcomes at national level

Outcome code	Total addresses	% of issued sample	% of eligible sample
Eligible			
Complete interview by selected person	10,450	48.23	54.37
Partial interview by selected person	43	0.20	0.22
No contact with anyone at the address	1,024	4.73	5.33
Contact made at the address, but not with any member of the sampled dwelling/household	168	0.78	0.87
Contact made at sampled dwelling/household, but not with any responsible resident	32	0.15	0.17
Contact made with responsible member of the sampled dwelling/household, but not with selected person	226	1.04	1.18
Office (HQ) refusal	843	3.89	4.39
Refusal by required respondent / selected person	3,697	17.06	19.24
Refusal by proxy	650	3.00	3.38
Refusal during interview	52	0.24	0.27
Broken appointment, no re-contact	678	3.13	3.53
Ill at home during survey period: notified to head office	25	0.12	0.13
Ill at home during survey period: notified to interviewer	297	1.37	1.55
Away/ill in hospital throughout the field period: notified to head office	13	0.06	0.07
Away/ill in hospital throughout the field period: notified to interviewer	579	2.67	3.01
Physically or mentally unable/incompetent: notified to head office	24	0.11	0.12
Physically or mentally unable/incompetent: notified to interviewer	308	1.42	1.60
Language difficulties: notified to interviewer	29	0.13	0.15
Lost interview	8	0.04	0.04
Issued but not attempted	2	0.01	0.01
Inaccessible	14	0.06	0.07
Unable to locate address	19	0.09	0.10
Information refused about whether address is residential	1	0.00	0.01
Unknown whether address is residential due to non contact	12	0.06	0.06
Information refused about whether there are eligible resident(s)	2	0.01	0.01
Unknown whether there are eligible resident(s) due to non contact	24	0.11	0.12
Ineligible			
Not yet built / under construction	60	0.28	-
Demolished / derelict	93	0.43	-
Vacant / empty	1,333	6.15	-
Non-residential address	342	1.58	-
Address occupied, but no resident household/resident(s)	535	2.47	-
Communal establishment / Institution	55	0.25	-
Directed not to sample at address	28	0.13	-
Total addresses	21,666		

Table 5.5: Sample outcomes at local authority level

Local authority	Interviews achieved (%)*	Refused (%)	No contact (%)	Ineligible (%)	Other (%)
Isle of Anglesey	52.40	18.55	3.63	22.44	2.98
Gwynedd	50.39	17.21	5.29	24.30	2.81
Conwy	48.59	26.15	3.85	15.51	5.90
Denbighshire	51.69	24.29	5.53	13.23	5.26
Flintshire	53.54	30.07	2.24	8.02	6.13
Wrexham	47.02	34.69	7.59	7.05	3.66
Ceredigion	53.41	19.58	2.48	17.72	6.82
Pembrokeshire	48.16	22.14	4.34	18.13	7.23
Carmarthenshire	50.99	27.80	3.61	9.75	7.85
Swansea	44.23	28.46	7.28	11.60	8.43
Neath Port Talbot	41.96	36.69	6.50	7.98	6.87
Bridgend	49.73	28.86	6.23	10.16	5.01
Vale of Glamorgan	47.12	28.61	9.40	6.59	8.27
Cardiff	41.54	26.49	14.77	7.47	9.73
Rhondda Cynon Taf	47.03	31.58	6.47	8.98	5.94
Caerphilly	44.30	32.46	9.54	6.47	7.24
Blaenau Gwent	46.61	26.35	10.13	10.13	6.79
Torfaen	51.22	32.52	7.04	4.35	4.87
Monmouthshire	59.92	22.10	2.69	7.37	7.93
Newport	47.89	30.75	8.10	6.57	6.69
Powys	51.46	24.80	5.01	14.52	4.20
Merthyr Tydfil	44.10	33.59	9.49	8.21	4.62
Total	48.43	27.32	6.69	11.29	6.26

* Response rates are based on the 16-17 survey period, ending with end of March 2017. This means that reissues for February and March are not included in this table.

Sample and reissues

- 5.32 After each field period a proportion of cases that had been coded as refusals, non-contacts or non-responses were reallocated to interview quotas and re-scattered. This was designed to reduce non-response bias and increase overall response. Reissues accounted for approximately 1.5% of the overall productive cases, or 0.7% of the issued sample. The response rate achieved at the reissue stage was approximately 11 percentage points lower than that of main stage (Table 5.6), Considering that identical field methodology was used for main stage and reissued cases, this observation indicates that successful interviews are comparatively harder to achieve at the reissue stage. This suggests that the extra effort invested in reissues has increased the overall robustness of the dataset by increasing the proportion of addresses that would normally refuse or are otherwise difficult to reach in social surveys.

Table 5.6: Outcomes by mainstage vs. reissue period

Survey period	Eligible cases			Ineligible cases	Response rates
	Interviews achieved	Refusals	Non-response/ Non-contact/ Unknown eligibility/		
Mainstage	10,337	5,746	2,781	2,381	54.8%
Reissue	156	174	26	65	43.8%
Total	10,493	5,920	2,807	2,446	54.6%

- 5.33 It should be noted that whilst cases identified for reissue during the fieldwork months of February and March were actioned in line with routine processes, any productive cases from these reissue periods will be included in the 17-18 survey data.

Achieved sample

- 5.34 In total 10,493 interviews were achieved. The breakdown of interviews between each quarter of 2016-17 is given in Table 5.7.

Table 5.7: Achieved interviews by quarter.

Quarter	Interview dates	Interviews achieved	Cumulative interviews achieved
1	1 April 2016 to 30 June	2,548	2,548
2	1 July to 30 September	2,609	5,157
3	1 October to 31 December	2,544	7,701
4	1 January 2017 to 31 March	2,792	10,493
TOTAL		10,493	10,493

- 5.35 The response rate (Tables 5.6 and 5.8) was calculated as:

$$\text{Response rate} = \text{interviews achieved} / (\text{total addresses} - \text{ineligible cases})$$

The index provides the fraction of eligible addresses that produced a successful interview.

- 5.36 Ineligible addresses are those that would not be eligible to take part in the survey. This only includes addresses that were vacant, non-residential or not occupied as a main residence (e.g. holiday homes) and those coded by interviewers as inaccessible or that they were unable to locate. It does not include addresses that

have been attempted a number of times by interviewers but where no contact has been made, unless there is clear evidence that the address is vacant or not occupied as a main residence (e.g. by confirming this with neighbours). The overall level of ineligible addresses was 11.3%.

- 5.37 At project start the planned response rate was 61%, based on other surveys in Wales (excluding the 2015 large-scale test, for which results were not yet available).
- 5.38 Whilst allowance was made for a lower response during the first quarter of the survey year due to the survey bedding in, the achieved response rate of the new National Survey remained unexpectedly low, even beyond the first quarter. Table 5.8 shows the response rates for 2016-17 at LA level. The overall response rate achieved was 54.6% (excluding reissues for February and March 2017 as these will be included in 17-18 data). This figure is 1.9 percentage points below the response rate realised in the large scale field test in 2015.

Table 5.8: Achieved response rate by LA (ranked by response rate)

Local authority	Total addresses*	Interview target	Completed interviews	Ineligible addresses	Response rate (%)
Isle of Anglesey	771	475	404	173	67.56
Gwynedd	889	516	448	216	66.57
Ceredigion	807	532	431	143	64.91
Monmouthshire	706	423	423	52	64.68
Powys	2,355	1,263	1,212	342	60.21
Denbighshire	741	430	383	98	59.56
Pembrokeshire	899	497	433	163	58.83
Flintshire	848	477	454	68	58.21
Conwy	780	446	379	121	57.51
Carmarthenshire	1,108	589	565	108	56.50
Bridgend	738	408	367	75	55.35
Torfaen	781	467	400	34	53.55
Blaenau Gwent	869	489	405	88	51.86
Rhondda Cynon Taf	1,314	731	618	118	51.67
Newport	852	436	408	56	51.26
Wrexham	738	414	347	52	50.58
Vale of Glamorgan	713	391	336	47	50.45
Swansea	1,483	795	656	172	50.04
Merthyr Tydfil	780	380	344	64	48.04
Caerphilly	912	526	404	59	47.36
Neath Port Talbot	815	432	342	65	45.60
Cardiff	1,767	918	734	132	44.89
TOTAL (National)	21,666	13,217	10,493	2,446	54.59

* The total sample, included the sample boost added in Q4, is used for the calculations.

- 5.39 Response rates ranged from 44.9% (Cardiff) to 67.6% (Anglesey). The number of interviews achieved was above the target in 11 out of 22 LAs. Most LAs (14) were within five percentage points of the national average. The Isle of Anglesey, Gwynedd, Ceredigion, Monmouthshire and Powys were the best performing areas while the lower response rates were recorded in Merthyr Tydfil, Caerphilly, Neath Port Talbot and Cardiff.
- 5.40 Large proportions of ineligible addresses were found in Powys, Gwynedd, Isle of Anglesey, Swansea, and Pembrokeshire followed by Ceredigion and Cardiff. Lower degree of variation was recorded in other areas and the lowest ineligible rate was recorded in Torfaen.

Remedial action to low response

- 5.41 ONS closely monitored the progress of survey response performance over the course of the fieldwork period. When it became apparent that the survey may not achieve its target response rate a number of remedial actions were proposed to WG and taken to help improve response rates:
- The normal re-issue process was relaxed over the first three quarters of the survey year to allow interviewers more time to pursue cases where interviewers felt this would result in a positive outcome (see section 3.17).
 - Ad-hoc pieces of analysis were conducted over the course of the survey year review was conducted, including for example a comparison of response level to other ONS surveys, and analysis of response and non-response patterns, to identify whether low response was country-wide or confined to certain areas, or certain interviewers. The review showed that the response levels were progressing along the same lines as those of other surveys, and revealed nothing unusual in terms of geographical variation.
 - An interviewer debrief survey was conducted by ONS in July 2016 to seek feedback from the field force on the survey design and process to help understand whether there were any underlying issues that could impact on response rates. However, the findings did not provide any conclusive evidence on issues affecting response levels.
 - An incentive experiment was introduced in July 2016 and ran until the end of October 2016 (see section 2.4) to inform the decision on whether to introduce an incentive going forward and of what value. Due to response levels remaining low,

the experiment, which was meant to run until December 2016, was terminated early in October 2016 and a conditional £10 incentive introduced for the whole sample from November 2016 onwards.

- In order to attempt a larger sample, part of the reserve sample (see section 3.09) was issued in the last quarter of the survey year boosting the sample size by 220 addresses at national level for each of the three months (i.e. an additional 660 addresses in total).
- As well as the above, ONS increased its overall interviewer field force in Wales by an additional 15 interviewers who began work on the survey in December and January 2017 and a further 8 in March 2017 (see Table 5.1). Out of those between seven and nine more interviewers were assigned National Survey work up in the months until March 2017 (part of which were assigned to the National Survey pilot in January 2017) to ensure capacity levels were sufficient to cover the larger sample.²⁶

5.42 The combination of the measures listed above led to an increase of achieved interviews in the fourth quarter of the fieldwork year, bringing the total number of interviews closer to the set target of 12,000 interviews.

²⁶ Interviewer numbers refer to actual head counts rather than full-time equivalent number.

6. Data processing and output

- 6.1 This chapter covers the data processing and delivery aspects of the survey. This includes the data coding and editing processes, production of derived variables, the data checking process and details of the outputs provided to WG.

Conversion of interview cases into a dataset

- 6.2 When interviewers complete an interview, the case is transmitted remotely through a secure connection to the ONS Field Office. This case is then received by the Object Management System collating individual cases into a Blaise datafile. The Blaise datafiles (BDB) are then converted from a Blaise format to an SPSS dataset with an accompanying .sps meta file through an in-house ONS designed VB6 package called 'DataDeliveryExpress'.
- 6.3 New SPSS datasets are produced daily (when new cases are received by the Field Office) and delivered to the ONS National Survey Research Team. Where additional editing is required (see section 6.8) cases were automatically sent to the ONS Coding and Editing Team, after which an edited SPSS dataset was then supplied to the Research Team for further data processing.

Data coding and editing

- 6.4 Where relevant, logic checks and interviewer prompts were incorporated into the CAPI script (see section 4.16) in order to ensure that answers provided were consistent and sensible. In addition to these checks built into the CAPI questionnaire, a number of checks were run (usually several times a week) by the ONS National Survey Research Team on datasets received to highlight any potential inconsistencies. These included ensuring that interviewers had selected the correct person at the sampled address to interview, and that the correct questions were being asked based on routing.
- 6.5 Post-fieldwork editing was also conducted on the data to account for any inconsistencies in response not covered by the checks built into the questionnaire. For example, the question asking respondents to select the ethnic group to which they belong contained several 'Other (specify)' codes, divided according to different ethnic groups (e.g. 'Any other Asian background'). If the verbatim response

provided at this question suggested that the respondent belonged a different 'Other' category, they were re-coded accordingly.

- 6.6 Post-interview coding of open-text responses was undertaken by members of the ONS Coding and Editing team, using pre-defined code frames. This team also looked at any notes interviewers added to the questionnaire and highlighting these to the ONS Research Team, if further editing actions were required.

Derived variables

- 6.7 A list of required derived variables was provided to ONS by WG. These are variables that are produced from other data, either collected during the interview or obtained from other sources (i.e. geography and census data). The full list of derived variables can be found in Annex I.

Data outputs

- 6.8 An unformatted dataset was provided to WG in April 2016. The file contained the raw data of the first 250 achieved interviews to allow WG to quality assure the questionnaire routing.
- 6.9 The WG provided ONS with detailed specifications for required datasets. These specified the required format and labelling for each questionnaire variable and derived variable included in each dataset. Weighting variables were produced by ONS for the individual and household level files. Details on the weighting process and weight variables on the datasets can be found in chapter 7.
- 6.10 Based on the specification ONS provided to WG the following SPSS data files:
- An 'All people' file, based on responses to the enumeration grid and basic demographic information on the whole household.
 - A respondent-level file based on responses to the questionnaire and containing interview data for all respondents.
 - An anonymised sample file, with fieldwork outcomes (e.g. interviewed, refused) and geo-demographic data for all addresses.
 - A non-anonymised file, with geographic data for all responding households.
 - A re-contact file, with the address details of all respondents that agreed to be recalled.

- 6.11 Each dataset was provided to WG firstly as an interim data file after the first five months of the survey and then again after nine and 12 months to allow an iterative approach to checking in preparation of final sign off. Each file for all iterations were first quality assured by the ONS National Survey Research Team followed by further checking on the content and format of the data sets being carried out by WG before they were signed off.

Availability of data

- 6.12 In order to enable a wider research community to access and use the survey data for further analysis, appropriately anonymised participant and household level dataset are hosted at the UK Data Archive²⁷ and the SAIL databank²⁸.

²⁷ <https://www.ukdataservice.ac.uk/>

²⁸ <https://saildatabank.com/>

7. Weighting, non-response and analysis

- 7.1 The general approach used in the calculation and application of weighting to the 2016-17 data reflects standard protocols in use for weighting social surveys and is in line with current international best practice. Design weights that reflect the probability of selection (both for households and individuals) were calculated, before being calibrated to 2011-based population estimates for 2015 in Wales, and adjusted to represent the resident population²⁹. However, the basic weighting strategy is consistent with the approaches taken to weighting the 2015 large scale field test³⁰ and the former Welsh Health Survey³¹.
- 7.2 Each weight is produced in two steps:
1. Production of design weight (to compensate for differences in sampling probability).
 2. Weight calibration (to compensate for differences between the sample profile and the known population profile).
- 7.3 As non-response at household and individual level may cause bias in the results, weights would usually be adjusted for the probability of not achieving an interview. A weighted logistic regression model was used to calculate the propensity of response for different types of households. Ideally this analysis should also be carried out at individual level, however, as no information on non-responding individuals is known at the point of contact, it was not possible to conduct this analysis at individual level. Findings of the household level model showed that the non-response bias was negligible. A decision was therefore taken that the weights did not need to be adjusted for non-response bias.
- 7.4 As set out in chapter 3, a reserve sample was drawn and part of which was used in the last quarter of the survey year to ensure more cases could be attempted and subsequently a higher number of interviews could be achieved. The mainstage and reserve sample were treated independently in the process of producing the design weights to reflect the different probabilities of inclusion in these two samples, these were then scaled and combined according to the respective sample sizes.

²⁹ "Resident population" means people living in private households across Wales. It excludes people living in institutional accommodation (e.g. care homes, halls of residence, prisons, hotels and B&Bs, and army bases). People in institutional accommodation are typically not included in social surveys.

³⁰ Hanson T., Sullivan S., *National Survey for Wales Field Test, Technical Report*, Welsh Government, Social Research Number 19/2016 <http://gov.wales/docs/caecd/research/2016/160315-national-survey-field-test-technical-report-en.pdf>

³¹ Doyle M., Brown L., Cabrera Alvarez P., Brown L., "Welsh Health Survey", Technical Report 2015, available from: <http://gov.wales/docs/statistics/2016/160929-welsh-health-survey-2015-technical-report-en.pdf>

Design weights

- 7.5 The first step of the weighting process was to calculate a design weight for both the household and individuals within households, which reflects the probability of selection.
- 7.6 The household design weight adjusts for cases where multiple dwellings are found at a sampled address (e.g. a block of flats), or multiple households within a sampled dwelling.

- 7.7 The weight is calculated as follows:

$$\text{Household design weight} = \frac{N_h \times (\text{Number of households in dwelling}) \times (\text{Number of dwellings at address})}{n_h}$$

where n_h is the sample size (number of addresses) allocated within stratum h and N_h is the population size (number of addresses on the Postcode Address File) within stratum h

- 7.8 In most cases, the product of the number of dwellings at the address and the number of households at the dwelling will both be one. When necessary the numbers were capped to minimise variability in the design weights and therefore in the calibrated weights. The level of such a cap was informed by analysis of the data and evidence from other surveys.
- 7.9 The individual design weight adjusts for the random selection of one adult within sampled households containing more than one adult aged 16 or older. The weight is calculated as follows:

$$\text{Individual design weight} = \text{Adjusted household design weight}_i \times m_i$$

where m_i is the number of people aged 16 and over in household i .

- 7.10 To avoid disproportionate within-address variation in the weights, the weight was capped at 4.

Calibration of weights

- 7.11 Finally, the adjusted design weights at both the household and individual levels are then calibrated to the relevant population totals. The population totals used in the calibration usually refer to the same period as the survey itself to give totals by LA for both individuals and households. The latest population estimates available for the 2016-17 weights were 2011-based population estimates for 2015 for Wales (adjusted for the resident population).³² In deciding on appropriate calibration groups, these needed to be sufficiently large to limit variation in the weights. For the adult weights, the calibration initially considered age, sex and LA. Appropriate calibration groups were explored as data was received during the first few months of the survey and included in the calculation of the weights when relevant.
- 7.12 Appropriate estimates of the number of private households in Wales were used to calibrate the adjusted household design weight to these known population totals. Analysis was conducted to explore whether using information such as household composition, in terms of the number of adults and children within a household, would be beneficial in defining calibration groups and in the calibration.
- 7.13 Appropriate population totals were used to calibrate the adjusted individual design weight to represent the population of adults in Wales aged 16 and older. Variables considered for calibration groups included age, sex and local authority (LA). The most appropriate calibration groups were identified by ensuring that the calibration groups are of a suitable size (i.e. more than 30 responses in the sample).
- 7.14 As a result of the analysis, the following variables were used for the calibration of the various weights:

³² Welsh Government, StatsWales Population Projects, <https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Projections/Local-Authority/2011-Based/PopulationProjections-by-LocalAuthority-Year>

Table 7.1: Variables used for weight calibration

Household	Population	Adult	Child
Local authority (22)	Local authority (22)	Local authority (22)	Region (4)
Household Composition	AgeSex by Male and Female	AgeSex by Male and Female	North West Wales
1 person household (no child)	0-4 years	16-19 years	Mid Wales
2 person household with child	5-10 years	20-24 years	South West Wales
2 person household (no child)	11-15 years	25-29 years	South East Wales
3 person household with 2 children	16-19 years	30-34 years	Sex
3 person household with 1 child	20-24 years	35-39 years	Age (3-17)
3 person household (no children)	25-29 years	40-44 years	
4 person household with children	30-34 years	45-49 years	
4 person household (no children)	35-39 years	50-54 years	
5+ person household	40-44 years	55-59 years	
	45-49 years	60-64 years	
	50-54 years	65-69 years	
	55-59 years	70-74 years	
	60-64 years	75 years or older	
	65-69 years		
	70-74 years		
	75 years or older		

7.15 The weights available for 2016-17 are: a household weight, an adult weight, a population weight and a child weight. A separate adult weight is provided for each sub-sampled module to allow the accurate estimation of totals from the responses to the questions in each sub-sample. Such weights will account for the difference in the probability of selection between the main survey and for the sub-sample. Ungrossed versions of each of these weights are also available, which give a weighted achieved sample size equal to the un-weighted achieved sample size. Ungrossed weights were initially produced quarterly in line with calibrated weights, whereby each quarter was scaled up to their respective sample size. Because ungrossed and calibrated weights were found to produce slightly different estimates, all four quarters were scaled up at the same time to the overall sample size. The ungrossed

weights were then checked to ensure they summed up to the correct sample totals. Annex J provides an overview of all weights included in the 2016-17 datasets:

7.16 The following tables provide projected 2015 population estimates:

Table 7.2: Projected 2015 resident population by age and sex

Age by sex		N	%
Male	0-4	90,016	3.0
Male	5-10	109,338	3.6
Male	11-15	84,916	2.8
Male	16-19	72,666	2.4
Male	20-24	105,219	3.5
Male	25-29	97,420	3.2
Male	30-34	89,428	2.9
Male	35-39	83,918	2.8
Male	40-44	92,430	3.0
Male	45-49	103,962	3.4
Male	50-54	107,001	3.5
Male	55-59	95,793	3.1
Male	60-64	89,697	2.9
Male	65-69	95,066	3.1
Male	70-74	71,648	2.4
Male	75-79	54,731	1.8
Male	80+	57,786	1.9
Female	0-4	85,637	2.8
Female	5-10	104,180	3.4
Female	11-15	80,221	2.6
Female	16-19	67,264	2.2
Female	20-24	99,638	3.3
Female	25-29	95,063	3.1
Female	30-34	90,950	3.0
Female	35-39	85,732	2.8
Female	40-44	96,537	3.2
Female	45-49	109,105	3.6
Female	50-54	111,628	3.7
Female	55-59	100,388	3.3
Female	60-64	94,262	3.1
Female	65-69	99,322	3.3
Female	70-74	77,136	2.5
Female	75-79	68,684	2.3
Female	80+	79,067	2.6
Other		1,228	0.0
All		3,047,075	100.0

Table 7.3: Projected 2015 resident population by age with Local authority

Local authority	0-24	25-64	65-74	75+
Isle of Anglesey	20,662	33,098	8,557	6,820
Gwynedd	36,434	55,907	14,262	12,377
Conwy	27,944	52,987	18,278	14,228
Denbighshire	25,805	47,719	11,227	8,709
Flintshire	41,930	82,855	15,336	13,075
Wrexham	40,344	67,644	16,438	10,586
Powys	32,864	66,491	17,356	13,929
Ceredigion	20,916	34,569	8,228	6,944
Pembrokeshire	31,026	55,784	20,423	14,239
Carmarthenshire	50,876	93,545	21,176	16,956
Swansea	75,481	115,729	26,465	20,037
Neath Port Talbot	41,735	69,067	16,864	12,171
Bridgend	41,740	70,313	15,300	12,358
Vale of Glamorgan	33,529	66,305	13,682	11,982
Cardiff	122,303	175,558	27,054	21,027
Rhondda Cynon Taf	70,931	124,221	24,827	14,897
Merthyr Tydfil	17,881	30,244	6,630	4,085
Caerphilly	48,273	91,723	21,971	17,109
Blaenau Gwent	20,225	35,889	7,928	4,920
Torfaen	24,981	50,993	8,372	6,742
Monmouthshire	27,365	45,793	10,042	7,604
Newport	46,493	77,251	12,828	9,613
All	899,738	1,543,685	343,244	260,408

Table 7.4: Projected 2015 household tenure estimates by Local authority

Local authority	Owner-occupied	Other
Isle of Anglesey	21,584	9,376
Gwynedd	36,607	16,813
Conwy	38,754	13,278
Denbighshire	29,322	11,874
Flintshire	46,263	18,911
Wrexham	37,592	20,817
Powys	42,751	16,388
Ceredigion	21,574	9,858
Pembrokeshire	38,876	15,443
Carmarthenshire	55,911	24,405
Swansea	68,674	37,424
Neath Port Talbot	42,981	18,188
Bridgend	47,837	12,457
Vale of Glamorgan	43,416	11,401
Cardiff	97,681	51,388
Rhondda Cynon Taf	72,104	30,437
Merthyr Tydfil	15,874	8,836
Caerphilly	55,718	19,860
Blaenau Gwent	17,677	13,035
Torfaen	25,996	13,337
Monmouthshire	29,291	9,773
Newport	39,778	22,806
All	926,261	406,105

Table 7.5: Projected 2015 household composition estimates

Group description	Group size
Single pensioner (no children)	236,030
Married couple pensioner (no children)	164,471
Single person, not a pensioner (no children)	183,478
Two adult household with children	221,282
Two adult household (up to one pensioner) without children	241,778
Single parent household	86,707
Other households	198,613
Total	1,332,359

Design effects and factors

- 7.17 Design effects and factors have been calculated for several variables allowing effective sample sizes to be produced at a national and local level. Table 7.6 provides an overview of the average design effect at local authority level based on a number of selected questions that were asked to the whole sample of respondents.

Table 7.6: Projected 2015 household composition estimates³³

Local authority	Design effect	Effective sample size
Isle of Anglesey	1.23	270
Gwynedd	1.19	335
Conwy	1.25	244
Denbigshire	1.27	241
Flintshire	1.32	263
Wrexham	1.27	221
Powys	1.37	644
Ceredigion	1.24	285
Pembrokeshire	1.26	272
Carmarthenshire	1.31	333
Swansea	1.31	392
Neath Port Talbot	1.35	185
Bridgend	1.27	233
Vale of Glamorgan	1.25	217
Cardiff	1.24	487
Rhondda Cynon Taf	1.19	442
Merthyr Tydfil	1.16	257
Caerphilly	1.29	243
Blaenau Gwent	1.26	255
Torfaen	1.25	263
Monmouthshire	1.39	213
Newport	1.20	284
Average	1.27	299
Full sample	1.53	6,871

- 7.18 Further breakdowns of a selection variables by local authority, local health board, gender, age group, economic status, and household material deprivation are included in Annex M.
- 7.19 Table 7.7 shows the design effects, design factors and confidence intervals for a range of questions in the 2016-17 survey.

³³ The variables used to calculate average design effects were all asked of the full sample. These were IntPersUse, EdOverSat, UqualServ, WbLifeWrth, WelSpk, Dvsmokec, Dvalcushibi, Dvmvpa150, and DvFGHealth1.

Table 7.7: Projected 2015 household composition estimates³⁴

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower %	Upper %
AmbContact	Ambulance service - Last 12 months, personally contacted the emergency ambulance service in Wales	Yes	1.50	1.22	13.3	15.0
		No	1.55	1.24	84.7	86.3
		Don't know/refused	1.63	1.27	0.0	0.2
		Total	1.54	1.24		
DvEcoStat3	Economic status (3 classifications)	In employment	1.25	1.12	52.3	54.4
		Unemployed	1.89	1.38	2.6	3.5
		Economically inactive	1.21	1.10	42.4	44.4
		Don't know/refused	1.86	1.36	0.1	0.3
		Total	1.25	1.12		
DvFinBilCred	Household/Pensioner deprivation - ability to keep up with bills and credit commitments at present	Keeping up with all bills and commitments without any difficulties	2.21	1.49	62.3	65.1
		Keeping up with all bills and commitments but it is a struggle from time to time	1.93	1.39	20.8	23.0
		Keeping up with all bills and commitments but it is a constant struggle	1.70	1.30	5.7	6.9
		Falling behind with some bills and credit commitments	1.72	1.31	1.8	2.5
		Having real financial problems and have fallen behind with many bills and credit commitments	1.57	1.25	0.8	1.2
		Have no bills	2.10	1.45	1.4	2.2
		Don't know/refused	2.48	1.58	1.0	1.7
		Total	2.10	1.45		
GenHealth	Health in general	Very good	1.78	1.34	35.6	38.1
		Good	1.78	1.33	34.0	36.5
		Fair	1.43	1.19	18.6	20.4

³⁴ The variables used to calculate average design effects were all asked of the full sample. These IntPersUse, EdOverSat, UqualServ, WbLifeWrth, WelSpk, Dvsmokec, Dvalcushibi, Dvmvpa150, DvFGHealth1

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower %	Upper %
		Bad	1.34	1.16	5.4	6.4
		Very bad	1.13	1.06	1.9	2.5
		Don't know/refused	1.37	1.17	0.1	0.2
		Total	1.67	1.29		
IntPersUse	Internet - Personal use of internet at home, work or elsewhere	Yes	1.34	1.16	84.5	86.0
		No	1.33	1.15	13.8	15.4
		Don't know/refused	1.23	1.11	0.0	0.0
		Total	1.34	1.16		
ScPerf	Social care service - Good social care services are available in my local area	Strongly agree	1.94	1.39	11.6	13.4
		Tend to agree	1.57	1.25	20.8	22.8
		Neither agree nor disagree	2.43	1.56	13.8	15.9
		Tend to disagree	1.23	1.11	6.2	7.3
		Strongly disagree	1.52	1.23	3.9	4.9
		Don't know/refused	2.67	1.63	37.8	40.9
		Total	2.15	1.47		
EdOverSat	Education - Overall satisfaction with the state of education in Wales (0 -10 scale)	Mean	1.71	1.31	6.1	6.2
UaQualServ	Local Authority - Council provides high quality services	Strongly agree	1.62	1.27	7.2	8.5
		Tend to agree	1.59	1.26	37.5	39.8
		Neither agree nor disagree	1.62	1.27	22.4	24.4
		Tend to disagree	1.60	1.27	17.2	19.1
		Strongly disagree	1.67	1.29	8.5	9.9
		Don't know/refused	2.86	1.69	2.1	3.2
		Total	1.64	1.28		
WbLifeWrth	Well-being - Extent of feeling that things done in life are worthwhile (0-10 scale)	Mean	1.62	1.27	7.9	8.0
WelSpk	Welsh Language - Speak Welsh	Yes	2.08	1.44	18.5	20.7
		No	2.53	1.59	69.9	72.7
		No, but have some Welsh speaking ability	2.91	1.70	8.1	10.0

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower %	Upper %
GpOverSat	GP - Overall satisfaction with care received	Don't know/refused	1.30	1.14	0.0	0.1
		Total	2.48	1.57		
		Very satisfied	1.72	1.31	21.9	24.0
		Fairly satisfied	1.61	1.27	8.2	9.6
		Neither satisfied nor dissatisfied	2.15	1.47	1.2	1.9
		Fairly dissatisfied	1.97	1.40	1.1	1.8
		Very dissatisfied	1.44	1.20	0.5	0.9
		Don't know/refused	0.84	0.92	0.0	0.0
ArtsVisit	Arts/Museums/Heritage - In the last 12 months, have you visited any of these arts events in Wales	Total	1.71	1.31		
		Yes	2.72	1.65	18.1	20.5
		No	3.13	1.77	15.0	17.5
		Don't know/refused	2.04	1.43	0.0	0.2
		Total	2.91	1.70		
VisitMain	Most recent visit - Main activity undertaken in most recent visit to outdoors	Walking	2.23	1.49	13.8	15.8
		Picnicking (as a significant part of the activity)	2.34	1.53	0.4	0.9
		Visiting children's playground / taking children to play area outdoors	1.86	1.36	3.4	4.4
		Total	2.17	1.47		
CliChanCon	Climate change - Concern about climate change	Very concerned	1.77	1.33	4.6	5.8
		Fairly concerned	1.84	1.36	10.5	12.2
		Not very concerned	1.89	1.38	4.3	5.5
		Not at all concerned	1.64	1.28	2.7	3.5
		Don't know/refused	1.55	1.24	0.7	1.1
		Total	1.80	1.34		
FloRiskProp	Flood risk - How concerned are you, about the risk of flooding to - Your property	Very concerned	1.43	1.20	0.4	0.8
		Fairly concerned	1.33	1.15	1.2	1.7
		Not very concerned	1.74	1.32	4.2	5.3
		Not at all concerned	1.72	1.31	15.9	17.8
		Don't know/refused	2.14	1.46	0.1	0.4

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower %	Upper %
		Total	1.70	1.30		
MusVisit	Arts/Museums/Heritage - In the last 12 months, have you visited any of these museums in Wales	Yes	2.36	1.54	12.7	14.7
		No	3.49	1.87	20.4	23.3
		Don't know/refused	1.43	1.19	0.0	0.2
		Total	3.05	1.75		
TxMstCtrl	Tax - Who currently has the most control over the taxes you pay	Local councils	2.17	1.47	1.1	1.7
		Welsh Government	3.03	1.74	2.7	3.9
		UK Government	9.81	3.13	14.2	18.7
		Other	1.33	1.15	0.0	0.1
		Don't know/refused	3.62	1.90	3.1	4.5
		Total	7.53	2.74		
GpOverSat	GP - Overall satisfaction with care received	Very satisfied	1.72	1.31	21.9	24.0
		Fairly satisfied	1.61	1.27	8.2	9.6
		Neither satisfied nor dissatisfied	2.15	1.47	1.2	1.9
		Fairly dissatisfied	1.97	1.40	1.1	1.8
		Very dissatisfied	1.44	1.20	0.5	0.9
		Don't know/refused	0.84	0.92	0.0	0.0
		Total	1.71	1.31		
Dvsmokec	Smoking- Currently smoke either daily or occasionally	Yes	1.62	1.27	17.6	19.5
		No	1.63	1.28	80.1	82.0
		Don't know/refused	1.04	1.02	0.0	0.0
		Total	1.63	1.28		
Dvecignbi	Smoking - E-cigarette used now - binary	Yes	1.60	1.27	6.0	7.2
		No	1.65	1.28	92.4	93.7
		Total	1.65	1.28		
Dvalcushibi	Alcohol - usual weekly alcohol consumption: higher risk - binary	Yes	1.80	1.34	18.8	20.9
		No	1.85	1.36	78.1	80.3
		Don't know/refused	2.00	1.41	0.4	0.8
		Total	1.85	1.36		

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower %	Upper %
Dvfv52	Fruit & Vegetables - Eaten 5+ fruit or veg the previous day	Yes	1.79	1.34	22.8	25.0
		No	1.79	1.34	74.5	76.7
		Don't know/refused	1.38	1.18	0.0	0.2
		Total	1.79	1.34		
Dvbmiowob2	Body Mass Index - BMI Overweight or obese (excl pregnant women)	Yes	2.33	1.53	51.9	54.8
		No	2.24	1.50	35.8	38.5
		Don't know/refused	2.96	1.72	7.4	9.2
		Total	2.35	1.53		
DvBmiObese2	Body Mass Index - BMI Obese (excl pregnant women)	Yes	2.49	1.58	19.3	21.8
		No	2.42	1.56	68.6	71.3
		Don't know/refused	2.96	1.72	7.4	9.2
		Total	2.48	1.58		
Dvmvpa150	Physical activity - MVPA meets guidelines 150 minutes weekly	Yes	2.20	1.48	52.1	54.9
		No	2.20	1.48	44.7	47.5
		Total	2.20	1.48		
Dvmvinact	Physical activity - MVPA inactive <30 minutes weekly	Yes	2.82	1.68	30.5	33.5
		No	2.84	1.69	66.1	69.2
		Total	2.84	1.68		
DvFGHealth1	Health - People with fewer than 2 healthy lifestyle behaviours (not smoking, healthy weight, eat 5 fruit or veg, not drinking above guidelines, active).	Yes	2.33	1.53	8.4	10.1
		No	2.63	1.62	79.4	81.8
		Don't know/refused	2.93	1.71	8.8	10.8
		Total	2.63	1.62		
SportVolClub	Sport - Volunteering - Given time for free to help run any sporting activity in last 12 months	After school	1.26	1.59	0.7	1.2
		At a sports club	1.26	1.58	1.5	2.2
ClubMem	Sport - Sports club membership - Current member of sports clubs or organisations	Yes	3.90	1.97	74.6	77.8
		No	3.94	1.98	21.5	24.7
		Don't know/refused	1.39	1.18	0.0	0.1
		Total	3.91	1.98		
SportMore	Sport - Future participation - What would	If I was younger	1.43	1.20	27.6	29.7

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower %	Upper %
	encourage respondent to do more outdoor, indoor activities or sports	If I was fitter	1.88	1.37	25.7	28.1
		If I was less busy at work	1.99	1.41	30.9	33.4
OAct4w	Sport - Current participation - Outdoor games and activities taken part in within the last 4 weeks	Football (outdoor)	1.92	1.39	7.7	9.2
		Jogging	1.96	1.40	9.5	11.1
OPur4w	Sport - Current participation - Outdoor pursuits taken part in within the last 4 weeks	Walking (over 2 miles)	2.54	1.59	32.2	35.0
DvFGSport	Derived variable - Participation in sporting activities three or more times a week (FG indicator)	Yes	2.08	1.44	27.3	29.8
		No	2.11	1.45	69.5	72.0
		Don't know/refused	1.88	1.37	0.0	0.1
		Total	2.10	1.45		

ANNEXES

Annex A – Kish Grid

Annex B – Sub-sampling specification

Annex C – Survey timings

Annex D – WG advance letter

Annex E – WG survey leaflet

Annex F – ONS advance letter and leaflet

Annex G – Data linkage showcard and flowchart

Annex H – ‘Thank You’ leaflet

Annex I – List of derived variables

Annex J – National Survey weights

Annex K – Sampling table

Annex L – Outcome code descriptions

Annex M – Design Effect and Factors

Annex A – Kish Grid

		Number of adults aged 16 or over in household												
		2	3	4	5	6	7	8	9	10	11	12	13	14
Address Number on Address List	1	1	1	2	1	2	5	7	3	2	6	9	7	1
	2	2	3	1	2	4	3	6	8	4	4	1	9	13
	3	2	2	3	5	3	7	5	1	10	7	12	4	9
	4	1	2	4	4	5	2	8	6	3	11	8	5	3
	5	2	1	2	3	1	4	1	2	1	3	6	12	8
	6	1	3	1	1	6	1	3	7	9	5	2	11	4
	7	1	2	3	3	4	6	4	9	6	2	5	8	6
	8	2	1	4	4	1	7	2	4	8	8	11	2	12
	9	1	3	4	5	3	1	4	5	5	10	7	6	11
	10	2	3	1	2	5	6	7	8	7	9	10	13	2
	11	2	2	3	4	2	3	5	4	6	1	4	10	14
	12	1	1	2	2	6	5	2	1	5	5	3	1	5
	13	2	1	4	1	4	4	1	7	2	8	11	3	7
	14	1	2	2	3	1	2	3	2	10	4	10	5	10
	15	2	3	3	5	5	2	8	3	7	6	5	10	14
	16	1	2	1	3	3	1	6	5	3	10	1	1	5
	17	1	1	3	5	6	4	8	9	4	7	9	9	6
	18	2	3	4	4	2	7	2	6	9	3	4	2	13
	19	2	3	1	1	2	3	7	8	8	1	2	3	4
	20	1	2	2	2	5	5	3	2	1	2	8	12	10
	21	2	1	2	4	3	6	1	1	10	11	7	8	7
	22	1	2	4	5	4	2	5	6	8	9	6	4	8
	23	2	3	3	2	1	7	4	7	9	4	12	13	9
	24	1	1	1	3	6	3	6	5	6	2	3	11	3
	25	2	3	1	1	4	4	8	3	1	9	5	6	1
	26	1	1	3	1	5	6	2	9	5	10	12	7	2
	27	1	2	4	2	1	5	5	4	3	5	6	4	11
	28	2	3	2	5	2	1	3	8	7	8	7	5	12
	29	2	1	1	3	6	5	7	9	4	6	10	1	12
	30	1	2	4	4	3	1	4	4	2	7	9	11	11
	31	1	1	3	1	2	3	6	3	2	11	1	7	1
	32	2	3	2	2	4	7	1	1	4	1	8	9	13
	33	2	2	1	5	3	2	7	6	10	3	2	12	9
	34	1	2	3	4	5	4	6	2	3	4	11	8	3
	35	2	1	4	3	1	6	5	7	1	7	4	2	8
	36	1	3	2	1	6	7	8	5	9	11	3	6	4
	37	1	2	1	3	4	1	1	8	6	3	9	13	6
	38	2	1	3	4	1	6	3	4	8	5	1	10	2
	39	1	3	4	5	3	3	4	1	5	2	12	3	5
	40	2	3	2	2	5	5	2	7	7	8	8	5	7

Annex B – Sub-sampling specification

Topic	Sub-sample	Notes
WG – Tenure	775	Plus 1k national-level comparator (same as Museum and Heritage comparator group)
WG – Internet	2,000	For IntSocTyp only, based on answer to IntFreqAcc (1 – 4)
WG – Public service websites	2,000	Same subsample as for IntSocTyp
WG – Hospitals ¹	10,000	Split equally by Health Board to give a sample of around 4.3k people (c. 600 in each health board) who had hospital appointments in the last 12 months
WG – GP services ²	5,500	Split equally by Health Board Drawn within the Hospitals subsample to give a sample of around 4.3k people who had a GP appointment in the last 12 months
WG – Local health services; eye care ²	4,300	Split equally by Health Board Drawn within the GP subsample
WG – Usual alcohol consumption question wording experiment	2,000	Original HSE wording used for random subsample of 2k respondents; revised wording used for the remaining 10k respondents
WG – Museum and Heritage	720	CF areas (6% of sample) Plus 1k national-level comparator (same as Tenure comparator group)
WG – Welsh Government	4,000	Split equally by region (option to ask of all)
WG – Satisfaction with education system	4,000	Split equally by region (option to ask of all)
WG – Satisfaction with health services	4,000	Split equally by region (option to ask of all)
ACW – Attendance	6,000	Half of sample in each LA
ACW – Participation	6,000	Half of sample in each LA
ACW – Barriers	6,000	Half of sample in each LA
NRW – Visits ³	6,000	Half of sample in each LA
NRW – Biodiversity	2,000	Nationally representative (GROUP A) Within 6k subsample for NRW – Visits
NRW – Climate change	2,000	Nationally representative (GROUP B) Within 6k subsample for NRW – Visits
NRW – Flood Risk	2,000	Nationally representative (GROUP C) Within 6k subsample for NRW – Visits

Topic	Sub-sample	Notes
NRW – Environmental action	4,000	GROUP A & GROUP B
Sport Wales – School experiences	3,000	Nationally representative

1 October 2016 - Hospitals sub-sample was removed and asked to all

2 November 2016 - GP and local health service subsamples increased

3 October 2016 - 'Visits to the outdoors' sub-sample was removed and asked to all

Annex C – Survey timings

Table C.1: 2016-17 National Survey mean and median times by questionnaire section. Mean median figures are based on cases routed to the relevant section (Sample size). All times are given in seconds. Mean and median figures have been rounded to the nearest tenth.

Section name	Sample size	Mean	Median
Household composition /Marital status / Household relationships	10,466	134.7	55.0
National Identity	10,465	24.4	14.0
Ethnicity	10,465	6.0	2.0
Economic status and qualifications	10,465	54.2	44.0
Tenure	10,465	17.9	13.0
Welsh language	10,465	21.8	13.0
Well-being (ONS4)	10,461	115.4	94.0
Community cohesion	10,455	84.0	67.0
Community safety	10,452	49.8	39.0
Volunteering	10,455	56.2	42.0
Local authority services	10,453	88.7	67.0
Democracy and understanding of local councils	10,453	23.2	14.0
Primary education	1,672	146.6	128.0
Secondary education	1,260	67.4	56.0
Childcare	2,169	55.7	30.0
Internet	10,450	52.7	44.0
Public service websites*	2,093	61.7	56.0
Health demographic questions	10,449	86.6	53.0
Personal care plan	3,917	29.6	23.0
Disability – Public transport	3,915	110.7	88.0
Disability – Local services	3,913	74.9	44.0
Local health services*	3,802	30.7	25.0
GP services*	6,094	71.6	59.0
Hospitals*	9,566	38.5	27.0
Ambulance services	10,441	24.8	11.0
Social care services	10,441	81.2	58.0
Screen time for child	2,083	81.5	70.0
Physical activity of child	2,081	65.8	59.0
Diet of child	2,080	53.9	47.0
Eye care	10,438	40.5	29.0
Vision, hearing and teeth	10,437	38.1	29.0

Section name	Sample size	Mean	Median
Fruit and vegetables	10,435	99.6	89.0
Alcohol consumption	10,427	143.8	131.0
Smoking	10,427	89.1	75.0
Exercise	10,429	132.0	110.0
Transport and Active travel	10,427	35.2	29.0
Welsh Government	10,427	36.8	28.0
Satisfaction with education system	10,427	39.5	23.0
Satisfaction with health services	10,426	38.5	20.0
Household material deprivation / financial inclusion	6,504	111.6	83.0
Household pensioner material deprivation	4,060	122.1	85.0
Child material deprivation	2,417	52.1	45.0
Debt advice and food bank use	10,418	30.8	27.0
NRW – Introduction*	7,862	13.8	6.0
Visits in the last 12 months*	7,862	52.5	47.0
Visits in the last 4 weeks*	6,018	36.7	30.0
Most recent visit*	5,046	108.1	100.0
General questions*	2,924	23.5	15.0
Biodiversity*	2,644	68.8	57.0
Climate change*	2,624	50.5	41.0
Environmental action*	5,266	48.7	40.0
Flood risk*	2,594	78.5	66.0
Libraries	10,413	22.9	15.0
Arts, museums and heritage	3,526	109.6	97.0
Current participation and latent demand	10,409	160.5	135.0
Sports club membership	10,407	30.7	8.0
Encouraging future participation	10,407	46.5	41.0
School experiences	3,002	28.2	23.0
Sport Wales – Volunteering	10,405	23.0	11.0
CASI training module	10,401	83.0	72.0
CASI WG (personal health) – Warwick-Edinburgh Mental Well-being Scale	9,528	148.3	127.0
CASI – Social care wellbeing questions	9,494	43.5	36.0
CASI – Loneliness	9,494	54.5	45.0
RS – CASI Core – Sexual orientation and religion 82	9,494	43.0	34.0
Recontact	10,395	63.4	46.0
Interviewer check information	10,394	135.6	78.0

*subsampled sections

Table C.2: 2016-17 National Survey mean and median times for the tax awareness omnibus module. Mean median figures are based on cases routed to the module (Sample size). All times are given in seconds. Mean and median figures have been rounded to the nearest tenth.

	Sample size	Mean	Median
Tax awareness	2,539	4.1	4.0

Annex D – WG advance letter



A high resolution image of the 2016-17 National Survey advance letter can be found at <http://gov.wales/docs/caecd/research/2016/160817-national-survey-wg-letter-2016-17-en.pdf>

Annex E – WG survey leaflet



National Survey for Wales

Llywodraeth Cymru
Welsh Government

www.gov.wales

Shaping our nation's future

Office for National Statistics

The National Survey for Wales is a study of people across the whole of Wales. It covers topics including health, schools, sports, culture, council services and your local area.

This is your chance to tell us about your experiences and opinions on a range of issues that affect your life. Your answers will help us to take action on things you think are important.

This research is being carried out by the Office for National Statistics (ONS), on behalf of the Welsh Government, Sport Wales, the Arts Council of Wales, and Natural Resources Wales. ONS is the independent government department responsible for official statistics.

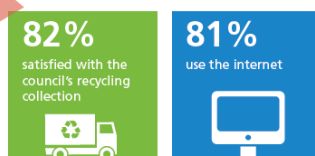
We value your contribution

We need to talk to people of different ages, from different walks of life and living in all parts of Wales. Your contribution is voluntary, but is very important to us because we cannot give your place to anyone else. We need your opinions no matter what your background or experience.

Why has my household been chosen?

Every year around 20,000 households are chosen at random from the Royal Mail's publicly available address list to take part in this research.

Some previous results



National Survey for Wales, 2014-15

What happens next?

An ONS interviewer will call at your home in the next few weeks. They will select one person in your household, aged 16 or over, to take part in an interview. If the interviewer calls at a time when you are busy, they will be happy to make an appointment for another time.

Is the information I give confidential?

Yes. The information you give us will be treated as confidential as directed by the Code of Practice for Official Statistics. It will be used to produce statistics that will not identify you or anyone in your household. Survey information is also provided to other approved organisations for statistical purposes only. All such statistics produced are subject to the Code and the same standards of protection are applied to your information at all times.

Can I be interviewed in Welsh?

Yes. If you would like to be interviewed in Welsh, please tell the interviewer or contact the freephone number **0800 496 2119**.

What if I have any other questions?

If you have any other questions or concerns, please ask the interviewer or contact ONS on **0800 496 2119** or email surveyfeedback@ons.gsi.gov.uk. Calls are free from mobiles as well as landline telephones.

If you would like to contact the Welsh Government directly, please email surveys@wales.gsi.gov.uk or call **0300 060 3300**.

For more information visit www.gov.wales/nationalsurveyinfo

WG LFT NSW Mar 16



Arolwg Cenedlaethol Cymru

Llywodraeth Cymru
Welsh Government

www.llyw.cymru

Llywio dyfodol ein cenedl

Swyddfa Ystadegau Gwladol

Mae Arolwg Cenedlaethol Cymru yn astudiaeth o bobl ledled Cymru gyfan. Mae'n cwmpasu pynciau sy'n cynnwys iechyd, ysgolion, chwaraeon, diwylliant, gwasanaethau cyngor a'ch ardal leol.

Dyma eich cyfle i roi eich barn ac i sôn am eich profiadau a'ch barn ar amrywiaeth o faterson sy'n effeithio ar eich bywyd. Bydd eich atebion yn ein helpu i weithredu ar bethau sy'n bwysig yn eich barn chi.

Cynhelir yr ymchwiliad hon gan y Swyddfa Ystadegau Gwladol (SYG) ar ran Llywodraeth Cymru, Chwaraeon Cymru, Cyngor Celfyddydau Cymru, a Chyfoeth Naturiol Cymru. Adran annibynnol y Llywodraeth, sy'n gyfrifol am ystadegau swydddogol, yw'r SYG.

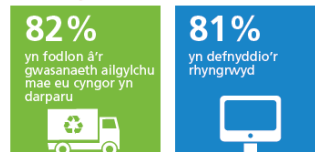
Rydym yn gwerthfawrogi eich cyfraniad

Mae angen i ni siarad â phobl o oedranau gwahanol, o gefndiroedd gwahanol ac sy'n byw yn rhannau gwahanol o Gymru. Mae eich cyfraniad yn wirfodol, ond mae'n bwysig iawn i ni eiddoedd ni allwng roi eich lle i unrhyw un arall. Mae angen eich barn arnom beth bynnag yw eich cefndir neu'ch profiad.

Pam bod fy nghartref wedi cael ei ddewis?

Pob blwyddyn caiff tua 20,000 o gartrefi eu dewis ar hap o restr cyfeiriadau'r Post Brenhinol, sydd ar gael i'r cyhoedd, i gymryd rhan yn yr ymchwiliad hon.

Rhai canlyniadau blaenorol



Arolwg Cenedlaethol Cymru, 2014-15

Beth sy'n digwydd nesaf?

Bydd cyfweilydd y SYG yn galw yn eich cartref yn ystod yr wythnosau nesaf. Bydd yn dewis un person yn eich cartref, sy'n 16 oed neu drosodd, i gymryd rhan mewn cyfweiliad. Os bydd y cyfweilydd yn galw ar adeg pan fyddwch yn brysur, bydd yn hapus i drefnu apwyntiad ar gyfer rwybryd arall.

A yw'r wybodaeth y byddaf yn ei rhoi yn gyfrinachol?

Ydy. Caiff y wybodaeth y byddwch yn ei rhoi i ni ei thrin yn gyfrinachol yn unig a'r Cod Ymarfer ar gyfer Ystadegau Swydddogol. Caiff ei defnyddio i lunio ystadegau na fyddant yn datgelu pwy ydych chi nac unrhyw un arall yn eich cartref. Yn ogystal, rhoddir gwybodaeth o'r arolwg i setylliadau cymeradwy eraill at ddibenion ystadegol yn unig. Mae'n rhaid i unrhyw ystadegau o'r fath gydymffurfio â'r Cod a bydd yr un safonau diogelwch yn gymwys i'ch gwybodaeth bob amser.

A alla i gael fy nghyfwrdd yn Gymraeg?

Gallwch. Os hoffech gael eich cyfwrdd yn Gymraeg, dywedwch wrth y cyfweilydd neu ffoniwch y rhif raddfôn **0800 496 2119**.

Beth os bydd gennyf unrhyw gwestiynau eraill?

Os bydd gennyf unrhyw gwestiynau eraill neu bryderon, gofynnwch i'r cyfweilydd neu cysylltwch â'r SYG ar **0800 496 2119** neu e-bostiwch adbortharolwg@ons.gsi.gov.uk. Mae galwadau am ddim o ffonau symudol yn ogystal â llinellau tir.

Os hoffech gysylltu â Llywodraeth Cymru yn uniongyrchol, e-bostiwch arolygon@cymru.gsi.gov.uk neu ffoniwch **0300 060 3300**.

I gael rhagor o wybodaeth ewch i www.llyw.cymru/arolwgcnedlaetholgwyb

WG LFT NSW Mar 16

A high resolution image of the 2016-17 National Survey leaflet can be found at <http://gov.wales/docs/caecd/research/2016/160817-national-survey-wg-leaflet-2016-17-en.pdf>

Annex F – ONS advance letter and leaflet

Figure F.1: ONS advance letter

 Llywodraeth Cymru Welsh Government	 www.ons.gov.uk/surveys Government Buildings Cardiff Road Newport, Gwent NP10 8XG Freephone: 0800 496 2119 Minicom: (18001) 0800 298 5313	 Llywodraeth Cymru Welsh Government	 www.ons.gov.uk/surveys Adelladau'r Llywodraeth Heol Caerdydd, Casnewydd, Gwent, NP10 8XG Rhafon: 0800 496 2119
Date: Reference number:		Dyddiad: Rhif cyfeirnod:	
Dear Resident(s),		Annwyl Breswlydd / Preswylwyr,	
<p>You were recently sent a letter from the Welsh Government about an official study called the National Survey for Wales. This study is carried out for the Welsh Government by the Office for National Statistics (ONS). Each year about half a million people take part in ONS studies.</p> <p>Taking part will help your household</p> <p>Many of the news stories you see or hear, for example about work, retirement and education, are based on information we collect. Your contribution to this study is essential for producing statistics used to make decisions which affect everyone.</p> <p>We need to interview somebody in your household</p> <p>An ONS interviewer will call at your home and select one person to take part in the study.</p> <p>Interviewer name: _____ Authority number: _____ Telephone number: _____ They expect to be in your area in the week commencing: _____</p> <p>If you are busy when they call, the interviewer will be happy to arrange a more convenient time to suit you. Our interviewers are available during the day, in the evenings and at weekends. Please show this letter to any other people in your household in case the interviewer calls when you are not at home.</p> <p>If you would like to arrange an appointment, request a Welsh speaking interviewer or if you have any questions, please call 0800 496 2119.</p> <p>We value your contribution</p> <p>Your answers will be treated as confidential. Thank you for helping ONS and the Welsh Government with this study.</p> <p>Yours faithfully,  Glen Watson Director General</p> <p>To request a copy of this letter in large print or braille please phone 0800 496 2119.</p> <p>For more information, go to our website www.ons.gov.uk/NationalSurveyforWales</p> <p>ONS INT NSW Mar 16</p>	<p>Adroddiad Cenedlaethol Cymru</p> <p>Caiff yr astudiaeth ei chynnal ar ran Llywodraeth Cymru gan y Swyddfa Ystadegau Gwladol (SYG). Bob blwyddyn, bydd tua hanner miliwn o bobl yn cymryd rhan mewn astudiaethau'r SYG.</p> <p>Bydd cymryd rhan yn helpu eich cartref</p> <p>Mae llawer o straeon newyddion rydych yn eu gweld neu'n eu clywed, er enghraifft am waith, ymdeolad ac addysg, yn seiliedig ar wybodaeth a gasglwn. Mae eich cyfraniad at yr astudiaeth hon yn hanfodol er mwyn llunio ystadegau a ddefnyddir i wneud penderfyniadau sy'n effeithio ar bawb.</p> <p>Mae angen i ni gyfnewid â rhywun yn eich cartref</p> <p>Bydd un o gyfnewlydd y SYG yn galw yn eich cartref ac yn dewis un person i gymryd rhan yn yr astudiaeth.</p> <p>Enw'r cyfnewlydd: _____ Rhif awdurdod: _____ Rhif fôn: _____ Mae disgwyl iddynt fod yn eich ardal yn ystod yr wythnos sy'n dechrau ar: _____</p> <p>Os byddwch yn brysus pan fydd yn galw, bydd y cyfnewlydd yn fwy na pharod i drefnu amser sy'n fwy cyfleus. Mae ein cyfnewlydd ar gael yn ystod y dydd, gyda'r nos ac ar y penwythnos. Dangoswch y llythyr hwn i unrhyw un arall sy'n byw yn eich cartref rhag ofn na fyddwch gartref pan fydd y cyfnewlydd yn galw.</p> <p>Os hoffech drefnu apwyntiad, gofyn am gyfnewlydd sy'n siarad Cymraeg neu os oes gennych unrhyw gwestiynau, ffoniwch 0800 496 2119.</p> <p>Rydym yn gwerthfawrogi eich cyfraniad</p> <p>Bydd eich atebion yn cael eu trin yn gyfrinachol. Diolch i chi am helpu'r SYG a Llywodraeth Cymru gyda'r astudiaeth hon.</p> <p>Yn gywir,  Glen Watson Cyfarwyddwr Cyffredinol</p> <p>I ofyn am gopi o'r llythyr hwn mewn print mawr neu braille ffoniwch 0800 496 2119.</p> <p>I gael rhagor o wybodaeth, ewch i'n gwefan www.ons.gov.uk/ArolwgCenedlaetholCymru</p> <p>ONS INT NSW Mar 16</p>		
 <p>The information you give us is protected by law and is treated as confidential. It will be used for statistical purposes only. The Office for National Statistics is not linked to any political parties.</p>		 <p>Mae'r wybodaeth rydych chi'n ei rhoi i ni yn cael ei diolgu gan y gyfraith ac yn cael ei drin yn gyfrinachol. Caiff ei defnyddio at ddibenion ystadegol yn unig. Nid yw'r Swyddfa Ystadegau Gwladol yn gysylltiedig gydag unrhyw blaid gwleidyddol.</p>	

A high resolution image of the 2016-17 National Survey ONS Letter can be found at <http://gov.wales/docs/caecd/research/2016/160817-national-survey-ons-letter-2016-17-en.pdf>

Figure F.2: ONS advance leaflet



Office for
National Statistics

National Survey for Wales

Here is what you need to know

What we do

The Office for National Statistics (ONS) is the independent government department responsible for collecting and publishing official statistics. The ten-yearly census is probably our best known study.

We conduct frequent studies of households which ask questions on a wide range of topics. **You have been selected for one of these.**

Using the information you provide, statistics are produced that paint a picture of how we all live – from the work or caring we do, to our health and wellbeing.

The results will be analysed and used to inform decisions made both locally and across Wales. Your participation may influence decisions affecting all aspects of your life.

Why has your household been selected?

We've selected your address at random from the Royal Mail's publicly available address list, to ensure we get a representative picture of households across Wales. Your household can't be replaced by another one, as this could affect the accuracy of the results. You are really important to us.

Is the study confidential?

Yes, the information you give us will be treated as confidential as directed by the Code of Practice for Official Statistics. It will be used to produce statistics that will not identify you or anyone in your household. Survey information is also

provided to other approved organisations for statistical purposes only. All such statistics produced are subject to the Code and the same standards of protection are applied to your information at all times.

Your answers will be treated as confidential and held securely

ONS statistical releases are available to all, free of charge at: www.ons.gov.uk

We value your contribution

It's really important to us and the users of our data – such as government, NHS, universities, charities, and members of the public – that our research represents the lives of everyone in the country. Whoever you are, whatever your situation, we are keen to hear from you.

You will not need any special knowledge to answer the questions asked in this study.

Contact us

Freephone: 0800 496 2119
Minicom: (18001) 0800 298 5313
Lines are open: Mon. to Thur. – 9am to 9pm,
Fri. – 9am to 8pm, and Sat. – 9am to 1pm.
www.ons.gov.uk/NationalSurveyforWales
Thank you for your help.

To request a copy of this leaflet in large print or braille please phone 0800 496 2119.

 [www.twitter.com/ONS](https://twitter.com/ONS)
 www.facebook.com/ONS

ONS LFT NSW Mar 16



Swyddfa
Ystadegau Gwladol

Arolwg Cenedlaethol Cymru

Dyma beth sydd angen i chi ei wybod

Beth rydym yn ei wneud

Adran annibynnol y llywodraeth yw'r Swyddfa Ystadegau Gwladol (SYG) sy'n gyfrifol am gasglu a chyhoeddi ystadegau swydddogol. Mae'n debygol mai'r cyfrifiad a gynhelir bob deng mlynedd yw ein hastudiaeth fwyaf adnabyddus.

Rydym yn cynnal astudiaethau cyson o gartrefi sy'n gofyn cwestiynau ar amrywiaeth eang o bynciau. **Rydych wedi cael eich dewis ar gyfer un o'r rhain.**

Gan ddefnyddio'r wybodaeth y byddwch yn ei darparu, cynhyrchir ystadegau fydd yn creu darlun o sut rydym i gyd yn byw – o'r gwaith neu'r gofalu rydym yn eu gwneud, i'n hiechyd a'n lles.

Caiff y canlyniadau eu dadansoddi a'u defnyddio i lywio penderfyniadau a wneir yn lleol a ledled Cymru. Gallai eich cyfranogiad ddylanwadu ar benderfyniadau sy'n effeithio ar bob agwedd ar eich bywyd.

Pam bod fy nghartref i wedi cael ei ddewis?

Rydym wedi dewis eich cyfeiriad ar hap o restr o gyfeiriadau'r Post Brenhinol sydd ar gael i'r cyhoedd, er mwyn sicrhau ein bod yn cael darlun cynrychioliadol o gartrefi ledled Cymru. Ni all eich cartref gael ei ddisodli gan un arall, gan y gallai hyn effeithio ar gywirdeb y canlyniadau. Rydych chi'n bwysig iawn i ni.

A yw'r astudiaeth yn gyfrinachol?

Ydy, caiff y wybodaeth y byddwch yn ei rhoi i ni ei thrin yn gwbl gyfrinachol yn unol â'r Cod Ymarfer ar gyfer Ystadegau Swydddogol. Caiff ei defnyddio i lunio ystadegau na fyddant yn datgelu pwy ydych

chi nac unrhyw un arall yn eich cartref. Yn ogystal, rhoddir gwybodaeth o'r arolwg i sefydliadau cymeradwy eraill at ddibenion ystadegol yn unig. Mae'n rhaid i unrhyw ystadegau o'r fath gydymffurfio â'r Cod a bydd yr un safonau diogelwch bob amser yn gymwys i'ch gwybodaeth.

Bydd eich atebion yn cael eu trin yn gyfrinachol a'u dal yn ddiogel

Mae datganiadau ystadegol SYG ar gael i bawb, am ddim ar: www.ons.gov.uk

Rydym yn gwerthfawrogi eich cyfraniad

Mae'n bwysig iawn i ni a defnyddwyr ein data – fel y llywodraeth, GIG, prifysgolion, elusennau, ac aelodau o'r cyhoedd – bod ein hymchwili yn cynrychioli bywydau pawb yn y wlad. Pwy bynnag ydych chi, beth bynnag yw eich sefyllfa, rydym yn awyddus i glywed gennych.

Ni fydd angen unrhyw wybodaeth arbenigol arnoch i ateb y cwestiynau a ofynnir yn yr astudiaeth hon.

Cysylltu â ni

Rhadffôn: 0800 496 2119
Mae'r llinellau ar agor:
Dydd Llun i ddydd Iau – 9yb i 9yh,
Dydd Gwener – 9yb i 8yh,
a Dydd Sadwrn – 9yb i 1yh.
www.ons.gov.uk/ArolwgCenedlaetholCymru
Diolch am eich help.

I ofyn am gopi o'r daflen hon mewn print mawr neu braille ffoniwch 0800 496 2119.

 [www.twitter.com/ONS](https://twitter.com/ONS)
 www.facebook.com/ONS

ONS LFT NSW Mar 16

A high resolution image of the 2016-17 National Survey ONS Leaflet can be found at <http://gov.wales/docs/caecd/research/2016/160817-national-survey-ons-leaflet-2016-17-en.pdf>

Figure G.1: Data linkage showcard

National Survey for Wales

Data Linkage

S

M

P

L

E

Arolwg Cenedlaethol Cymru

Cysylltu Data

S

M

P

L

E

Making your survey answers even more valuable

What do we want to do?

The Welsh Government would like to be able to **link your anonymised survey answers** to anonymised information that the NHS and other public organisations hold about you. For example - your GP, hospital and education records. This would make your survey answers **even more useful**.

Why do we want to link your survey answers?

Linking your survey answers will give the Welsh Government and other public organisations a wealth of extra information, so that they can have a clearer picture of issues in Wales and how to tackle them.

What will happen to my information?

The NHS in Wales and a Welsh Government funded research unit at Swansea University will work together to link your survey answers to data held by the NHS and other public organisations hold about you. Your name, address and postcode will remain separate from your survey answers at all times and will not be included in their data.

Who will be able to use the linked data?

The data will be made available to researchers from organisations like universities and other approved researchers for projects that have been approved by the Welsh Government. These organisations must sign a confidentiality agreement preventing them from passing the information on to anyone else. **Your information will not be used for research purposes only and will not be passed on to any company for marketing purposes.**

Where can I get more information about this?

For more information please visit the National Survey for Wales website:
www.gov.wales/nationalsurveydataalink

Do you agree for us to link your survey answers with other information held about you?

Gwneud eich atebion arolwg hyd yn fwy gwerthfawr

Beth y dymunwn ei wneud?

Hoffai Llywodraeth Cymru **gysylltu eich atebion arolwg dienw chi**, i wybodaeth dienw y mae'r Gwasanaeth Iechyd Gwladol (GIG) a chyfrif cyhoeddus eraill yn eu cadw amdanoch chi. Er enghraifft, cofnodion meddyg teulu, ysbtyfio, cofnodion addysg. Byddai hyn yn gwneud eich atebion **hyd yn oed yn fwy defnyddiol**.

Pam rydym am gysylltu eich atebion arolwg gyda data eraill?

Bydd cysylltu eich atebion yn rhoi llawer o wybodaeth ychwanegol i Lywodraeth Cymru a sefydliadau cyhoeddus eraill felly gallant gael darlun cliriach o faterion yng Nghymru a sut i ddelio â nhw.

Beth fydd yn digwydd i'm gwybodaeth?

Bydd y GIG yng Nghymru ac uned ymchwilwyr o sefydliadau fel prifysgolion ac ymchwilwyr a gymeradwywyd ar gyfer prosiectau a gymeradwywyd gan Lywodraeth Cymru. Rhaid i'r sefydliadau hyn lofnodi cytundeb cyfrinachedd fydd yn eu hatal rhag gwyhoeddi neu cyfeirid a'ch cod post yn cael eu cadw ar wahân i'ch atebion arolwg ac ni fydd hyn yn ddiogel neu cynwys yn y data cysylltiedig.

Pwy fydd yn gallu defnyddio'r data sydd wedi cael eu cysylltu?

Bydd y data ar gael i ymchwilwyr o sefydliadau fel prifysgolion ac ymchwilwyr a gymeradwywyd ar gyfer prosiectau a gymeradwywyd gan Lywodraeth Cymru. Rhaid i'r sefydliadau hyn lofnodi cytundeb cyfrinachedd fydd yn eu hatal rhag gwyhoeddi neu cyfeirid a'ch cod post yn cael eu cadw ar wahân i'ch atebion arolwg ac ni fydd hyn yn ddiogel neu cynwys yn y data cysylltiedig.

Ble gallaf gael mwy o wybodaeth am hyn?

I gael rhagor o wybodaeth ewch i wefan Arolwg Cenedlaethol Cymru:
www.llyw.cymru/cysylltudataarolwgacenedlaethol

Ydych chi'n cytuno i ni gysylltu eich atebion arolwg gyda gwybodaeth arall a gedwir amdanoch chi?

Shaping our nation's future

The information you give us is protected by law and is treated as confidential. It will be used for statistical purposes only.

DL SC NSW July 16 Welsh Government, Ca Cardiff, CF10 3NQ

Llywio dyfodol ein cenedl

Mae'r wybodaeth rydych chi'n ei rhoi i ni yn cael ei diogelu gan y gyfraith ac yn cael ei thrin yn gyfrinachol. Calfi ei defnyddio at ddibenion ystadegol yn unig.

DL SC NSW July 16 Llywodraeth Cymru, Pan yddedd, CF10 3NQ

SAMPLE





Ulywodraeth Cymru
Welsh Government

National Survey for Wales

Thank you







Shaping our nation's future



Thank you for taking part in the National Survey for Wales

We appreciate you giving your time to take part in this important study.

The information you have provided will be treated in the strictest confidence and only used for statistical and research purposes.

For more information on the study, or to see previous results, visit our website:
www.gov.wales/nationalsurvey

Useful contacts

Arts Council of Wales
The country's funding and development agency for the arts.
www.artswales.org.uk
0204 204 2000

Sports Wales
The national organisation responsible for developing and promoting sport and physical activity in Wales.
www.sports.wales
0300 300 3111

Natural Resources Wales
Work to ensure that the environment and natural resources of Wales are sustainably maintained, sustainably enhanced and sustainably used, now and in the future.
www.naturalresources.wales
0300 065 3000

NHS Direct Wales
Health advice and information, 24 hours a day.
www.nhsdirect.wales.nhs.uk
0845 4647

Money Advice Service
Provides free and impartial advice.
www.moneyadviceservice.org.uk
0300 500 5000

Citizens Advice
Provides information and advice on a wide range of issues.
www.citizensadvice.org.uk
03454 04 05 06

Time to Change Wales
Provides information and advice on mental health issues.
www.timetochangewales.org.uk

These organisations listed above are independent of the Welsh Government.

This interview was conducted by:

Interviewer name: _____

Interviewer number: _____

Working for the Office for National Statistics, on behalf of the Welsh Government.



Office for National Statistics

TYL NSW July 16



Annex I – List of derived variables

Variable name	Short label - English	Short topic
Dv2011OAC	ONS Output Area Classification	Geographical area
DvAsEcArea	Assembly Economic Fora Area	Geographical area
DvBUA	Built-up areas	Geographical area
DvComFrst	Communities First cluster or not	Geographical area
DvComFrstClust	Communities First Cluster	Geographical area
DvElecWard	Electoral Wards	Geographical area
DvFireReg	Fire & Rescue Service region	Geographical area
DvFusProg	Fusion Programme Communities First Cluster areas	Geographical area
DvLocHlth	Local health board	Geographical area
DvLSOA2001	Lower super output area (based on 2001 Census)	Geographical area
DvLSOA2011	Lower super output area (based on 2011 Census)	Geographical area
DvMSOA2011	Middle super output area (based on 2011 Census)	Geographical area
DvPCArea	Postcode area	Geographical area
DvPolReg	Police region	Geographical area
DvPSFoot	Public services footprint	Geographical area
DvRegions	ACW and Sports Wales regions	Geographical area
DvSpAreaCen	Spatial Plan area - Central Wales	Geographical area
DvSpAreaNE	Spatial Plan area - North East Wales	Geographical area
DvSpAreaNW	Spatial Plan area - North West Wales	Geographical area
DvSpAreaPH	Spatial Plan area - Pembrokeshire Haven	Geographical area
DvSpAreaSB	Spatial Plan area - Swansea Bay	Geographical area
DvSpAreaSE	Spatial Plan area - South East Wales	Geographical area
DvUniAuth	Local authority	Geographical area

Variable name	Short label - English	Short topic
DvUrbRur	Urban/rural classification	Geographical area
DvUrbRurCom	Urban/rural classification – combined	Geographical area
DvUrbRurCon	Urban/rural classification – context	Geographical area
DvUrbRurMor	Urban/rural classification – morphology	Geographical area
DvUSOA2011	Upper super output area (based on 2011 Census)	Geographical area
DvVVPlaces	Vibrant and Viable Places	Geographical area
DvWaConst	Welsh Assembly/Parliamentary constituency	Geographical area
DvWIMDEdu5	Welsh Index of Multiple Deprivation - education score (in quintiles)	Welsh Index of Multiple Deprivation - area
DvWIMDEmp5	Welsh Index of Multiple Deprivation - employment score (in quintiles)	Welsh Index of Multiple Deprivation - area
DvWIMDEnv5	Welsh Index of Multiple Deprivation - physical environment score (in quintiles)	Welsh Index of Multiple Deprivation - area
DvWIMDHlth5	Welsh Index of Multiple Deprivation - health score (in quintiles)	Welsh Index of Multiple Deprivation - area
DvWIMDHse5	Welsh Index of Multiple Deprivation - housing score (in quintiles)	Welsh Index of Multiple Deprivation - area
DvWIMDInc5	Welsh Index of Multiple Deprivation - income score (in quintiles)	Welsh Index of Multiple Deprivation - area
DvWIMDOvr5	Welsh Index of Multiple Deprivation - overall score (in quintiles)	Welsh Index of Multiple Deprivation - area
DvWIMDSafe5	Welsh Index of Multiple Deprivation - community safety score (in quintiles)	Welsh Index of Multiple Deprivation - area
DvWIMDServ5	Welsh Index of Multiple Deprivation - access to services score (in quintiles)	Welsh Index of Multiple Deprivation - area

Variable name	Short label - English	Short topic
DvAgeGrp3	Age (3 groups)	Demographic information
DvAgeGrp5	Age (5 year bands)	Demographic information
DvAgeGrp7	Age (7 groups) (10 year bands)	Demographic information
Dvalcmaxagbi	Max daily alcohol consumption last week: above guidelines - binary	Alcohol consumption
Dvalcmaxbibi	Max daily alcohol consumption last week: binge drinking - binary	Alcohol consumption
Dvalcmaxgrp	Max daily consumption last week groups	Alcohol consumption
Dvalcmaxvhbi	Max daily alcohol consumption last week: very heavy drinking over 3 times guidelines - binary	Alcohol consumption
Dvalcusgrp	Usual weekly consumption groups	Alcohol consumption
Dvalcushibi	Usual weekly alcohol consumption: higher risk - binary	Alcohol consumption
DvAtPsModeTravBus	Usual mode of travel to primary school - bus	Active travel - children
DvAtPsModeTravCL	Usual mode of travel to primary school - car or lift	Active travel - children
DvAtPsModeTravWlk	Usual mode of travel to primary school - walk	Active travel - children
DvAtSsModeTravBus	Usual mode of travel to secondary school - bus	Active travel - children
DvAtSsModeTravCL	Usual mode of travel to secondary school - car or lift	Active travel - children
DvAtSsModeTravWlk	Usual mode of travel to secondary school - walk	Active travel - children
Dvbmi	Body Mass Index	BMI
Dvbmi2	Body Mass Index (excl pregnant women)	BMI
Dvbmilev2	Body Mass Index classification (excl pregnant women)	BMI
Dvbmimorb2	Body Mass Index classification (excl pregnant women) (incl. 40+)	BMI
Dvbmiobese2	BMI Obese (excl pregnant women)	BMI
Dvbmiowob2	BMI Overweight or obese (excl pregnant women)	BMI
DVCAct7	Child active 1 hour or more a day 7 days a week	Child physical activity
DVCactnum	Number of days in week child active for 1 hour or more	Child physical activity
DvCcokeday	Child drinks coke etc. every day	Child diet
DvCdcokeday	Child drinks diet coke etc. every day	Child diet
DvCfruitday	Child eats fruit every day	Child diet
DvChBdLnMD	Respondent routed to additional child material deprivation questions	Child material deprivation
DvChildEdu	Respondent has a child in full-time education	Other

Variable name	Short label - English	Short topic
DvChMatDep	Children in material deprivation	Child material deprivation
DvCvegday	Child eats veg every day	Child diet
Dvdevicewd1	Electronic device used on weekday for 1 hour or more a day	Child screen time
Dvdevicewd2	Electronic device used on weekday for 2 hours or more a day	Child screen time
Dvdevicewe1	Electronic device used at weekend for 1 hour or more a day	Child screen time
Dvdevicewe2	Electronic device used at weekend for 2 hours or more a day	Child screen time
DvDn7dbi	drank in last 7 days - binary	Alcohol consumption
DvDnFreq0	drinking frequency (incl. non-drinkers)	Alcohol consumption
Dvdualfirst	Dual users tobacco and e-cigarettes - which used first	Smoking
Dvecigevbi	E-cigarette ever used - binary	Smoking
Dvecignbi	E-cigarette used - binary	Smoking
DvEcoStat	Economic status	Employment
DvEcoStat3	Economic status (3 classification)	Employment
Dvexecall	See e-cigarettes - all	Smoking
Dvexecinall	See e-cigarettes used indoors - all	Smoking
Dvexecinnsm	See e-cigarettes used indoors - non-smokers only	Smoking
Dvexecnsm	Exposed to e-cigarettes - non-smokers only	Smoking
Dvexecouall	See e-cigarettes used outdoors - all	Smoking
Dvexecounsm	See e-cigarettes used outdoors - non-smokers only	Smoking
Dvexinall	Exposed to tobacco smoke indoors - all	Smoking
Dvexinnsm	Exposed to tobacco smoke indoors - non-smokers only	Smoking
Dvexouall	Exposed to tobacco smoke outdoors - all	Smoking
Dvexounsm	Exposed to tobacco smoke outdoors - non-smokers only	Smoking
Dvexpoall	Exposed to tobacco smoke - all	Smoking
Dvexponsm	Exposed to tobacco smoke - non-smokers only	Smoking
Dveyesight	Eyesight difficulty - binary	Eye care
Dvfairbadhealth	Fair or bad health	General health
DvFGArts	People attending or participating in arts, culture or heritage activities. (FG indicator)	Arts, culture and heritage
DvFGComm	Have a sense of community	Community cohesion
DvFGHealth1	Fewer than two healthy lifestyle behaviours	Healthy behaviours

Variable name	Short label - English	Short topic
DvFGHealth4	People with 4 or 5 healthy lifestyle behaviours (not smoking, healthy weight, eat 5 fruit or veg, not drinking above guidelines, active). (FG indicator)	Healthy behaviours
DvFGHealthyB	Number of healthy lifestyle behaviours (not smoking, healthy weight, eat 5 fruit or veg, not drinking above guidelines, active)	Healthy behaviours
DvFGLonely	People feeling lonely (FG indicator)	Loneliness
DvFGSafe	People feeling safe (at home, walking in the local area, and travelling)	Community safety
DvFGSport	Participation in sporting activities three or more times a week (FG indicator)	Sport - participation
DvFGVol	People who volunteer (formally and informally/caring)	Volunteering
DvFGWelsh	People using Welsh Language in everyday life (FG indicator)	Welsh language - use
Dvfrtpor2	Total portion of fruit	Diet
Dvfv52	Eaten 5+ fruit or veg the previous day - binary	Diet
Dvfv5aday2	No of portions of fruit and vegetables eaten yesterday	Diet
Dvgenhealth3	General health (3 groups)	General health
Dvgoodhealth	Good general health	General health
DvHh60OrOvr	Household contains adult aged 60 or over	Demographic information
DvHhBdLnMD	Respondent routed to additional household material deprivation questions	Adult material deprivation
DvHhMatDep	Household in material deprivation	Adult material deprivation
DvHhSCCarer	Household contains carer	Social care
DvHhSCUse	Household contains someone receiving help from care and support services in Wales	Social care
DvHhUnd16	Household contains children aged under 16	Demographic information
DvHhUnd19	Household contains children aged under 19	Demographic information
DvHhUnd5	Household contains children aged under 5	Demographic information
DvHiQual1	Highest educational qualification	Education
Dvhtcm	Height : in cm - computed from Feet/inches if necessary	BMI
Dvillness01	Has cancer (neoplasm) including (non-malignant) lumps and cysts	Illnesses
Dvillness02	Has diabetes. Incl. Hyperglycaemia	Illnesses
Dvillness03	Has other endocrine/metabolic condition	Illnesses
Dvillness04	Has mental illness/anxiety/depression/nerves	Illnesses
Dvillness05	Has mental handicap	Illnesses
Dvillness06	Has epilepsy/fits/convulsions	Illnesses

Variable name	Short label - English	Short topic
DvIllness07	Has migraine/headaches	Illnesses
DvIllness08	Has other problems of nervous system	Illnesses
DvIllness09	Has cataract/poor eye sight/blindness	Illnesses
DvIllness10	Has other eye complaints	Illnesses
DvIllness11	Has poor hearing/deafness	Illnesses
DvIllness12	Has tinnitus/noises in the ear	Illnesses
DvIllness13	Has meniere's disease/ear complaints causing balance problems	Illnesses
DvIllness14	Has other ear complaints	Illnesses
DvIllness15	Has stroke/cerebral haemorrhage/cerebral thrombosis	Illnesses
DvIllness16	Has heart attack/angina	Illnesses
DvIllness17	Has hypertension/high blood pressure/blood pressure	Illnesses
DvIllness18	Has other heart problems	Illnesses
DvIllness19	Has piles/haemorrhoids	Illnesses
DvIllness20	Has varicose veins/phlebitis in lower extremities	Illnesses
DvIllness21	Has other blood vessels/embolic	Illnesses
DvIllness22	Has bronchitis/emphysema	Illnesses
DvIllness23	Has asthma	Illnesses
DvIllness24	Has hayfever	Illnesses
DvIllness25	Has other respiratory complaints	Illnesses
DvIllness26	Has stomach ulcer/ulcer/abdominal hernia/rupture	Illnesses
DvIllness27	Has other digestive complaints (stomach, liver, pancreas etc.)	Illnesses
DvIllness28	Has complaints of bowel/colon/rectum	Illnesses
DvIllness29	Has complaints of teeth/mouth/tongue	Illnesses
DvIllness30	Has kidney complaints	Illnesses
DvIllness31	Has urinary tract infection	Illnesses
DvIllness32	Has other bladder problems/incontinence	Illnesses
DvIllness33	Has reproductive system disorders	Illnesses
DvIllness34	Has arthritis/rheumatism/fibrositis	Illnesses
DvIllness35	Has back problems/slipped disc/spine/neck	Illnesses
DvIllness36	Has other problems of bones/joints/muscles	Illnesses
DvIllness37	Has infectious and parasitic disease	Illnesses
DvIllness38	Has disorders of blood and blood forming organs	Illnesses
DvIllness39	Has skin complaints	Illnesses
DvIllness40	Has other complaints	Illnesses
DvIllness41	Has unclassifiable complaint	Illnesses
DvJobSatGrp4	Overall satisfaction with present job (grouped)	Employment
DvLDAAnyAct	Latent demand for any activity	Sport - participation
DvLDAAnyActExclWik	Latent demand for any activity excluding walking	Sport - participation

Variable name	Short label - English	Short topic
DvLDAnyActExclWEM	Latent demand for any activity excluding exercise machines	Sport - participation
DvLDAnySport	Latent demand for any outdoor game or activity	Sport - participation
DvLDInGameAct	Latent demand for any indoor game or activity	Sport - participation
DvLDOutPurs	Latent demand for any outdoor pursuit	Sport - participation
DvLDOutPursExclWlk	Latent demand for any outdoor pursuit excluding walking	Sport - participation
Dvlikgupbi	Would like to give up smoking - binary	Smoking
Dvlimany	Limited at all by longstanding illness	Illnesses
Dvlimill01	Cancer (neoplasm) including benign (non-malignant) lumps and cysts limits individual	Illnesses
Dvlimill02	Diabetes incl. hyperglycaemia limits individual	Illnesses
Dvlimill03	Other endocrine/metabolic complaint limits individual	Illnesses
Dvlimill04	Mental illness/anxiety/depression/nerves limits individual	Illnesses
Dvlimill05	Mental handicap limits individual	Illnesses
Dvlimill06	Epilepsy/fits/convulsions limits individual	Illnesses
Dvlimill07	Migraine/headaches limits individual	Illnesses
Dvlimill08	Other problems of nervous system limit individual	Illnesses
Dvlimill09	Other eye complaints limit individual	Illnesses
Dvlimill10	Cataract/poor eye sight/blindness limits individual	Illnesses
Dvlimill11	Poor hearing/deafness limits individual	Illnesses
Dvlimill12	Tinnitus/noises in the ear limits individual	Illnesses
Dvlimill13	Meniere's disease/ear complaints causing balance problems limits individual	Illnesses
Dvlimill14	Other ear complaints limits individual	Illnesses
Dvlimill15	Stroke/cerebral haemorrhage/cerebral thrombosis limits individual	Illnesses
Dvlimill16	Heart attack/angina limits individual	Illnesses
Dvlimill17	Hypertension/high blood pressure/blood pressure limits individual	Illnesses
Dvlimill18	Other heart problems limits individual	Illnesses
Dvlimill19	Piles/haemorrhoids limits individual	Illnesses
Dvlimill20	Varicose veins/phlebitis in lower extremities limits individual	Illnesses
Dvlimill21	Other blood vessels/embolic limits individual	Illnesses
Dvlimill22	Bronchitis/emphysema limits individual	Illnesses
Dvlimill23	Asthma limits individual	Illnesses
Dvlimill24	Hayfever limits individual	Illnesses
Dvlimill25	Other respiratory complaints limits individual	Illnesses
Dvlimill26	Stomach ulcer/ulcer/abdominal hernia/rupture limits individual	Illnesses

Variable name	Short label - English	Short topic
Dvlimill27	Other digestive complaints (stomach, liver, pancreas etc.) limits individual	Illnesses
Dvlimill28	Complaints of bowel/colon/rectum limits individual	Illnesses
Dvlimill29	Complaints of teeth/mouth/tongue limits individual	Illnesses
Dvlimill30	Kidney complaints limits individual	Illnesses
Dvlimill31	Urinary tract infection limits individual	Illnesses
Dvlimill32	Other bladder problems/incontinence limits individual	Illnesses
Dvlimill33	Reproductive system disorders limits individual	Illnesses
Dvlimill34	Arthritis/rheumatism/fibrositis limits individual	Illnesses
Dvlimill35	Back problems/slipped disc/spine/neck limits individual	Illnesses
Dvlimill36	Other problems of bones/joints/muscles limits individual	Illnesses
Dvlimill37	Infectious and parasitic disease limits individual	Illnesses
Dvlimill38	Disorders of blood and blood forming organs limits individual	Illnesses
Dvlimill39	Skin complaints limits individual	Illnesses
Dvlimill40	Other complaint limits individual	Illnesses
Dvlimill41	Unclassifiable complaint limits individual	Illnesses
Dvlimill42	Limiting illness no longer present	Illnesses
Dvlimlot	Limited a lot by longstanding illness	Illnesses
Dvlimnum	Number of limiting illnesses	Illnesses
Dvlimnumgrp	Number of limiting illnesses (grouped)	Illnesses
DvLLTI	Has a limiting long-standing illness, disability or infirmity	Illnesses
Dvlsill	Any longstanding illness	Illnesses
Dvlsillnum	Number of longstanding illnesses	Illnesses
Dvlsillnumgrp	Number of longstanding illnesses (grouped)	Illnesses
Dvmodexday	Moderate activity in last 7 days - number of days	Physical activity
Dvmodexmw	Total minutes moderate activity per week	Physical activity
Dvmodexweek	Any moderate activity in last 7 days - binary	Physical activity
Dvmonx	Moderate or vigorous activity on Monday	Physical activity
Dvmvdays	Number of at least moderately active days per week	Physical activity
Dvmvinact	MVPA inactive <30 minutes weekly	Physical activity
Dvmvpa150	MVPA meets guidelines 150 minutes weekly	Physical activity
Dvmvpagrp2	MVPA minutes per week - 3 groups	Physical activity

Variable name	Short label - English	Short topic
Dvmvpamw	MVPA minutes per week	Physical activity
DvNeet	Not in education, employment or training (NEET) status (aged 16-18)	Employment
DvNeet2	Not in education, employment or training (NEET) status (aged 16-25)	Employment
Dvnondrink	Non drinker (not even occasional)	Alcohol consumption
Dvnoteeth	No teeth - binary	General health
DvPrtExclSnk	Participating in any activity excluding billiards/snooker	Sport - participation
DvPrtAnyMA	Participating in any martial arts	Sport - participation
DvPrtAnyDance	Participating in any dance	Sport - participation
DvPrtCycMB	Participating in cycling/mountain biking	Sport - participation
DvPrtAnyCyc	Participating in any cycling (bmx/cycling/mountain biking)	Sport - participation
DvPrtAthRun	Participating in athletics/running (any)	Sport - participation
DvPrtSnk	Participating in billiards/snooker	Sport - participation
DvPrtCanoe	Participating in canoeing/kayaking	Sport - participation
DvPrtExclWlk	Participating in any activity excluding walking	Sport - participation
DvPrtClimb	Participating in climbing and mountaineering/rock climbing	Sport - participation
DvPrtHock	Participating in hockey (including street hockey)	Sport - participation
DvPrtRug	Participating in rugby (league or union)	Sport - participation
DvPrtSail	Participating in sailing/yachting	Sport - participation
DvPrtShoot	Participating in target shooting (including clay)	Sport - participation
DvPrtAnyBask	Participating in any basketball	Sport - participation
DvPrtAnyFootb	Participating in any football	Sport - participation
DvPrtAnyRug	Participating in any rugby	Sport - participation
DvPrtAnySwim	Participating in any swimming	Sport - participation
DvPrtInOutAth	Participating in any indoor or outdoor athletics	Sport - participation
DvPrtExclSnk	Participating in any activity excluding billiards/snooker	Sport - participation

Variable name	Short label - English	Short topic
DvPrtInOutBowls	Participating in any indoor or outdoor bowls	Sport - participation
DvPrtInOutCric	Participating in any indoor or outdoor cricket	Sport - participation
DvPrtInOutDive	Participating in any indoor or outdoor diving	Sport - participation
DvPrtInOutFootB	Participating in any indoor or outdoor football	Sport - participation
DvPrtInOutHock	Participating in any indoor or outdoor hockey	Sport - participation
DvPrtInOutNet	Participating in any indoor or outdoor netball	Sport - participation
DvPrtAnyOutGamAct	participating in any outdoor game or activity	Sport - participation
DvPrtInOutSkatB	Participating in any indoor or outdoor skateboarding	Sport - participation
DvPrtInOutVolB	Participating in any indoor or outdoor volleyball	Sport - participation
DvPrtInOutTen	Participating in any indoor or outdoor tennis	Sport - participation
DvPrtInOutTai	Participating in any indoor or outdoor Tai Chi	Sport - participation
DvPrtInOutClimb	Participating in any indoor or outdoor climbing	Sport - participation
DvPrtAnyInGamAct	participating in any indoor game or activity	Sport - participation
DvPrtAnyInGamActExclEM	Participating in any indoor game or activity excluding exercise machines	Sport - participation
DvPrtAnyInGamActExclSnkEM	Participating in any indoor game or activity excluding billiards/snooker and exercise machines	Sport - participation
DvPrtAnyOutPurs	Participating in any outdoor pursuit	Sport - participation
DvOutPursExclWik	Participating in any outdoor pursuit excluding walking	Sport - participation
DvPenFlag	Pensionable age at time of interview	Demographic information
Dvporfv2	Total portion of fruit and veg	Diet
Dvsatx	Moderate or vigorous activity on Saturday	Physical activity
DvSCCarer	Social care service - received help as a carer	Social care
DvScDkRef	Social care service - Received help - Dk/Ref	Social care
DVScNeither	Social care service - Not received help from care and support services	Social care
DvSCUser	Social care service - received help as a user	Social care
Dvsmokec	Currently smoke either daily or occasionally	Smoking
Dvsmokstat	Smoking status	Smoking
Dvstpsmk1m	Gave up smoking at least one month ago - binary	Smoking

Variable name	Short label - English	Short topic
Dvstpsmk1y	Gave up smoking at least one year ago - binary	Smoking
Dvsunx	Moderate or vigorous activity on Sunday	Physical activity
DvTenurGrp	Tenure (grouped)	Housing
DvTenurGrp2	Tenure (grouped v2)	Housing
Dvthux	Moderate or vigorous activity on Thursday	Physical activity
Dvtotscreenwd	Total screen time on weekday	Child screen time
Dvtotscreenwd1	Total screen time on weekday - 1 hour or more a day	Child screen time
Dvtotscreenwd2	Total screen time on weekday - 2 hours or more a day	Child screen time
Dvtotscreenwe	Total screen time at weekend	Child screen time
Dvtotscreenwe1	Total screen time at weekend - 1 hour or more a day	Child screen time
Dvtotscreenwe2	Total screen time at weekend - 2 hours or more a day	Child screen time
DvTrustMostGrp4	Most people can be trusted (grouped)	Wellbeing
Dvtrygupbi	Tried to give up smoking - binary	Smoking
Dvtuex	Moderate or vigorous activity on Tuesday	Physical activity
DvTwwd1	TV watched on weekday for 1 hour or more a day	Child screen time
DvTwwd2	TV watched a weekend for 2 hours or more a day	Child screen time
DvTwwe1	TV watched at weekend for 1 hour or more a day	Child screen time
DvTwwe2	TV watched at weekend for 1 hours or more a day	Child screen time
Dvunits0	Number of units on the heaviest drinking day last week	Alcohol consumption
Dvunitswk0	Usual number of weekly units	Alcohol consumption
Dvvegpor2	Total portion of vegetables (incl.salad)	Diet
Dvvigexday	Vigorous activity in the last 7 days - number of days	Physical activity
Dvvigexmw	Total minutes vigorous activity per week	Physical activity
Dvvigexweek	Any vigorous activity in last 7 days - binary	Physical activity
Dvvigmvmw	Total minutes vigorous activity per week *2 to give moderate intensity minutes	Physical activity
DvVolSport	Volunteering in sport during the past 12 months	Sport - volunteering
Dvwalkday	Walk in last 7 days - number of days (scale)	Physical activity

Variable name	Short label - English	Short topic
DvWalkmv	Walking qualifying as moderate activity	Physical activity
Dvwalkmw	Total minutes walking per week	Physical activity
Dvwalkweek	Any walking in the last 7 days - binary	Physical activity
DvWbAnxYestGrp4	Overall anxiousness yesterday (grouped)	Wellbeing - 4 ONS questions
DvWbHapYestGrp4	Overall happiness yesterday (grouped)	Wellbeing - 4 ONS questions
DvWbLifeWrthGrp4	Overall extent of feeling that the things done in life are worthwhile (grouped)	Wellbeing - 4 ONS questions
DvWbSatlifeGrp4	Overall satisfaction with life (grouped)	Wellbeing - 4 ONS questions
Dvwedx	Moderate or vigorous activity on Wednesday	Physical activity
DvWeLang1	Welsh language ability - can speak, read and write Welsh	Welsh language - ability
DvWeLang2	Welsh language ability - can speak and read Welsh, but not write Welsh	Welsh language - ability
DvWeLang3	Welsh language ability - can speak Welsh, but can't read or write Welsh	Welsh language - ability
DvWeLang4	Welsh language ability - can understand spoken Welsh only	Welsh language - ability
DvWEMWBS	Warwick-Edinburgh Mental Well-being Scale - total score	Mental wellbeing
DVWkinAge	Working age	Demographic information
Dvwlkmvday	Walking as moderate activity in last 7 days, number of days	Physical activity
Dvwlkmmvw	Minutes walking per week qualifying as moderate activity	Physical activity
Dvwtkg	Weight : in kg - computed from Stones/pounds if necessary	BMI
Dvillchap03	Individual has mental disorders (4-5)	Illnesses
Dvlimchap03	Mental disorders (4-5) limit individual	Illnesses
DvApp	Apprenticeship level	Education
Dvfrix	Moderate or vigorous activity on Friday	Physical activity
DvFrqPrtSport	Frequency of participation in sport (average per week)	Sport - participation
Dvhearbi	Difficulty with hearing - binary	Hearing

Variable name	Short label - English	Short topic
DvHhType	Household type	Demographic information
DvHiQual2	Highest educational qualification - use apprenticeship level provided from Q2 onwards	Education
DvHiQualxApp	Highest qualification excluding apprenticeships	Education
Dvillchap01	Has neoplasms and benign growths (1)	Illnesses
Dvillchap02	Has endocrine and metabolic diseases (2-3)	Illnesses
Dvillchap04	Has nervous system complaints (6-8)	Illnesses
Dvillchap05	Has eye complaints (9-10)	Illnesses
Dvillchap06	Has ear complaints (11-14)	Illnesses
Dvillchap07	Has heart and circulatory complaints (15-21)	Illnesses
Dvillchap08	Has respiratory system complaints (22-25)	Illnesses
Dvillchap09	Has digestive system complaints (26-29)	Illnesses
Dvillchap10	Has genito-urinary system complaints (30-33)	Illnesses
Dvillchap11	Has musculoskeletal complaints (34-36)	Illnesses
Dvillchap12	Has infectious diseases complaints (37)	Illnesses
Dvillchap13	Has complaints of blood / related organs (38)	Illnesses
Dvillchap14	Has skin complaints (39)	Illnesses
Dvillchap15	Has other complaint v2	Illnesses
Dvillchap16	Has unclassifiable complaint v2	Illnesses
Dvillchap17	Complaint no longer present v2	Illnesses
Dvillness42	Complaint no longer present	Illnesses
Dvlimchap01	Neoplasms and benign growths (1) limit individual	Illnesses
Dvlimchap02	Endocrine and metabolic diseases (2-3) limit individual	Illnesses
Dvlimchap04	Nervous system complaints (6-8) limit individual	Illnesses
Dvlimchap05	Eye complaints (9-10) limit individual	Illnesses
Dvlimchap06	Ear complaints (11-14) limit individual	Illnesses
Dvlimchap07	Heart and circulatory complaints (15-21) limit individual	Illnesses
Dvlimchap08	Respiratory system complaints (22-25) limit individual	Illnesses
Dvlimchap09	Digestive system complaints (26-29) limit individual	Illnesses
Dvlimchap10	Genito-urinary system complaints (30-33) limit individual	Illnesses
Dvlimchap11	Musculoskeletal complaints (34-36) limit individual	Illnesses
Dvlimchap12	Infectious diseases (37) limit individual	Illnesses
Dvlimchap13	Blood and related organs complaints (38) limit individual	Illnesses
Dvlimchap14	Skin complaints (39) limit individual	Illnesses
Dvlimchap15	Other complaint limits individual v2	Illnesses
Dvlimchap16	Unclassifiable complaint limits individual v2	Illnesses
Dvlimchap17	Limiting illness no longer present v2	Illnesses

Variable name	Short label - English	Short topic
DvMemSportC	Member of a sports club	Sport - participation
DvPnBdLnMD	Respondent routed to additional pensioner material deprivation questions	Pensioner material deprivation
DvPnMatDep	Pensioner Household in material deprivation	Pensioner material deprivation
Dvteethbi	Fewer than 21 teeth - binary	General health
DvWkingHh	Household members (aged 16+ and not in full time education) in paid work, either full-time or part-time	Employment
Dvwlkmvweek	Any walking as moderate activity in last 7 days - binary	Physical activity

Annex J – National Survey weights

Table J.1: Weights provided for the “all people file”

A. All people file

Variable name	Variable label	Explanation for when to use the variable
WalesPopWeight	Weight to represent the total population of Wales (all ages)	Enumerated individual weight, used to scale up individuals of all ages living in responding households to ensure the sample represents the population profile of all individuals in Wales (3,047,075 using ONS 2011-based population estimates for 2015).
SamplePopWeight	Weight to make sample population reflect all-Wales characteristics	This weight ensures that the weighted base matches the un-weighted base
WalesHhWeight	Weight to represent all households in Wales	Household weight, which is used to scale up responding households to represent the total number of households in Wales (1,332,359 using ONS 2011-based population estimates for 2015).
SamplehhWeight	Weight to make sample reflect the characteristics of all households in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesTenWeight	Weight to make the Tenure sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled ‘Tenure’ module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleTenWeight	Weight to make Tenure sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.

B. Respondent file

Variable name	Variable label	Explanation for when to use the variable
WalesHhWeight	Weight to represent all households in Wales	Household weight, which is used to scale up responding households to represent the total number of households in Wales (1,332,359 using ONS 2011-based population estimates for 2015).
SampleHhWeight	Weight to make sample reflect the characteristics of all households in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesAdultWeight	Weight to represent all adults (16+) in Wales	Enumerated individual weight, used to scale up responding individuals to represent the population of adults aged 16 and older in Wales (2,492,622 using ONS 2011-based population estimates for 2015).
SampleAdultWeight	Weight to make sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesVisitsWeight	Weight to make the NRW visits sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Visits to the outdoors' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleVisitsWeight	Weight to make NRW visits sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.

Variable name	Variable label	Explanation for when to use the variable
WalesBioWeight	Weight to make the Biodiversity sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Biodiversity' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleBioWeight	Weight to make Biodiversity sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesClimWeight	Weight to make the Climate Change sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Climate Change' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleClimWeight	Weight to make Climate Change sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesFloodWeight	Weight to make the Flood Risk sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Flood Risk' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleFloodWeight	Weight to make Flood Risk sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.

Variable name	Variable label	Explanation for when to use the variable
WalesEnvWeight	Weight to make the Environment sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Environmental Health' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleEnvWeight	Weight to make Environment sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesHospWeight	Weight to make the Hospital sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Hospital' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleHospWeight	Weight to make Hospital sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesGPWeight	Weight to make the GP sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'GP' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleGPWeight	Weight to make GP sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.

Variable name	Variable label	Explanation for when to use the variable
WalesLHWeight	Weight to make the Local Health Services sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Local Health Services' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleLHWeight	Weight to make Local Health Services sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesSportWeight	Weight to make the Sport sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Sport' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleSportWeight	Weight to make Sport sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesIntWeight	Weight to make the Internet sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Internet' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleIntWeight	Weight to make Internet sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.

Variable name	Variable label	Explanation for when to use the variable
WalesHerWeight	Weight to make the Heritage sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Arts, museums and heritage' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleHerWeight	Weight to make Heritage sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesTenWeight	Weight to make the Tenure sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Tenure' module to allow the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.
SampleTenWeight	Weight to make Tenure sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesChildWeight	Weight to represent all children 3-17 in Wales	Enumerated individual weight assigned to individuals with dependent children responding to sub-sampled modules on 'Screen time', 'Diet' and 'Physical Activity' of the relevant child (523,827 using ONS 2011-based population estimates for 2015). The weight allows the accurate estimation of totals from the responses in this module. This weight accounts for the difference in the probability of selection between the main survey and for the sub-sample.

Variable name	Variable label	Explanation for when to use the variable
SampleChildWeight	Weight to make the sample of children reflect the characteristics of all children 3-17 in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesTaxWeight	Weight to make the Tax module (one quarter) represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Tax' module to allow the accurate estimation of totals from the responses in this module, which was only asked in one quarter.
SampleTaxWeight	Weight to make Tax module reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.

Annex K – Sampling table

Table K.1: 2016-2017 National Survey achieved response rate by LA (ranked by response rate)

Local Authority	Total addresses*	Interview target	Completed interviews	Ineligible addresses	Response rate (%)
Isle of Anglesey	771	475	404	173	67.56
Gwynedd	889	516	448	216	66.57
Ceredigion	807	532	431	143	64.91
Monmouthshire	706	423	423	52	64.68
Powys	2,355	1,263	1,212	342	60.21
Denbighshire	741	430	383	98	59.56
Pembrokeshire	899	497	433	163	58.83
Flintshire	848	477	454	68	58.21
Conwy	780	446	379	121	57.51
Carmarthenshire	1,108	589	565	108	56.50
Bridgend	738	408	367	75	55.35
Torfaen	781	467	400	34	53.55
Blaenau Gwent	869	489	405	88	51.86
Rhondda Cynon Taf	1,314	731	618	118	51.67
Newport	852	436	408	56	51.26
Wrexham	738	414	347	52	50.58
Vale of Glamorgan	713	391	336	47	50.45
Swansea	1,483	795	656	172	50.04
Merthyr Tydfil	780	380	344	64	48.04
Caerphilly	912	526	404	59	47.36
Neath Port Talbot	815	432	342	65	45.60
Cardiff	1,767	918	734	132	44.89
Total (National)	21,666	13,217	10,493	2,446	54.59

*The total sample, including the sample boost added in the 4th survey quarter (January to March), is used for the calculations

Annex L – Outcome code descriptions

Table L.1: Eligible codes

Outcome category	Outcome code	Description
Complete interview	110	Complete interview by required respondent(s) / selected person
Complete interview	120	Complete interview: partly by required respondent(s) /selected person and partly by proxy
Non contact	310	No contact with anyone at the address
Non contact	320	Contact made at the address, but not with any member of the sampled dwelling/household
Non contact	330	Contact made at sampled dwelling/household, but not with any responsible resident
Refusal	410	Office (HQ) refusal
Refusal	431	Refusal by required respondent / selected person
Refusal	432	Refusal by proxy
Refusal	440	Refusal during interview
Refusal	450	Broken appointment, no re-contact
Other non response	511	Ill at home during survey period: notified to head office
Other non response	512	Ill at home during survey period: notified to interviewer
Other non response	521	Away/ill in hospital throughout the field period: notified to head office
Other non response	522	Away/ill in hospital throughout the field period: notified to interviewer
Other non response	531	Physically or mentally unable/incompetent: notified to head office
Other non response	532	Physically or mentally unable/incompetent: notified to interviewer
Other non response	542	Language difficulties: notified to interviewer
Other non response	550	Lost interview

Table L.2: Ineligible codes

Outcome category	Outcome code	Description
	710	Not yet built / under construction
	720	Demolished / derelict
	730	Vacant / empty
	740	Non-residential address
		Address occupied, but no resident
	750	household/resident(s)
	760	Communal establishment / Institution
	781	Directed not to sample at address

Table L.3: Unknown eligibility codes

Outcome category	Outcome code	Description
	612	Issued but not attempted
	620	Inaccessible
	630	Unable to locate address
	641	Information refused about whether address is residential
		Unknown whether address is residential due to non
	642	contact
		Information refused about whether there are eligible
	651	resident(s)
		Unknown whether there are eligible resident(s) due to
	652	non contact

Annex M – Design Effect and Factors

The software used to calculate the normal approximation of the design factors (DEFT), design effects (DEFF), and confidence intervals was SAS.

The design factor (DEFT) is a ratio of the standard errors. The DEFT shows how much the sample standard error, and consequently the confidence intervals, increases.

The DEFT was calculated by using the Glinjack macro, which allows for estimation of standard errors for estimates under complex designs. The macro uses the Jackknife method estimating the variance of the data provided by looking at the vulnerability of the estimates between sub-samples.

The DEFFs (DEFT²) reflect a sampling method that gives wider [confidence intervals](#) than would result from [simple random sampling](#) (SRS).

A confidence interval gives an estimated range of values which is likely to include an unknown population parameter, the estimated range being calculated from a given set of sample data. The confidence interval can take any number of probabilities, with the most common being 95% or 99%. In this case, the probability accounted for was 95%. By establishing a 95% confidence interval using the sample's mean and [standard deviation](#), and assuming a [normal distribution](#) as represented by the Bell Curve, an upper and lower bound is calculated that contains the true mean 95% of the time.

Selected survey variables split by gender

IntPersUse		Personal use of internet at home, work or elsewhere			
Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Yes	1.16	1.08	85.8	87.9
	No	1.17	1.08	12.0	14.1
Female	Yes	1.10	1.05	82.7	84.7
	No	1.08	1.04	15.1	17.0

EdOverSat Overall satisfaction with the state of education in Wales

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Mean	1.53	1.24	6.0	6.2
Female	Mean	1.52	1.23	6.2	6.3

UaQualServ Council provides high quality services

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Strongly agree	1.55	1.25	7.0	9.0
	Tend to agree	1.48	1.22	37.2	40.6
	Neither agree nor disagree	1.58	1.26	22.0	25.0
	Tend to disagree	1.43	1.20	16.3	19.0
	Strongly disagree	1.41	1.19	8.2	10.2
	Don't know/refused	2.50	1.58	1.9	3.4
Female	Strongly agree	1.50	1.22	6.9	8.5
	Tend to agree	1.84	1.36	36.7	40.0
	Neither agree nor disagree	1.51	1.23	22.0	24.6
	Tend to disagree	1.44	1.20	17.4	19.8
	Strongly disagree	1.56	1.25	8.2	10.1
	Don't know/refused	2.67	1.64	2.0	3.3

WbLifeWrth Extent of feeling that things done in life are worthwhile

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Mean	1.52	1.23	7.8	7.9
Female	Mean	1.39	1.18	8.1	8.2

WelSpk**Speak Welsh**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Yes	1.50	1.22	16.8	19.5
	No	1.90	1.38	71.7	75.2
	No, but have some Welsh speaking ability	2.27	1.51	7.1	9.6
Female	Yes	1.69	1.30	19.7	22.4
	No	1.97	1.40	67.5	70.8
	No, but have some Welsh speaking ability	2.35	1.53	8.5	10.9

ArtsVisit**In the last 12 months, have you visited any of these arts events in Wales**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Yes	2.33	1.53	16.6	20.0
	No	2.24	1.50	15.0	18.2
	Don't know	1.52	1.23	0.0	0.2
Female	Yes	2.09	1.45	18.8	21.8
	No	2.62	1.62	14.4	17.4
	Don't know	2.48	1.57	0.0	0.3

FloRiskProp**How concerned are you, about the risk of flooding to - Your property**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Very concerned	1.30	1.14	0.2	0.7
	Fairly concerned	1.40	1.18	0.9	1.7
	Not very concerned	1.50	1.22	3.7	5.2
	Not at all concerned	1.65	1.28	15.8	18.6
	Don't know/refused	1.80	1.34	0.1	0.6
Female	Very concerned	1.44	1.20	0.5	1.1

Fairly concerned	1.28	1.13	1.2	1.9
Not very concerned	1.71	1.31	4.4	5.8
Not at all concerned	1.60	1.27	15.3	17.7
Don't know/refused	1.83	1.35	0.0	0.3

TxMstCtrl Who currently has the most control over the taxes you pay

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Very concerned	1.86	1.36	0.8	1.7
	Fairly concerned	2.18	1.48	2.4	3.9
	Not very concerned	5.54	2.35	15.5	20.7
	Not at all concerned	1.35	1.16	0.0	0.2
	Don't know/refused	2.07	1.44	1.7	2.9
Female	Very concerned	1.74	1.32	1.1	1.9
	Fairly concerned	2.22	1.49	2.7	4.0
	Not very concerned	5.58	2.36	12.7	17.0
	Not at all concerned	0.90	0.95	0.0	0.1
	Don't know/refused	3.38	1.84	4.2	6.3

Dvsmokec1 Currently smoke either daily or occasionally

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Yes	1.56	1.25	18.8	21.7
	No	1.55	1.24	77.9	80.8
Female	Yes	1.54	1.24	15.7	18.1
	No	1.60	1.27	81.4	83.9

Dvalcushibi **Usual weekly consumption binary - Higher risk, drinking above guidelines (>14 units)**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Yes	1.55	1.24	25.0	28.2
	No	1.56	1.25	70.9	74.1
Female	Yes	1.75	1.32	12.3	14.6
	No	1.78	1.34	84.4	86.8

Dvmvpa150 **MVPA meets guidelines 150 minutes weekly**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Yes	1.74	1.32	55.0	58.8
	No	1.74	1.32	40.9	44.7
Female	Yes	2.03	1.43	48.5	52.2
	No	2.00	1.41	47.5	51.1

OAct4W **Outdoor games and activities taken part in within the last 4 weeks**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Football (outdoor)	1.86	1.36	12.5	15.3
	Jogging	1.85	1.36	9.6	12.1
Female	Football (outdoor)	1.77	1.33	2.6	3.8
	Jogging	1.98	1.41	8.7	10.8

OPur4w Outdoor pursuits taken part in within the last 4 weeks

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Walking (over 2 miles)	1.92	1.38	29.9	33.7
Female	Walking (over 2 miles)	2.15	1.47	33.5	37.1

DVFGSport Participation in sporting activities three or more times a week

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Yes	1.66	1.29	31.7	35.2
	No	1.66	1.29	64.2	67.7
Female	Yes	1.96	1.40	22.4	25.5
	No	1.97	1.40	73.8	76.9

Selected survey variables split by age groups**IntPersUse Personal use of internet at home, work or elsewhere**

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Yes	1.13	1.06	97.6	99.5
	No	1.02	1.01	0.3	2.0
25-44 years	Yes	1.54	1.24	95.4	97.2
	No	1.55	1.25	2.6	4.4
45-64 years	Yes	1.59	1.26	88.5	91.1
	No	1.59	1.26	8.8	11.4
65-74 years	Yes	1.30	1.14	69.5	73.8

	No	1.26	1.12	26.0	30.3
75+ years	Yes	1.34	1.16	37.4	43.0
	No	1.34	1.16	56.7	62.4

EdOverSat Overall satisfaction with the state of education in Wales

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Mean	1.10	1.05	6.5	6.8
25-44 years	Mean	1.37	1.17	6.2	6.4
45-64 years	Mean	1.43	1.19	5.8	6.0
65-74 years	Mean	1.39	1.18	5.9	6.2
75+ years	Mean	1.52	1.23	6.2	6.5

UaQualServ Council provides high quality services

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Strongly agree	1.34	1.16	4.0	8.4
	Tend to agree	1.31	1.14	34.0	42.7
	Neither agree nor disagree	1.18	1.09	22.1	29.5
	Tend to disagree	1.14	1.07	9.9	15.5
	Strongly disagree	1.25	1.12	4.3	8.6
	Don't know/refused	1.51	1.23	7.3	13.1
25-44 years	Strongly agree	1.67	1.29	6.1	8.6
	Tend to agree	1.35	1.16	36.3	40.1
	Neither agree nor disagree	1.50	1.23	22.6	26.6
	Tend to disagree	1.33	1.15	17.9	21.4
	Strongly disagree	1.30	1.14	7.3	9.7
	Don't know/refused	1.47	1.21	1.2	2.5
45-64 years	Strongly agree	1.44	1.20	5.6	7.6
	Tend to agree	1.35	1.16	36.3	40.1

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	Neither agree nor disagree	1.49	1.22	22.1	25.6
	Tend to disagree	1.34	1.16	17.9	20.9
	Strongly disagree	1.33	1.15	9.6	12.0
	Don't know/refused	1.32	1.15	0.7	1.5
65-74 years	Strongly agree	1.61	1.27	7.1	10.1
	Tend to agree	1.38	1.17	36.6	41.5
	Neither agree nor disagree	1.32	1.15	20.4	24.4
	Tend to disagree	1.34	1.16	16.5	20.3
	Strongly disagree	1.36	1.17	8.9	11.9
	Don't know/refused	1.56	1.25	0.5	1.5
75+ years	Strongly agree	1.21	1.10	12.3	16.1
	Tend to agree	1.24	1.11	39.0	44.5
	Neither agree nor disagree	1.41	1.19	14.7	19.1
	Tend to disagree	1.37	1.17	14.8	19.1
	Strongly disagree	1.48	1.22	6.6	9.9
	Don't know/refused	1.23	1.11	1.1	2.5

WbLifeWrth Extent of feeling that things done in life are worthwhile

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Mean	1.20	1.09	7.68	7.97
25-44 years	Mean	1.39	1.18	7.90	8.05
45-64 years	Mean	1.43	1.20	7.87	8.02
65-74 years	Mean	1.46	1.21	8.14	8.33
75+ years	Mean	1.53	1.24	7.83	8.08

WelSpk**Speak Welsh**

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Yes	0.91	0.95	21.5	27.9
	No	1.05	1.02	57.5	65.3
	No, but have some Welsh speaking ability	1.29	1.14	10.8	17.0
25-44 years	Yes	1.26	1.12	18.6	22.0
	No	1.53	1.24	67.9	72.2
	No, but have some Welsh speaking ability	1.70	1.30	8.1	11.0
45-64 years	Yes	1.48	1.22	16.7	19.8
	No	1.71	1.31	71.5	75.3
	No, but have some Welsh speaking ability	1.96	1.40	7.0	9.6
65-74 years	Yes	1.28	1.13	15.4	19.0
	No	1.31	1.14	73.5	77.7
	No, but have some Welsh speaking ability	1.41	1.19	5.9	8.5
75+ years	Yes	1.19	1.09	16.6	20.8
	No	1.24	1.11	73.1	77.8
	No, but have some Welsh speaking ability	1.41	1.19	4.4	7.2

ArtsVisit**In the last 12 months, have you visited any of these arts events in Wales**

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Yes	1.39	1.18	20.0	27.9
	No	1.34	1.16	13.7	20.5
	Don't know	1.25	1.12	-0.1	1.0
25-44 years	Yes	1.89	1.37	20.7	25.1
	No	1.77	1.33	14.0	17.7
	Don't know	0.00	0.00	0.0	0.0
45-64 years	Yes	1.65	1.28	17.4	20.7
	No	1.96	1.40	12.7	15.9

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
65-74 years	Don't know	1.56	1.25	0.0	0.3
	Yes	1.57	1.25	13.3	17.2
	No	2.00	1.41	14.9	19.5
	Don't know	0.34	0.58	0.0	0.1
75+ years	Yes	1.31	1.15	7.5	10.7
	No	1.51	1.23	18.6	23.5
	Don't know	0.87	0.93	0.0	0.3

FloRiskProp How concerned are you, about the risk of flooding to - Your property

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Very concerned	1.02	1.01	0.0	1.3
	Fairly concerned	0.95	0.97	0.1	1.5
	Not very concerned	1.20	1.09	2.3	5.7
	Not at all concerned	1.24	1.11	1.1	11.3
	Don't know/refused	1.27	1.13	0.1	1.9
25-44 years	Very concerned	1.47	1.21	0.3	1.0
	Fairly concerned	1.11	1.06	1.1	2.1
	Not very concerned	1.32	1.15	3.9	5.7
	Not at all concerned	1.38	1.18	14.4	17.7
	Don't know/refused	1.58	1.26	0.0	0.4
45-64 years	Very concerned	1.11	1.05	0.4	1.0
	Fairly concerned	1.26	1.12	1.2	2.2
	Not very concerned	1.41	1.19	4.3	6.0
	Not at all concerned	1.37	1.17	16.0	18.9
	Don't know/refused	1.20	1.09	0.0	0.2
65-74 years	Very concerned	0.99	0.99	0.3	0.9
	Fairly concerned	0.95	0.97	0.6	1.4
	Not very concerned	1.66	1.29	3.9	6.2

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
75+ years	Not at all concerned	1.50	1.23	16.2	20.2
	Don't know/refused	1.21	1.10	0.0	0.3
	Very concerned	0.69	0.83	0.0	0.5
	Fairly concerned	1.85	1.36	0.9	2.6
	Not very concerned	1.34	1.16	3.1	5.4
	Not at all concerned	1.46	1.21	16.7	21.4
	Don't know/refused	1.00	1.00	0.0	0.4

TxMstCtrl Who currently has the most control over the taxes you pay

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Very concerned	1.52	1.23	0.2	2.5
	Fairly concerned	1.20	1.10	1.8	5.0
	Not very concerned	1.91	1.38	8.5	15.6
	Not at all concerned	0.00	0.00	0.0	0.0
	Don't know/refused	1.67	1.29	5.4	10.9
25-44 years	Very concerned	1.26	1.12	0.8	1.7
	Fairly concerned	1.71	1.31	2.7	4.5
	Not very concerned	3.85	1.96	13.3	18.8
	Not at all concerned	1.52	1.23	0.0	0.3
	Don't know/refused	1.72	1.31	2.9	4.9
45-64 years	Very concerned	1.50	1.22	0.8	1.6
	Fairly concerned	1.77	1.33	2.3	3.9
	Not very concerned	4.59	2.14	15.7	21.2
	Not at all concerned	0.86	0.93	0.0	0.1
	Don't know/refused	1.63	1.28	1.5	2.8
65-74 years	Very concerned	1.76	1.32	0.9	2.2
	Fairly concerned	1.77	1.33	1.9	3.7
	Not very concerned	3.26	1.81	14.8	20.7
	Not at all concerned	1.40	1.18	-0.1	0.3

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
75+ years	Don't know/refused	1.86	1.36	1.8	3.7
	Very concerned	1.93	1.39	1.3	3.3
	Fairly concerned	1.63	1.28	2.1	4.3
	Not very concerned	2.55	1.60	12.3	18.0
	Not at all concerned	0.82	0.91	-0.1	0.2
	Don't know/refused	1.54	1.24	3.1	5.6

Dvsmokec1 **Currently smoke either daily or occasionally**

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Yes	1.16	1.08	16.3	23.0
	No	1.18	1.09	76.6	83.4
25-44 years	Yes	1.45	1.21	21.4	25.3
	No	1.44	1.20	74.3	78.2
45-64 years	Yes	1.52	1.23	19.3	22.7
	No	1.55	1.24	77.0	80.4
65-74 years	Yes	1.34	1.16	10.0	13.1
	No	1.37	1.17	86.6	89.8
75+ years	Yes	1.35	1.16	4.2	6.8
	No	1.47	1.21	92.2	95.1

Dvalcushibi **Usual weekly consumption binary - Higher risk, drinking above guidelines (>14 units)**

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Yes	1.37	1.17	13.4	20.3
	No	1.33	1.15	78.1	85.1
25-44 years	Yes	1.46	1.21	17.1	20.7
	No	1.42	1.19	78.3	81.9

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
45-64 years	Yes	1.54	1.24	21.7	25.2
	No	1.55	1.25	73.9	77.5
65-74 years	Yes	1.41	1.19	19.8	23.9
	No	1.41	1.19	75.8	80.0
75+ years	Yes	1.41	1.19	10.7	14.6
	No	1.45	1.21	84.2	88.3

Dvmvpa150 **MVPA meets guidelines 150 minutes weekly**

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Yes	1.43	1.20	53.5	62.7
	No	1.43	1.20	36.9	46.1
25-44 years	Yes	1.46	1.21	59.6	64.1
	No	1.46	1.21	35.5	40.0
45-64 years	Yes	1.50	1.23	51.3	55.4
	No	1.50	1.22	44.3	48.4
65-74 years	Yes	1.64	1.28	46.2	51.7
	No	1.63	1.28	48.1	53.5
75+ years	Yes	1.64	1.28	27.5	33.3
	No	1.72	1.31	65.8	71.8

OAct4W **Sport - Current participation - Outdoor games and activities taken part in within the last 4 weeks**

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Football (outdoor)	1.24	1.11	21.1	28.6
	Jogging	1.40	1.18	21.4	29.5
25-44 years	Football (outdoor)	1.41	1.19	11.4	14.4

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	Jogging	1.45	1.21	14.7	18.1
45-64 years	Football (outdoor)	1.39	1.18	2.6	4.0
	Jogging	1.41	1.19	4.8	6.6
65-74 years	Football (outdoor)	1.32	1.15	0.4	1.3
	Jogging	1.73	1.32	0.2	1.0
75+ years	Football (outdoor)	1.94	1.39	-0.1	0.3
	Jogging	0.00	0.00	-0.2	0.2

OPur4w Outdoor pursuits taken part in within the last 4 weeks

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Walking (over 2 miles)	1.45	1.20	25.1	29.6
25-44 years	Walking (over 2 miles)	1.50	1.23	7.1	10.6
45-64 years	Walking (over 2 miles)	1.85	1.36	35.7	40.1
65-74 years	Walking (over 2 miles)	1.45	1.20	25.1	29.6
75+ years	Walking (over 2 miles)	1.50	1.23	7.1	10.6

DVFGSport Participation in sporting activities three or more times a week

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Yes	1.34	1.16	37.3	46.2
	No	1.35	1.16	53.0	62.0
25-44 years	Yes	1.43	1.19	33.6	38.0
	No	1.42	1.19	61.3	65.7
45-64 years	Yes	1.59	1.26	25.6	29.4
	No	1.60	1.26	70.0	73.8
65-74 years	Yes	1.32	1.15	17.1	20.9

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
75+ years	No	1.34	1.16	78.8	82.7
	Yes	1.44	1.20	5.5	8.5
	No	1.38	1.17	90.4	93.5

Selected survey variables split by economic status

IntPersUse Personal use of internet at home, work or elsewhere

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
In employment	Yes	1.45	1.20	94.2	95.7
	No	1.41	1.19	4.2	5.6
Unemployed	Yes	1.09	1.04	86.8	94.1
	No	1.09	1.04	5.9	13.2
Economically inactive	Yes	1.24	1.11	71.6	74.3
	No	1.22	1.10	25.5	28.2

EdOverSat Overall satisfaction with the state of education in Wales

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
In employment	Mean	1.59	1.26	6.1	6.2
Unemployed	Mean	1.66	1.29	5.9	6.6
Economically inactive	Mean	1.53	1.24	6.1	6.3

UaQualServ Council provides high quality services

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
In employment	Strongly agree	1.60	1.26	5.2	6.9
	Tend to agree	1.42	1.19	37.3	40.6
	Neither agree nor disagree	1.49	1.22	23.7	26.6
	Tend to disagree	1.37	1.17	17.7	20.3
	Strongly disagree	1.57	1.25	7.6	9.5
	Don't know/refused	2.24	1.50	1.5	2.8
Unemployed	Strongly agree	1.75	1.32	1.8	8.9
	Tend to agree	1.74	1.32	26.5	41.3
	Neither agree nor disagree	1.50	1.23	16.8	29.0
	Tend to disagree	1.63	1.28	12.9	24.8
	Strongly disagree	1.21	1.10	7.1	15.3
	Don't know/refused	2.01	1.42	3.3	12.3
Economically inactive	Strongly agree	1.66	1.29	9.1	11.2
	Tend to agree	1.64	1.28	36.9	40.2
	Neither agree nor disagree	1.64	1.28	20.0	22.8
	Tend to disagree	1.57	1.25	15.7	18.3
	Strongly disagree	1.44	1.20	8.9	10.8
	Don't know/refused	2.90	1.70	2.1	3.7

WbLifeWrth Extent of feeling that things done in life are worthwhile

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
In employment	Mean	1.64	1.28	8.07	8.18
Unemployed	Mean	1.59	1.26	6.86	7.53
Economically inactive	Mean	1.64	1.28	7.79	7.93

WelSpk**Speak Welsh**

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
In employment	Yes	1.57	1.25	19.8	22.7
	No	1.85	1.36	67.7	71.2
	No, but have some Welsh speaking ability	2.10	1.45	8.1	10.5
Unemployed	Yes	1.24	1.11	8.2	16.9
	No	1.34	1.16	71.0	82.6
	No, but have some Welsh speaking ability	1.62	1.27	5.8	15.0
Economically inactive	Yes	1.76	1.33	16.8	19.5
	No	2.14	1.46	71.4	74.9
	No, but have some Welsh speaking ability	2.44	1.56	7.5	9.8

Dvsmokec1**Currently smoke either daily or occasionally**

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
In employment	Yes	1.45	1.20	18.0	20.7
	No	1.45	1.20	79.0	81.6
Unemployed	Yes	1.92	1.39	33.5	49.7
	No	1.90	1.38	49.5	65.7
Economically inactive	Yes	1.76	1.33	14.7	17.3
	No	1.77	1.33	82.2	84.9

Dvalcushibi**Usual weekly consumption binary - Higher risk, drinking above guidelines (>14 units)**

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
In employment	Yes	1.52	1.23	21.3	24.2
	No	1.55	1.25	74.9	77.8
Unemployed	Yes	1.69	1.30	8.3	18.9
	No	1.67	1.29	79.9	90.7

Economically inactive	Yes	1.89	1.37	15.4	18.2
	No	1.93	1.39	80.9	83.7

Dvmvpa150 **MVPA meets guidelines 150 minutes weekly**

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
In employment	Yes	1.65	1.28	59.9	63.4
	No	1.64	1.28	36.2	39.7
Unemployed	Yes	1.75	1.32	40.1	55.8
	No	1.73	1.31	43.4	59.0
Economically inactive	Yes	2.15	1.47	42.0	45.9
	No	2.17	1.47	53.7	57.7

Selected survey variables split by local authority

IntPersUse **Personal use of internet at home, work or elsewhere**

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Isle of Anglesey	Yes	0.62	0.79	83.3	88.8
	No	0.63	0.79	11.2	16.7
Gwynedd	Yes	0.93	0.97	79.7	86.6
	No	0.89	0.95	13.3	20.1
Conwy	Yes	1.88	1.37	77.4	88.2
	No	1.93	1.39	11.5	22.3
Denbigshire	Yes	0.86	0.93	84.9	91.2
	No	0.86	0.93	8.8	15.1
Flintshire	Yes	1.52	1.23	81.5	89.8
	No	1.52	1.23	10.2	18.5
Wrexham	Yes	0.78	0.88	81.3	88.2

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	No	0.78	0.88	11.8	18.7
Powys	Yes	0.95	0.98	83.6	87.6
	No	0.95	0.98	12.4	16.3
Ceredigion	Yes	0.61	0.78	86.2	91.1
	No	0.61	0.78	9.0	13.8
Pembrokeshire	Yes	0.41	0.64	84.8	89.0
	No	0.41	0.64	11.0	15.2
Carmarthenshire	Yes	2.26	1.50	77.6	87.3
	No	2.26	1.50	12.7	22.4
Swansea	Yes	1.54	1.24	80.7	87.8
	No	1.54	1.24	12.2	19.3
Neath Port Talbot	Yes	1.71	1.31	70.9	83.0
	No	1.71	1.31	17.0	29.1
Bridgend	Yes	1.26	1.12	78.9	87.9
	No	1.26	1.12	12.1	21.1
Vale of Glamorgan	Yes	0.55	0.74	85.0	90.5
	No	0.55	0.74	9.5	15.0
Cardiff	Yes	0.91	0.95	88.3	92.5
	No	0.91	0.95	7.5	11.7
Rhondda Cynon Taf	Yes	0.84	0.91	80.7	86.2
	No	0.82	0.91	13.8	19.2
Merthyr Tydfil	Yes	0.84	0.92	78.8	86.5
	No	0.75	0.87	13.4	20.6
Caerphilly	Yes	1.18	1.09	78.9	87.2
	No	1.07	1.03	11.5	19.0
Blaenau Gwent	Yes	1.00	1.00	72.7	81.2
	No	0.91	0.96	17.8	25.7
Torfaen	Yes	1.20	1.09	83.3	90.7
	No	1.17	1.08	9.1	16.4
Monmouthshire	Yes	0.60	0.77	88.0	92.6

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	No	0.60	0.78	7.2	11.8
Newport	Yes	0.91	0.95	87.6	93.3
	No	0.91	0.96	6.7	12.4

EdOverSat Overall satisfaction with the state of education in Wales

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Isle of Anglesay	Mean	0.92	0.96	6.2	6.6
Gwynedd	Mean	1.48	1.21	5.8	6.4
Conwy	Mean	1.53	1.24	6.1	6.7
Denbigshire	Mean	1.93	1.39	6.1	6.6
Flintshire	Mean	1.88	1.37	6.2	6.7
Wrexham	Mean	2.13	1.46	5.9	6.6
Powys	Mean	1.51	1.23	5.5	5.8
Ceredigion	Mean	1.33	1.15	5.9	6.4
Pembrokeshire	Mean	1.55	1.24	5.5	6.0
Carmarthenshire	Mean	1.97	1.40	5.8	6.3
Swansea	Mean	1.65	1.28	5.9	6.4
Neath Port Talbot	Mean	1.02	1.01	5.8	6.3
Bridgend	Mean	1.53	1.24	5.9	6.6
Vale of Glamorgan	Mean	1.13	1.06	6.1	6.6
Cardiff	Mean	1.23	1.11	6.2	6.5
Rhondda Cynon Taf	Mean	1.21	1.10	5.9	6.3
Merthyr Tydfil	Mean	2.38	1.54	6.0	6.7
Caerphilly	Mean	1.29	1.13	5.9	6.4
Blaenau Gwent	Mean	1.59	1.26	6.0	6.5
Torfaen	Mean	1.45	1.20	6.1	6.6
Monmouthshire	Mean	1.38	1.17	5.9	6.4
Newport	Mean	1.85	1.36	5.8	6.4

UaQualServ Council provides high quality services

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Isle of Anglesey	Strongly agree	1.35	1.16	3.5	9.3
	Tend to agree	1.38	1.17	21.9	32.5
	Neither agree nor disagree	1.63	1.28	21.1	32.5
	Tend to disagree	1.95	1.40	17.2	29.1
	Strongly disagree	1.89	1.38	9.3	19.0
	Don't know/refused	0.93	0.97	0.9	3.8
Gwynedd	Strongly agree	0.72	0.85	3.0	6.5
	Tend to agree	1.81	1.35	31.3	43.8
	Neither agree nor disagree	1.36	1.16	16.2	25.2
	Tend to disagree	1.89	1.37	16.9	27.9
	Strongly disagree	1.42	1.19	5.9	12.6
	Don't know/refused	2.16	1.47	2.2	8.6
Conwy	Strongly agree	1.15	1.07	8.1	15.3
	Tend to agree	1.31	1.14	42.4	54.4
	Neither agree nor disagree	1.40	1.18	14.6	24.4
	Tend to disagree	1.17	1.08	11.1	19.2
	Strongly disagree	1.04	1.02	1.2	4.9
	Don't know/refused	2.25	1.50	-0.1	4.5
Denbigshire	Strongly agree	0.91	0.96	9.0	15.5
	Tend to agree	1.12	1.06	33.7	44.5
	Neither agree nor disagree	1.23	1.11	24.6	35.1
	Tend to disagree	1.26	1.12	9.5	17.5
	Strongly disagree	1.07	1.03	1.8	6.0
	Don't know/refused	1.07	1.04	0.1	2.7
Flintshire	Strongly agree	1.98	1.41	4.6	12.0
	Tend to agree	1.51	1.23	35.9	47.5

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	Neither agree nor disagree	1.56	1.25	21.3	31.8
	Tend to disagree	1.26	1.12	10.2	17.6
	Strongly disagree	1.26	1.12	4.1	9.5
	Don't know/refused	4.23	2.06	-0.5	5.9
Wrexham	Strongly agree	1.41	1.19	5.2	12.5
	Tend to agree	1.28	1.13	25.8	37.2
	Neither agree nor disagree	1.34	1.16	21.8	33.0
	Tend to disagree	1.33	1.15	14.8	24.8
	Strongly disagree	1.25	1.12	7.2	14.8
	Don't know/refused	1.14	1.07	0.1	3.0
Powys	Strongly agree	1.07	1.04	3.3	5.7
	Tend to agree	1.66	1.29	26.4	33.2
	Neither agree nor disagree	1.80	1.34	20.3	26.7
	Tend to disagree	1.77	1.33	22.1	28.7
	Strongly disagree	2.36	1.54	12.6	19.0
	Don't know/refused	1.61	1.27	0.3	1.8
Ceredigion	Strongly agree	1.26	1.12	7.9	14.9
	Tend to agree	1.49	1.22	38.8	50.6
	Neither agree nor disagree	1.43	1.19	17.2	26.9
	Tend to disagree	1.18	1.08	9.6	16.8
	Strongly disagree	1.79	1.34	2.6	8.7
	Don't know/refused	1.94	1.39	0.7	5.4
Pembrokeshire	Strongly agree	0.95	0.97	2.8	6.9
	Tend to agree	1.23	1.11	39.7	50.5
	Neither agree nor disagree	1.34	1.16	18.5	28.0
	Tend to disagree	1.45	1.20	13.5	22.5
	Strongly disagree	2.07	1.44	4.6	12.4

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Carmarthenshire	Don't know/refused	1.35	1.16	-0.3	0.9
	Strongly agree	1.00	1.00	3.5	7.4
	Tend to agree	2.05	1.43	37.0	49.0
	Neither agree nor disagree	1.24	1.11	19.2	27.2
	Tend to disagree	1.19	1.09	11.4	18.0
	Strongly disagree	2.72	1.65	4.7	12.5
	Don't know/refused	2.67	1.63	2.0	8.1
Swansea	Strongly agree	1.31	1.14	3.0	6.8
	Tend to agree	1.25	1.12	35.7	44.2
	Neither agree nor disagree	1.39	1.18	20.7	28.7
	Tend to disagree	1.27	1.13	13.5	20.1
	Strongly disagree	2.47	1.57	7.1	14.8
	Don't know/refused	1.32	1.15	1.3	4.2
Neath Port Talbot	Strongly agree	1.22	1.11	3.3	9.1
	Tend to agree	0.92	0.96	27.3	37.1
	Neither agree nor disagree	2.02	1.42	20.0	33.8
	Tend to disagree	1.42	1.19	12.9	23.0
	Strongly disagree	0.98	0.99	9.2	16.5
	Don't know/refused	2.12	1.46	0.8	7.0
Bridgend	Strongly agree	0.88	0.94	3.3	8.0
	Tend to agree	1.84	1.36	28.7	42.8
	Neither agree nor disagree	1.18	1.09	23.6	34.2
	Tend to disagree	1.79	1.34	16.1	28.1
	Strongly disagree	1.33	1.16	4.0	10.5
	Don't know/refused	1.83	1.35	-0.5	1.1
Vale of Glamorgan	Strongly agree	1.31	1.15	8.0	16.4
	Tend to agree	1.42	1.19	32.0	45.0
	Neither agree nor	1.84	1.36	15.3	27.8

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	disagree				
	Tend to disagree	0.72	0.85	14.6	21.9
	Strongly disagree	1.16	1.08	2.7	8.1
	Don't know/refused	3.15	1.77	0.2	8.1
Cardiff	Strongly agree	1.70	1.30	9.0	15.3
	Tend to agree	1.30	1.14	38.9	47.2
	Neither agree nor disagree	1.24	1.11	14.9	21.3
	Tend to disagree	1.46	1.21	10.9	17.1
	Strongly disagree	1.53	1.24	7.4	12.9
	Don't know/refused	2.86	1.69	0.6	4.5
Rhondda Cynon Taf	Strongly agree	1.07	1.03	5.5	10.0
	Tend to agree	1.43	1.19	31.5	40.8
	Neither agree nor disagree	1.66	1.29	19.8	28.8
	Tend to disagree	1.47	1.21	16.5	24.4
	Strongly disagree	1.17	1.08	4.9	9.5
	Don't know/refused	2.49	1.58	1.6	6.7
Merthyr Tydfil	Strongly agree	0.88	0.94	5.3	11.0
	Tend to agree	1.57	1.25	22.9	35.6
	Neither agree nor disagree	1.67	1.29	21.5	34.4
	Tend to disagree	1.02	1.01	14.1	22.7
	Strongly disagree	1.89	1.37	10.1	21.2
	Don't know/refused	1.32	1.15	-0.4	0.9
Caerphilly	Strongly agree	1.86	1.36	6.6	15.2
	Tend to agree	1.17	1.08	34.8	45.5
	Neither agree nor disagree	1.19	1.09	17.4	26.5
	Tend to disagree	1.57	1.25	12.5	22.1
	Strongly disagree	0.83	0.91	3.9	8.2
	Don't know/refused	2.09	1.45	0.0	4.2

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Blaenau Gwent	Strongly agree	1.23	1.11	1.0	4.6
	Tend to agree	1.18	1.09	16.1	25.0
	Neither agree nor disagree	1.23	1.11	15.6	24.6
	Tend to disagree	1.54	1.24	22.1	33.3
	Strongly disagree	1.07	1.03	21.3	30.4
	Don't know/refused	2.54	1.59	-0.2	4.5
Torfaen	Strongly agree	1.22	1.10	4.0	9.7
	Tend to agree	1.64	1.28	32.8	45.5
	Neither agree nor disagree	0.89	0.94	16.1	23.8
	Tend to disagree	1.94	1.39	15.2	26.7
	Strongly disagree	1.16	1.08	7.0	13.6
	Don't know/refused	1.38	1.18	0.7	4.5
Monmouthshire	Strongly agree	0.85	0.92	4.3	8.9
	Tend to agree	2.04	1.43	36.1	50.2
	Neither agree nor disagree	2.17	1.47	19.4	32.2
	Tend to disagree	1.84	1.36	13.2	23.7
	Strongly disagree	1.31	1.14	1.8	6.2
	Don't know/refused	3.07	1.75	-0.5	4.1
Newport	Strongly agree	1.19	1.09	2.8	7.7
	Tend to agree	1.19	1.09	37.4	48.3
	Neither agree nor disagree	1.48	1.21	16.1	26.0
	Tend to disagree	1.58	1.26	15.1	25.2
	Strongly disagree	1.09	1.05	5.2	10.9
	Don't know/refused	3.26	1.81	-0.3	5.5

WbLifeWrth **Extent of feeling that things done in life are worthwhile**

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Isle of Anglesay	Mean	1.16	1.08	7.9	8.3
Gwynedd	Mean	1.46	1.21	7.9	8.3
Conwy	Mean	0.93	0.96	7.9	8.3
Denbigshire	Mean	1.49	1.22	7.9	8.4
Flintshire	Mean	1.41	1.19	7.9	8.2
Wrexham	Mean	1.55	1.25	7.8	8.2
Powys	Mean	1.59	1.26	7.9	8.2
Ceredigion	Mean	1.20	1.09	7.9	8.2
Pembrokeshire	Mean	1.59	1.26	8.0	8.4
Carmarthenshire	Mean	1.24	1.11	7.7	8.0
Swansea	Mean	1.19	1.09	7.8	8.1
Neath Port Talbot	Mean	2.18	1.48	7.6	8.2
Bridgend	Mean	1.32	1.15	7.8	8.3
Vale of Glamorgan	Mean	2.01	1.42	7.7	8.3
Cardiff	Mean	1.50	1.22	7.8	8.1
Rhondda Cynon Taf	Mean	0.92	0.96	7.8	8.1
Merthyr Tydfil	Mean	0.82	0.90	7.6	8.0
Caerphilly	Mean	1.67	1.29	7.7	8.1
Blaenau Gwent	Mean	0.90	0.95	7.7	8.0
Torfaen	Mean	1.17	1.08	7.7	8.1
Monmouthshire	Mean	1.23	1.11	7.9	8.3
Newport	Mean	1.49	1.22	7.7	8.2

WelSpk Speak **Welsh**

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Isle of Anglesey	Yes	2.34	1.53	54.8	69.9
	No	1.52	1.23	25.8	37.3

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Gwynedd	No, but have some Welsh speaking ability	2.80	1.67	2.0	10.1
	Yes	1.85	1.36	69.0	80.4
	No	1.96	1.40	17.6	29.0
Conwy	No, but have some Welsh speaking ability	0.97	0.98	0.7	3.4
	Yes	3.18	1.78	25.7	43.5
	No	3.15	1.78	53.6	71.5
Denbigshire	No, but have some Welsh speaking ability	1.40	1.18	0.6	4.5
	Yes	2.77	1.66	22.5	38.4
	No	3.51	1.87	55.2	73.9
Flintshire	No, but have some Welsh speaking ability	2.31	1.52	1.5	8.4
	Yes	2.45	1.57	7.1	16.8
	No	3.12	1.77	75.3	88.3
Wrexham	No, but have some Welsh speaking ability	2.27	1.51	2.8	9.7
	Yes	2.34	1.53	9.3	21.3
	No	2.35	1.53	72.1	85.7
Powys	No, but have some Welsh speaking ability	2.14	1.46	2.1	9.6
	Yes	3.43	1.85	14.8	23.1
	No	4.18	2.05	62.4	73.3
Ceredigion	No, but have some Welsh speaking ability	4.80	2.19	9.0	17.5
	Yes	2.17	1.47	42.2	56.7
	No	2.66	1.63	36.1	52.0
Pembrokeshire	No, but have some Welsh speaking ability	2.31	1.52	2.8	10.1
	Yes	3.80	1.95	13.7	29.4
	No	3.07	1.75	57.2	73.5
Carmarthenshire	No, but have some Welsh speaking ability	2.80	1.67	7.6	18.6
	Yes	2.05	1.43	34.1	46.0
	No	2.27	1.51	36.5	49.2
Swansea	No, but have some Welsh speaking ability	2.11	1.45	12.3	21.6
	Yes	1.70	1.30	7.5	13.8
	No	2.88	1.70	68.3	80.0

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	No, but have some Welsh speaking ability	3.21	1.79	10.2	20.2
Neath Port Talbot	Yes	3.71	1.93	9.9	26.2
	No	3.75	1.94	62.9	81.9
	No, but have some Welsh speaking ability	3.68	1.92	3.3	15.7
Bridgend	Yes	2.09	1.44	13.6	26.0
	No	2.35	1.53	63.2	78.3
	No, but have some Welsh speaking ability	2.37	1.54	4.6	14.3
Vale of Glamorgan	Yes	2.12	1.46	6.6	17.1
	No	2.40	1.55	73.9	87.6
	No, but have some Welsh speaking ability	1.79	1.34	3.5	11.3
Cardiff	Yes	1.44	1.20	6.5	11.6
	No	1.90	1.38	76.6	84.6
	No, but have some Welsh speaking ability	1.83	1.35	7.2	13.2
Rhondda Cynon Taf	Yes	2.01	1.42	8.1	15.6
	No	2.11	1.45	78.3	87.2
	No, but have some Welsh speaking ability	1.21	1.10	3.4	7.5
Merthyr Tydfil	Yes	1.66	1.29	5.4	13.9
	No	1.52	1.23	84.4	93.1
	No, but have some Welsh speaking ability	1.10	1.05	0.1	3.0
Caerphilly	Yes	2.16	1.47	5.5	14.4
	No	3.35	1.83	73.1	87.8
	No, but have some Welsh speaking ability	4.30	2.07	3.4	15.8
Blaenau Gwent	Yes	2.02	1.42	5.8	14.4
	No	1.91	1.38	83.0	92.1
	No, but have some Welsh speaking ability	1.58	1.26	0.4	4.2
Torfaen	Yes	1.95	1.40	1.4	7.2
	No	2.08	1.44	81.6	91.6
	No, but have some Welsh speaking ability	2.72	1.65	4.3	13.9
Monmouthshire	Yes	1.47	1.21	2.4	7.7
	No	2.35	1.53	77.7	89.1
	No, but have some Welsh speaking ability	2.78	1.67	6.3	16.9
Newport	Yes	2.57	1.60	1.2	8.0

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	No	1.67	1.29	79.3	88.8
	No, but have some Welsh speaking ability	2.06	1.44	6.8	15.9

Dvsmokec1 **Currently smoke either daily or occasionally**

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Isle of Anglesey	Yes	1.25	1.12	13.8	22.6
	No	1.25	1.12	77.4	86.2
Gwynedd	Yes	0.77	0.88	15.8	22.4
	No	0.78	0.88	77.5	84.2
Conwy	Yes	1.82	1.35	8.5	18.0
	No	2.01	1.42	81.1	91.3
Denbigshire	Yes	1.96	1.40	13.5	24.9
	No	1.96	1.40	75.1	86.5
Flintshire	Yes	1.79	1.34	15.6	26.0
	No	1.79	1.34	74.0	84.4
Wrexham	Yes	2.22	1.49	12.5	25.1
	No	2.21	1.49	74.9	87.5
Powys	Yes	1.49	1.22	15.5	20.8
	No	1.50	1.23	78.8	84.2
Ceredigion	Yes	1.32	1.15	9.8	17.5
	No	1.25	1.12	82.5	90.0
Pembrokeshire	Yes	1.21	1.10	14.5	22.9
	No	1.20	1.09	77.1	85.4
Carmarthenshire	Yes	1.52	1.23	16.5	24.9
	No	1.52	1.23	75.1	83.5
Swansea	Yes	1.35	1.16	16.2	23.5
	No	1.27	1.13	76.3	83.4
Neath Port Talbot	Yes	1.33	1.15	18.8	29.7

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Bridgend	No	1.33	1.15	70.1	81.0
	Yes	1.16	1.08	14.9	24.1
	No	1.21	1.10	75.5	85.0
Vale of Glamorgan	Yes	1.82	1.35	10.7	21.9
	No	1.82	1.35	78.1	89.3
Cardiff	Yes	1.17	1.08	12.0	17.6
	No	1.17	1.08	82.1	87.8
Rhondda Cynon Taf	Yes	1.18	1.09	17.0	24.1
	No	1.18	1.08	75.8	82.9
Merthyr Tydfil	Yes	1.08	1.04	16.9	26.4
	No	1.09	1.04	73.0	82.6
Caerphilly	Yes	1.49	1.22	12.7	22.0
	No	1.67	1.29	74.2	84.8
Blaenau Gwent	Yes	2.01	1.42	15.4	27.1
	No	1.97	1.40	70.7	82.7
Torfaen	Yes	1.63	1.27	15.6	26.2
	No	1.63	1.28	73.4	84.0
Monmouthshire	Yes	3.53	1.88	7.3	20.2
	No	3.45	1.86	79.5	92.4
Newport	Yes	0.78	0.88	15.7	22.7
	No	0.76	0.87	77.0	83.9

Dvalcushibi **Usual weekly consumption binary - Higher risk, drinking above guidelines (>14 units)**

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Isle of Anglesey	Yes	1.18	1.08	13.1	21.5
	No	1.19	1.09	77.8	86.3
Gwynedd	Yes	1.55	1.24	15.0	24.5
	No	1.53	1.24	74.8	84.4
Conwy	Yes	1.02	1.01	9.8	17.0
	No	0.97	0.98	82.5	89.6
Denbigshire	Yes	1.73	1.31	12.5	22.9
	No	1.72	1.31	77.2	87.5
Flintshire	Yes	1.21	1.10	12.4	20.2
	No	1.17	1.08	79.5	87.2
Wrexham	Yes	1.55	1.25	16.6	27.9
	No	1.45	1.20	71.2	82.3
Powys	Yes	1.41	1.19	15.7	21.0
	No	1.42	1.19	78.5	83.9
Ceredigion	Yes	1.71	1.31	15.6	26.0
	No	1.75	1.32	73.6	84.2
Pembrokeshire	Yes	1.64	1.28	16.4	26.7
	No	1.63	1.28	73.2	83.5
Carmarthenshire	Yes	1.43	1.20	18.8	27.3
	No	1.49	1.22	72.3	81.1
Swansea	Yes	1.52	1.23	15.4	23.0
	No	1.53	1.24	76.5	84.2
Neath Port Talbot	Yes	0.81	0.90	17.1	25.3
	No	0.83	0.91	74.5	82.8
Bridgend	Yes	1.54	1.24	13.3	23.7
	No	1.55	1.24	75.7	86.2
Vale of Glamorgan	Yes	1.65	1.29	20.6	33.4
	No	1.57	1.25	66.3	78.8

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Cardiff	Yes	2.08	1.44	17.3	26.1
	No	2.01	1.42	73.2	81.9
Rhondda Cynon Taf	Yes	1.56	1.25	16.0	24.1
	No	1.78	1.33	75.0	83.7
Merthyr Tydfil	Yes	0.83	0.91	13.6	21.3
	No	0.89	0.94	78.0	86.0
Caerphilly	Yes	1.92	1.39	14.6	25.8
	No	2.26	1.50	68.9	82.0
Blaenau Gwent	Yes	1.07	1.03	11.0	18.4
	No	1.51	1.23	76.4	86.0
Torfaen	Yes	1.25	1.12	14.7	23.7
	No	1.42	1.19	72.8	82.9
Monmouthshire	Yes	1.91	1.38	21.6	33.9
	No	2.24	1.50	62.7	76.4
Newport	Yes	1.27	1.13	9.5	17.2
	No	1.20	1.10	82.3	89.9

Dvmvpa150

MVPA meets guidelines 150 minutes weekly

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Isle of Anglesey	Yes	2.75	1.66	42.7	59.4
	No	2.75	1.66	40.6	57.3
Gwynedd	Yes	2.55	1.60	37.9	53.2
	No	2.50	1.58	46.7	61.9
Conwy	Yes	2.14	1.46	47.6	62.8
	No	2.19	1.48	36.7	52.0
Denbigshire	Yes	1.74	1.32	43.6	57.3
	No	1.75	1.32	42.7	56.4
Flintshire	Yes	2.26	1.50	36.0	50.1

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Wrexham	No	2.26	1.50	49.9	64.0
	Yes	2.11	1.45	40.9	56.8
Powys	No	2.11	1.45	43.2	59.1
	Yes	2.12	1.46	61.0	68.9
Ceredigion	No	2.15	1.47	30.9	38.9
	Yes	1.76	1.33	60.2	72.5
Pembrokeshire	No	1.81	1.35	27.0	39.4
	Yes	1.66	1.29	54.1	66.5
Carmarthenshire	No	1.67	1.29	33.4	45.8
	Yes	1.67	1.29	53.6	64.3
Swansea	No	1.67	1.29	35.7	46.4
	Yes	1.96	1.40	49.3	60.2
Neath Port Talbot	No	2.04	1.43	39.4	50.5
	Yes	2.09	1.45	47.9	63.7
Bridgend	No	2.13	1.46	36.1	52.0
	Yes	2.38	1.54	33.0	49.4
Vale of Glamorgan	No	2.38	1.54	50.6	67.0
	Yes	1.59	1.26	40.8	55.0
Cardiff	No	1.59	1.26	45.0	59.2
	Yes	2.24	1.50	59.5	70.0
Rhondda Cynon Taf	No	2.28	1.51	29.7	40.4
	Yes	1.46	1.21	42.7	52.5
Merthyr Tydfil	No	1.46	1.21	47.5	57.2
	Yes	2.46	1.57	31.6	48.7
Caerphilly	No	2.47	1.57	50.3	67.5
	Yes	1.70	1.30	45.8	59.0
Blaenau Gwent	No	1.38	1.17	38.7	50.5
	Yes	1.26	1.12	40.2	51.5
Torfaen	No	1.56	1.25	45.4	57.9
	Yes	2.00	1.41	45.6	59.9

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	No	2.03	1.42	39.6	54.1
Monmouthshire	Yes	2.21	1.49	52.9	67.4
	No	2.17	1.47	32.4	46.7
Newport	Yes	1.87	1.37	42.6	56.4
	No	1.88	1.37	43.6	57.4

Selected survey variables split by household material deprivation

IntPersUse Personal use of internet at home, work or elsewhere

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Yes	1.37	1.17	85.4	89.5
	No	1.37	1.17	10.5	14.6
No	Yes	1.41	1.19	94.3	95.7
	No	1.40	1.18	4.3	5.7

EdOverSat Overall satisfaction with the state of education in Wales

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Mean	1.49	1.22	6.0	6.3
No	Mean	1.48	1.22	6.2	6.3

UaQualServ Council provides high quality services

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Strongly agree	1.50	1.23	5.5	8.8
	Tend to agree	1.56	1.25	24.1	29.9
	Neither agree nor disagree	1.59	1.26	22.9	28.7
	Tend to disagree	1.44	1.20	18.8	24.0
	Strongly disagree	1.47	1.21	12.8	17.4
	Don't know/refused	1.99	1.41	2.2	5.0
No	Strongly agree	1.62	1.27	6.1	7.8
	Tend to agree	1.43	1.20	39.2	42.5
	Neither agree nor disagree	1.53	1.24	22.7	25.6
	Tend to disagree	1.46	1.21	16.1	18.6
	Strongly disagree	1.43	1.20	6.8	8.6
	Don't know/refused	2.55	1.60	2.3	3.8

WbLifeWrth Extent of feeling that things done in life are worthwhile

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Mean	1.50	1.22	7.11	7.41
No	Mean	1.67	1.29	8.03	8.14

WelSpk**Speak Welsh**

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Yes	1.08	1.04	13.0	17.0
	No	1.49	1.22	73.1	78.6
	No, but have some Welsh speaking ability	1.79	1.34	7.0	11.1
No	Yes	1.59	1.26	19.9	22.7
	No	1.94	1.39	67.0	70.5
	No, but have some Welsh speaking ability	2.06	1.44	8.7	11.1

Dvsmokec1**Currently smoke either daily or occasionally**

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Yes	1.62	1.27	35.6	42.2
	No	1.61	1.27	57.8	64.4
No	Yes	1.45	1.20	16.6	19.1
	No	1.46	1.21	80.9	83.4

Dvalcushibi**Usual weekly consumption binary - Higher risk, drinking above guidelines (>14 units)**

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Yes	1.40	1.18	13.2	17.7
	No	1.44	1.20	81.6	86.2
No	Yes	1.61	1.27	20.3	23.1
	No	1.58	1.26	76.2	79.1

Dvmvpa150 MVPA meets guidelines 150 minutes weekly

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Yes	1.69	1.30	45.8	52.7
	No	1.69	1.30	47.3	54.2
No	Yes	1.72	1.31	57.9	61.5
	No	1.72	1.31	38.5	42.0

DVFGSport Participation in sporting activities three or more times a week

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Yes	1.78	1.33	17.4	23.1
	No	1.77	1.33	76.7	82.4
No	Yes	1.75	1.32	34.9	38.4
	No	1.75	1.32	61.3	64.8

Selected survey variables split by local health board

Dvsmokec1 Currently smoke either daily or occasionally

Local health board	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Abertawe Bro Morgannwg University Health Board	Yes	1.30	1.14	18.5	23.4
	No	1.28	1.13	76.3	81.3
Aneurin Bevan University Health Board	Yes	1.69	1.30	16.1	20.5
	No	1.79	1.34	78.0	82.6
Betsi Cadwaladr University Health Board	Yes	1.82	1.35	16.3	20.4
	No	1.85	1.36	79.4	83.7
Cardiff & Vale University Health Board	Yes	1.33	1.15	12.7	17.7

Local health board	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	No	1.33	1.15	82.1	87.2
Cwm Taf University Health Board	Yes	1.52	1.23	16.2	21.2
	No	1.29	1.13	76.1	82.0
Hywel Dda University Health Board	Yes	1.52	1.23	16.2	21.2
	No	1.50	1.23	78.8	83.8
Powys Teaching Health Board	Yes	1.49	1.22	15.5	20.8
	No	1.50	1.23	78.8	84.2

Dvalcushibi **Usual weekly consumption binary - Higher risk, drinking above guidelines (>14 units)**

Local health board	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Abertawe Bro Morgannwg University Health Board	Yes	1.31	1.14	17.1	22.0
	No	1.33	1.15	77.6	82.5
Aneurin Bevan University Health Board	Yes	1.82	1.35	16.6	21.2
	No	2.09	1.45	75.6	80.8
Betsi Cadwaladr University Health Board	Yes	1.48	1.22	16.0	19.7
	No	1.42	1.19	79.7	83.5
Cardiff & Vale University Health Board	Yes	1.98	1.41	19.5	26.7
	No	1.90	1.38	72.6	79.8
Cwm Taf University Health Board	Yes	1.63	1.28	19.3	24.9
	No	1.90	1.38	76.3	83.4
Hywel Dda University Health Board	Yes	1.63	1.28	19.3	24.9
	No	1.67	1.29	74.8	80.5
Powys Teaching Health Board	Yes	1.41	1.19	15.7	21.0
	No	1.42	1.19	78.5	83.9

Dvmvpa150**MVPA meets guidelines 150 minutes weekly**

Local health board	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Abertawe Bro Morgannwg University Health Board	Yes	2.08	1.44	47.5	55.3
	No	2.13	1.46	44.5	52.3
Aneurin Bevan University Health Board	Yes	2.02	1.42	49.1	55.3
	No	1.89	1.38	43.5	49.5
Betsi Cadwaladr University Health Board	Yes	2.33	1.52	45.4	51.6
	No	2.33	1.53	48.4	54.5
Cardiff & Vale University Health Board	Yes	2.05	1.43	56.0	64.5
	No	2.08	1.44	35.3	43.9
Cwm Taf University Health Board	Yes	1.79	1.34	57.4	64.2
	No	1.73	1.31	49.4	57.9
Hywel Dda University Health Board	Yes	1.79	1.34	57.4	64.2
	No	1.80	1.34	35.6	42.5
Powys Teaching Health Board	Yes	2.12	1.46	61.0	68.9
	No	2.15	1.47	30.9	38.9

DVFGSport**Participation in sporting activities three or more times a week**

Local health board	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Abertawe Bro Morgannwg University Health Board	Yes	2.36	1.54	23.1	30.4
	No	2.45	1.57	69.1	76.6
Aneurin Bevan University Health Board	Yes	2.01	1.42	27.2	32.8
	No	2.06	1.44	65.0	70.9
Betsi Cadwaladr University Health Board	Yes	1.46	1.21	23.8	28.1
	No	1.44	1.20	71.5	75.7
Cardiff & Vale University Health Board	Yes	1.78	1.34	28.3	35.8
	No	1.80	1.34	63.7	71.4
Cwm Taf University Health Board	Yes	2.37	1.54	31.0	38.7

Local health board	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	No	1.46	1.21	74.8	81.3
Hywel Dda University Health Board	Yes	2.37	1.54	31.0	38.7
	No	2.37	1.54	61.2	68.9
Powys Teaching Health Board	Yes	2.18	1.48	24.7	32.3
	No	2.15	1.47	67.3	74.9

Selected survey variables split by the Welsh Index of Multiple Deprivation

Dvsmokec1 Currently smoke either daily or occasionally

Welsh index of multiple deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Most deprived 20%	Yes	1.80	1.34	25.5	31.3
	No	1.81	1.35	67.6	73.5
Q2	Yes	1.63	1.28	20.9	25.8
	No	1.64	1.28	74.0	78.9
Q3	Yes	1.43	1.20	16.5	20.2
	No	1.43	1.20	79.4	83.1
Q4	Yes	1.48	1.21	14.2	17.7
	No	1.49	1.22	82.2	85.7
Least deprived 20%	Yes	1.89	1.38	6.9	10.4
	No	1.92	1.39	89.2	92.8

Dvalcushibi **Usual weekly consumption binary - Higher risk, drinking above guidelines (>14 units)**

Welsh index of multiple deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Most deprived 20%	Yes	1.57	1.25	11.6	15.7
	No	1.77	1.33	82.2	86.8
Q2	Yes	1.70	1.30	15.9	20.4
	No	1.66	1.29	79.0	83.5
Q3	Yes	1.74	1.32	18.9	23.3
	No	1.74	1.32	75.6	80.0
Q4	Yes	2.21	1.49	19.7	24.5
	No	2.14	1.46	75.0	79.8
Least deprived 20%	Yes	1.40	1.18	20.9	25.3
	No	1.42	1.19	73.8	78.3

Dvmvpa150 **MVPA meets guidelines 150 minutes weekly**

Welsh index of multiple deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Most deprived 20%	Yes	2.08	1.44	44.2	51.1
	No	2.00	1.41	48.0	54.8
Q2	Yes	1.55	1.25	46.6	52.2
	No	1.55	1.24	47.6	53.2
Q3	Yes	1.94	1.39	50.0	55.6
	No	1.96	1.40	43.9	49.5
Q4	Yes	1.91	1.38	53.2	58.6
	No	1.91	1.38	41.4	46.7
Least deprived 20%	Yes	1.72	1.31	57.7	63.4
	No	1.75	1.32	36.3	42.0

DVFGSport Participation in sporting activities three or more times a week

Welsh index of multiple deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Most deprived 20%	Yes	2.08	1.44	19.1	24.9
	No	2.04	1.43	73.7	79.5
Q2	Yes	1.98	1.41	23.3	28.9
	No	1.99	1.41	70.5	76.1
Q3	Yes	1.88	1.37	25.3	30.2
	No	1.90	1.38	69.2	74.2
Q4	Yes	1.76	1.33	29.8	34.6
	No	1.80	1.34	64.9	69.9
Least deprived 20%	Yes	1.41	1.19	31.3	36.3
	No	1.41	1.19	63.3	68.3