



SOCIAL RESEARCH NUMBER:

34/2018

PUBLICATION DATE:

20/06/18

National Survey for Wales 2017-18

Technical Report

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.

This document is also available in Welsh.

OGI © Crown Copyright Digital ISBN 978-1-78937-418-6

National Survey for Wales 2017-18
Technical Report

Authors:

Martina Helme and Zoe Brown, Office for National Statistics

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

Table of contents

1. Introduction and survey overview	4
Overview of the 2017-18 National Survey for Wales	4
Structure of the report	6
2. Sampling	6
Sample design	6
Selection of addresses (including reserve sample).....	8
Sample batching and allocation.....	10
Selection of dwelling units, households and individuals.....	11
3. Questionnaire content and development	13
Overview of the questionnaire	13
Questionnaire content and development	13
Questionnaire programming and testing.....	17
Showcards	19
Welsh translation.....	19
Interview timings	21
Changes to the questionnaire	23
4. Fieldwork.....	24
Recruitment of interviewers.....	24
Briefing of interviewers.....	25
Supervision and quality control.....	26
Fieldwork dates, management and procedures.....	27
Fieldwork documents	29
Web pages about the survey.....	32
Welsh language and other language interviews	33
Sample outcomes	36
Sample and reissues.....	38
Achieved sample.....	39
5. Data processing and output.....	43
Conversion of interview cases into a dataset.....	43
Data coding and editing	43
Derived variables	44
Data outputs.....	44
Availability of data	45
6. Weighting, non-response and analysis	46
Design weights.....	47

Calibration of weights.....	47
Design effects and factors.....	52

The following technical appendices are included at the end of this technical guide.

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 A5 post card

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 – Outcome code descriptions

Annex L – Design effects and factors

List of tables

Table 2.1: Number of addresses included in main sample by LA	9
Table 4.1: Number of interviewers by months of survey	25
Table 4.2: Survey materials	30
Table 4.3: Language of interview.....	34
Table 4.4: Sample outcomes at national level	36
Table 4.5: Sample outcomes at local authority level.....	38
Table 4.6: Outcomes by mainstage vs. reissue period	39
Table 4.7: Achieved interviews by quarter.	39
Table 4.8: Achieved response rate by LA (ranked by response rate)	40
Table 6.1: Variables used for weight calibration	48
Table 6.2: Projected 2016 resident population by age and sex	50
Table 6.3: Projected 2016 resident population by age with Local authority	51
Table 6.4: Projected 2015 household composition estimates	52
Table 6.5: Design effects and effective sample sizes	52
Table 6.6: Design effects, design factors and confidence intervals for a range of 2017-18 survey estimates	0

List of figures

Figure 4.1: Average interview length by survey month	21
Figure 4.2: Distribution of interview length (April to June 2017).....	22
Figure 4.3: Distribution of interview length (July 2017 to March 2018)	22

Glossary

Term	Definition
Blaise	Statistics Netherland Blaise Enterprise 4.8
BRE	Building Research Establishment
CAPI	Computer assisted personal interviewing
CASI	Computer assisted self-interviewing
HRP	Household Reference Person
IM	Interviewer manager
LA	Local authority
National Survey	National Survey for Wales
ONS	Office for National Statistics
PAF	Royal Mail Postcode Address File
SIM	Survey Instruction Manual
SPSS	Statistical Package for the Social Science – IBM SPSS Statistics
WG	Welsh Government
WHCS	Welsh Housing Conditions Survey
WIMD	Welsh Index of Multiple Deprivation

1. Introduction and survey overview

- 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). Before the new survey was launched at the end of March 2016, a large-scale pilot survey and then a small-scale field test on the final questionnaire were conducted. Further information on how the pilot survey and field test were conducted, as well as technical information on the new survey, can be found on the [National Survey website](#).

Overview of the 2017-18 National Survey for Wales

- 1.2 The second year of the new National Survey, carried out by the Office for National Statistics (ONS), ran from the beginning of April 2017 to end of March 2018. It involved conducting 11,381 interviews of people aged 16 and over based on a randomly-selected sample of residential addresses across Wales.
- 1.3 Interviews were carried out face-to-face by ONS interviewers using portable computers. The duration of the interview over the whole year was 44 minutes mean average (42 minutes median interview length), whereby the interview length from April to June was 39 minutes mean average (37 minutes median), and from July onwards 46 minutes mean average (43 minutes median). This was because a number of extra questionnaire sections were added from July onwards relating to the Welsh Housing Conditions Survey (WHCS), a follow-up survey conducted by WG over the course of 2017-18 (see section 3). The National Survey consisted of a total of 63 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, and education;
 - sports participation;
 - use of and satisfaction with public services;
 - income, housing costs, finances and poverty;

- wellbeing and loneliness;
 - internet access and use; and
 - tax devolution.
- 1.4 Respondents received a £10 shopping voucher as a ‘thank you’ for taking part in the survey, which was sent to respondents after the interview by mail or email depending on their preference.
- 1.5 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.
- 1.6 A total sample of 23,517 addresses, drawn from the Post Office small users Postcode Address File, was used in the 2017-18 survey year. 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 750 in Powys.¹ The number of interviews achieved in each LA over the survey year ranged from 310 in Isle of Anglesey to 1,169 in Cardiff. In Powys, 1,043 successful interviews were recorded over the year.
- 1.7 A small pilot survey² was carried out in January 2017 to test the new questionnaire and up-dated survey materials. The pilot survey provided an indication of the average interview length.
- 1.8 Further development work was carried out by ONS during the survey period. This included:
- a) a pilot of interviewer observation questions and a consent question for the respondent, to facilitate the Welsh Housing Conditions Survey in April 2017, a follow-up survey to the National Survey conducted by the Building Research Establishment (BRE); and
 - b) the introduction of further questionnaire modules covering questions on

¹ 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 sub-sampling.

² ONS (2017), National Survey for Wales, 2017 Pilot Report, <http://gov.wales/docs/caecd/research/2017/171003-national-survey-2017-18-pilot-report-summary-en.pdf>

income and housing costs.

The additions to the questionnaire also required a slight update to the advance letter and to the interviewer training material.

- 1.9 Cases were issued on a continuous monthly basis, with some cases being reissued the following month if thought likely to achieve positive outcomes.

Structure of the report

- 1.10 This report is intended to provide a clear and accessible description of the approach taken to collecting and processing the data.

- 1.11 Following the introductory chapter, this report is divided into a further five chapters:

- **Chapter 2** ('Sampling') describes the process of selecting addresses for the survey.
- **Chapter 3** ('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 4** ('Fieldwork') covers the process of preparing interviewers for fieldwork, fieldwork procedures, interview numbers, response rates, and interview timings.
- **Chapter 5** ('Data processing and output') gives an overview of the process of how the datasets were prepared and finalised.
- **Chapter 6** ('Weighting and non-response') describes the weighting process.

2. Sampling

Sample design

- 2.1 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.

- 2.2 The sample was drawn from the Royal Mail Small Users Postcode Address File (PAF)³, whereby all residential addresses and types of dwellings were included in the sample selection process as long as they are listed as individual addresses.⁴ If included as individual addresses on the PAF, residential park homes and other dwellings were included in the sampling frame.
- 2.3 Sampled addresses were then clustered quarterly to ensure field work is allocated effectively.
- 2.4 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).⁵ 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.
- 2.5 Further sampling will be applied within the questionnaire where certain questionnaire modules will only be asked to a sub-sample of respondents (see paragraph 3.15).
- 2.6 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.

³ See <https://licensing-centre.poweredbypaf.com/>

⁴ 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.

⁵ 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.

- 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.
 - c) Steps (a) and (b) were conducted iteratively until the minimum effective sample size was achieved for all LAs.
- 2.7 The LAs that were oversampled in this way were Isle of Anglesey, Blaenau Gwent, Ceredigion, Denbighshire, Gwynedd, Merthyr Tydfil, Monmouthshire, Pembrokeshire, and Torfaen.
- 2.8 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)

- 2.9 Due to response rates being lower than anticipated during the first survey year in 2016-17, a sample of 23,517 addresses was selected for the main sample, stratified by LA (see previous section), which covered around 2,500 more addresses than the previous year to ensure more interviews could be achieved over the course of 2017-18.
- 2.10 To select addresses for inclusion in the survey, the PAF was ordered by postcode and a systematic sample⁶ 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 part of the 2013-14 or 2014-15 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 (2013-14 and 2014-15) were also included on the Used Address File and will not be reselected for the survey for four years after they were initially sampled.⁷
- 2.11 Given the uncertainties around variation in response and eligibility rate a reserve 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. As it was unknown at the time the reserve sample was drawn, in

⁶ 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).

⁷ The exact period for which addresses are excluded from re-selection varies from survey to survey.

which area additional cases may be required, the sample was drawn of equal size to provide the opportunity to boost the main sample at any given point and any area required. However, only a small proportion of the overall reserve sample would ever be used. The reserve sample for 2017-18 was used to provide a sample for the 2017 pilot test.

- 2.12 Table 3.1 below shows an overview of the sample distribution across LAs. This has changed slightly since 2016-17 to consider the sample outcome and experience gained during 2017-18 of what level of response can be achieved in each local authority on the new National Survey. The sample size for 2017-18 was therefore adjusted taking account of the levels of response and ineligibility rates at local authority level achieved during 2016-17, aiming to increase the number of achieved interviews.

Table 2.1: Number of addresses included in main sample by LA

Local authority	Issued sample size
Anglesey	665
Blaenau Gwent	783
Bridgend	935
Caerphilly	1,288
Cardiff	2,497
Carmarthenshire	1,244
Ceredigion	665
Conwy	757
Denbighshire	632
Flintshire	929
Gwynedd	951
Merthyr Tydfil	647
Monmouthshire	576
Neath Port Talbot	1,085
Newport	1,052
Pembrokeshire	941
Powys	1,989
Rhondda Cynon Taf	1,669
Swansea	1,856
Torfaen	694

Local authority	Issued sample size
Vale of Glamorgan	825
Wrexham	837
Total	23,517

Sample batching and allocation

- 2.13 The main 2017-18 sample was divided into quotas (address clusters) and then allocated to months. The quotas were allocated based on their average WIMD⁸ 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.
- 2.14 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.
- 2.15 An average quota contained around 20 cases. The largest quotas allocated in 2017-18 included 39 cases. The number of addresses allocated per month from the main sample ranged between 1,932 (March 2018) and 1,996 (April 2017).
- 2.16 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 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.
- 2.17 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

⁸ Welsh Index of Multiple Deprivation

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.

Selection of dwelling units, households and individuals

- 2.18 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 Grid⁹. 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).
- 2.19 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.
- 2.20 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.
- 2.21 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).

⁹ 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. Questionnaire content and development

Overview of the questionnaire

- 3.1 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 annual questionnaire review and stakeholder consultation is carried out by WG to establish new policy needs and determine the questionnaire content for the new survey year. In addition, a feedback questionnaire was issued to interviewers to get their views on how well the survey processes worked in the field, whether there were any specific issues with the questionnaire content or flow, and whether there was room for improvement. WG have considered the interviewer feedback during the development of the content for the 2017-18 questionnaire. The core [questionnaire](#) from April 2017 covered a range of different topics, including public services, wellbeing, personal health, arts, and sport participation. Further modules on income and housing costs were added to the questionnaire from July 2017 onwards. A full list of modules included in the final questionnaire is published on the WG website¹⁰..
- 3.2 A [small scale pilot](#) survey was conducted by ONS in January 2017 to test the questionnaire worked well, as well as testing fieldwork processes.

Questionnaire content and development

- 3.3 In 2016-17, questions for the National Survey were largely taken from the five predecessor surveys, with some questions taken also from other large-scale surveys. Changes for 2017-18 included small up-dates to individual questions that were continued from 2016-17 to 2017-18, discontinuing or pausing certain questionnaire modules that do not need to be asked every survey year, as well as introducing new questionnaire modules and individual questions.

Pilot of Welsh Housing Conditions Survey elements

¹⁰ Survey content 2017-18: <http://gov.wales/statistics-and-research/national-survey/content-materials/materials-2017-18/?lang=en>

- 3.4 During 2017-18, respondents to the National Survey were used as a sampling frame for the Welsh Housing Conditions Survey (WHCS), which was run as a follow-up survey starting in July 2017. The WHCS, conducted separately by a third party (BRE), is based on an internal and external inspection of the property and a short questionnaire for the respondent to answer. This information is used by WG to inform the [Housing Conditions Evidence Programme](#). ONS had sampled suitable households/individuals and secured consent to participate. Using the National Survey as a sampling frame provided WG with the opportunity to draw a suitable sample for the WHCS more efficiently as information on the property and its residents was already available.
- 3.5 For this reason two additional small elements were built into the survey process for the National Survey. To facilitate the sampling of suitable households/individuals, which focused on properties in moderate and poor condition as well as a sample of properties in good condition, National Survey interviewers were asked to conduct a short ‘first impressions’ assessment where the conditions of the walls, windows and doors, and the roof (if visible) were assessed at the first visit to the address. As it was important to conduct this assessment consistently, National Survey interviewers were thoroughly briefed on how to do it.
- 3.6 A consent question formed the second element implemented in the National Survey questionnaire. Depending on the outcome of the assessment as well as the respondent’s answer to some questions (i.e. tenure of the property, whether the property was owned/rented in the respondent’s name) the respondent would be asked for their consent to participate in the follow-up survey. To obtain consent, the interviewer read out a statement to inform the respondent who would conduct the survey and what it would entail. If consent was obtained, interviewers would leave an information leaflet with the respondent providing more detailed information on the survey.
- 3.7 Both elements were piloted in April 2017 by adding on the relevant sections to the mainstage questionnaire. The pilot was run in three local authorities (Swansea, Wrexham and Flintshire) during which consent from 87 cases for the follow-up survey were obtained representing a consent rate of 64%.

3.8 Following a written briefing to all National Survey interviewers the property assessment questions for interviewers and the consent question for respondents were rolled out to the whole sample from July 2017 onwards.

Introduction of a questionnaire omnibus module

3.9 The WHCS is designed to provide information on various topics including the proportion of households in Wales living in

- ‘[fuel poverty](#)’¹¹, i.e. spending 10% or more of their income on energy costs, or
- ‘severe fuel poverty’, i.e. spending 20% or more of income on energy costs.

3.10 To calculate fuel poverty WG needed to collect income and housing costs data from each respondent that was the household reference person¹² of the household they live in. Relevant questionnaire modules were developed, [cognitively tested](#) and piloted in January 2017. Following the findings from the pilot, further changes were applied to these questionnaire modules and subsequently added to the 2017-18 questionnaire from July until the end of the survey year in March 2018.

3.11 After the additional elements of the WHCS follow-up survey and the omnibus modules were rolled out in July, observed consent rates for the WHCS consent question (around 54%) were below the expected level, with large variations in the consent rates amongst interviewers. Feedback from interviewers suggested that a number of underlying problems could explain this. For example, the consent question was implemented at the end of the questionnaire, and after the new income and housing cost modules, which had not been part of the pilot in April 2017. Interviewers reported that the new questions were perceived as more intrusive by respondents, potentially

¹¹ <http://gov.wales/topics/environmentcountryside/energy/fuelpoverty/>

¹² The term Household Reference Person (HRP) was introduced in the 2001 Census to replace the previously used term of 'head of the household'. A HRP is a certain individual within a household that acts as a reference point for producing further derived statistics and for characterising a whole household according to characteristics of the chosen reference person. A HRP on the National Survey is determined as the respondent in whose name the property is owned or rented. If jointly owned/rented, the HRP is the highest earner; if more than one person jointly owns/rents and they earn the same, the HRP is the eldest of these people.

resulting in higher interview fatigue at the end of the interview and respondents consequently being less likely to consent to the follow-up survey. Feedback also indicated that tenants appeared less likely to consent as they would have preferred to get their landlord's permission to participate. Interviewers also thought that respondents often struggled to see the benefit for them, as, for example, the results for the survey of their own property would not be shared with them.

3.12 As a result of these observations and feedback a number of measures were put in place over the course of the survey year to improve the consent rate:

- Additional support was provided to interviewers in individual meetings between interviewers and their managers as well as team meetings to discuss the challenges and how to overcome them. This was found to have helped interviewers explain the purpose of the follow-up survey in more detail where the respondents had further questions or was unsure about whether they would like to participate.
- Briefing material was subsequently updated and an additional training document developed providing interviewers with lines to take to provide background information to respondents when being asked about the purpose of the WHCS or income and housing costs questions.
- In order to address the issue of interview fatigue, a decision was made to move the consent question towards the beginning of the questionnaire to a point between the energy efficiency and income questions. This change in the positioning of the question did not improve the consent rate. Interviewers felt that the consent question was implemented now too early on in the questionnaire by which interviewers had not had a chance yet to build up rapport with the respondent, which they felt was vital for obtaining consent for a follow-up survey.
- WG informed local councils and housing associations about this survey being conducted to enable interviewers to reassure respondents renting their property that councils and housing associations are aware.
- A conditional incentive, in the form of a £10 gift voucher was introduced from January onwards. National Survey interviewers informed respondents

about this incentive when obtaining consent. However, the incentive was only issued by the property surveyor on completion of the WHCS property inspection. This measure was found to be most successful out of all changes introduced during the survey year, increasing the consent rate by around 10 percentage points.

- 3.13 Further information on the content of the final 2017-18 questionnaire and the background to questions asked in the survey can be found on the WG website¹³.

Questionnaire programming and testing

- 3.14 The questionnaire was scripted by ONS and administered using Statistics Netherlands Blaise Enterprise 4.8 (“Blaise”).
- 3.15 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, and occasionally within bespoke geographies. Annex B provides an overview of sub-sampled modules, the required annual sample size, and geographical considerations.
- 3.16 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

¹³ <http://gov.wales/statistics-and-research/national-survey/content-materials/materials-2017-18/?lang=en>

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.

3.17 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.
- **Computer assisted person interviewing (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.

- 3.18 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.
- 3.19 A raw SPSS¹⁴ 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

- 3.20 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 A5 English-only booklet for every interviewer and an A4 bilingual version for interviewers conducting Welsh language interviews. A second “core” set included two common scoring lists that were included throughout the questionnaire. The core set was produced in the same format as the main showcards. All showcards can be found on the WG website.¹⁵

Welsh translation

- 3.21 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 translations were used for consistency and

¹⁴ Statistical Package for the Social Science. IBM SPSS Statistics

¹⁵ All showcards can be found at <http://gov.wales/docs/caecd/research/2016/160817-national-survey-2017-18-showcards-ency.pdf>.

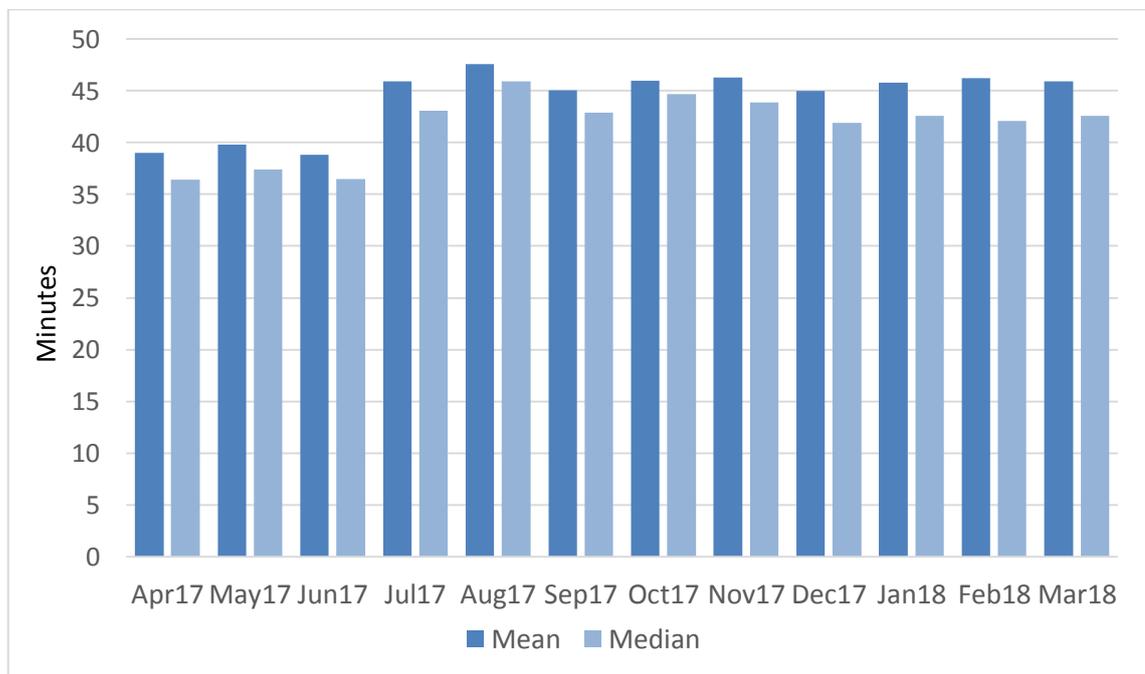
continuity purposes. For any new or amended questions, WG used certified translators ensuring that the same terminologies were used throughout the questionnaire. Both ONS and WG research teams had access to Welsh speakers for quality assurance of the translation, as well as minor clarifications and alterations.

- 3.22 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.
- 3.23 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.
- 3.24 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.
- 3.25 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

3.26 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 in mean and median questionnaire length over the course of the survey year. The graph illustrates the increase of interview length with the introduction of the income and housing cost modules from July 2017 onwards.

Figure 3.1: Average interview length by survey month



3.27 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.

3.28 As explained in section 3.15, a sub-sampling approach was applied to the survey, resulting in certain modules being asked of some respondents but not others. Figure 3.2 and 3.3 provide an overview of the distribution of interview length before (April to June 2017) and after (July 2017 to March 2018) the introduction of the housing costs and income modules. In the first quarter of the survey year the median interview length was around 37

minutes (mean 39 minutes), with 50% of respondents having an interview lasting between 28 and 37 minutes. For the remaining three quarters the median interview length was around 43 minutes (mean 46 minutes) with 50% of respondents having an interview lasting between 32 and 43 minutes.

Figure 3.2: Distribution of interview length (April to June 2017)

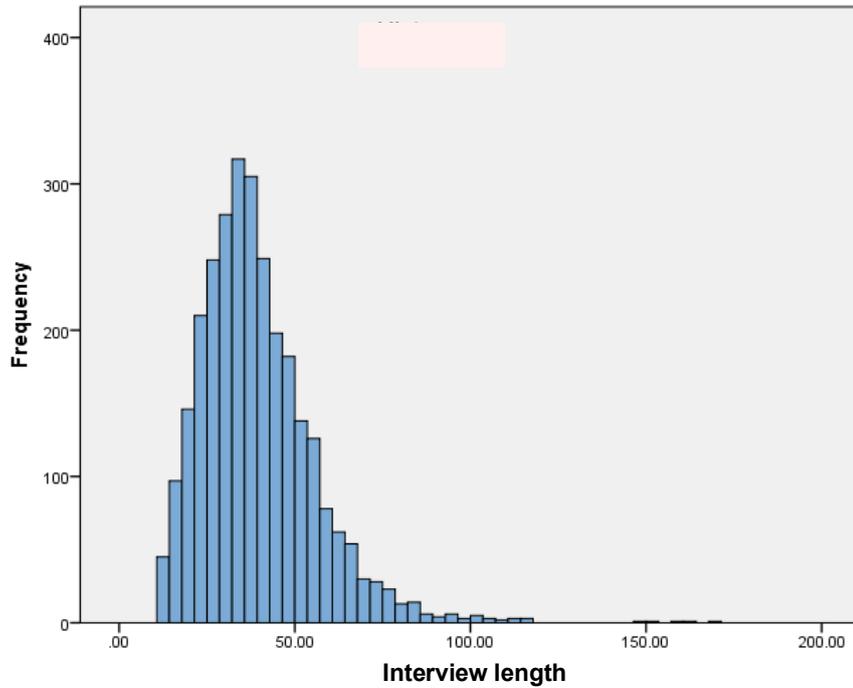
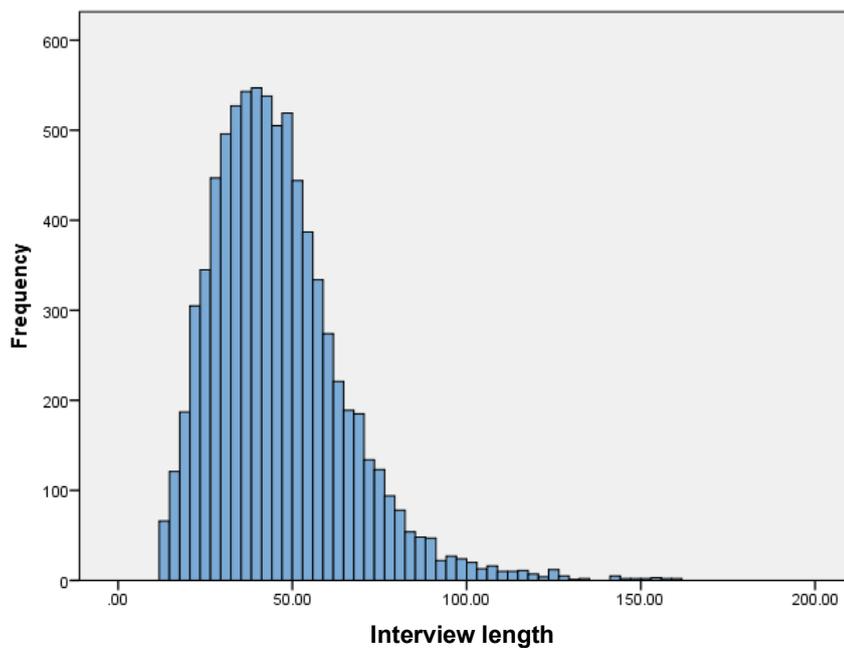


Figure 3.3: Distribution of interview length (July 2017 to March 2018)



Changes to the questionnaire

3.29 A number of changes were introduced to the questionnaire during the survey year; most of them related to the introduction of the housing costs and income modules, the consent question for the WHCS follow-up survey, and improvements to data entry checks. The main changes consisted in the following:

- July 2017 - Implementation of housing costs and income modules after the 'Energy efficiency' module, as well as the WHCS consent question at the end of the questionnaire.
- August 2017 - Updates to housing costs and income related soft and hard checks.
- September 2017 - WHCS consent question moved from the end of the questionnaire to the beginning of the income section.
- October 2017 - Updates to soft and hard checks for health-related variables.
- November 2017 - Improved introductions to housing costs and income sections, as well as the WHCS consent question added.
- January 2017 - Updates made to interviewer probes for the WHCS consent question.

4. Fieldwork

Recruitment of interviewers

- 4.1 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.
- 4.2 Interviewer vacancies were advertised on the Civil Service Jobs¹⁶ 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.
- 4.3 Recruitment, training and briefing of new interviewers 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.
- 4.4 A total of 122 interviewers and 9 interviewer managers and have been briefed on the National Survey since April 2017, with 13 interviewers leaving over the year, leaving a total of 109 (Table 4.1). There were seven Welsh speaking interviewers and one Welsh speaking interview manager.

¹⁶ <https://www.civilservicejobs.service.gov.uk>

Table 4.1: Number of interviewers by months of survey¹⁷

Month	Total number of ONS interviewers in Wales	Number of interviewers assigned to the survey *
April 2017	101	65
May	104	59
June	97	61
July	110	59
August	104	63
September	103	66
October	116	67
November	112	61
December	110	68
January 2018	124	59 (68)*
February	103	66
March	109	67

* Interviewer numbers in this column only cover interviewers working on the survey during the mainstage field months. In January 2018, nine additional interviewers were working on the pilot test for the 18-19 survey.

Briefing of interviewers

4.5 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.

¹⁷ 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.

- **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.
- **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.

4.6 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.¹⁸ The SIM can be made available on request.

4.7 Prior to the introduction of the income and WHCS modules an additional 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

4.8 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;

¹⁸ <http://gov.wales/docs/caecd/research/2016/161201-national-survey-2016-17-background-to-questions-en.pdf>

- 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.
- 4.9 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.
- 4.10 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.
- 4.11 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 2017-18 survey year were checked, and all of the addresses were verified as valid interviews.

Fieldwork dates, management and procedures

- 4.12 The fieldwork started with the beginning of April 2017 and ended with end of March 2018. 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 postcards 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.
- 4.13 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.

- 4.14 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 mainstage 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.
- 4.15 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 (after 6pm) or at the weekend 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 felt that there was 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 interviewer's performance management review. During 2017-18 interviewers made on average three calls to achieve an interview. Around two calls were made until an interviewer could establish that the address was ineligible, four calls on average until a case was coded out as a refusal, and six calls on average for non-contacts. Cases resulting in a circumstantial refusal (e.g. too busy, or currently unwell) or non-contact at mainstage were reissued to ensure that hard-to-reach cases were covered in the survey population.
- 4.16 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. A breakdown of the figures at LA level was provided fortnightly.

Fieldwork documents

- 4.17 Survey documents used during 2016-17 were updated considering interviewer feedback and general outcomes from the survey. 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. The second stage advance letter, sent out by interviewers prior to their first contact with a selected address, was made more concise and redesigned to an A5 postcard format. A number of other ONS generic survey materials, such as the 'refusal conversion' letter, 'impediment to contact' letter, 'called today' cards, 'broken appointment' cards and the message pad were rebranded to fit in with the WG branding used on this survey. All survey materials were [cognitively tested](#) and piloted in January/February 2017, and subsequently finalised prior to the start of the main stage fieldwork at the beginning of April 2017.
- 4.18 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 the new A5 postcards, which were posted by the interviewer a week before their first visit to the addresses of their assigned quotas.

Changes to materials during the survey year

- 4.19 A small update to the advance letter was made at the end of 2017 to reflect on the feedback from interviewers following the introduction of the omnibus modules in July. This involved a slight wording change of the first paragraph of the letter to make sure that the list of survey topics would reflect better the new content of the questionnaire, and therefore better manage respondents' expectations. The changes to the introductory paragraph in the advance letter are highlighted below in bold:

Previous version:

This is your chance to tell the Welsh Government about your experiences and views on a range of things like the NHS, education and training, and council services.

New version:

*This is your chance to tell the Welsh Government about your experiences and views on **health and the NHS, schools, sports, housing, council services, and other aspects of your life.***

- 4.20 The change to the wording in the advance letter was not found to affect refusal rates negatively.
- 4.21 Interviewer feedback also highlighted the need for more guidance helping interviewers to explain to respondent the purpose of questions around income and housing costs as well as the purpose of the follow-up Welsh Housing Conditions Survey. To accommodate that the interviewer briefing material was up-dated and an additional two-page document was developed providing the information in a concise format for doorstep introductions.
- 4.22 The latest versions of the most important survey materials used on this survey during 2017-18 are included in Annexes D to G.
- 4.23 The full set of documents used for this survey shown in Table 4.2, along with a brief description of each document.

Table 4.2: 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

Document	Description
A5 postcard (see Annex F)	<ul style="list-style-type: none"> • Sent by interviewers before calling at the address. • Reminding the household that an interviewer will call at the address. • 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 • An English-only A5 booklet and 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
Refusal conversion; Impediment to contact; Calling today cards; Appointment card; Broken Appointment card; and General Message pad	<ul style="list-style-type: none"> • Interviewers were provided with WG branded field material, which they could leave at addresses where the interviewer had problems making contact with anyone living at the address, the interviewer received an initial refusal; 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

Document	Description
A5 work sheets	<ul style="list-style-type: none"> • Used for each address 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 for interviewers	<ul style="list-style-type: none"> • A brief infographic sheet (at LA level) 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

4.24 The WG website hosts respondent-specific survey information (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.

4.25 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.

- 4.26 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.
- 4.27 Information on these web pages is available in Welsh and English.

Welsh language and other language interviews

- 4.28 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 seven interviewers were trained to conduct Welsh-language interviews.
- 4.29 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.
- 4.30 In a small number of cases respondents were not able to complete the interview in English or Welsh (Table 4.3). 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.

4.31 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 4.3: Language of interview

Language	Frequency	Percent
English	11,228	98.7
Welsh	149	1.3
Other	4	< 0.1
Total	11,381	100.0

Process of making contact at a sampled address

4.32 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.

4.33 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

4.34 A total of 48.2% of the issued sample (54.5% of the eligible sample) resulted in successful interviews (Table 5.4). The second most frequent outcome was refusals to interview, including broken appointments, which accounted for over 28.1% of the issued sample (31.9% of the eligible sample). Non-contacts accounted for around 5.9% of the issued sample (6.7% of the eligible sample). Tables 4.4 and 4.5 show the sample outcomes for all sampled addresses.

Table 4.4: Sample outcomes at national level

Outcome code description	Total addresses*	% of issued sample	% of eligible sample
Eligible			
Complete interview by required respondent(s) / selected person	11,343	48.0	54.3
Complete interview: partly by required respondent(s) /selected person and partly by proxy	38	0.2	0.2
No contact with anyone at the address	1,011	4.3	4.8
Contact made at the address, but not with any member of the sampled dwelling/household	160	0.7	0.8
Contact made at sampled dwelling/household, but not with any responsible resident	32	0.1	0.2
Contact made with responsible member of sampled dwelling/household, but not with sampled person	197	0.8	0.9
Office (HQ) refusal	508	2.1	2.4
Information refused that would allow identification of required respondent(s) within dwelling or household. Information refused about persons within household	4	0.0	0.0
Refusal by required respondent / selected person	4,552	19.3	21.8
Refusal by proxy	685	2.9	3.3
Refusal of access to site	2	0.0	0.0
Refusal during interview	56	0.2	0.3
Broken appointment, no re-contact	852	3.6	4.1
Ill at home during survey period: notified to head office	14	0.1	0.1
Ill at home during survey period: notified to interviewer	359	1.5	1.7
Away/ill in hospital throughout the field period: notified to head office	4	0.0	0.0

Outcome code description	Total addresses*	% of issued sample	% of eligible sample
Away/ill in hospital throughout the field period: notified to interviewer	534	2.3	2.6
Physically or mentally unable/incompetent: notified to head office	13	0.1	0.1
Physically or mentally unable/incompetent: notified to interviewer	376	1.6	1.8
Language difficulties: notified to interviewer	41	0.2	0.2
Lost interview	16	0.1	0.1
Issued but not attempted	8	0.0	0.0
Inaccessible	22	0.1	0.1
Unable to locate address	23	0.1	0.1
Unknown whether address is residential due to non-contact	9	0.0	0.0
Information refused about whether there are eligible resident(s)	8	0.0	0.0
Unknown whether there are eligible resident(s) due to non-contact	18	0.1	0.1
Ineligible			
Not yet built / under construction	48	0.2	-
Demolished / derelict	91	0.4	-
Vacant / empty	1,520	6.4	-
Non-residential address	395	1.7	-
Address occupied, but no resident household/resident(s)	599	2.5	-
Communal establishment / Institution	56	0.2	-
Directed not to sample at address	37	0.2	-
Total issued sample	23,631	100.0	-

* Reissues for February and March 2017 are included.

Table 4.5: Sample outcomes at local authority level

Local Authority	Interviews achieved (%)*	Refused (%)	No contact (%)	Ineligible (%)	Other (%)
Isle of Anglesey	46.48	32.08	2.70	18.29	0.45
Gwynedd	49.02	20.83	3.42	26.53	0.21
Conwy	50.52	32.25	4.02	12.56	0.65
Debigshire	48.75	32.09	4.52	14.33	0.31
Flintshire	51.75	34.01	4.36	9.03	0.85
Wrexham	48.39	35.01	8.48	8.00	0.12
Ceredigion	48.58	26.91	3.89	20.03	0.60
Pembrokeshire	43.57	32.31	3.08	20.40	0.64
Carmarthenshire	50.96	32.96	4.42	11.09	0.56
Swansea	46.51	34.75	6.61	11.92	0.21
Neath Porth Talbot	45.16	37.14	6.64	10.88	0.18
Bridgend	47.93	36.37	6.15	8.91	0.64
Vale of Glamorgan	46.06	39.27	7.88	6.67	0.12
Cardiff	46.76	35.52	10.60	6.56	0.56
Rhondda Cynon Taf	43.26	36.46	8.17	11.81	0.30
Caerphilly	51.01	38.04	4.89	5.75	0.31
Blaenau Gwent	47.96	35.37	5.22	11.45	0.00
Torfaen	50.36	39.09	4.71	5.56	0.29
Monmouthshire	54.84	31.31	3.29	10.55	0.00
Newport	50.38	36.58	5.48	7.47	0.09
Powys	52.05	27.40	4.39	15.62	0.55
Merthyr Tydfil	42.04	40.80	6.96	10.20	0.00
Total	48.16	33.92	5.92	11.62	0.37

* Response rates are based on the 2017-18 survey period, ending with end of March 2018. This means that reissues for February and March 2018 are not included in this table.

Sample and reissues

4.35 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 1.9% of the overall productive cases, or 0.9% of the issued sample. The response rate achieved at the reissue stage was approximately 11 percentage points lower than that of main stage (Table 4.6). 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 4.6: Outcomes by mainstage vs. reissue period

Survey period	Eligible cases			Ineligible cases	Response rates
	Interviews achieved	Refusals	Non-response/ Non-contact/ Unknown eligibility/		
Mainstage	11,161	7,760	1,456	2,682	54.8%
Reissue	220	256	32	64	43.3%
Total	11,381	8,016	1,488	2,746	54.5%

4.36 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 2018-19 survey data. Therefore, Table 4.6 includes reissued cases for February and March 2017 (from the sample of the previous survey year) but not the reissued case for February and March 2017-18.

Achieved sample

4.37 In total 11,381 interviews were achieved, whereby 27 interviews were part of the 2016-17 sample that were reissued at the beginning of 2017-18. As these interviews were conducted with the 2017-18 questionnaire they are included in the respective dataset. The breakdown of interviews between each quarter of 2017-18 is given in Table 4.7.

Table 4.7: Achieved interviews by quarter.

Quarter	Interview dates	Interviews achieved	Cumulative interviews achieved
1	April '17 to June '17	2,651	2,651
2	July '17 to September '17	3,024	5,675
3	October '17 to December '17	2,938	8,613

4	January '18 to March '18	2,768	11,381
TOTAL		11,381	11,381

4.38 The response rate (Tables 4.6 and 4.8) 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.

4.39 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 11.6%.

4.40 The planned response rate for 2017-18 was 59%, based the previous year's achievement and the additional measure put in place to increase response.

4.41 The final response rate at national level for 2017-18 is 54.5%. Table 4.8 shows the response rates for 2017-18 at LA level.

Table 4.8: Achieved response rate by LA (ranked by response rate)

Local Authority	Total addresses*	Interview target	Completed interviews	Ineligible addresses	Response rate (%)
Gwynedd	965	466	473	258	66.9
Powys	2,004	1,041	1,043	319	61.9
Monmouthshire	578	339	317	61	61.3
Ceredigion	669	358	325	136	61.0
Conwy	772	431	390	102	58.2
Carmarthenshire	1,244	666	634	144	57.6
Isle of Anglesey	667	372	310	124	57.1
Denbighshire	642	347	313	93	57.0
Flintshire	941	516	487	86	57.0
Pembrokeshire	941	466	410	198	55.2

Newport	1,058	538	533	80	54.5
Blaenau Gwent	786	390	377	90	54.2
Caerphilly	1,288	665	657	75	54.2
Torfaen	700	406	353	41	53.6
Swansea	1,862	904	866	224	52.9
Bridgend	943	506	452	85	52.7
Wrexham	837	460	405	68	52.7
Neath Port Talbot	1,085	516	490	120	50.8
Cardiff	2,499	1,247	1,169	165	50.1
Vale of Glamorgan	825	444	380	55	49.4
Rhondda Cynon Taf	1,676	836	725	201	49.2
Merthyr Tydfil	647	340	272	66	46.8
TOTAL (National)	23,629	12,288	11,381	2,791	54.5

* The total sample, included reissued cases from February and March 2017, is used for the calculations.

4.42 Response rates ranged from 46.8% (Merthyr Tydfil) to 66.9% (Gwynedd).

The number of interviews achieved was close to the target level in most areas, but severe weather conditions over the winter months (in particular February and March 2018) affected the progress interviewers could make. Due to end-of-year data processing tasks commencing immediately at the start of April, it was not possible to extend the field period to provide interviewers with the opportunity to follow-up on cancelled appointments. Instead, unproductive cases for February and March were reissued over the course of April and May 2018. Any productive interviews resulting from the reissuing of these cases will be included in the 2018-19 dataset.

4.43 Large proportions of ineligible addresses were found in Gwynedd, Pembrokeshire, Ceredigion, and Isle of Anglesey. Lower degree of variation was recorded in other areas and the lowest ineligible rate was recorded in Caerphilly.

Remedial action to low response

4.44 ONS closely monitored the progress of survey response performance over the course of the fieldwork period. Similar issues to 2016-17¹⁹ with response

¹⁹ Aumeyr M. et al. (2017). National Survey for Wales 2016-17: Technical Report. Cardiff: Welsh Government, GSR report number 34/2017, section 5.41-5.42

levels being lower than expected were experienced during 2017-18.

Achieved interviews increased from 10,493 in 2016-17 to 11,354 in 2017-18, but response rates fell slightly from 54.6% to 54.5%. It is likely that the total number of achieved interviews improved due to a bigger sample being drawn and response rates benefited from the continuation of a £10 conditional incentive for this survey year.

4.45 Over the course of the survey year low performing areas were investigated further, including analysis of area and interviewer level performance data, seeking feedback from interviewers on the underlying issues causing low response in some areas. This has highlighted that response levels across areas and interviewers are very volatile with peaks and troughs in response differing by area as well as interviewer.

4.46 A programme of further research work for the following survey year 2018-19 has been agreed, identifying some measures to apply in areas that appear to be particularly prone to low response.

5. Data processing and output

- 5.1 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

- 5.2 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'.
- 5.3 New SPSS datasets are produced daily (when new cases are received by the Field Office) and delivered to the ONS National Survey Research Team.

Data coding and editing

- 5.4 Where relevant, logic checks and interviewer prompts were incorporated into the CAPI script (see section 3.16) 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.
- 5.5 Post-fieldwork editing was also conducted by the ONS National Survey Research Team, a task that was previously carried out by the ONS Coding and Editing Team in 2016-17, 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.

Data checks also included looking at any notes interviewers added to the questionnaire highlighting and/or clarifying any unusual responses.

Derived variables

- 5.6 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). Those produced from data collected through the interview either reflect on an original questionnaire variable but where responses are grouped into fewer categories (e.g. age groups) or reflect on a number of questionnaire variables providing an indicator of a respondent having a certain characteristic (e.g. health related derived variables) or showing certain behaviours (e.g. sport and activity related derived variables). The full list of derived variables can be found in Annex I.

Data outputs

- 5.7 An unformatted dataset was provided to WG in April 2017. The file contained the raw data of the first 250 achieved interviews to allow WG to quality assure the questionnaire routing.
- 5.8 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.
- 5.9 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.

5.10 Each dataset was provided to WG firstly as an interim data file after the first four months of the survey and then again after six 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

5.11 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 Archive²⁰ and the SAIL databank²¹.

²⁰ <https://www.ukdataservice.ac.uk/>

²¹ <https://saildatabank.com/>

6. Weighting, non-response and analysis

- 6.1 The general approach used in the calculation and application of weighting to the 2017-18 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 the projected 2016 population of Wales from the 2014-based population projections²², and adjusted to represent the resident population²³. However, the basic weighting strategy is consistent with the approaches taken to weighting the previous 2016-17 dataset, the 2015 large scale field test²⁴ and the former Welsh Health Survey²⁵.
- 6.2 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).
- 6.3 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. The same approach as used for the 2016-17 weights was applied to 2017-18 weights.

²² The weight calibration for 2017-18 was based on population projections for 2016 (<https://stats.wales.gov.wales/Catalogue/Population-and-Migration/Population/Projections/Local-Authority/2014-based>) as the population estimates for 2016 had not been published at the time the weights were produced.

²³ "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.

²⁴ 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>

²⁵ 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

- 6.4 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.
- 6.5 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.
- 6.6 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

- 6.7 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.
- 6.8 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 .

- 6.9 To avoid disproportionate variation between addresses in the weights, the weight was capped at 5

Calibration of weights

- 6.10 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 figures available for the 2017-18 weights were 2014-based

population projections for 2016 for Wales²⁶ (adjusted for the resident population).²⁷ 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.

- 6.11 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.
- 6.12 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).
- 6.13 As a result of the analysis, the following variables were used for the calibration of the various weights:

Table 6.1: 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	11-15 years	25-29 years	South East Wales

²⁶ The population projections are based on the 2011 Census taking into account births and deaths up until 2014: <https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Projections/Local-Authority/2014-based>

²⁷ Welsh Government, StatsWales Population Projections, <https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Projections/Local-Authority/2014-based>

Household	Population	Adult	Child
(no child)			
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 (3-7)
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		

6.14 The weights available for 2017-18 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. Un-grossed versions of each of these weights are also available, which give a weighted achieved sample size equal to the un-weighted achieved sample size. Because un-grossed and calibrated weights were initially found to produce slightly different estimates when producing the weights for 2016-17, all four quarters were scaled up at the same time to the overall sample size in line with last year's weights. The un-grossed 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 2017-18 datasets:

6.15 The following tables provide projected 2016 population totals:

Table 6.2: Projected 2016 resident population by age and sex

Age by sex		N	%
Male	0-4	88,567	2.9
Male	5-10	110,890	3.6
Male	11-15	84,594	2.8
Male	16-19	71,692	2.3
Male	20-24	105,029	3.4
Male	25-29	100,261	3.3
Male	30-34	89,548	2.9
Male	35-39	85,579	2.8
Male	40-44	87,699	2.9
Male	45-49	102,976	3.4
Male	50-54	107,335	3.5
Male	55-59	98,076	3.2
Male	60-64	89,181	2.9
Male	65-69	95,522	3.1
Male	70-74	73,999	2.4
Male	75-79	56,231	1.8
Male	80+	59,406	1.9
<hr/>			
Female	0-4	84,150	2.8
Female	5-10	105,815	3.5
Female	11-15	79,938	2.6
Female	16-19	66,866	2.2
Female	20-24	97,784	3.2
Female	25-29	96,388	3.2
Female	30-34	90,482	3.0
Female	35-39	86,803	2.8
Female	40-44	91,496	3.0
Female	45-49	108,379	3.5
Female	50-54	112,043	3.7
Female	55-59	102,665	3.4
Female	60-64	94,142	3.1
Female	65-69	100,015	3.3

Age by sex		N	%
Female	70-74	79,701	2.6
Female	75-79	66,917	2.2
Female	80+	84,007	2.8
Other/Don't know		597	0.0
All		3,054,770	100.0

Table 6.3: Projected 2016 resident population by age with Local authority

Local authority	0-24	25-64	65-74	75+
Isle of Anglesey	14,590	34,061	12,806	7,851
Gwynedd	35,046	57,519	15,795	10,602
Conwy	30,935	55,788	14,130	12,903
Denbighshire	26,676	44,600	13,089	9,529
Flintshire	43,202	76,944	17,345	15,971
Wrexham	39,453	65,496	17,653	13,636
Powys	33,207	65,012	17,738	14,311
Ceredigion	22,796	32,417	10,231	5,972
Pembrokeshire	30,521	57,730	19,628	13,930
Carmarthenshire	46,701	95,135	24,484	16,557
Swansea	78,049	121,362	21,799	17,101
Neath Port Talbot	35,810	70,413	18,881	14,590
Bridgend	37,139	73,844	16,099	12,554
Vale of Glamorgan	39,034	60,798	15,371	10,654
Cardiff	126,233	176,685	26,132	20,114
Rhondda Cynon Taf	67,970	125,460	25,507	16,117
Merthyr Tydfil	17,082	31,184	6,776	3,607
Caerphilly	49,103	96,730	18,380	15,149
Blaenau Gwent	18,440	35,296	8,239	6,982
Torfaen	27,253	47,918	7,901	7,966
Monmouthshire	26,378	44,056	10,628	9,882
Newport	49,874	75,033	10,626	10,583
All	895,492	1,543,481	349,238	266,561

Table 6.4: Projected 2015 household composition estimates

Group description	Group size
Pensioner couple - a couple where one or more of the adults are of State Pension age or over	207,529
Single pensioner - single adult of State Pension age or over	232,098
Couple with children - a non-pensioner couple with dependent children	200,549
Couple without children - a non-pensioner couple with no dependent children	161,475
Single adult with children - a non-pensioner single adult with dependent children	87,505
Single adult without children - a non-pensioner single adult with no dependent children	192,670
3 or more adults with children – three or more adults with dependent children	59,239
3 or more adults without children - related – three or more adults with no dependent children, who are related to each other	90,130
3 or more adults without children - not related – three or more adults with no dependent children, who are not related	46,080
Other households	64,350
Total	1,341,624

Design effects and factors

- 6.16 Design effects and factors have been calculated for several variables allowing effective sample sizes to be produced at a national and local level. Table 6.5 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 6.5: Design effects and effective sample sizes²⁸

Local authority	Design effect	Effective sample size
Isle of Anglesey	1.41	220
Gwynedd	1.30	364
Conwy	1.40	279

²⁸ The variables used to calculate average design effects were all asked of the full sample. These were IntPersUse, EdOverSat, WbLifeWrth, WelSpk, Dvsmokec, Dvalcushibi, Dvmvpa150, and DvFGHealth1.

Local authority	Design effect	Effective sample size
Denbighshire	1.37	228
Flintshire	1.25	390
Wrexham	1.29	314
Powys	1.34	778
Ceredigion	1.60	203
Pembrokeshire	1.25	329
Carmarthenshire	1.31	485
Swansea	1.36	635
Neath Port Talbot	1.35	364
Bridgend	1.31	345
Vale of Glamorgan	1.26	302
Cardiff	1.52	769
Rhondda Cynon Taf	1.31	552
Merthyr Tydfil	1.25	217
Caerphilly	1.24	529
Blaenau Gwent	1.46	259
Torfaen	1.22	290
Monmouthshire	1.31	242
Newport	1.33	402
Average	1.34	386
Full sample	1.36	8,373

- 6.17 Further breakdowns of a selection of variables by local authority, local health board, gender, age group, economic status, and household material deprivation are included in Annex L.
- 6.18 Table 6.6 shows the design effects, design factors and confidence intervals for a range of questions in the 2017-18 survey.

Table 6.6: Design effects, design factors and confidence intervals for a range of 2017-18 survey estimates²⁹

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower	Upper
DvEcoStat3	Economic status (3 classifications)	In employment	0.93	0.97	52.1%	53.9%
		Unemployed	2.09	1.44	2.6%	3.5%
		Economically inactive	0.85	0.92	43.1%	44.8%
		Don't know/refused	0.79	0.89	0.0%	0.1%
		Total	0.86	0.93		
FinBilCredNP	Household Deprivation - Ability to keep up with bills and credit commitments at present (Household)	Keeping up with all bills and commitments without any difficulties	1.35	1.16	61.1%	63.7%
		Keeping up with all bills and commitments but it is a struggle from time to time	1.35	1.16	23.7%	26.0%
		Keeping up with all bills and commitments but it is a constant struggle	1.28	1.13	6.2%	7.6%
		Falling behind with some bills and credit commitments	1.31	1.15	1.8%	2.6%
		Having real financial problems and have fallen behind with many bills and credit commitments	1.48	1.22	0.9%	1.5%
		Have no bills	1.50	1.22	0.4%	0.9%
		Don't know/refused	2.19	1.48	1.3%	2.2%
		Total	1.38	1.18		
FinBilCredP	Household Deprivation - Ability to keep up with bills and credit commitments at present (Pensioner)	Keeping up with all bills and commitments without any difficulties	1.25	1.12	80.2%	82.8%
		Keeping up with all bills and commitments but it is a struggle from time to time	1.25	1.12	12.0%	14.3%

²⁹ The variables used to calculate average design effects were all asked of the full sample. These IntPersUse, EdOverSat, WbLifeWrth, WelSpk, Dvsmokec, Dvalcushibi, Dvmvpa150, DvFGHealth1

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower	Upper
		Keeping up with all bills and commitments but it is a constant struggle	1.33	1.15	2.0%	3.1%
		Falling behind with some bills and credit commitments	1.61	1.27	0.0%	0.4%
		Having real financial problems and have fallen behind with many bills and credit commitments	0.65	0.80	0.0%	0.1%
		Have no bills	1.04	1.02	1.5%	2.3%
		Don't know/refused	1.37	1.17	0.4%	0.9%
		Total	1.12	1.06		
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	1.44	1.20	66.3%	68.3%
		Keeping up with all bills and commitments but it is a struggle from time to time	1.48	1.22	20.9%	22.7%
		Keeping up with all bills and commitments but it is a constant struggle	1.49	1.22	5.3%	6.3%
		Falling behind with some bills and credit commitments	1.64	1.28	1.4%	2.0%
		Having real financial problems and have fallen behind with many bills and credit commitments	1.84	1.36	0.7%	1.2%
		Have no bills	1.15	1.07	0.8%	1.2%
		Don't know/refused	2.51	1.58	1.2%	1.8%
		Total	1.43	1.19		
GenHealth	Health in general	Very good	1.41	1.19	34.9%	37.0%
		Good	1.40	1.19	33.1%	35.2%
		Fair	1.20	1.10	19.2%	20.9%

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower	Upper
		Bad	1.08	1.04	6.4%	7.4%
		Very bad	1.02	1.01	2.6%	3.3%
		Don't know/refused	0.80	0.90	0.0%	0.1%
		Total	1.17	1.08		
IntPersUse	Internet - Personal use of internet at home, work or elsewhere	Yes	0.68	0.83	84.3%	85.4%
		No	0.68	0.83	14.5%	15.7%
		Don't know/refused	1.70	1.31	0.0%	0.1%
		Total	0.68	0.83		
EdOverSat	Education - Overall satisfaction with the state of education in Wales (0 - 10 scale)	Mean	1.32	1.15	6.25	6.42
WbLifeWrth	Well-being - Extent of feeling that things done in life are worthwhile (0-10 scale)	Mean	1.34	1.16	7.95	8.02
WelSpk	Welsh Language - Speak Welsh	Yes	1.18	1.08	18.5%	20.1%
		No	1.24	1.12	67.8%	69.7%
		No, but have some Welsh speaking ability	1.52	1.23	11.2%	12.7%
		Don't know/refused	0.71	0.84	0.0%	0.1%
		Total	1.37	1.17		
GpOverSat	GP - Overall satisfaction with care received	Very satisfied	1.43	1.20	56.4%	60.0%
		Fairly satisfied	1.46	1.21	25.4%	28.7%
		Neither satisfied nor dissatisfied	1.77	1.33	4.3%	6.1%
		Fairly dissatisfied	1.59	1.26	5.0%	6.8%
		Very dissatisfied	1.45	1.21	3.0%	4.4%
		Don't know/refused	0.00	0.00	0.0%	0.0%

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower	Upper
		Total	1.47	1.21		
TxMstCtrl	Tax - Who currently has the most control over the taxes you pay	Local councils	1.08	1.04	5.2%	7.5%
		Welsh Government	1.43	1.20	8.3%	11.5%
		UK Government	1.40	1.18	63.8%	68.9%
		Other	1.11	1.06	0.0%	0.2%
		Don't know/refused	0.32	0.56	0.0%	0.01%
		Total	1.39	1.18		
Dvsmokec	Smoking- Currently smoke either daily or occasionally	Yes	1.49	1.22	17.9%	20.4%
		No	1.49	1.22	79.6%	82.1%
		Don't know/refused	0.00	0.00	0.0%	0.0%
		Total	1.49	1.22		
Dvecignbi	Smoking - E-cigarette used now - binary	Yes	1.58	1.26	6.3%	8.0%
		No	1.58	1.26	92.0%	93.7%
		Don't know/refused	0.42	0.64	0.0%	0.00%
		Total	1.58	1.26		
Dvalcushibi	Alcohol - usual weekly alcohol consumption: higher risk - binary	Yes	1.34	1.16	16.8%	19.1%
		No	1.35	1.16	80.5%	82.6%
		Don't know/refused	1.58	1.26	0.4%	0.9%
		Total	1.34	1.16		
Dvfv52	Fruit & Vegetables - Eaten 5+ fruit or veg the previous day	Yes	1.31	1.15	22.0%	24.6%
		No	1.32	1.15	75.2%	77.8%
		Don't know/refused	1.69	1.30	0.1%	0.314%
		Total	1.31	1.15		
Dvbmowob2	Body Mass Index - BMI Overweight or obese (excl	Yes	1.32	1.15	52.9%	55.9%
		No	1.39	1.18	34.5%	37.5%

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower	Upper
	pregnant women)	Don't know/refused	1.38	1.18	8.7%	10.5%
		Total	1.36	1.17		
DvBmiObese2	Body Mass Index - BMI Obese (excl pregnant women)	Yes	1.27	1.13	18.9%	21.3%
		No	1.33	1.15	68.9%	71.7%
		Don't know/refused	1.38	1.18	8.7%	10.5%
		Total	1.28	1.13		
Dvmvpa150	Physical activity - MVPA meets guidelines 150 minutes weekly	Yes	1.34	1.16	51.1%	54.1%
		No	1.34	1.16	45.9%	48.9%
		Don't know/refused	0.92	0.96	0.0%	0.1%
		Total	1.34	1.16		
Dvmvinact	Physical activity - MVPA inactive <30 minutes weekly	Yes	1.28	1.13	32.3%	35.1%
		No	1.28	1.13	64.9%	67.7%
		Don't know/refused	0.96	0.92	0.0%	0.01%
		Total	1.28	1.13		
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	1.41	1.19	8.4%	10.1%
		No	1.40	1.18	79.3%	81.8%
		Don't know/refused	1.39	1.18	9.3%	11.1%
		Total	1.41	1.19		
OAct4w	Sport - Current participation - Outdoor games and activities taken part in within the last 4 weeks	Football (outdoor)	1.90	1.34	6.8%	8.0%
		Jogging	1.90	1.38	10.0%	11.5%
OPur4w	Sport - Current participation - Outdoor pursuits taken part in within the last 4 weeks	Walking (over 2 miles)	1.38	1.17	31.6%	33.6%
DvFGSport	Derived variable -	Yes	1.44	1.20	30.6%	32.6%

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower	Upper
	Participation in sporting activities three or more times a week (FG indicator)	No	1.43	1.20	66.8%	68.9%
		Don't know/refused	1.20	1.09	0.4%	0.7%
		Total	1.44	1.20		
IAct4W34	Sport – Current participation – Indoor games and activities taken part in within the last 4 weeks	Swimming (indoor)	1.51	1.23	12.0%	13.5%
DvLDAny	Derived variable – Latent demand for any activity	Yes	1.19	1.09	53.5%	55.5%
		No	1.19	1.09	44.0%	46.0%
		Don't know/refused	1.33	1.15	0.4%	0.8%
		Total	1.19	1.09		
LocServAv	Local authorities – Satisfaction with availability of services and facilities	Very satisfied	1.44	1.20	24.1%	28.2%
		Fairly satisfied	1.43	1.20	36.9%	41.5%
		Neither satisfied nor dissatisfied	1.42	1.19	8.7%	11.5%
		Fairly dissatisfied	1.35	1.16	10.8%	13.8%
		Very dissatisfied	1.36	1.17	6.3%	8.7%
		No local services and facilities	1.09	1.04	3.1%	4.8%
		Don't know/refused	1.43	1.20	0.4%	1.2%
ArtsAttEv	Arts attendance – Attended arts event in part 12 months	Film showing	1.20	1.10	50.0%	52.0%
		Theatre	1.35	1.16	32.0%	34.1%
		Live music	1.42	1.19	34.8%	36.8%
		Dance performance	1.48	1.22	8.1%	9.4%
		Storytelling or reading event	1.37	1.17	4.8%	5.8%
		None of these	1.14	1.07	31.1%	32.9%
		Other	1.29	1.14	6.4%	7.5%

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower	Upper
		Don't know/refused	2.04	1.43	0.0%	0.1%
MusAtt	Museum – Visited a museum in past 12 months	Yes	1.37	1.17	39.2%	41.3%
		No	1.37	1.17	58.4%	60.5%
		Don't know/refused	1.32	1.15	0.1%	0.3%
		Total	1.37	1.17		
DvIncResp	Derived variable – Income – Total personal income from all sources over the last 12 months (NET)	Mean	0.99	1.00	£11,590	£12,647
IncResp	Income – Total personal income from all sources over the last 12 months (GROSS)	Less than £10,400 a year	1.34	1.16	30.4%	32.7%
		£10,400 to £20,799 a year	1.31	1.15	30.0%	32.3%
		£20,800 to £31,099 a year	1.36	1.16	15.5%	17.3%
		£31,100 to £41,499 a year	1.31	1.14	7.2%	8.5%
		£41,500 or more a year	1.31	1.14	6.1%	7.3%
		Don't know/refused	1.26	1.12	5.7%	6.9%
		Total	1.22	1.10		
AtFrqWik	Active travel – How frequently walked for more than 10 minutes as a means of transport, in last 3 months?	Every day	1.52	1.23	23.6%	28.3%
		Several times a week	1.39	1.18	14.2%	18.0%
		Once or twice a week	1.60	1.27	13.3%	17.4%
		Once or twice a month	1.27	1.13	5.2%	7.7%
		Less often / never	1.30	1.14	32.1%	37.0%
		Don't know/refused	0.97	0.98	1.0%	2.2%
		Total	1.36	1.17	3.0%	3.2%
Tenure	Accommodation - Tenure	I/we own it or live with the person who owns it	1.37	1.17	69.0%	70.9%
		It is rented from the local council	1.29	1.14	5.3%	6.3%
		It is rented from a housing association or housing trust	1.26	1.12	8.4%	9.5%

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower	Upper
		It is rented from a private landlord	1.56	1.25	12.9%	14.4%
		Other (e.g. live rent free or home comes with job)	1.55	1.24	1.2%	1.7%
		Don't know/refused	2.40	1.55	0.1%	0.3%
		Total	1.45	1.20		
HSat	Accommodation – Satisfaction with accommodation	Very satisfied	1.42	1.19	65.7%	67.7%
		Fairly satisfied	1.46	1.21	23.6%	25.5%
		Neither satisfied nor dissatisfied	1.68	1.30	3.3%	4.2%
		Fairly dissatisfied	1.63	1.28	2.8%	3.6%
		Very dissatisfied	1.27	1.61	1.4%	2.0%
		Don't know/refused	2.47	1.57	0.0%	0.2%
		Total	1.51	1.23		
SmkAlmNum	Fire safety – How many smoke alarms do you have in your home?	Mean	1.26	1.12	2.15	2.26
PsSchSat	Primary education – Satisfaction with school	Very satisfied	1.17	1.08	54.4%	60.0%
		Fairly satisfied	1.19	1.09	27.8%	33.1%
		Neither satisfied nor dissatisfied	1.04	1.02	3.6%	6.0%
		Fairly dissatisfied	1.11	1.05	4.2%	6.7%
		Very dissatisfied	1.11	1.05	1.2%	2.8%
		Don't know/refused	0.49	0.70	0.0%	0.1%
		Total	1.12	1.06		
DvFGLonely	Derived variable – People feeling lonely (FG indicator)	Not lonely (0)	1.31	1.14	28.9%	30.9%
		Sometimes lonely (1-3)	1.40	1.18	51.2%	53.5%
		Lonely (4-6)	1.43	1.19	15.1%	16.8%
		Don't know/refused	1.92	1.38	1.4%	2.1%
		Total	1.34	1.16		

Variable name	Variable label	Value label	Design effect	Design factor	95 % Confidence Interval	
					Lower	Upper
LongIIIAdptR	Disabled adaptations – Have or need adaptations to home due to physical or mental health or illness	Yes	1.16	1.08	25.6%	28.4%
		No	1.16	1.08	71.4%	74.3%
		Don't know/refused	1.31	1.14	0.0%	0.4%
		Total	1.16	1.08		

ANNEXES

Annex A – Kish Grid.....	63
Annex B – Sub-sampling specification.....	64
Annex C – Survey timings.....	65
Annex D – WG advance letter.....	67
Annex E – WG survey leaflet	68
Annex F – ONS A5 post card.....	69
Annex G – Data linkage showcard and flowchart.....	70
Annex H – ‘Thank You’ leaflet.....	72
Annex I – List of derived variables	73
Annex J – National Survey weights.....	93
Annex K – Outcome code descriptions	104
Annex L – Design effect and factors	106

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	Subsample	Notes
Welsh language: Attitudes towards language	2,000	Asked of all Welsh speakers plus 2k national subsample of non-Welsh speakers
Domestic fire safety	3,000	1k in each of the three Fire and Rescue Authority Areas
Hazards - noise	3,000	
Access to services and facilities	3,000	Split evenly by region (South East, South West, Mid, and North Wales)
Play and children rights	2,000	Asked of all parents/guardians plus 2k national subsample of non-parents
Confidence in education system	2,000	Asked of half of all parents plus 2k of non-parents
Satisfaction within education system	720	Asked of half of all parents plus 2k of non-parents
BMI	6,000	Split equally by health board, same subsample as other personal health topics, within hospital subsample
GP services	5,000	Split equally by health board, same subsample as other personal health topics, within hospital subsample
Hospitals	10,000	Split equally by health board
Use of HSS in Welsh	2,000	Asked of all Welsh speakers and 2k of non-Welsh speakers who had a GP or hospital appointment within last 12 months
Non-primary GP services and Medicines	4,300	Split equally by health board, within GP subsample
Diet, Alcohol, Smoking, and Physical activity(FG)	6,000	Split equally by health board, same subsample as other personal health topics, within hospital subsample
Active travel	2,000	
Tax devolution	2,000	
Problems and advice	3,000	
Volunteering	2,000	
Archives (FG)	2,000	
CASI Drugs – support	3,000	
CASI Tattoos and piercings	3,000	Half of the subsample that were asked the other personal health modules

Annex C – Survey timings

Table C.1: 2017-18 National Survey mean and median times by questionnaire section. Mean median figures are based on cases routed to the relevant section (Sample size) not including respondents that were not sampled for sub-sampled modules. 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	11,376	146.4	89.0
National identity	11,355	36.3	27.0
Ethnicity	11,385	6.5	2.0
Core - Economic status and qualifications	11,383	55.9	45.0
Core - Welsh language	11,012	19.7	13.0
Welsh language - Confidence	3,379	40.4	37.0
Welsh language - Attitudes towards language*	5,024	41.5	33.0
Well-being (ONS4)	11,062	98.0	86.0
Internet connection and use	11,065	99.7	98.0
Public service websites	8,818	38.4	35.0
Tenure and accommodation	11,015	57.0	45.0
Property ownership	5,715	7.0	5.0
Domestic fire safety*	2,480	48.0	43.0
Hazards - noise*	2,560	15.9	10.0
Energy efficiency measures	10,997	53.2	43.0
Method of payment for energy**	7,807	20.5	15.0
Welsh Housing Conditions Survey - Consent**	5,298	93.5	80.0
Banded Income**	8,072	56.8	52.0
Income from household reference person**	3,491	65.5	56.0
Income from spouse/partner**	4,293	29.7	19.0
Income from other sources**	7,757	140.1	110.0
Housing costs**	7,711	117.7	101.0
Local authorities	11,360	75.4	58.0
Access to services and facilities*	2,452	113.4	102.0
Play*	3,996	49.5	37.0
Children's rights*	3,925	21.4	20.0
Confidence and satisfaction with education system*	5,617	39.9	29.0
Primary schools	1,526	111.3	102.0
Secondary schools	1,248	76.0	69.0
Responsibility for education	1,995	23.7	22.0
Screen time of child	1,045	117.7	115.0
Physical activity of child	1,094	57.6	51.0
Diet of child	1,069	45.0	40.0
Core - Health demographic questions	11,084	15.6	11.0
BMI*	5,654	29.0	23.0

Section name	Sample size	Mean	Median
Long-term illnesses and disability adaptations*	11,344	97.2	58.0
Carers (volunteering)	11,098	16.0	13.0
GP Services*	5,059	59.1	42.0
Hospitals*	9,288	23.4	18.0
Use of HSS in Welsh*	5,338	23.9	19.0
Non-GP primary care services*	3,988	56.9	50.0
Medicines*	4,007	25.8	24.0
Diet*	5,484	83.3	77.0
Alcohol*	5,462	121.7	113.0
Smoking*	5,533	17.6	14.0
Physical activity*	5,474	100.2	95.0
Active travel*	1,886	38.1	35.0
Tax devolution*	1,810	188.1	188.0
Core - Household material deprivation / financial inclusion	6,933	84.1	77.0
Core - Household pensioner material deprivation	4,277	125.2	88.0
Core - Child material deprivation	2,500	52.4	44.0
Food poverty	11,045	15.6	14.0
Problems and advice*	2,707	78.9	69.0
Welfare reform	11,141	44.8	38.0
Volunteering*	1,823	28.4	21.0
Arts attendance	10,987	45.5	37.0
Arts participation	10,994	21.6	15.0
Heritage	11,197	51.9	46.0
Museums	11,338	43.7	34.0
Libraries	11,058	31.7	26.0
Archives*	1,867	8.3	6.0
Sports Wales - Current participation and latent demand	10,914	127.2	111.0
CASI Training module	11,330	96.5	82.0
CASI Loneliness	10,268	63.6	57.0
CASI Drugs - support*	2,487	48.3	43.0
CASI Core - Sexual orientation and religion	10,324	27.0	23.0
CASI Tattoos*	2,542	35.5	31.0
Core - Re-contact	11,070	38.6	31.0
Interviewer Check information	11,312	119.0	97.0

*Subsampled sections

**Modules included from July 2017 to March 2018

Annex D – WG advance letter

Help improve local services and receive a £10 thank you



Dear resident,
Your address has been selected for the **National Survey for Wales**. We would like someone in your household to take part in a simple interview. This is your chance to tell the Welsh Government about your experiences and views on health and the NHS, schools, sports, housing, council services, and other aspects of your life.

You can help us improve local services
Taking part will help improve services in your local area and across Wales. We will keep your answers confidential and only use them for research purposes. With your help, we can gain a better understanding of the issues that affect life in Wales.

We need to interview somebody in your household
An interviewer will call round to arrange a convenient time for an interview. They will select one person in your household, aged 16 or over, to take part. Please show this letter to any other people in your household in case your interviewer visits when you are not at home.

The study is being carried out for the Welsh Government by the Office for National Statistics (ONS). If you would like to arrange an appointment, request a Welsh speaking interviewer, or if you have any questions please call 0800 496 2119. Your interviewer is available during the day, evenings and at weekends and will carry an ONS identity card.

Thank you
To say thank you for taking part, you will receive a **£10 gift voucher** that can be spent in high street shops or online. Thank you for helping us with this important study.

Dr Steven Marshall
Chief Social Research Officer
Welsh Government

Helpu gwella gwasanaethau lleol a chael £10 fel diolch



Annwyl breswilydd,
Mae eich cyfeiriad wedi'i ddewis ar gyfer **Arolwg Cenedlaethol Cymru**. Hoffem i rywun yn eich cartref i gymryd rhan mewn cyfweiliad syml. Dyma'ch cyfle i ddweud wrth Llywodraeth Cymru am eich profiadau ac i roi eich barn am iechyd a'r GIG, ysgolion, chwaraeon, tai, gwasanaethau cyngor, ac agweddau eraill ar eich bywyd.

Gallwch helpu ni i wella gwasanaethau lleol
Bydd gymryd rhan yn helpu i wella'r gwasanaethau yn eich ardal leol a Cymru gyfan. Byddwn yn cadw eich atebion yn gyfrinachol ac yn eu defnyddio at ddbenion ymchwil yn unig. Gyda'ch help, gallwn gael gwell dealltwriaeth o'r materion sy'n effeithio ar fywyd yng Nghymru.

Mae angen i ni gyfweiliad â rhywun yn eich cartref
Bydd cyfweiliad yn ymweld â'ch cyfeiriad er mwyn trefnu amser cyfleus i gynnal cyfweiliad. Bydd y cyfweiliad yn dewis un person, 16 oed neu drosodd, yn eich cartref i gymryd rhan. Dangoswch y llythyr hwn i unrhyw un arall sy'n byw yn eich cartref rhag ofn na fyddwch gartref pan fydd y cyfweiliad yn galw.

Cynhelir yr astudiaeth ar ran Llywodraeth Cymru gan y Swyddfa Ystadegau Gwladol (SYG). Ffoniwch 0800 496 2119 os hoffech drefnu apwyntiad, gofyn am gyfweiliad sy'n siarad Cymraeg, neu os oes gennych unrhyw gwestiynau. Mae eich cyfweiliad ar gael yn ystod y dydd, gyda'r nos ac ar y penwythnos ac maent yn cario cerdyn adnabod yr SYG.

Diolch
I ddiwedd diolch am gymryd rhan, byddwch yn cael **taleg rhodd gwerth £10** a gellir ei wario mewn siopau stryd fawr neu ar-lein. Diolch i chi am ein helpu gyda'r astudiaeth bwysig hon.

Dr Steven Marshall
Prif Swyddog Ymchwil Gymdeithasol
Llywodraeth Cymru

www.gov.wales/nationalsurveyinfo

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

WG AL NSW 10/17 Welsh Government, Cathays Park, Cardiff, CF10 3NQ

www.llyw.cymru/arolwgenedlaetholgyby

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

WG AL NSW 10/17 Llywodraeth Cymru, Parc Cathays, Caerdydd, CF10 3NQ

A high-resolution image of the 2017-18 National Survey advance letter can be found at <https://gov.wales/docs/caecd/research/2017/170503-national-survey-letter-2017-18-en.pdf>

Annex E – WG survey leaflet



National Survey for Wales

Llywodraeth Cymru
Welsh Government

Office for National Statistics

National Survey for Wales, 2014-15

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 nationalsurveyforwales@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 04/17



Arolwg Cenedlaethol Cymru

Llywodraeth Cymru
Welsh Government

Swyddfa Ystadegau Gwladol

Arolwg Cenedlaethol Cymru, 2014-15

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 faterion 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 swyddogol, 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 ym mhob rhan o Gymru. Mae eich cyfraniad yn wirfoddol, ond mae'n bwysig iawn i ni oherwydd ni allwn 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 cyfweilyad. Os bydd y cyfweilydd yn galw ar adeg pan fyddwch yn brysyr, 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 unol â'r Cod Ymarfer ar gyfer Ystadegau Swyddogol. 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 yn gwmys i'ch gwybodaeth bob amser.

A allai i gael fy nghyfweld yn Gymraeg?

Gallwch. Os hoffech gael eich cyfweld yn Gymraeg, dywedwch wrth y cyfweilydd neu ffoniwch y rhif rhadffôn **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 arolwgcnedlaetholcymru@ons.gsi.gov.uk. Mae galwadau am ddim o ffonau symudol yn ogystal â linellau 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/arolwgcnedlaetholgyb

WG LFT NSW 04/17

A high resolution image of the 2017-18 National Survey leaflet can be found at <http://gov.wales/docs/caecd/research/2017/170503-national-survey-leaflet-2017-18-en.pdf>

Annex F – ONS A5 postcard

 Office for
National Statistics
Swyddfa
Ystadegau Gwladol



National Survey for Wales Arolwg Cenedlaethol Cymru



www.gov.wales/nationalsurveyinfo
www.llyw.cymru/arolwgcenedlaetholgwyb

INT AL NSW 04/17

Dear resident,

We recently wrote to you about the
National Survey for Wales.

This study is being carried out for the Welsh Government by the Office for National Statistics (ONS). I work for ONS and will call round in the next week. I will have an ONS identity card.

You will receive a **£10 gift voucher** to say thank you for taking part.

I look forward to meeting you soon.

Annwyl breswilydd,

Ysgrifennom atoch yn ddiweddar am yr
Arolwg Cenedlaethol Cymru.

Mae'r astudiaeth hon yn cael ei chynnal gan y Swyddfa Ystadegau Gwladol (SYG) ar ran Llywodraeth Cymru. Rwy'n gweithio i'r SYG a byddaf yn galw gyda chi yn ystod yr wythnos nesaf. Byddaf yn cario cerdyn adnabod SYG.

Byddwch yn derbyn **taleb gwerth £10** i ddiolch i chi am gymryd rhan.

Edrychaf ymlaen i gyfarfod â chi cyn hir.

My name / Fy enw: _____

Interviewer number / Rhif cyfwelydd: _____

Telephone number / Rhif ffôn: _____



A high resolution image of the 2017-18 A5 Postcard can be found at

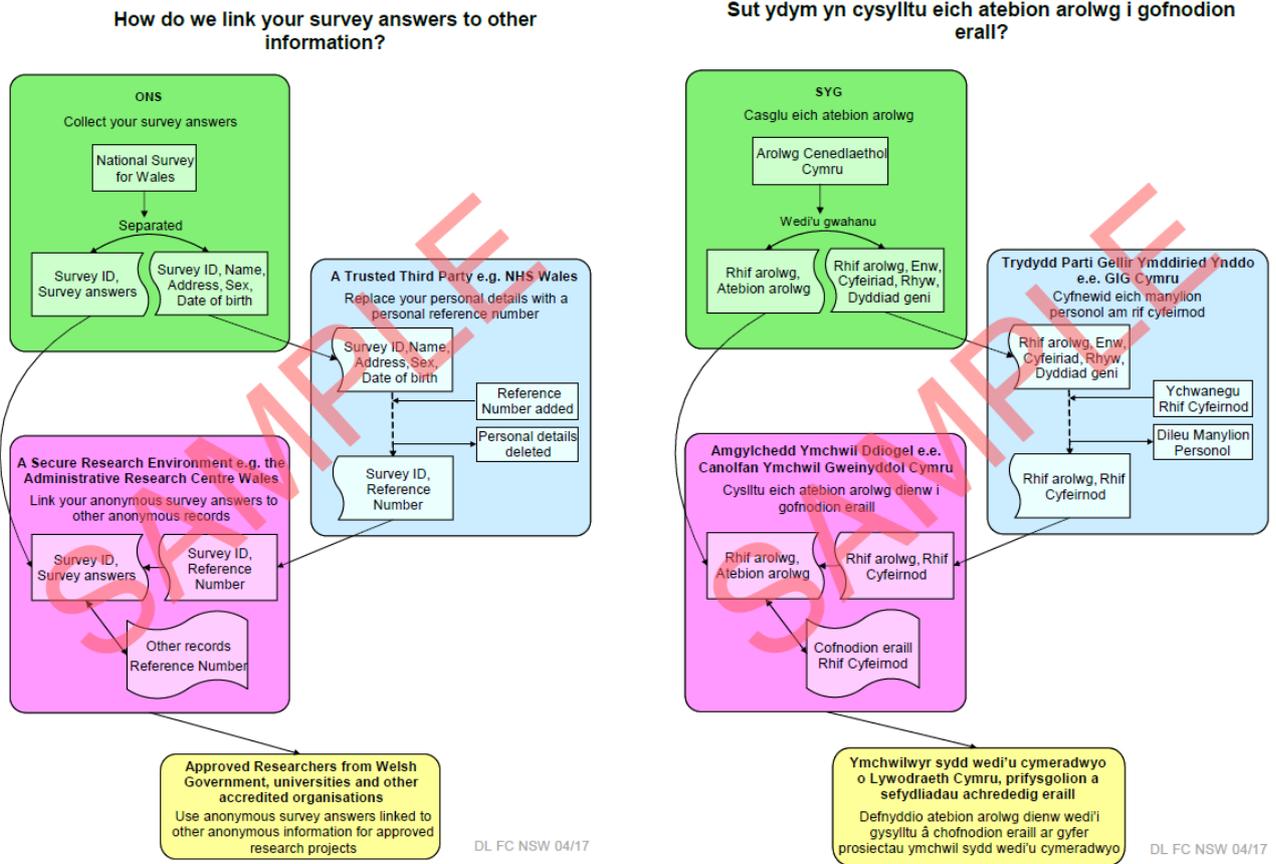
<http://gov.wales/docs/caecd/research/2017/170503-national-survey-postcard-2017-18-ency.pdf>

Annex G – Data linkage showcard and flowchart

Figure G.1: Data linkage showcard

<h3>National Survey for Wales</h3> <p>Data Linkage</p>  <p>Making your survey answers even more valuable</p> <p>What do we want to do?</p> <p>The Welsh Government would like to be able to link your anonymised survey answers to other anonymised information about you which is available to the Welsh Government, the NHS or other public organisations. For example - your GP, hospital and education records.</p> <p>Why do we want to link your survey answers?</p> <p>Linking your survey answers will give approved researchers, 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.</p> <p>What will happen to my information?</p> <p>The Welsh Government, a Trusted Third Party and a Secure Research Environment will work together to link your survey answers with other anonymised information about you which is available to the Welsh Government, the NHS and other public organisations.</p> <p>A Trusted Third Party is an organisation with secure facilities for linking data such as the Office for National Statistics or the NHS Wales. A Secure Research Environment is a setting in which research can be done using anonymised information and where checks are carried out to make sure that identities are not revealed by the results of the analysis. Your name, address and postcode will remain separate from your survey answers at all times and will not be included in the linked data.</p> <p>Who will be able to use the linked data?</p> <p>The data will be made available using a Secure Research Environment to approved researchers from the Welsh Government, universities or other accredited organisations for projects that have been approved by the Welsh Government. Only projects with a clear public benefit will be approved.</p> <p>Before researchers are allowed to access data using a secure research environment, they must complete a training course to make sure they understand how to handle linked anonymised data safely, lawfully and responsibly.</p> <p>Where can I get more information about this?</p> <p>For more information please visit the National Survey for Wales website: www.gov.wales/nationalsurveydata/link</p> <p>The information you give us is protected by law and is treated as confidential. It will be used for statistical purposes only.</p> <p>Welsh Government, Cathays Park, Cardiff, CF10 3NQ DL SC NSW 04/17</p>	<h3>Arolwg Cenedlaethol Cymru</h3> <p>Cysylltu Data</p>  <p>Gwneud eich atebion arolwg hyd yn oed yn fwy gwerthfawr</p> <p>Beth y dymunwn ei wneud?</p> <p>Hoffai Llywodraeth Cymru gysylltu eich atebion arolwg dienw chi, i wybodaeth ddienw arall amdanoch chi sydd ar gael i Lywodraeth Cymru, y Gwasanaeth Iechyd Gwladol (GIG) neu sefydliadau cyhoeddus eraill. Er enghraifft, cofnodion meddyg teulu, ystyby a chofnodion addysg.</p> <p>Pam rydym am gysylltu eich atebion arolwg?</p> <p>Bydd cysylltu eich atebion yn rhoi llawer o wybodaeth ychwanegol i ymchwilyr sydd wedi'u cymeradwyo, Llywodraeth Cymru a sefydliadau cyhoeddus eraill fel y gallant gael darlun cliriach o faterion yng Nghymru a sut i ddelio â nhw.</p> <p>Beth fydd yn digwydd i'm gwybodaeth?</p> <p>Bydd Llywodraeth Cymru, Trydydd Parti Gellir Ymddiried Ynddo ac Amgylchedd Ymchwil Ddiogel yn cydweithio er mwyn cysylltu eich atebion arolwg i gofnodion eraill amdanoch chi sydd ar gael i Lywodraeth Cymru, y GIG neu sefydliadau cyhoeddus eraill.</p> <p>Mae Trydydd Parti Gellir Ymddiried Ynddo yn sefydlid gyda chyfleusterau diogel ar gyfer cysylltu data fel y Swyddfa Ystadegau Gwladol neu'r GIG Cymru. Mae Amgylchedd Ymchwil Ddiogel yn lleoliad lle gellir defnyddio gwybodaeth ddienw i ymchwilio a lle cynhelir gwiriadau i sicrhau nad yw'r hunaniaethau yn cael eu dangos gan ganlyniadau'r dadansoddiad. Bydd eich enw, cyfeiriad a'ch cod post yn cael eu cadw ar wahân i'ch atebion arolwg ac ni fyddant yn cael eu cynnwys yn y data cysylltiedig.</p> <p>Pwy fydd yn gallu defnyddio'r data sydd wedi cael eu cysylltu?</p> <p>Bydd y data ar gael drwy ddefnyddio Amgylchedd Ymchwil Ddiogel i ymchwilyr sydd wedi'u cymeradwyo o Lywodraeth Cymru, prifysgolion neu sefydliadau achrededig ar gyfer prosiectau a gymeradwydd gan Lywodraeth Cymru. Dim ond prosiectau a budd cyhoeddus dir bydd yn cael eu cymeradwyo.</p> <p>Cyn y caniateir ymchwilyr i gael gafael ar ddata gan ddefnyddio amgylchedd ymchwil diogel, rhaid iddynt gwblhau cwrs hyfforddi i wneud yn si'r eu bod yn deall sut i ddelio â data dienw cysylltiedig yn ddiogel, yn gyfreithlon ac yn gyfrifol.</p> <p>Ble gallaf gael mwy o wybodaeth am hyn?</p> <p>I gael rhagor o wybodaeth ewch i wefan Arolwg Cenedlaethol Cymru: www.llyw.cymru/cysylltudataarolwgenedlaethol</p> <p>Mae'r wybodaeth rydych chi'n ei rhoi i ni yn cael ei diogelu gan y gyfraith ac yn cael ei thrin yn gyfrinachol. Caiff ei defnyddio at ddiibenion ystadegol yn unig.</p> <p>Llywodraeth Cymru, Parc Cathays, Caerdydd, CF10 3NQ DL SC NSW 04/17</p>
--	--

Figure G.2: Data linkage flowchart



Annex H – ‘Thank You’ leaflet



National Survey for Wales

Thank you

www.gov.wales/nationalsurveyinfo

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.arts.wales
029 2044 1300

Sport Wales
Responsible for developing and promoting sport and physical activity in Wales.
www.sport.wales
0300 300 3111

Natural Resources Wales
Working to maintain the environment and natural resources of Wales.
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
Free, independent advice on money issues.
www.moneyadviceservice.org.uk
0800 138 7777

Citizens Advice
Advice on a wide range of issues.
www.citizensadvice.org.uk/wales
0344 477 2020

Time to Change Wales
Advice on mental health issues.
www.timetochangewales.org.uk

The organisations listed above are independent of the Welsh Government.

Nest
Advice to help make homes warmer.
www.nestwales.org.uk
0808 808 2244

This interview was carried out by:
Interviewer name:

Interviewer number:

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

Office for National Statistics

TYL NSW 04/17



Arolwg Cenedlaethol Cymru

Diolch yn Fawr

www.llyw.cymru/arolwgcenedlaetholgwyb

Diolch am gymryd rhan yn Arolwg Cenedlaethol Cymru

Rydym yn gwerthfawrogi eich bod yn rhoi eich amser i gymryd rhan yn yr astudiaeth bwysig hon.

Bydd yr wybodaeth yr ydych chi wedi ei darparu yn cael ei thrin yn gwbl gyfrinachol a dim ond yn cael ei defnyddio at ddibenion ystadegol ac ymchwil.

Am ragor o wybodaeth am yr astudiaeth, neu i weld canlyniadau blaenorol, ewch i'n gwefan:
www.llyw.cymru/arolwgcenedlaethol

Gwybodaeth gyswllt defnyddiol

Cyngor Celfyddydau Cymru
Y corff sy'n datblygu a chyllido'r celfyddydau yng Nghymru.
www.celf.cymru
0292 044 1300

Chwaraeon Cymru
Yn gyfrifol am ddatblygu a hybu chwaraeon a gweithgaredd corfforol yng Nghymru.
www.chwaraeon.cymru
0845 045 0904

Cyfoeth Naturiol Cymru
Gweithio i gynnal yr amgylchedd ac adnoddau naturiol Cymru.
www.cyfoethnaturiol.cymru
0300 065 3000

Galw IECHYD Cymru
Cyngor a gwybodaeth iechyd, 24 awr y dydd.
www.galwiechycymru.wales.nhs.uk
0845 4647

Gwasanaeth Cyngor Ariannol
Darparu cyngor am ddim a diduedd.
www.moneyadviceservice.org.uk/cy
0300 500 5555

Y Ganolfan Cyngor ar Bopeth
Darparu gwybodaeth a chyngor ar amrywiaeth eang o faterion.
www.citizensadvice.org.uk/cymraeg
0345 404 0505

Amser i Newid Cymru
Darparu gwybodaeth a chyngor ar faterion iechyd meddwl.
www.amserinewidcymru.org.uk

Mae'r sefydliadau a restrir uchod yn annibynnol o Lywodraeth Cymru

Nyth
Cyngor i helpu i wneud cartrefi'n gynhesach.
<https://www.nestwales.org.uk/cy/hafan>
0808 808 2244

Cynhaliwyd y cyfweiliad hwn gan:
Enw'r cyfweilydd:

Rhif y cyfweilydd:

Yn gweithio i'r Swyddfa Ystadegau Gwladol ar ran Llywodraeth Cymru.

Swyddfa Ystadegau Gwladol

TYL NSW 04/17

Annex I – List of derived variables

Variable name	Short label - English	Short topic
Dv2011OAC	Derived variable - ONS Output Area Classification	Geographical area
DvAdBdLnMD	Derived variable - Respondent routed to additional adult (non-pensioner) material deprivation questions	Adult material deprivation
DvAddnet	Derived variable - Income from other jobs over the last 12 months (NET)	Income
DvAdMatDep	Derived variable - Non-pensioner adults in material deprivation	Adult material deprivation
DvAdvProb	Derived variable - Had advice or support from any organisations in past 12 months [SampleProblemsWeight]	Problems
DvAgeGrp3	Derived variable - Age (3 groups)	Demographic information
DvAgeGrp5	Derived variable - Age (5 groups)	Demographic information
DvAgeGrp7	Derived variable - Age (7 groups)	Demographic information
DvAgeGrp80	Derived variable - Age (5 groups, with 80+)	Demographic information
Dvalcmaxagbi	Derived variable - Max daily alcohol consumption last week: above guidelines - binary [SamplePopHlthWeight]	Alcohol consumption
Dvalcmaxbibi	Derived variable - Max daily alcohol consumption last week: binge - binary [SamplePopHlthWeight]	Alcohol consumption
Dvalcmaxgrp	Derived variable - Max daily alcohol consumption last week groups [SamplePopHlthWeight]	Alcohol consumption
Dvalcmaxvhbi	Derived variable - Max daily alcohol consumption last week: very heavy drinking over 3 times guidelines - binary [SamplePopHlthWeight]	Alcohol consumption
Dvalcusgrp	Derived variable - Usual weekly alcohol consumption groups [SamplePopHlthWeight]	Alcohol consumption
Dvalcushibi	Derived variable - Usual weekly alcohol consumption binary - Higher risk, drinking above guidelines (>14 units) [SamplePopHlthWeight]	Alcohol consumption
DvArts	Derived variable - People attending or participating in arts, culture or heritage activities	Arts, culture and heritage
DvArtsAttEv	Derived variable - Attended an arts events in past 12 months	Arts, culture and heritage
DvArtsFreq	Derived variable - How often attended arts event, in own time or to	Arts, culture and heritage

Variable name	Short label - English	Short topic
	volunteer, in past 12 months	
DvArtsPart	Derived variable - Participated in an arts events in past 12 months	Arts, culture and heritage
DvArtsPartFreq	Derived variable - How often participated in an arts event, in own time or to volunteer, in past 12 months	Arts, culture and heritage
DvArtsPartWhy	Derived variable - Participated in an arts event in own time or to volunteer in past 12 months	Arts, culture and heritage
DvArtsWhy	Derived variable - Attended arts event in own time or to volunteer in past 12 months	Arts, culture and heritage
DvAsEcArea	Derived variable - Assembly Economic Fora Area	Geographical area
DvBedroom	Derived Variable - Sufficient number of bedrooms for the household	Housing
DvBenefits	Derived variable - Income - Receiving any benefits?	Income
DvBenRec	Derived variable - Income from benefits received over the last 12 months (GROSS)	Income
Dvbmi	Derived variable - Body Mass Index [SamplePopHlthWeight]	BMI
Dvbmi2	Derived variable - Body Mass Index (excl pregnant women) [SamplePopHlthWeight]	BMI
Dvbmihealthy2	Derived variable - Body Mass Index classification (excl pregnant women) (healthy BMI) [SamplePopHlthWeight]	BMI
Dvbmilev2	Derived variable - Body Mass Index classification (excl pregnant women) [SamplePopHlthWeight]	BMI
Dvbmimorb2	Derived variable - Body Mass Index classification (excl pregnant women) (incl. 40+) [SamplePopHlthWeight]	BMI
Dvbmiobese2	Derived variable - BMI Obese (excl pregnant women) [SamplePopHlthWeight]	BMI
Dvbmiowob2	Derived variable - BMI Overweight or obese (excl pregnant women) [SamplePopHlthWeight]	BMI
DvBUA	Derived variable - Built-up areas	Geographical area
DvCAct7	Derived variable - Child active 1 hour or more a day 7 days a week [SampleChildWeight]	Child physical activity
DvCactnum	Derived variable - Number of days in week child active for 1 hour or more [SampleChildWeight]	Child physical activity

Variable name	Short label - English	Short topic
DvCcokeday	Derived variable - Child drinks coke etc. every day [SampleChildWeight]	Child diet
DvCdcokeday	Derived variable - Child drinks diet coke etc. every day [SampleChildWeight]	Child diet
DvCfruitday	Derived variable - Child eats fruit every day [SampleChildWeight]	Child diet
DvChBdLnMD	Derived variable - Respondent routed to additional child material deprivation questions	Material deprivation
DvChildEdu	Derived variable - Respondent has a child in full-time education	Other
DvChMatDep	Derived variable - Child(ren) in material deprivation	Material deprivation
DvComFrst	Derived variable – Communities First Cluster or not	Geographical area
DvComFrstClust	Derived variable – Communities First Cluster	Geographical area
DvCvegday	Derived variable - Child eats veg every day [SampleChildWeight]	Child diet
Dvdevicewd1	Derived variable - Electronic device used on weekday for 1 hour or more a day [SampleChildWeight]	Child screen time
Dvdevicewd2	Derived variable - Electronic device used on weekday for 2 hours or more a day [SampleChildWeight]	Child screen time
Dvdevicewe1	Derived variable - Electronic device used on weekend for 1 hour or more a day [SampleChildWeight]	Child screen time
Dvdevicewe2	Derived variable - Electronic device used on weekday for 2 hours or more a day [SampleChildWeight]	Child screen time
DvDisputes	Derived variable - Personally experienced any problems or disputes in past 12 months [SampleProblemsWeight]	Other
DvDn7dbi	Derived variable - Drank in last 7 days - binary [SamplePopHlthWeight]	Alcohol consumption
DvDnFreq0	Derived variable - Drinking frequency (incl. non-drinkers) [SamplePopHlthWeight]	Alcohol consumption
Dvecigevbi	Derived variable - E-cigarette ever used - binary [SamplePopHlthWeight]	Smoking
Dvecignbi	Derived variable - E-cigarette used now - binary [SamplePopHlthWeight]	Smoking
DvEcoStat	Derived variable - Economic Status	Employment
DvEcoStat3	Derived variable - Economic Status (3 classifications)	Employment
DvElecWard	Derived variable - Electoral Wards	Geographical area
DvElecWardCd	Derived variable - Electoral Wards	Geographical

Variable name	Short label - English	Short topic
	(geography codes)	area
Dvfairbadhealth	Derived variable - Fair or bad health	General health
DvFGArts	Derived variable - People attending or participating in arts, culture or heritage activities at least three times a year (FG indicator)	Arts, culture and heritage
DvFGHealth1	Derived variable - People with fewer than 2 healthy lifestyle behaviours (not smoking, healthy weight, eat 5 fruit or veg, not drinking above guidelines, active). (FG indicator) [SamplePopHlthWeight]	General health
DvFGHealth4	Derived variable - People with 4 or 5 healthy lifestyle behaviours (not smoking, healthy weight, eat 5 fruit or veg, not drinking above guidelines, active). (FG indicator) [SamplePopHlthWeight]	General health
DvFGHealthyB	Derived variable - Number of healthy lifestyle behaviours (not smoking, healthy weight, eat 5 fruit or veg, not drinking above guidelines, active) [SamplePopHlthWeight]	General health
DvFGLonely	Derived variable - People feeling lonely (FG indicator)	Wellbeing
DvFGLonelySc	Derived variable - Short loneliness scale (6 items)	Wellbeing
DvFGSport	Derived variable - Participation in sporting activities three or more times a week (FG indicator)	Sport - participation
DvFGVol	Derived variable - People who volunteer (formally or informally) [SampleVolunteerWeight]	Volunteering
DvFGWelsh	Derived variable - People using Welsh language in everyday life (FG indicator 36)	Welsh language - use
DvFinBilCred	Derived variable - Keeping up with bills	Material deprivation
DvFireReg	Derived variable - Fire & Rescue Service region	Geographical area
DvFirstImp	Derived Variable - Overall condition of property	Welsh housing conditions Survey
Dvfrix	Derived variable - Moderate or vigorous activity on Friday [SamplePopHlthWeight]	Physical activity
DvFrqPrtSport3	Derived variable - Frequency of participation in sport (average per week)	Sport - participation
DvFrqPrtSport4	Derived variable - Frequency of participation in sport (average per week)	Sport - participation

Variable name	Short label - English	Short topic
Dvfrtpor2	Derived variable - Total portion of fruit [SamplePopHlthWeight]	Diet
DvFusProg	Derived variable – Fusion Programme Communities First Cluster areas	Geographical area
Dvfv52	Derived variable - Eaten 5+ fruit or veg the previous day - binary [SamplePopHlthWeight]	Diet
Dvfv5aday2	Derived variable - No of portions of fruit and vegetables eaten yesterday [SamplePopHlthWeight]	Diet
Dvgenhealth3	Derived variable - General health (3 groups)	General health
Dvgoodhealth	Derived variable - Good general health	General health
DvHeritAtt	Derived variable - Visited heritage site in past 12 months	Arts, culture and heritage
DvHh60OrOvr	Derived variable - Household contains adult aged 60 or over	Demographic information
DvHhBenefits	Derived variable - Income - Anyone in household receiving any benefits?	Income
DvHhInc	Derived variable - Income - Household income from all sources over the last 12 months (NET)	Income
DvHhIncCost	Derived variable - Household income after housing costs - over the last 12 months (NET)	Income
DvHhType	Derived variable - Household type	Demographic information
DvHhUnd5	Derived variable - Household contains child aged under 5	Demographic information
DvHhUnd16	Derived variable - Household contains child aged under 16	Demographic information
DvHhUnd19	Derived variable - Household contains child aged under 19	Demographic information
DvHiQual1	Derived variable - Highest educational qualification (all apprenticeships - NQF level 3)	Education
DvHiQual2	Derived variable - Highest educational qualification (apprenticeship variables and responses combined)	Education
Dvhtcm	Derived variable - Height : in cm - computed from Feet/inches if necessary [SamplePopHlthWeight]	BMI
Dvillchap1	Derived variable - Individual has Neoplasms and benign growths	Illness
Dvillchap2	Derived variable - Individual has Endocrine and metabolic diseases	Illness
Dvillchap3	Derived variable - Individual has Mental disorders	Illness
Dvillchap4	Derived variable - Individual has Nervous system illness	Illness

Variable name	Short label - English	Short topic
Dvillchap5	Derived variable - Individual has Eye complaints	Illness
Dvillchap6	Derived variable - Individual has Ear complaints	Illness
Dvillchap7	Derived variable - Individual has Heart and circulatory illness	Illness
Dvillchap8	Derived variable - Individual has Respiratory system illness	Illness
Dvillchap9	Derived variable - Individual has Digestive system illness	Illness
Dvillchap10	Derived variable - Individual has Genito-urinary system illness	Illness
Dvillchap11	Derived variable - Individual has Musculoskeletal illness	Illness
Dvillchap12	Derived variable - Individual has Infectious diseases	Illness
Dvillchap13	Derived variable - Individual has Blood and related organs illness	Illness
Dvillchap14	Derived variable - Individual has Skin complaints	Illness
Dvillchap15	Derived variable - Individual has Other illness	Illness
Dvillchap16	Derived variable - Individual has Unclassifiable	Illness
Dvillness0	Derived variable - Individual has No longstanding illness	Illness
Dvillness1	Derived variable - Individual has Cancer (neoplasm) including lumps, masses, tumours and growths and benign (non-malignant) lumps and cysts	Illness
Dvillness2	Derived variable - Individual has Diabetes incl. Hyperglycaemia	Illness
Dvillness3	Derived variable - Individual has Other endocrine - metabolic	Illness
Dvillness4	Derived variable - Individual has Mental illness - anxiety - depression - nerves (nes)	Illness
Dvillness5	Derived variable - Individual has Mental handicap	Illness
Dvillness6	Derived variable - Individual has Epilepsy - fits - convulsions	Illness
Dvillness7	Derived variable - Individual has Migraine - headaches	Illness
Dvillness8	Derived variable - Individual has Other problems of nervous system	Illness
Dvillness9	Derived variable - Individual has Cataract - poor eye sight - blindness	Illness
Dvillness10	Derived variable - Individual has Other eye complaints	Illness
Dvillness11	Derived variable - Individual has Poor hearing - deafness	Illness
Dvillness12	Derived variable - Individual has	Illness

Variable name	Short label - English	Short topic
	Tinnitus - noises in the ear	
Dvillness13	Derived variable - Individual has Meniere's disease - ear complaints causing balance problems	Illness
Dvillness14	Derived variable - Individual has Other ear complaints	Illness
Dvillness15	Derived variable - Individual has Stroke - cerebral haemorrhage - cerebral thrombosis	Illness
Dvillness16	Derived variable - Individual has Heart attack - angina	Illness
Dvillness17	Derived variable - Individual has Hypertension - high blood pressure - blood pressure (nes)	Illness
Dvillness18	Derived variable - Individual has Other heart problems	Illness
Dvillness19	Derived variable - Individual has Piles - haemorrhoids incl. Varicose Veins in anus	Illness
Dvillness20	Derived variable - Individual has Varicose veins - phlebitis in lower extremities	Illness
Dvillness21	Derived variable - Individual has Other blood vessels - embolic	Illness
Dvillness22	Derived variable - Individual has Bronchitis - emphysema	Illness
Dvillness23	Derived variable - Individual has Asthma	Illness
Dvillness24	Derived variable - Individual has Hayfever	Illness
Dvillness25	Derived variable - Individual has Other respiratory complaints	Illness
Dvillness26	Derived variable - Individual has Stomach ulcer - ulcer (nes) - abdominal hernia - rupture	Illness
Dvillness27	Derived variable - Individual has Other digestive complaints (stomach, liver, pancreas, bile ducts, small intestine - duodenum, jejunum and ileum)	Illness
Dvillness28	Derived variable - Individual has Complaints of bowel - colon (large intestine, caecum, bowel, colon, rectum)	Illness
Dvillness29	Derived variable - Individual has Complaints of teeth - mouth - tongue	Illness
Dvillness30	Derived variable - Individual has Kidney complaints	Illness
Dvillness31	Derived variable - Individual has Urinary tract infection	Illness
Dvillness32	Derived variable - Individual has Other bladder problems - incontinence	Illness

Variable name	Short label - English	Short topic
Dvillness33	Derived variable - Individual has Reproductive system disorders	Illness
Dvillness34	Derived variable - Individual has Arthritis - rheumatism - fibrositis	Illness
Dvillness35	Derived variable - Individual has Back problems - slipped disc - spine - neck	Illness
Dvillness36	Derived variable - Individual has Other problems of bones - joints - muscles	Illness
Dvillness37	Derived variable - Individual has Infectious and parasitic disease	Illness
Dvillness38	Derived variable - Individual has Disorders of blood and blood forming organs	Illness
Dvillness39	Derived variable - Individual has Skin complaints	Illness
Dvillness40	Derived variable - Individual has Other complaints	Illness
Dvillness41	Derived variable - Individual has Unclassifiable	Illness
DvIncResp	Derived variable - Income - Total personal income from all sources over the last 12 months (NET)	Income
DvIncResp	Derived variable – Income – Total personal income from all sources over the last 12 months (grouped) (NET)	Income
DvInstEnDn	Derived variable - Energy efficiency - Home improvement carried out for energy saving in past 12 months	Energy
DvInstEnFinSup	Derived variable - Energy efficiency - Financial support received for energy saving home improvements	Energy
DvIntSkills	Derived variable - Internet skills - Number of internet activities carried out in the past 4 weeks	Internet
DvJobSatGrp4	Derived variable - Overall satisfaction with present job (grouped)	Employment
DvLA	Derived variable - Local Authority	Geographical area
DvLACd	Derived variable - Local Authority (geography codes)	Geographical area
DvLDAny	Derived variable - Latent demand for any activity	Sport - latent demand
DvLDAnyBask	Derived variable - Latent demand for any basketball	Sport - latent demand
DvLDAnyCyc	Derived variable - Latent demand for any cycling (bmx/cycling/mountain biking)	Sport - latent demand
DvLDAnyDance	Derived variable - Latent demand for any dance	Sport - latent demand

Variable name	Short label - English	Short topic
DvLDAAnyFootb	Derived variable - Latent demand for any indoor or outdoor football or futsal	Sport - latent demand
DvLDAAnyInGam	Derived variable - Latent demand for any indoor game or activity	Sport - latent demand
DvLDAAnyInGamExclEM	Derived variable - Latent demand for any indoor game or activity excluding exercise machines	Sport - latent demand
DvLDAAnyMA	Derived variable - Latent demand for any martial arts	Sport - latent demand
DvLDAAnyOutGam	Derived variable - Latent demand for any outdoor game or activity	Sport - latent demand
DvLDAAnyOutPur	Derived variable - Latent demand for any outdoor pursuit	Sport - latent demand
DvLDAAnyOutPurExclWik	Derived variable - Latent demand for any outdoor pursuit excluding walking	Sport - latent demand
DvLDAAnyRug	Derived variable - Latent demand for any rugby	Sport - latent demand
DvLDAAnySwim	Derived variable - Latent demand for any swimming	Sport - latent demand
DvLDAthRun	Derived variable - Latent demand for indoor or outdoor athletics or running or jogging	Sport - latent demand
DvLDCanoe	Derived variable - Latent demand for canoeing/kayaking	Sport - latent demand
DvLDClimb	Derived variable - Latent demand for climbing and mountaineering/rock climbing	Sport - latent demand
DvLDCycMB	Derived variable - Latent demand for cycling/mountain biking	Sport - latent demand
DvLDExclSnk	Derived variable - Latent demand for any activity excluding billiards/snooker	Sport - latent demand
DvLDExclSnkWik	Derived variable - Latent demand for any activity excluding billiards/snooker and walking	Sport - latent demand
DvLDExclWik	Derived variable - Latent demand for any activity excluding walking	Sport - latent demand
DvLDHock	Derived variable - Latent demand for hockey (including street hockey)	Sport - latent demand
DvLDInOutAth	Derived variable - Latent demand for any indoor or outdoor athletics only	Sport - latent demand
DvLDInOutAthInclRun	Derived variable - Latent demand for any indoor or outdoor athletics incl. running	Sport - latent demand
DvLDInOutBowls	Derived variable - Latent demand for any indoor or outdoor bowls	Sport - latent demand
DvLDInOutClimb	Derived variable - Latent demand for any indoor or outdoor climbing	Sport - latent demand
DvLDInOutCric	Derived variable - Latent demand for any indoor or outdoor cricket	Sport - latent demand

Variable name	Short label - English	Short topic
DvLDInOutDive	Derived variable - Latent demand for any indoor or outdoor Diving	Sport - latent demand
DvLDInOutFootB	Derived variable - Latent demand for any indoor or outdoor football only	Sport - latent demand
DvLDInOutHock	Derived variable - Latent demand for any indoor or outdoor hockey	Sport - latent demand
DvLDInOutNetB	Derived variable - Latent demand for any indoor or outdoor netball	Sport - latent demand
DvLDInOutSkatB	Derived variable - Latent demand for any indoor or outdoor skateboarding	Sport - latent demand
DvLDInOutTai	Derived variable - Latent demand for any indoor or outdoor Tai chi	Sport - latent demand
DvLDInOutTen	Derived variable - Latent demand for any indoor or outdoor tennis	Sport - latent demand
DvLDInOutVolB	Derived variable - Latent demand for any indoor or outdoor volleyball	Sport - latent demand
DvLDRug	Derived variable - Latent demand for rugby (league or union)	Sport - latent demand
DvLDSail	Derived variable - Latent demand for sailing/yachting	Sport - latent demand
DvLDSshoot	Derived variable - Latent demand for target shooting (including clay)	Sport - latent demand
DvLDSnk	Derived variable - Latent demand for snooker or billiards	Sport - latent demand
DvLHB	Derived variable - Local health board	Geographical area
Dvlimany	Derived variable - Limited at all by longstanding illness	Illness
Dvlimill1	Derived variable - Cancer (neoplasm) including benign (non-malignant) lumps and cysts limits individual	Illness
Dvlimill2	Derived variable - Diabetes incl. hyperglycaemia limits individual	Illness
Dvlimill3	Derived variable - Other endocrine/metabolic complaint limits individual	Illness
Dvlimill4	Derived variable - Mental illness/anxiety/depression/nerves limits individual	Illness
Dvlimill5	Derived variable - Mental handicap limits individual	Illness
Dvlimill6	Derived variable - Epilepsy/fits/convulsions limits individual	Illness
Dvlimill7	Derived variable - Migraine/headaches limits individual	Illness
Dvlimill8	Derived variable - Other problems of nervous system limit individual	Illness
Dvlimill9	Derived variable - Cataract/poor eye sight/blindness limits individual	Illness
Dvlimill10	Derived variable - Other eye complaints limit individual	Illness

Variable name	Short label - English	Short topic
Dvlimill11	Derived variable - Poor hearing/deafness limits individual	Illness
Dvlimill12	Derived variable - Tinnitus/noises in the ear limits individual	Illness
Dvlimill13	Derived variable - Meniere's disease/ear complaints causing balance problems limits individual	Illness
Dvlimill14	Derived variable - Other ear complaints limits individual	Illness
Dvlimill15	Derived variable - Stroke/cerebral haemorrhage/cerebral thrombosis limits individual	Illness
Dvlimill16	Derived variable - Heart attack/angina limits individual	Illness
Dvlimill17	Derived variable - Hypertension/high blood pressure/blood pressure limits individual	Illness
Dvlimill18	Derived variable - Other heart problems limits individual	Illness
Dvlimill19	Derived variable - Piles/haemorrhoids limits individual	Illness
Dvlimill20	Derived variable - Varicose veins/phlebitis in lower extremities limits individual	Illness
Dvlimill21	Derived variable - Other blood vessels/embolic limits individual	Illness
Dvlimill22	Derived variable - Bronchitis/emphysema limits individual	Illness
Dvlimill23	Derived variable - Asthma limits individual	Illness
Dvlimill24	Derived variable - Hayfever limits individual	Illness
Dvlimill25	Derived variable - Other respiratory complaints limits individual	Illness
Dvlimill26	Derived variable - Stomach ulcer/ulcer/abdominal hernia/rupture limits individual	Illness
Dvlimill27	Derived variable - Other digestive complaints (stomach, liver, pancreas etc.) limits individual	Illness
Dvlimill28	Derived variable - Complaints of bowel/colon/rectum limits individual	Illness
Dvlimill29	Derived variable - Complaints of teeth/mouth/tongue limits individual	Illness
Dvlimill30	Derived variable - Kidney complaints limits individual	Illness
Dvlimill31	Derived variable - Urinary tract infection limits individual	Illness
Dvlimill32	Derived variable - Other bladder problems/incontinence limits individual	Illness

Variable name	Short label - English	Short topic
Dvlimill33	Derived variable - Reproductive system disorders limits individual	Illness
Dvlimill34	Derived variable - Arthritis/rheumatism/fibrositis limits individual	Illness
Dvlimill35	Derived variable - Back problems/slipped disc/spine/neck limits individual	Illness
Dvlimill36	Derived variable - Other problems of bones/joints/muscles limits individual	Illness
Dvlimill37	Derived variable - Infectious and parasitic disease limits individual	Illness
Dvlimill38	Derived variable - Disorders of blood and blood forming organs limits individual	Illness
Dvlimill39	Derived variable - Skin complaints limits individual	Illness
Dvlimill40	Derived variable - Other complaint limits individual	Illness
Dvlimill41	Derived variable - Unclassifiable complaint limits individual	Illness
Dvlimill42	Derived variable - Complaint no longer present	Illness
Dvlimillchap1	Derived variable - Neoplasms and benign growths (1) limit individual	Illness
Dvlimillchap2	Derived variable - Endocrine and metabolic diseases (2-3) limit individual	Illness
Dvlimillchap3	Derived variable - Mental disorders (4-5) limit individual	Illness
Dvlimillchap4	Derived variable - Nervous system complaints (6-8) limit individual	Illness
Dvlimillchap5	Derived variable - Eye complaints (9-10) limit individual	Illness
Dvlimillchap6	Derived variable - Ear complaints (11-14) limit individual	Illness
Dvlimillchap7	Derived variable - Heart and circulatory complaints (15-21) limit individual	Illness
Dvlimillchap8	Derived variable - Respiratory system complaints (22-25) limit individual	Illness
Dvlimillchap9	Derived variable - Digestive system complaints (26-29) limit individual	Illness
Dvlimillchap10	Derived variable - Genito-urinary system complaints (30-33) limit individual	Illness
Dvlimillchap11	Derived variable - Musculoskeletal complaints (34-36) limit individual	Illness
Dvlimillchap12	Derived variable - Infectious diseases (37) limit individual	Illness
Dvlimillchap13	Derived variable - Blood and related organs complaints (38) limit	Illness

Variable name	Short label - English	Short topic
	individual	
Dvlimillchap14	Derived variable - Skin complaints (39) limit individual	Illness
Dvlimillchap15	Derived variable - Other complaint limits individual	Illness
Dvlimillchap16	Derived variable - Unclassifiable complaint limits individual	Illness
Dvlimlot	Derived variable - Limited a lot by longstanding illness	Illness
Dvlimnum	Derived variable - Number of limiting illnesses	Illness
Dvlimnumgrp	Derived variable - Number of limiting illnesses (grouped)	Illness
DvLLTI	Derived variable - Has a limiting long-standing illness, disability or infirmity	Illness
DvLocHlthCd	Derived variable - Local health board (geography codes)	Geographical area
Dvlsill	Derived variable - Any longstanding illness	Illness
Dvlsillnum	Derived variable - Number of longstanding illnesses	Illness
Dvlsillnumgrp	Derived variable - Number of longstanding illnesses (grouped)	Illness
DvLSOA2001	Derived variable - Lower super output area (based on 2001 Census)	Geographical area
DvLSOA2011	Derived variable - Lower super output area (based on 2011 Census)	Geographical area
DvMainNet	Derived variable - Income as an employee over the last 12 months (NET)	Income
DvMarketVal	Derived Variable - Housing costs - What do you think the market value of this property is now?	Housing costs
DvMatDep	Derived variable - Material deprivation (adults and pensioners combined)	Material deprivation
Dvmodexday	Derived variable - Moderate activity in last 7 days - number of days [SamplePopHlthWeight]	Physical activity
Dvmodexmw	Derived variable - Total minutes moderate activity per week [SamplePopHlthWeight]	Physical activity
Dvmodexweek	Derived variable - Any moderate activity in last 7 days - binary [SamplePopHlthWeight]	Physical activity
Dvmonx	Derived variable - Moderate or vigorous activity on Monday [SamplePopHlthWeight]	Physical activity
DvMortVal	Derived Variable - Housing costs - Total monthly repayments for all mortgages/loans	Housing costs

Variable name	Short label - English	Short topic
DvMSOA2011	Derived variable - Middle super output area (based on 2011 Census)	Geographical area
Dvmvdays	Derived variable - Number of at least moderately active days per week [SamplePopHlthWeight]	Physical activity
Dvmvinact	Derived variable - MVPA inactive <30 minutes weekly [SamplePopHlthWeight]	Physical activity
Dvmvpa150	Derived variable - MVPA meets guidelines 150 minutes weekly [SamplePopHlthWeight]	Physical activity
Dvmvpagrp2	Derived variable - MVPA minutes per week - 3 groups [SamplePopHlthWeight]	Physical activity
Dvmvpamw	Derived variable - MVPA minutes per week [SamplePopHlthWeight]	Physical activity
DvNeet	Derived variable - Not in education, employment or training (NEET) status (aged 16-18)	Employment
DvNeet2	Derived variable - Not in education, employment or training (NEET) status (aged 16-25)	Employment
Dvnondrink	Derived variable - Non drinker (not even occasional) [SamplePopHlthWeight]	Alcohol consumption
DvOwnerYear	Derived Variable - Housing costs - When did you begin to own this accommodation?	Housing costs
DvPCArea	Derived variable - Postcode area	Geographical area
DvPenFlag	Derived variable - Pensionable age at time of interview	Demographic information
DvPnBdLnMD	Derived variable - Respondent routed to additional pensioner material deprivation questions	Material deprivation
DvPnMatDep	Derived variable - Pensioner in material deprivation	Material deprivation
DvPolReg	Derived variable - Police region	Geographical area
Dvporfv2	Derived variable - Total portion of fruit and veg [SamplePopHlthWeight]	Diet
DvPrtAny	Derived variable - Participating in any activity	Sport - participation
DvPrtAnyBask	Derived variable - Participating in any basketball	Sport - participation
DvPrtAnyCyc	Derived variable - Participating in any cycling (bmx/cycling/mountain biking)	Sport - participation
DvPrtAnyDance	Derived variable - Participating in any dance	Sport - participation
DvPrtAnyFootb	Derived variable - Participating in any indoor or outdoor football or futsal	Sport - participation

Variable name	Short label - English	Short topic
DvPrtAnyInGam	Derived variable - Participating in any indoor game or activity	Sport - participation
DvPrtAnyInGamActExclSnkEM	Derived variable - Participating in any indoor game or activity excluding billiards/snooker and exercise machines	Sport - participation
DvPrtAnyInGamExclEM	Derived variable - Participating in any indoor game or activity excluding exercise machines	Sport - participation
DvPrtAnyMA	Derived variable - Participating in any martial arts	Sport - participation
DvPrtAnyOutGam	Derived variable - Participating in any outdoor game or activity	Sport - participation
DvPrtAnyOutPur	Derived variable - Participating in any outdoor pursuit	Sport - participation
DvPrtAnyOutPurExclWlk	Derived variable - Participating in any outdoor pursuit excluding walking	Sport - participation
DvPrtAnyRug	Derived variable - Participating in any rugby	Sport - participation
DvPrtAnySwim	Derived variable - Participating in any swimming	Sport - participation
DvPrtAthRun	Derived variable - Participating in indoor or outdoor athletics or running or jogging	Sport - participation
DvPrtCanoe	Derived variable - Participating in canoeing/kayaking	Sport - participation
DvPrtClimb	Derived variable - Participating in climbing and mountaineering/rock climbing	Sport - participation
DvPrtCycMB	Derived variable - Participating in cycling/mountain biking	Sport - participation
DvPrtExclSnk	Derived variable - Participating in any activity excluding billiards/snooker	Sport - participation
DvPrtExclSnkWlk	Derived variable - Participating in any activity excluding billiards/snooker and walking	Sport - participation
DvPrtExclWlk	Derived variable - Participating in any activity excluding walking	Sport - participation
DvPrtHock	Derived variable - Participating in hockey (including street hockey)	Sport - participation
DvPrtInOutAth	Derived variable - Participating in any indoor or outdoor athletics only	Sport - participation
DvPrtInOutAthInclRun	Derived variable - Participating in any indoor or outdoor athletics incl. running	Sport - participation
DvPrtInOutBowls	Derived variable - Participating in any indoor or outdoor bowls	Sport - participation
DvPrtInOutClimb	Derived variable - Participating in any indoor or outdoor climbing	Sport - participation
DvPrtInOutCric	Derived variable - Participating in any indoor or outdoor cricket	Sport - participation

Variable name	Short label - English	Short topic
DvPrtInOutDive	Derived variable - Participating in any indoor or outdoor Diving	Sport - participation
DvPrtInOutFootB	Derived variable - Participating in any indoor or outdoor football only	Sport - participation
DvPrtInOutHock	Derived variable - Participating in any indoor or outdoor hockey	Sport - participation
DvPrtInOutNetB	Derived variable - Participating in any indoor or outdoor netball	Sport - participation
DvPrtInOutSkatB	Derived variable - Participating in any indoor or outdoor skateboarding	Sport - participation
DvPrtInOutTai	Derived variable - Participating in any indoor or outdoor Tai chi	Sport - participation
DvPrtInOutTen	Derived variable - Participating in any indoor or outdoor tennis	Sport - participation
DvPrtInOutVolB	Derived variable - Participating in any indoor or outdoor volleyball	Sport - participation
DvPrtNone	Derived variable - Participating in no activity	Sport - participation
DvPrtRug	Derived variable - Participating in rugby (league or union)	Sport - participation
DvPrtSail	Derived variable - Participating in sailing/yachting	Sport - participation
DvPrtShoot	Derived variable - Participating in target shooting (including clay)	Sport - participation
DvPrtSnk	Derived variable - Participating in snooker or billiards	Sport - participation
DvPSFoot	Derived variable - Public services footprint	Geographical area
DvRegions	Derived variable - ACW and Sports Wales regions	Geographical area
DvRent	Derived variable - Housing costs - Rent paid for household accommodation (PCM)	Housing costs
Dvsatx	Derived variable - Moderate or vigorous activity on Saturday [SamplePopHlthWeight]	Physical activity
DvSENet	Derived variable - Self-employed income over the last 12 months (NET)	Income
Dvsmokec	Derived variable - Currently smoke either daily or occasionally [SamplePopHlthWeight]	Smoking
Dvsmokstat	Derived variable - Smoking status [SamplePopHlthWeight]	Smoking
Dvsunx	Derived variable - Moderate or vigorous activity on Sunday [SamplePopHlthWeight]	Physical activity
DvTenurGrp	Derived variable - Tenure	Housing
DvTenurGrp2	Derived variable - Tenure (grouped)	Housing
Dvthux	Derived variable - Moderate or vigorous activity on Thursday [SamplePopHlthWeight]	Physical activity

Variable name	Short label - English	Short topic
Dvtotscreenwd	Derived variable - Derived variable - Total screen time on weekday [SampleChildWeight]	Child screen time
Dvtotscreenwd1	Derived variable - Total screen time on weekday - 1 hour or more a day [SampleChildWeight]	Child screen time
Dvtotscreenwd2	Derived variable - Total screen time on weekday - 2 hours or more a day [SampleChildWeight]	Child screen time
Dvtotscreenwe	Derived variable - Derived variable - Total screen time at weekend [SampleChildWeight]	Child screen time
Dvtotscreenwe1	Derived variable - Total screen time on weekend - 1 hour or more a day [SampleChildWeight]	Child screen time
Dvtotscreenwe2	Derived variable - Total screen time on weekend - 2 hours or more a day [SampleChildWeight]	Child screen time
DvTrustMostGrp4	Derived variable - Most people can be trusted (grouped)	Wellbeing
Dvtuex	Derived variable - Moderate or vigorous activity on Tuesday [SamplePopHlthWeight]	Physical activity
DvTvwd1	Derived variable - TV watched on weekday for 1 hour or more a day [SampleChildWeight]	Child screen time
DvTvwd2	Derived variable - TV watched on weekday for 2 hours or more a day [SampleChildWeight]	Child screen time
DvTvwe1	Derived variable - TV watched on weekend for 1 hour or more a day [SampleChildWeight]	Child screen time
DvTvwe2	Derived variable - TV watched on weekend for 2 hours or more a day [SampleChildWeight]	Child screen time
DvTxAir	Derived variable - Tax - How much control do you think the Welsh Government currently has over the levels of tax on air travel from Wales? [SampleTaxWeight]	Tax devolution
DvTxAlc	Derived variable - Tax - How much control do you think the Welsh Government currently has over levels of tax on alcohol? [SampleTaxWeight]	Tax devolution
DvTxCoun	Derived variable - Tax - How much control do you think the Welsh Government currently has over levels of Council Tax? [SampleTaxWeight]	Tax devolution
DvTxInc	Derived variable - Tax - How much control do you think the Welsh Government currently has over	Tax devolution

Variable name	Short label - English	Short topic
	levels of income tax? [SampleTaxWeight]	
DvTxLnd	Derived variable - Tax - How much control do you think the Welsh Government currently has over levels of tax on waste sent to landfill? [SampleTaxWeight]	Tax devolution
DvTxStmp	Derived variable - Tax - How much control do you think the Welsh Government currently has over levels of Stamp Duty? [SampleTaxWeight]	Tax devolution
DvTxVAT	Derived variable - Tax - How much control do you think the Welsh Government currently has over levels of VAT? [SampleTaxWeight]	Tax devolution
Dvunits0	Derived variable - Number of alcohol units on the heaviest drinking day last week [SamplePopHlthWeight]	Alcohol consumption
Dvunitswk0	Derived variable - Usual number of weekly alcohol units [SamplePopHlthWeight]	Alcohol consumption
DvUrbRur	Derived variable - Urban/rural classification	Geographical area
DvUrbRurCom	Derived variable - Urban/rural classification – combined	Geographical area
DvUrbRurCon	Derived variable - Urban/rural classification – context	Geographical area
DvUrbRurMor	Derived variable - Urban/rural classification – morphology	Geographical area
DvUSOA2011	Derived variable - Upper super output area (based on 2011 Census)	Geographical area
Dvvegpor2	Derived variable - Total portion of vegetables (incl.salad) [SamplePopHlthWeight]	Diet
Dvvigexday	Derived variable - Vigorous activity in the last 7 days - number of days [SamplePopHlthWeight]	Physical activity
Dvvigexmw	Derived variable - Total minutes vigorous activity per week [SamplePopHlthWeight]	Physical activity
Dvvigexweek	Derived variable - Any vigorous activity in last 7 days - binary [SamplePopHlthWeight]	Physical activity
Dvvigmvmw	Derived variable - Total minutes vigorous activity per week *2 to give moderate intensity minutes [SamplePopHlthWeight]	Physical activity
DvWaConst	Derived variable - Welsh Assembly/Parliamentary constituency	Geographical area

Variable name	Short label - English	Short topic
DvWaConstCd	Derived variable - Welsh Assembly/Parliamentary constituency (geography codes)	Geographical area
Dvwalkday	Derived variable - Walk in last 7 days - number of days (scale) [SamplePopHlthWeight]	Physical activity
DvWalkmv	Derived variable - Walking qualifying as moderate activity [SamplePopHlthWeight]	Physical activity
Dvwalkmw	Derived variable - Total minutes walking per week [SamplePopHlthWeight]	Physical activity
Dvwalkweek	Derived variable - Any walking in the last 7 days - binary [SamplePopHlthWeight]	Physical activity
DvWbAnxYestGrp4	Derived variable - Overall anxiousness yesterday (grouped)	Wellbeing
DvWbHapYestGrp4	Derived variable - Overall happiness yesterday (grouped)	Wellbeing
DvWbLifeWrthGrp4	Derived variable - Overall extent of feeling that the things done in life are worthwhile (grouped)	Wellbeing
DvWbSatlifeGrp4	Derived variable - Overall satisfaction with life (grouped)	Wellbeing
Dvwedx	Derived variable - Moderate or vigorous activity on Wednesday [SamplePopHlthWeight]	Physical activity
DvWeLang1	Derived variable - Welsh language ability - Can speak, read and write Welsh	Welsh language - ability
DvWeLang2	Derived variable - Welsh language ability - Can speak and read Welsh, but not write Welsh	Welsh language - ability
DvWeLang3	Derived variable - Welsh language ability - Can speak Welsh, but can't read or write Welsh	Welsh language - ability
DvWeLang4	Derived variable - Welsh language ability - Can understand spoken Welsh only	Welsh language - ability
DvWIMDEdu5	Derived variable – Welsh Index of Multiple Deprivation – education score (in quintiles)	Geographical area
DvWIMDEmp5	Derived variable – Welsh Index of Multiple Deprivation – employment score (in quintiles)	Geographical area
DvWIMDEnv5	Derived variable – Welsh Index of Multiple Deprivation – physical environment score (in quintiles)	Geographical area
DvWIMDHlth5	Derived variable – Welsh Index of Multiple Deprivation – health score (in quintiles)	Geographical area
DvWIMDHse5	Derived variable – Welsh Index of Multiple Deprivation – housing score	Geographical area

Variable name	Short label - English	Short topic
	(in quintiles)	
DvWIMDInc5	Derived variable – Welsh Index of Multiple Deprivation – income score (in quintiles)	Geographical area
DvWIMDOvr5	Derived variable – Welsh Index of Multiple Deprivation – overall score (in quintiles)	Geographical area
DvWIMDSafe5	Derived variable – Welsh Index of Multiple Deprivation – community safety score (in quintiles)	Geographical area
DvWIMDServ5	Derived variable – Welsh Index of Multiple Deprivation – access to services score (in quintiles)	Geographical area
DvWkinAge	Derived variable - Working age	Demographic information
DvWkingHh	Derived variable - Household members of working age (i.e. aged 16-19 not in FT education or 19 to pension age) in paid work, either full-time or part-time	Demographic information
Dvwlkmvday	Derived variable - Walking as moderate activity in last 7 days, number of days [SamplePopHlthWeight]	Physical activity
Dvwlkmvmw	Derived variable - Minutes walking per week qualifying as moderate activity [SamplePopHlthWeight]	Physical activity
Dvwtkg	Derived variable - Weight : in kg - computed from Stones/pounds if necessary [SamplePopHlthWeight]	BMI

Annex J – National Survey weights

Table J.1: Weights provided for the “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 (3,054,770 using ONS 2014-based population projections for 2016).
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 (1,341,624 using ONS 2014-based population projections for 2016).
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.
WalesHhHCSWeight	Weight for Housing Conditions Survey questions to represent all households in Wales	Household weight for ‘Housing Conditions Survey’ 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 (module included from July 2017 to March 2018).
SampleHhIncomeWeight	Weight for Housing Conditions Survey questions to make sample reflect the characteristics of all households in Wales	This weight ensures that the weighted base matches the un-weighted base.

Table J.2: Weights provided for the “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 (1,341,624 using ONS 2014-based population projections for 2016).
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 (2,500,648 using ONS 2014-based population projections for 2016).
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.
WalesChildWeight	Weight to represent all children 3-7 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 (181,093 using ONS 2014-based population projections for 2016). 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.
SampleChildWeight	Weight to make the sample of children reflect the characteristics of all children 3-7 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
WalesWelshWeight	Weight to make the Welsh language sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Welsh language' 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.
SampleWelshWeight	Weight to make the Welsh language sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesFireWeight	Weight to make the Domestic fire safety sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Domestic fire safety' 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.
SampleFireWeight	Weight to make the Domestic fire safety sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesHazardWeight	Weight to make the Hazzard sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Hazzard - noise' 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.
SampleHazardWeight	Weight to make the Hazzard 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
WalesServiceWeight	Weight to make the Services and facilities sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Services and facilities' 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.
SampleServiceWeight	Weight to make the Services and facilities sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesPlayWeight	Weight to make the Play sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Play' 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.
SamplePlayWeight	Weight to make the Play sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesUNCRCWeight	Weight to make the UNCRC sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Children's rights' 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.
SampleUNCRCWeight	Weight to make the UNCRC 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
WalesEduCWeight	Weight to make the Confidence in Education sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Confidence in education' 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.
SampleEduCWeight	Weight to make the Confidence in Education sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesEduSWeight	Weight to make the Satisfaction with Education sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Satisfaction with education' 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.
SampleEduSWeight	Weight to make the Satisfaction with Education 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 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.
SampleGPWeight	Weight to make the 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
WalesHospitalWeight	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.
SampleHospitalWeight	Weight to make the Hospital sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesHSSWeight	Weight to make the HSS sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Use of HSS in Welsh' 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.
SampleHSSWeight	Weight to make the HSS sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesNonGPWeight	Weight to make the Non-GP services and Medicines sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Non-GP primary care 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.
SampleNonGPWeight	Weight to make the Non-GP services and Medicines 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
WalesPopHlthWeight	Weight to make the population health lifestyle sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Population health' modules 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.
SamplePopHlthWeight	Weight to make the population health lifestyle sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesActiveWeight	Weight to make the Active Travel sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Active travel' 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.
SampleActiveWeight	Weight to make the Active Travel sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesTaxWeight	Weight to make the Tax sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Tax devolution' 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.
SampleTaxWeight	Weight to make the Tax 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
WalesProblemsWeight	Weight to make the Problems and advice sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Problems and advice' 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.
SalesProblemsWeight	Weight to make the Problems and advice sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesVolunteerWeight	Weight to make the Volunteering sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Volunteering' 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.
SampleVolunteerWeight	Weight to make the Volunteering sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesArchivesWeight	Weight to make the Archives sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Archives' 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.
SampleArchivesWeight	Weight to make the Archives 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
WalesDrugsWeight	Weight to make the Drugs support sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Drugs support' 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.
SampleDrugsWeight	Weight to make the Drugs support sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesTattooWeight	Weight to make the Tattoos and piercings sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Tattoos and piercings' 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.
SampleTattooWeight	Weight to make the Tattoos and piercings sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesHhDepWeight	Weight to make the Household deprivation sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Household material deprivation' 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.
SampleHhDepWeight	Weight to make the Household deprivation 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
WalesPenDepWeight	Weight to make the Pension deprivation sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Pensioner material deprivation' 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.
SamplePenDepWeight	Weight to make the Pension deprivation sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesChildDepWeight	Weight to make the Child deprivation sub-sample represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Child material deprivation' 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.
SampleChildDepWeight	Weight to make the Child deprivation sub-sample reflect the characteristics of all adults (16+) in Wales	This weight ensures that the weighted base matches the un-weighted base.
WalesHCSWeight	Weight for House Condition Survey questions to represent all adults (16+) in Wales	Enumerated individual weight assigned to individuals responding to sub-sampled 'Adult Income' 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.
SampleHCSWeight	Weight for House Condition Survey questions to make 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
WalesHhHCSWeight	Weight for House Condition Survey questions to represent all households in Wales	Household weight for 'Income' 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 (module included from July 2017 to March 2018).
SampleHhHCSWeight	Weight for House Condition Survey questions to make sample reflect the characteristics of all households in Wales	This weight ensures that the weighted base matches the un-weighted base.

Annex K – Outcome code descriptions

Table K.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
Non-contact	340	Contact made with responsible member of sampled dwelling/household, but not with sampled person
Refusal	410	Office (HQ) refusal
Refusal	422	Information refused that would allow identification of required respondent(s) within dwelling or household.
Refusal	431	Information refused about persons within household
Refusal	432	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 K.2: Ineligible codes

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

Table K.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
	642	Unknown whether address is residential due to non-contact
	651	Information refused about whether there are eligible resident(s)
	652	Unknown whether there are eligible resident(s) due to non-contact

Annex L – Design Effects and Factors

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

The DEFT is a ratio of a standard error taking into account the complex survey design relative to a standard error under a simple random sample. The DEFF (= DEFT²) is a ratio of the equivalent variances and can be used to calculate the effective sample size; that is the random sample size that would give estimates of similar precision to the complex survey sample.

Confidence intervals provide an upper and lower boundary of an estimate indicating the extent to which an estimate may differ from a true value. The larger the difference between the upper and lower boundary, the less precise is the estimate. A confidence interval at a 95% confidence level means that if we were to repeat the survey 100 times, we would expect the confidence interval to contain the true value in 95 of those 100 instances.¹

The standard errors and DEFTs were calculated by using an in-house macro, which allows for estimation of standard errors for means and proportions under complex designs. The macro uses the linearised Jackknife method estimating the variance of the data provided.

Selected survey variables split by gender

IntPersUse	Personal use of internet at home, work or elsewhere	Response	Design effect	Design factor	95 % Confidence Interval	
					Lower %	Upper %
Male		Yes	0.66	0.81	85.4	87.0
		No	0.66	0.81	12.9	14.6
Female		Yes	0.71	0.84	82.8	84.4
		No	0.71	0.84	15.6	17.2

¹ Office for National Statistics, Methodology: Migration Statistics Quarterly Report – information for users, section 2. Interpreting confidence intervals for migration estimates, <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/methodologies/migrationstatisticsquarterlyreportinformationforusers#interpreting-confidence-intervals-for-migration-estimates>

WelSpk**Speak Welsh**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Yes	1.25	1.12	16.8	19.1
	No	1.31	1.14	70.4	73.3
	No, but have some Welsh speaking ability	1.53	1.24	9.2	11.2
Female	Yes	1.34	1.16	19.5	21.8
	No	1.35	1.16	64.4	67.1
	No, but have some Welsh speaking ability	1.57	1.25	12.6	14.6

DvSmokec**Derived variable – Currently smoking either daily or occasionally**

Gender	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Male	Yes	1.52	1.23	19.3	23.1
	No	1.52	1.23	76.9	80.7
Female	Yes	1.41	1.19	15.7	18.7
	No	1.41	1.19	81.3	84.3

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

Gender	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Male	Yes	1.31	1.14	22.7	26.6
	No	1.31	1.15	72.8	76.8
Female	Yes	1.28	1.13	10.3	12.9
	No	1.31	1.14	86.4	89.1

Dvmvpa150 **Derived variable – MVPA meets guidelines 150 minutes weekly**

Gender	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Male	Yes	1.33	1.15	54.5	59.0
	No	1.33	1.15	41.0	45.5
Female	Yes	1.36	1.17	46.6	50.7
	No	1.36	1.17	49.3	53.4

ArtsAttEv **Attended arts event in past 12 months**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Film showing	1.24	1.11	47.9	50.9
	Theatre	1.41	1.19	27.4	30.3
	Live music	1.43	1.19	35.1	38.2
	Dance performance	1.63	1.28	6.1	7.8
	Storytelling or reading event	1.63	1.28	3.6	5.0
	None of these	1.13	1.06	32.1	35.0
	Other	1.36	1.16	5.6	7.2
	Female	Film showing	1.16	1.08	51.1
Theatre		1.33	1.15	35.7	38.5
Live music		1.40	1.18	33.6	36.3
Dance performance		1.45	1.20	9.6	11.4
Storytelling or reading event		1.24	1.11	5.6	7.0
None of these		1.16	1.08	29.3	31.7
Other		1.25	1.12	6.7	8.2

DvIncResp **Derived variable - Respondent's income NET**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower	Upper
Male	Mean	0.96	0.98	£13,241	£15,155
Female	Mean	0.87	0.93	£9,721	£10,742

DVFGLonely **Derived variable - Feeling lonely**

Gender	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Male	Not lonely	1.31	1.15	27.3	30.3
	Sometimes lonely	1.39	1.18	52.6	56.0
	Lonely	1.43	1.20	13.9	16.3
Female	Not lonely	1.29	1.14	29.6	32.3
	Sometimes lonely	1.39	1.18	49.0	52.0
	Lonely	1.43	1.20	15.7	18.0

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	1.37	1.17	97.7	99.6
	No	1.37	1.17	0.4	2.3
25-44 years	Yes	1.19	1.09	96.3	97.7
	No	1.19	1.09	2.3	3.7
45-64 years	Yes	1.12	1.06	87.7	89.8
	No	1.12	1.06	10.1	12.2
65-74 years	Yes	1.20	1.10	69.3	73.4
	No	1.19	1.09	26.4	30.5
75+ years	Yes	1.25	1.12	37.3	42.4
	No	1.25	1.12	57.6	62.7

WelSpk		Speak Welsh			
Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Yes	1.10	1.05	21.9	28.6
	No	1.18	1.09	52.2	60.1
	No, but have some Welsh speaking ability	1.30	1.14	15.4	21.8
25-44 years	Yes	1.14	1.07	19.4	22.7
	No	1.16	1.08	64.2	68.0
	No, but have some Welsh speaking ability	1.22	1.10	11.4	14.2
45-64 years	Yes	1.16	1.08	15.4	18.0
	No	1.17	1.08	71.1	74.2
	No, but have some Welsh speaking ability	1.16	1.08	9.6	11.7
65-74 years	Yes	1.19	1.09	15.3	18.6
	No	1.19	1.09	70.8	74.8
	No, but have some Welsh speaking ability	1.17	1.08	8.8	11.5
75+ years	Yes	1.18	1.08	16.2	20.1
	No	1.18	1.09	72.5	76.9
	No, but have some Welsh speaking ability	1.13	1.06	5.8	8.4

DvSmokec		Derived variable – Currently smoking either daily or occasionally			
Age group	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
16-24 years	Yes	1.19	1.09	17.5	26.7
	No	1.19	1.09	73.3	82.5
25-44 years	Yes	1.26	1.12	21.0	26.0
	No	1.26	1.12	74.0	79.0
45-64 years	Yes	1.26	1.12	18.1	22.1
	No	1.26	1.12	77.9	81.9
65-74 years	Yes	1.28	1.13	12.0	16.5
	No	1.28	1.13	83.5	88.0
75+ years	Yes	1.19	1.09	5.4	9.2
	No	1.19	1.09	90.8	94.6

Dvalcushibi **Derived variable - 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	1.32	1.15	10.1	18.3
	No	1.28	1.13	80.5	88.9
25-44 years	Yes	1.15	1.07	14.1	18.4
	No	1.15	1.07	81.2	85.5
45-64 years	Yes	1.30	1.14	19.4	23.5
	No	1.31	1.14	75.5	79.7
65-74 years	Yes	1.20	1.09	18.9	24.1
	No	1.20	1.10	75.7	80.9
75+ years	Yes	1.19	1.09	9.1	13.8
	No	1.20	1.09	86.0	90.7

Dvmvpa150 **Derived variable – MVPA meets guidelines 150 minutes weekly**

Age group	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
16-24 years	Yes	1.23	1.11	59.9	70.7
	No	1.23	1.11	29.3	40.1
25-44 years	Yes	1.20	1.10	56.7	62.5
	No	1.20	1.10	37.5	43.3
45-64 years	Yes	1.27	1.13	47.8	52.8
	No	1.27	1.13	47.2	52.2
65-74 years	Yes	1.22	1.10	45.5	51.8
	No	1.22	1.10	48.2	54.5
75+ years	Yes	1.24	1.11	26.0	32.8
	No	1.24	1.11	67.2	74.0

ArtsAttEv
Attended arts events in past 12 months

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Film showing	1.17	1.08	70.4	77.4
	Theatre	1.27	1.13	24.7	32.1
	Live music	1.24	1.11	42.5	50.6
	Dance performance	1.29	1.13	8.3	13.4
	Storytelling or reading event	1.32	1.15	2.4	5.7
	None of these	1.14	1.07	13.5	19.2
	Other	1.35	1.16	3.8	7.7
25-44 years	Film showing	1.23	1.11	62.4	66.4
	Theatre	1.19	1.09	31.4	35.3
	Live music	1.23	1.11	36.6	40.6
	Dance performance	1.21	1.10	8.6	11.1
	Storytelling or reading event	1.10	1.05	7.4	9.7
	None of these	1.22	1.10	21.2	24.7
	Other	1.18	1.09	5.8	7.9
45-64 years	Film showing	1.26	1.12	45.3	48.8
	Theatre	1.27	1.13	33.9	37.4
	Live music	1.29	1.14	36.9	40.4
	Dance performance	1.21	1.10	7.4	9.3
	Storytelling or reading event	1.20	1.09	3.8	5.2
	None of these	1.26	1.12	31.5	34.8
	Other	1.14	1.07	7.1	9.0
65-74 years	Film showing	1.21	1.10	31.1	35.4
	Theatre	1.19	1.09	34.2	38.5
	Live music	1.23	1.11	26.3	30.5
	Dance performance	1.31	1.14	7.3	9.9
	Storytelling or reading event	1.14	1.07	3.2	4.9
	None of these	1.22	1.10	41.2	45.7
	Other	1.16	1.08	6.8	9.2
75+ years	Film showing	1.23	1.11	17.8	22.0
	Theatre	1.19	1.09	23.7	28.2
	Live music	1.24	1.11	13.3	17.1

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	Dance performance	1.21	1.10	3.4	5.5
	Storytelling or reading event	1.12	1.06	1.5	3.0
	None of these	1.23	1.11	55.8	60.9
	Other	1.14	1.07	2.9	4.9

DvIncResp Derived variable - Total personal income from all sources over the last 12 months (NET)

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower	Upper
16-24 years	Mean	1.26	1.12	£5,951	£8,322
25-44 years	Mean	1.19	1.09	£15,912	£17,183
45-64 years	Mean	1.75	1.32	£13,385	£15,624
65-74 years	Mean	0.42	0.65	£4,220	£5,925
75+ years	Mean	0.87	0.94	£3,462	£6,938

DvFgLonely Derived variable - People feeling lonely

Age group	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
16-24 years	Not lonely	1.21	1.10	16.0	22.5
	Sometimes lonely	1.23	1.11	51.8	59.9
	Lonely	1.16	1.08	17.4	23.8
25-44 years	Not lonely	1.24	1.11	26.8	30.7
	Sometimes lonely	1.24	1.11	48.8	53.1
	Lonely	1.19	1.09	16.9	20.2
45-64 years	Not lonely	1.33	1.16	27.2	30.6
	Sometimes lonely	1.29	1.13	51.8	55.5
	Lonely	1.18	1.09	14.7	17.3
65-74 years	Not lonely	1.23	1.11	35.8	40.4
	Sometimes lonely	1.21	1.10	49.0	53.7
	Lonely	1.14	1.07	8.3	11.0
75+ years	Not lonely	1.26	1.12	37.7	43.2
	Sometimes lonely	1.24	1.11	45.8	51.3
	Lonely	1.13	1.06	9.0	12.2

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	0.98	0.99	94.8	96.0
	No	0.98	0.99	3.9	5.1
Unemployed	Yes	0.85	0.92	87.0	93.6
	No	0.85	0.92	6.4	13.0
Economically inactive	Yes	0.93	0.97	70.6	72.9
	No	0.93	0.97	27.1	29.3

WelSpk Speak Welsh

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
In employment	Yes	1.15	1.07	19.7	22.1
	No	1.19	1.09	64.6	67.4
	No, but have some Welsh speaking ability	1.28	1.13	12.0	14.1
Unemployed	Yes	1.40	1.18	11.1	21.3
	No	1.77	1.33	66.0	79.7
	No, but have some Welsh speaking ability	2.68	1.64	5.3	16.7
Economically inactive	Yes	1.40	1.18	16.4	18.7
	No	1.42	1.19	70.3	73.0
	No, but have some Welsh speaking ability	1.73	1.31	9.7	11.7

DvIncResp Derived variable - Total personal income from all sources over the last 12 months (NET)

Economic status	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower	Upper
In employment	Mean	1.39	1.18	£17,951	£19,261
Unemployed	Mean	1.03	1.02	£2,967	£4,233
Economically inactive	Mean	0.93	0.96	£3,758	£5,425

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	0.96	0.98	81.8	89.7
	No	0.96	0.98	10.3	18.2
Gwynedd	Yes	1.00	1.00	78.8	86.1
	No	1.00	1.00	13.9	21.2
Conwy	Yes	0.88	0.94	81.6	88.6
	No	0.85	0.92	11.0	17.8
Denbighshire	Yes	0.87	0.93	82.1	89.6
	No	0.87	0.93	10.4	17.9
Flintshire	Yes	0.94	0.97	79.6	86.4
	No	0.94	0.97	13.6	20.4
Wrexham	Yes	1.01	1.01	75.1	83.3
	No	1.01	1.01	16.7	24.9
Powys	Yes	0.86	0.93	83.6	87.8
	No	0.86	0.93	12.1	16.3
Ceredigion	Yes	1.24	1.11	80.8	89.7
	No	1.24	1.11	10.3	19.2
Pembrokeshire	Yes	0.81	0.90	82.5	88.8
	No	0.81	0.90	11.2	17.5
Carmarthenshire	Yes	0.94	0.97	79.1	85.2
	No	0.94	0.97	14.8	20.9
Swansea	Yes	0.84	0.92	83.5	88.0
	No	0.83	0.91	11.8	16.3
Neath Port Talbot	Yes	0.98	0.99	72.4	80.1
	No	0.98	0.99	19.9	27.6
Bridgend	Yes	0.88	0.94	82.6	88.9
	No	0.88	0.94	11.1	17.4
Vale of Glamorgan	Yes	0.83	0.91	84.9	91.2
	No	0.83	0.91	8.8	15.1
Cardiff	Yes	0.76	0.87	90.0	93.1

Local authority	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	No	0.76	0.87	6.9	10.0
Rhondda Cynon Taf	Yes	0.98	0.99	76.2	82.3
	No	0.98	0.99	17.7	23.8
Merthyr Tydfil	Yes	0.83	0.91	81.0	89.2
	No	0.83	0.91	10.8	19.0
Caerphilly	Yes	0.85	0.92	80.4	86.1
	No	0.85	0.92	13.9	19.6
Blaenau Gwent	Yes	0.87	0.93	79.2	86.7
	No	0.87	0.93	13.3	20.8
Torfaen	Yes	0.80	0.89	82.4	89.3
	No	0.80	0.89	10.7	17.6
Monmouthshire	Yes	0.73	0.85	87.0	92.5
	No	0.73	0.85	6.9	13.0
Newport	Yes	0.77	0.88	87.6	92.5
	No	0.77	0.88	7.5	12.4

WelSpk Speak Welsh

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Isle of Anglesey	Yes	1.25	1.12	54.9	67.2
	No	1.24	1.11	27.6	39.4
	No, but have some Welsh speaking ability	0.98	0.99	2.9	8.0
Gwynedd	Yes	1.19	1.09	65.1	74.3
	No	1.13	1.06	21.7	30.3
	No, but have some Welsh speaking ability	1.42	1.19	2.2	6.4
Conwy	Yes	1.22	1.10	23.5	33.5
	No	1.37	1.17	51.4	62.9
	No, but have some Welsh speaking ability	1.82	1.35	9.8	18.9
Denbighshire	Yes	1.27	1.13	19.2	30.1
	No	1.39	1.18	57.4	70.0

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Flintshire	No, but have some Welsh speaking ability	1.82	1.35	7.1	16.2
	Yes	1.29	1.13	9.7	16.6
	No	1.35	1.16	74.8	83.1
Wrexham	No, but have some Welsh speaking ability	1.48	1.22	5.0	10.7
	Yes	1.29	1.14	10.4	18.1
	No	1.35	1.16	66.9	77.0
Powys	No, but have some Welsh speaking ability	1.46	1.21	9.7	17.7
	Yes	1.40	1.18	18.5	24.4
	No	1.43	1.19	58.6	65.6
Ceredigion	No, but have some Welsh speaking ability	1.62	1.27	13.6	19.2
	Yes	1.47	1.21	37.3	50.4
	No	1.56	1.25	33.4	46.7
Pembrokeshire	No, but have some Welsh speaking ability	1.22	1.10	11.7	20.5
	Yes	1.52	1.23	16.6	26.3
	No	1.42	1.19	62.6	73.3
Carmarthenshire	No, but have some Welsh speaking ability	1.39	1.18	7.0	14.1
	Yes	1.33	1.16	39.1	48.0
	No	1.27	1.13	34.5	43.1
Swansea	No, but have some Welsh speaking ability	1.52	1.23	13.9	21.1
	Yes	1.42	1.19	7.0	11.5
	No	1.35	1.16	69.4	76.3
Neath Port Talbot	No, but have some Welsh speaking ability	1.32	1.15	14.7	20.6
	Yes	1.48	1.22	15.6	24.0
	No	1.41	1.19	67.1	76.5
Bridgend	No, but have some Welsh speaking ability	1.37	1.17	5.5	11.2
	Yes	1.24	1.11	10.0	17.0
	No	1.37	1.17	72.2	81.2
Vale of Glamorgan	No, but have some Welsh speaking ability	1.62	1.27	6.4	13.2
	Yes	1.80	1.34	5.1	12.5

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
	No	1.49	1.22	77.0	86.5
	No, but have some Welsh speaking ability	1.27	1.13	6.1	12.8
	Cardiff	Yes	1.37	1.17	8.6
	No	1.56	1.25	72.8	78.9
	No, but have some Welsh speaking ability	1.77	1.33	10.9	16.0
	Rhondday Cynon Taf	Yes	1.34	1.16	12.5
	No	1.45	1.20	73.1	80.3
	No, but have some Welsh speaking ability	1.80	1.34	5.4	10.4
	Merthyr Tydfil	Yes	1.78	1.33	7.8
	No	1.62	1.27	75.5	87.0
	No, but have some Welsh speaking ability	1.33	1.15	2.8	8.8
	Caerphilly	Yes	1.81	1.35	6.5
	No	1.43	1.20	72.7	80.3
	No, but have some Welsh speaking ability	1.27	1.13	11.2	17.2
	Blaenau Gwent	Yes	2.20	1.48	3.0
	No	2.10	1.45	83.3	92.4
	No, but have some Welsh speaking ability	2.16	1.47	2.3	8.6
	Torfaen	Yes	2.00	1.42	4.4
	No	1.66	1.29	72.8	83.5
	No, but have some Welsh speaking ability	1.58	1.26	9.3	18.1
	Monmouthshire	Yes	1.58	1.26	3.0
	No	1.44	1.20	76.9	86.9
	No, but have some Welsh speaking ability	1.41	1.19	7.7	16.1
	Newport	Yes	1.13	1.06	2.5
	No	1.64	1.28	78.8	86.9
	No, but have some Welsh speaking ability	1.85	1.36	9.1	16.6

DvSmokec **Derived variable – Currently smoking either daily or occasionally**

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Isle of Anglesey	Yes	1.88	1.37	8.8	24.5
	No	1.88	1.37	75.5	91.2
Gwynedd	Yes	1.51	1.23	13.1	24.9
	No	1.51	1.23	75.1	86.9
Conwy	Yes	1.33	1.15	9.9	21.2
	No	1.33	1.15	78.8	90.1
Denbighshire	Yes	1.35	1.16	10.0	23.3
	No	1.35	1.16	76.7	90.0
Flintshire	Yes	1.46	1.21	14.8	26.7
	No	1.46	1.21	73.3	85.2
Wrexham	Yes	1.49	1.22	13.3	25.9
	No	1.49	1.22	74.1	86.7
Powys	Yes	1.71	1.31	13.5	21.8
	No	1.71	1.31	78.2	86.5
Ceredigion	Yes	2.12	1.46	11.3	27.9
	No	2.12	1.46	72.1	88.7
Pembrokeshire	Yes	1.60	1.26	10.2	23.3
	No	1.60	1.26	76.7	89.8
Carmarthenshire	Yes	1.36	1.17	11.4	20.6
	No	1.36	1.17	79.4	88.6
Swansea	Yes	1.63	1.28	15.7	25.0
	No	1.63	1.28	75.0	84.3
Neath Port Talbot	Yes	1.35	1.16	19.2	31.8
	No	1.35	1.16	68.2	80.8
Bridgend	Yes	1.12	1.06	14.1	25.2
	No	1.12	1.06	74.8	85.9
Vale of Glamorgan	Yes	1.61	1.27	12.0	24.8

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Cardiff	No	1.61	1.27	75.2	88.0
	Yes	1.40	1.19	13.6	20.8
Rhondda Cynon Taf	No	1.40	1.19	79.2	86.4
	Yes	1.37	1.17	15.7	25.5
Merthyr Tydfil	No	1.37	1.17	74.5	84.3
	Yes	1.31	1.15	16.0	32.9
Caerphilly	No	1.31	1.15	67.1	84.0
	Yes	1.52	1.23	18.2	29.3
Blaenau Gwent	No	1.52	1.23	70.7	81.8
	Yes	1.66	1.29	14.5	29.5
Torfaen	No	1.66	1.29	70.5	85.5
	Yes	1.14	1.07	9.3	20.4
Monmouthshire	No	1.14	1.07	79.6	90.7
	Yes	1.31	1.14	5.8	17.4
Newport	No	1.31	1.14	82.6	94.2
	Yes	1.37	1.17	16.6	28.4
	No	1.37	1.17	71.6	83.4

Dvalcushibi **Derived variable - 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	No	1.09	1.04	78.9	90.9
	Yes	1.09	1.04	9.1	21.1
Gwynedd	No	1.77	1.33	73.0	86.2
	Yes	1.77	1.33	13.8	27.0
Conwy	No	1.27	1.13	74.5	87.0
	Yes	1.27	1.13	13.0	25.5
Denbighshire	Yes	1.24	1.11	10.9	24.7

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
	No	1.23	1.13	74.4	88.3
Flintshire	Yes	1.19	1.09	10.9	21.0
	No	1.18	1.09	78.8	89.0
Wrexham	Yes	1.40	1.18	12.4	24.6
	No	1.40	1.18	75.4	87.6
Powys	Yes	1.25	1.12	13.8	21.1
	No	1.29	1.13	77.6	85.2
Ceredigion	Yes	1.00	1.00	8.8	20.5
	No	1.00	1.00	79.5	91.2
Pembrokeshire	Yes	1.36	1.17	10.3	22.6
	No	1.44	1.20	74.8	88.0
Carmarthenshire	Yes	1.38	1.17	13.1	23.1
	No	1.38	1.17	76.9	86.9
Swansea	Yes	1.27	1.13	18.2	27.0
	No	1.29	1.13	72.5	81.5
Neath Port Talbot	Yes	1.33	1.15	16.7	28.9
	No	1.32	1.15	70.9	83.1
Bridgend	Yes	1.14	1.07	13.9	25.1
	No	1.15	1.07	74.1	85.5
Vale of Glamorgan	Yes	1.49	1.22	14.7	28.5
	No	1.49	1.22	71.5	85.3
Cardiff	Yes	1.36	1.16	14.0	21.4
	No	1.35	1.16	78.6	86.0
Rhondda Cynon Taf	Yes	1.12	1.06	8.2	15.7
	No	1.11	1.06	82.7	90.5
Merthyr Tydfil	Yes	1.36	1.17	14.4	31.6
	No	1.35	1.16	61.0	79.4
Caerphilly	Yes	1.59	1.26	11.0	21.0

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
	No	1.57	1.25	78.7	88.7
Blaenau Gwent	Yes	1.31	1.14	10.5	22.9
	No	1.33	1.15	73.3	86.7
Torfaen	Yes	1.03	1.02	9.2	19.8
	No	1.20	1.09	78.0	89.8
Monmouthshire	Yes	1.15	1.07	12.9	27.3
	No	1.15	1.07	72.7	87.1
Newport	Yes	1.33	1.15	10.5	20.7
	No	1.33	1.15	79.3	89.5

Dvmvpa150**Derived variable – MVPA meets guidelines 150 minutes weekly**

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Isle of Anglesey	Yes	1.25	1.12	50.3	68.1
	No	1.25	1.12	31.9	49.7
Gwynedd	Yes	1.32	1.15	38.6	53.2
	No	1.32	1.15	46.8	61.4
Conwy	Yes	1.35	1.16	54.2	70.1
	No	1.35	1.16	29.9	45.8
Denbighshire	Yes	1.21	1.10	54.2	71.4
	No	1.21	1.10	28.6	45.8
Flintshire	Yes	1.39	1.18	46.2	60.8
	No	1.39	1.18	39.2	53.8
Wrexham	Yes	1.29	1.14	41.1	56.2
	No	1.29	1.14	43.8	58.9
Powys	Yes	1.27	1.13	59.7	69.0
	No	1.27	1.13	31.0	40.3
Ceredigion	Yes	1.68	1.30	42.8	62.3
	No	1.68	1.30	37.7	57.2
Pembrokeshire	Yes	1.34	1.16	43.1	59.5
	No	1.34	1.16	40.5	56.9
Carmarthenshire	Yes	1.22	1.10	51.3	63.4
	No	1.22	1.10	36.6	48.7
Swansea	Yes	1.35	1.16	53.4	64.0
	No	1.35	1.16	36.0	46.6
Neath Port Talbot	Yes	1.28	1.13	31.9	45.7
	No	1.28	1.13	53.8	67.7
Bridgend	Yes	1.35	1.16	31.2	45.9
	No	1.35	1.16	54.1	68.8
Vale of Glamorgan	Yes	1.28	1.13	55.2	70.3

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Cardiff	No	1.28	1.13	29.7	44.8
	Yes	1.41	1.19	50.9	60.7
Rhondda Cynon Taf	No	1.41	1.19	39.3	49.1
	Yes	1.29	1.14	31.0	42.6
Merthyr Tydfil	No	1.29	1.14	57.4	69.0
	Yes	1.40	1.18	26.9	46.3
Caerphilly	No	1.40	1.18	53.7	73.1
	Yes	1.37	1.17	45.5	58.2
Blaenau Gwent	No	1.37	1.17	41.8	54.5
	Yes	1.35	1.16	34.3	51.1
Torfaen	No	1.35	1.16	48.9	65.7
	Yes	1.28	1.13	37.1	53.6
Monmouthshire	No	1.28	1.13	46.4	62.9
	Yes	1.15	1.07	52.5	70.0
Newport	No	1.15	1.07	30.0	47.5
	Yes	1.20	1.10	54.6	67.7
	No	1.20	1.10	32.3	45.4

DvIncResp **Derived variable - Total personal income from all sources over the last 12 months (NET)**

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower	Upper
Isle of Anglesey	Mean	1.47	1.21	£ 8,276	£ 13,347
Gwynedd	Mean	1.75	1.32	£ 8,623	£ 12,065
Conwy	Mean	0.53	0.73	£ 8,121	£ 18,228
Denbighshire	Mean	0.60	0.77	£ 9,200	£ 17,127
Flintshire	Mean	1.53	1.24	£ 9,919	£ 13,539
Wrexham	Mean	2.59	1.61	£ 9,191	£ 19,317
Powys	Mean	1.47	1.21	£ 9,641	£ 11,890

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower	Upper
Ceredigion	Mean	0.33	0.57	£ 7,995	£ 14,626
Pembrokeshire	Mean	1.27	1.13	£ 8,840	£ 11,699
Carmarthenshire	Mean	1.34	1.16	£ 10,892	£ 13,371
Swansea	Mean	0.47	0.69	£ 10,944	£ 14,966
Neath Port Talbot	Mean	1.23	1.11	£ 7,599	£ 9,912
Bridgend	Mean	1.19	1.09	£ 9,848	£ 12,726
Vale of Glamorgan	Mean	1.64	1.28	£ 10,834	£ 15,405
Cardiff	Mean	1.83	1.35	£ 12,358	£ 16,701
Rhondda Cynon Taf	Mean	0.81	0.90	£ 8,751	£ 13,466
Merthyr Tydfil	Mean	1.62	1.27	£ 6,884	£ 12,366
Caerphilly	Mean	1.30	1.14	£ 10,967	£ 13,136
Blaenau Gwent	Mean	1.29	1.14	£ 8,863	£ 11,497
Torfaen	Mean	1.09	1.04	£ 10,710	£ 14,083
Monmouthshire	Mean	1.30	1.14	£ 9,721	£ 14,653
Newport	Mean	1.67	1.29	£ 12,096	£ 15,705

DvFgLonely Derived variable - People feeling lonely

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Isle of Anglesey	Not lonely	1.29	1.14	28.4	40.9
	Sometimes lonely	1.29	1.13	38.6	51.5
	Lonely	1.62	1.27	12.4	23.0
Gwynedd	Not lonely	1.37	1.17	28.6	39.0
	Sometimes lonely	1.37	1.17	45.5	56.4
	Lonely	1.24	1.11	10.2	17.3
Conwy	Not lonely	1.35	1.16	30.4	41.8
	Sometimes lonely	1.37	1.17	42.9	55.0
	Lonely	1.08	1.04	8.6	15.7
Denbighshire	Not lonely	1.41	1.19	29.1	42.0

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
	Sometimes lonely	1.39	1.18	42.3	55.6
	Lonely	1.10	1.05	7.8	15.5
Flintshire	Not lonely	1.41	1.19	32.9	43.4
	Sometimes lonely	1.36	1.17	44.6	55.2
	Lonely	1.44	1.20	7.7	14.4
Wrexham	Not lonely	1.13	1.06	19.2	28.4
	Sometimes lonely	1.29	1.13	48.3	59.6
	Lonely	1.55	1.25	15.7	25.5
Powys	Not lonely	1.32	1.15	29.1	35.9
	Sometimes lonely	1.35	1.16	50.1	57.4
	Lonely	1.41	1.19	10.3	15.2
Ceredigion	Not lonely	1.34	1.16	23.7	35.7
	Sometimes lonely	1.45	1.21	49.7	63.0
	Lonely	1.57	1.25	8.0	16.9
Pembrokeshire	Not lonely	1.19	1.09	25.6	35.8
	Sometimes lonely	1.29	1.14	44.4	55.8
	Lonely	1.45	1.20	14.0	23.1
Carmarthenshire	Not lonely	1.33	1.15	29.1	37.7
	Sometimes lonely	1.33	1.15	42.5	51.6
	Lonely	1.14	1.07	12.9	19.1
Swansea	Not lonely	1.31	1.14	22.9	29.8
	Sometimes lonely	1.37	1.17	50.8	58.7
	Lonely	1.29	1.14	13.5	19.2
Neath Port Talbot	Not lonely	1.22	1.11	26.4	35.9
	Sometimes lonely	1.26	1.12	46.1	56.4
	Lonely	1.33	1.15	12.9	20.7
Bridgend	Not lonely	1.25	1.12	29.6	39.6
	Sometimes lonely	1.31	1.14	46.0	56.7

Local authority	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Vale of Glamorgan	Lonely	1.31	1.14	9.2	16.1
	Not lonely	1.25	1.12	25.5	36.4
	Sometimes lonely	1.35	1.16	47.9	60.0
Cardiff	Lonely	1.61	1.27	8.9	17.6
	Not lonely	1.37	1.17	23.5	29.8
	Sometimes lonely	1.47	1.21	49.5	56.7
Rhondda Cynon Taf	Lonely	1.57	1.25	16.1	21.8
	Not lonely	1.27	1.13	24.3	32.2
	Sometimes lonely	1.29	1.14	49.5	58.3
Merthyr Tydfil	Lonely	1.21	1.10	13.2	19.5
	Not lonely	1.20	1.09	17.6	32.4
	Sometimes lonely	1.36	1.17	42.4	60.4
Caerphilly	Lonely	1.49	1.22	12.4	26.8
	Not lonely	1.33	1.15	22.1	30.3
	Sometimes lonely	1.35	1.16	49.2	58.5
Blaenau Gwent	Lonely	1.29	1.14	15.1	22.1
	Not lonely	1.30	1.14	24.4	36.1
	Sometimes lonely	1.36	1.17	39.9	52.7
Torfaen	Lonely	1.52	1.23	16.2	27.1
	Not lonely	1.15	1.07	19.6	29.8
	Sometimes lonely	1.28	1.13	49.8	62.0
Monmouthshire	Lonely	1.28	1.13	13.0	22.3
	Not lonely	1.21	1.10	22.5	34.2
	Sometimes lonely	1.31	1.14	50.0	63.1
Newport	Lonely	1.41	1.19	9.3	18.6
	Not lonely	1.13	1.06	20.2	28.4
	Sometimes lonely	1.33	1.15	52.8	62.8
	Lonely	1.41	1.19	9.3	18.6

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	0.99	1.00	80.8	84.4
	No	0.99	1.00	15.6	19.2
No	Yes	0.67	0.82	84.7	86.0
	No	0.67	0.82	14.0	15.2

WelSpk Speak Welsh

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Yes	Yes	1.26	1.12	12.9	16.5
	No	1.37	1.17	71.7	76.3
	No, but have some Welsh speaking ability	1.52	1.23	9.5	13.0
No	Yes	1.23	1.11	19.3	21.1
	No	1.28	1.13	66.7	68.8
	No, but have some Welsh speaking ability	1.54	1.24	11.3	12.9

DvIncResp **Derived variable - Total personal income from all sources over the last 12 months (NET)**

Household material deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower	Upper
Yes	Mean	1.25	1.12	£ 9,360	£ 12,618
No	Mean	0.93	0.96	£ 11,807	£ 12,904

Selected survey variables split by local health board

DvSmokec **Derived variable – Currently smoking either daily or occasionally**

Local health board	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Betsi Cadwaladr University Health Board	Yes	1.49	1.22	15.8	21.0
	No	1.49	1.22	79.0	84.2
Powys Teaching Health Board	Yes	1.71	1.31	13.5	21.8
	No	1.71	1.31	78.2	86.5
Hywel Dda University Health Board	Yes	1.59	1.26	13.5	20.4
	No	1.59	1.26	79.6	86.5
Abertawe Bro Morgannwg University Health Board	Yes	1.41	1.19	18.4	24.6
	No	1.41	1.19	75.4	81.6
Cwm Taf University Health Board	Yes	1.39	1.18	17.1	25.6
	No	1.39	1.18	74.4	82.9
Aneurin Bevan University Health Board	Yes	1.44	1.20	17.2	22.8
	No	1.44	1.20	77.2	82.8
Cardiff and Vale University Health Board	Yes	1.48	1.22	14.4	20.7
	No	1.48	1.22	79.3	85.6

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

Local health board	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Betsi Cadwaladr University Health Board	Yes	1.35	1.16	15.4	20.4
	No	1.35	1.16	79.4	84.5
Powys Teaching Health Board	Yes	1.25	1.12	13.8	21.1
	No	1.29	1.13	77.6	85.2
Hywel Dda University Health Board	Yes	1.32	1.15	13.6	20.2
	No	1.36	1.17	79.1	85.8
Abertawe Bro Morgannwg University Health Board	Yes	1.25	1.12	18.8	24.9
	No	1.26	1.12	74.7	80.8
Cwm Taf University Health Board	Yes	1.18	1.09	10.7	17.6
	No	1.17	1.08	79.7	87.0
Aneurin Bevan University Health Board	Yes	1.35	1.16	13.8	18.9
	No	1.37	1.17	80.3	85.5
Cardiff and Vale University Health Board	Yes	1.42	1.19	15.5	22.1
	No	1.41	1.19	77.8	84.4

Dvmvpa150 **Derived variable – MVPA meets guidelines 150 minutes weekly**

Local health board	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Betsi Cadwaladr University Health Board	Yes	1.32	1.15	51.2	57.7
	No	1.32	1.15	42.3	48.8
Powys Teaching Health Board	Yes	1.27	1.13	59.7	69.0
	No	1.27	1.13	31.0	40.3
Hywel Dda University Health Board	Yes	1.36	1.17	50.1	58.9
	No	1.36	1.17	41.1	49.9
Abertawe Bro Morgannwg University Health Board	Yes	1.31	1.14	44.6	52.0
	No	1.31	1.14	47.9	55.3
Cwm Taf University Health Board	Yes	1.35	1.16	31.7	41.8

Local health board	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
	No	1.35	1.16	58.2	68.3
Aneurin Bevan University Health Board	Yes	1.30	1.14	49.9	56.7
	No	1.30	1.14	43.3	50.1
Cardiff and Vale University Health Board	Yes	1.37	1.17	53.7	61.9
	No	1.37	1.17	38.1	46.3

DvFgLonely Derived variable - People feeling lonely

Local health board	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
Betsi Cadwaladr University Health Board	Not lonely	1.33	1.15	31.2	35.8
	Sometimes lonely	1.37	1.17	47.7	52.5
	Lonely	1.39	1.18	12.7	16.0
Powys Teaching Health Board	Not lonely	1.32	1.15	29.0	35.8
	Sometimes lonely	1.35	1.16	50.0	57.3
	Lonely	1.45	1.20	10.6	15.5
Hywel Dda University Health Board	Not lonely	1.29	1.14	29.0	34.8
	Sometimes lonely	1.34	1.16	46.6	52.9
	Lonely	1.33	1.15	13.8	18.4
Abertawe Bro Morgannwg University Health Board	Not lonely	1.26	1.12	27.4	32.3
	Sometimes lonely	1.32	1.15	50.2	55.6
	Lonely	1.30	1.14	13.5	17.4
Cwm Taf University Health Board	Not lonely	1.29	1.14	24.2	31.3
	Sometimes lonely	1.32	1.15	49.5	57.5
	Lonely	1.27	1.13	14.0	19.8
Aneurin Bevan University Health Board	Not lonely	1.24	1.11	24.1	28.5
	Sometimes lonely	1.34	1.16	52.3	57.3
	Lonely	1.39	1.18	15.5	19.4
Cardiff and Vale University Health Board	Not lonely	1.33	1.15	25.1	30.5

Local health board	Response	Design effect	Design factor	95 % Confidence interval	
				Lower %	Upper %
	Sometimes lonely	1.44	1.20	50.2	56.4
	Lonely	1.57	1.25	15.0	19.9

Selected survey variables split by the Welsh Index of Multiple Deprivation

Dvsmokec Derived variable - 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	1.35	1.16	25.4	32.0
	No	1.35	1.16	68.0	74.6
Q2	Yes	1.42	1.19	20.8	26.8
	No	1.42	1.19	73.2	79.2
Q3	Yes	1.65	1.28	14.6	19.9
	No	1.65	1.28	80.1	85.4
Q4	Yes	1.68	1.29	13.1	18.0
	No	1.68	1.29	82.0	86.9
Least deprived 20%	Yes	1.60	1.27	10.6	15.3
	No	1.60	1.27	84.7	89.4

Dvalcushibi Derived variable - 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	1.39	1.18	11.8	17.0
	No	1.38	1.17	82.2	87.5
Q2	Yes	1.32	1.15	14.3	19.5
	No	1.36	1.16	78.9	84.3
Q3	Yes	1.43	1.19	15.2	20.4
	No	1.43	1.20	79.3	84.5
Q4	Yes	1.41	1.19	15.5	20.6
	No	1.40	1.18	79.2	84.3

Welsh index of multiple deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Least deprived 20%	Yes	1.30	1.14	18.9	24.4
	No	1.31	1.14	75.1	80.6

Dvmvpa150 Derived variable - 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	1.42	1.19	39.6	47.0
	No	1.42	1.19	53.0	60.4
Q2	Yes	1.35	1.16	43.2	50.2
	No	1.35	1.16	49.7	56.7
Q3	Yes	1.41	1.19	51.1	57.8
	No	1.41	1.19	42.2	48.9
Q4	Yes	1.40	1.18	53.5	60.0
	No	1.40	1.18	40.0	46.5
Least deprived 20%	Yes	1.33	1.16	55.7	62.3
	No	1.33	1.16	37.7	44.3

DvFgLonely Derived variable - People feeling lonely

Welsh index of multiple deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
Most deprived 20%	Not lonely	1.26	1.12	22.0	26.5
	Sometimes lonely	1.38	1.17	49.7	55.1
	Lonely	1.34	1.16	19.2	23.6
Q2	Not lonely	1.26	1.22	23.7	28.1
	Sometimes lonely	1.37	1.17	50.7	55.9
	Lonely	1.41	1.19	16.3	20.3
Q3	Not lonely	1.39	1.18	27.8	32.3
	Sometimes lonely	1.40	1.18	49.1	54.0
	Lonely	1.45	1.21	15.0	18.6
Q4	Not lonely	1.41	1.19	31.2	35.7
	Sometimes lonely	1.45	1.20	49.9	54.7

Welsh index of multiple deprivation	Response	Design effect	Design factor	95 % Confidence Interval	
				Lower %	Upper %
	Lonely	1.50	1.22	11.5	14.8
Least deprived 20%	Not lonely	1.34	1.16	32.0	36.6
	Sometimes lonely	1.39	1.78	49.8	54.8
	Lonely	1.49	1.22	10.0	13.2