

Compendium

# Chapter 1 - Introduction

Contact:  
Gemma Thomas  
los@ons.gsi.gov.uk

Release date:  
10 September 2015

Next release:  
To be announced

## Table of contents

1. [Foreword](#)
2. [Background of the Life Opportunities Survey](#)
3. [Social model of disability](#)
4. [Brief outline of the LOS methodology](#)
5. [Wave Three Analyses](#)
6. [Interpreting survey results](#)
7. [Strengths and weaknesses](#)
8. [Availability of detailed and unpublished data](#)
9. [Background notes](#)

# 1 . Foreword

This report presents results based on the longitudinal findings from Wave One and Wave Three of the Life Opportunities Survey (LOS). Analysis focuses on Wave One and Wave Three to make full use of the longitudinal design of LOS. Considering impairment status at Wave One and Wave Three only also simplifies the classification of adults for analysis.

## 2 . Background of the Life Opportunities Survey

The Life Opportunities Survey (LOS) is a large-scale longitudinal survey<sup>1</sup> of disability in Great Britain. It is the first major national social survey which explores disability in terms of the barriers to participation that people experience. Prior to the development of the LOS, the last major survey on disability conducted in Great Britain had been the Family Resources Survey disability follow-up in 1996 to 1997. Before this, it was the Office of Population Censuses and Surveys (OPCS) national surveys of disability, carried out during 1985 to 1988. In 2005, the [Department for Work and Pensions](#) (DWP) carried out a feasibility study<sup>2</sup> which recommended a new survey dedicated to meet the evidence needs of policy for disabled people in Great Britain. Subsequently, the [Office for Disability Issues](#) (ODI) (part of the DWP) commissioned the Office for National Statistics (ONS) to develop the LOS.

The survey is wholly funded by the DWP and is carried out by ONS. The LOS was conducted over 3 waves with each wave of the survey spanning 2 years. Respondents in Wave Two were followed up approximately 1 year after their initial interview. Interviews with Wave Three respondents were carried out approximately 2 and a half years after Wave Two, and 3 and a half years after Wave One. Wave One of the LOS took place between June 2009 and March 2011; Wave Two began in June 2010 and finished in March 2012; Wave Three commenced in October 2012 and was completed in September 2014. This is the final wave of the survey.

### Notes for 1.1 Background of the Life Opportunities Survey

1. A survey where respondents are regularly re-interviewed after a set interval (for example, 1 year).
2. [Purdon et al. \(2005\)](#) Meeting DWP's long-term information needs on disability: A feasibility study.

## 3 . Social model of disability

According to the social model, disability is viewed as the disadvantage or restriction of activity and participation caused by aspects of society which take little or no account of the needs of people with impairment. Therefore, in line with the social model, the LOS assesses the level of participation of people with impairment and the barriers to participation they face.

Impairments relate to the loss of physiological and psychological functions of the body such as loss of sight, hearing, mobility or learning capacity, and should be distinguished from medical conditions or loss of bodily structure. For example, glaucoma is a medical condition whereas loss of vision is the impairment it causes. Activity limitations are restrictions an individual may have in executing physical or mental tasks or actions as a result of their impairment, for example, being unable to read newsprint at arm's length without glasses or other aids and adaptations.

The LOS collects self-reported data on impairment; this is dependent upon the respondent's perception of the limitations and severity of the impairment.

In this report, an adult is defined as having an impairment if they indicated that:

- they experience either moderate, severe or complete difficulty within at least 1 area of physical or mental functioning
- certain activities are limited in any way as a result. "Activities" refer to different areas of physical or mental functioning, such as walking, climbing stairs or reading a newspaper

The LOS collects information about all impairments that a respondent may have (it is possible for a respondent to report more than one impairment) and respondents are asked to self-classify their impairment according to a list of 14 impairment types:

- sight<sup>1</sup>
- hearing
- speaking
- mobility
- dexterity
- long-term pain
- chronic health condition<sup>2</sup>
- breathing
- learning
- intellectual impairment
- behavioural
- memory
- mental health condition
- "other"

At Waves One and Three of the survey, respondents were not asked to specify the underlying condition for each impairment type. However, respondents who reported a particular impairment were asked the level and frequency of the limitation caused by the impairment. Questions about long-term health conditions were also included.

This method of classifying impairment status is compatible with the International Classification of Functioning, Disability and Health (ICF) developed by the [World Health Organisation](#) (WHO).

The survey also collects information on:

- participation in different life areas
- the barriers that people face to participating in these life areas
- how levels of participation and barriers to participation change over time

Respondents are asked questions on a broad range of topics including employment, education and training, transport, leisure, social and cultural activities, the accessibility of buildings and use of public services. They are also asked questions about informal care, experiences of discrimination and crime and the financial situation of the household.

The LOS asks questions about people's experience of barriers in the following 8 life areas:

- education and training
- work
- economic life (the household's ability to make ends meet)
- transport
- leisure activities
- accessibility in the home
- accessibility outside the home
- social contact

An adult has a participation restriction if they experience at least 1 barrier to taking part in at least one of the 8 life areas.

Examples of barriers include: discrimination, the attitudes of other people, inaccessible buildings, public transport and information, lack of money, not having anyone to meet or speak to, as well as lack of support, equipment and adjustments.

Further information on the development of the survey, including details on the consultation with a reference group of disabled people and qualitative testing of the survey, can be found in the [Wave One Interim Report \(956.2 Kb Pdf\)](#).

## **Notes for 1.2 Social model of disability**

1. At Wave Three the question on limitation to activities due to impaired vision was amended to collect information for short and long sightedness as separate categories.
2. Wave Three included 2 additional categories to chronic health condition – Chronic Obstructive Pulmonary Disease (COPD) and Depression.

## **4 . Brief outline of the LOS methodology**

The following section of the report contains a brief summary of how respondents were followed up across the 3 waves and how they are classified into groups for the purpose of longitudinal analysis.

### 1.3.1 Follow-up of respondents from Wave One to Wave Two

A total of 37,500 households were sampled for the LOS Wave One survey, using a single stage (unclustered) design. In this first wave, all adults (with and without impairment) responding to the survey were interviewed. Classification of impairment status then took place after the interview. Each respondent's impairment status at Wave One was then used to assign them to 1 of 3 different groups which determined how they were followed up in Wave Two.

#### 1. Adults with at least 1 impairment

This group included all adults who reported at least 1 impairment at Wave One<sup>1</sup> (29%). These adults, as well as all adult members of their households, were interviewed in person at Wave Two.

#### 2. Control

Of the 71% of adults who did not report having an impairment at Wave One, a subset was selected to form a "control" group. The adults in this group were chosen to provide a comparison group that is similar to the adults with at least 1 impairment on several main characteristics associated with impairment: sex, age, region of residence, and the urban or rural classification of residence. The size of the control group was designed to be half that of the group of adults with at least 1 impairment, that is, for the Wave Two sample there were 2 adults with impairment for every 1 person in the control group. All of the adults in the control group, as well as all adult members of their households, were interviewed in person at Wave Two.

#### 3. Onset-screening

All of the remaining adults who did not have an impairment at Wave One and who were not selected for the control group, were assigned to the "onset screening group". These adults were not interviewed in person at Wave Two, unless they or an adult member of their household had acquired an impairment between Wave One and Wave Two. A brief telephone interview was conducted with the onset-screening group between Wave One and Wave Two in order to establish if anyone in their household had acquired an impairment.

For more information on the composition of the 3 follow-up groups, see the [Wave Two Interim Technical Report \(2.26 Mb Pdf\)](#).

### 1.3.2 Follow-up of respondents from Wave Two to Wave Three

All adults interviewed at Wave Two LOS were followed up with a face-to-face interview at Wave Three. This included adults who reported at least one impairment at Wave Two, as well as all adult members of their household and adults without an impairment at Wave Two and all adults in their household.

Adults in the onset screening group were also followed up at Wave Three. A brief telephone interview was conducted with the onset-screening group between Wave Two and Wave Three in order to establish if anyone in their household had acquired an impairment. These adults were not interviewed in person at Wave Three, unless they or an adult member of their household had acquired an impairment between Wave Two and Wave Three.

Diagram 1.1 shows a summary of time periods of waves and the LOS longitudinal design. The data collection periods overlap slightly for Wave One and Wave Two, although adults were interviewed for Wave Two approximately a year after their first interview. The time period between interviews at Wave Two and Wave Three varies between 28 months and 30 months. This variation in time lag is due to the move from quarterly to monthly data collection implemented at Wave Two. The time lag between Wave One and Wave Three is between 3 years and 4 months and 3 and a half years.

## Diagram 1.1: Timescale for LOS interviews

Time period	June 2009 – Mar 2010	June 2010 – Mar 2011	June 2011 – Mar 2012	Oct 2012 – Sept 2013	Oct 2013 – Sept 2014
Wave	Wave One Year One	Wave One Year Two			
		Wave Two Year One			
				Wave Three Year One	Wave Three Year Two
Fieldwork	Quarterly			Monthly	
Timelag	12 months between W1 and W2			Between 28 and 30 months between W2 and W3	

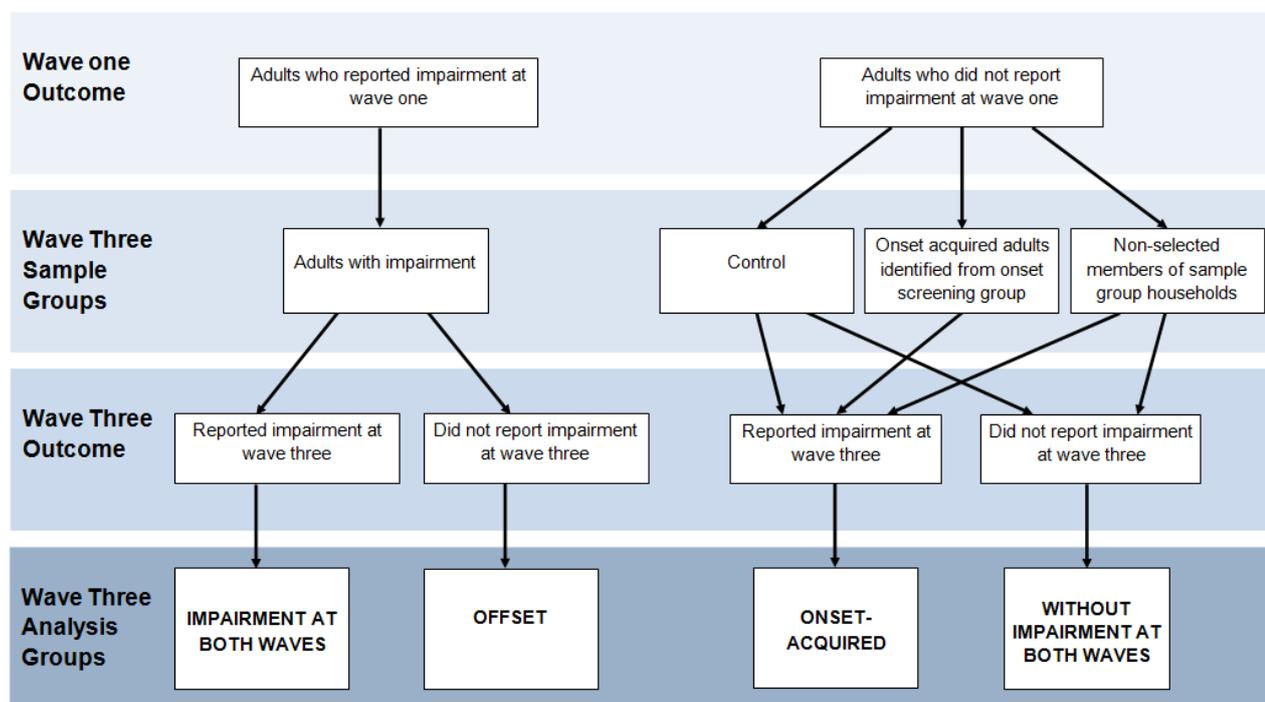
## Classification of individuals for Wave Three longitudinal analysis

Diagram 1.2 shows how adults have been classified for the Wave One to Wave Three longitudinal analysis. The classification takes into account impairment status at Wave One and Wave Three only. Diagram 1.2 also illustrates how adults who did not report any impairment at either Wave One or Wave Three flow through the survey. The more complex flow of adults through all 3 waves is illustrated in [Annex 2 \(79.3 Kb Pdf\)](#).

The following 4 groups are featured in the longitudinal analyses of this report:

1. adults who had at least 1 impairment at Wave One and at Wave Three are "adults with impairment at both waves"
2. adults who had at least 1 impairment at Wave One but no impairments at Wave Three are "offset adults"
3. adults who did not have any impairment at Wave One but had at least 1 impairment at Wave Three are "onset-acquired adults"
4. adults who did not have any impairment at Wave One or at Wave Three are "adults without impairment at both waves"

## Diagram 1.2: Classification of adults for LOS Wave Three longitudinal analysis



## Notes for 1.3 Brief outline of the LOS methodology

1. [Wave one results, 2009 to 2011](#)

## 5 . Wave Three Analyses

### Outline of chapters

This report explores impairment transitions over time, as well as adults' experiences at Wave Three of various life areas by impairment status.

Chapter 1 (this chapter) sets out the background for the LOS and outlines the LOS methodology. This chapter also discusses the importance of the main measures used in the analysis and highlights both the strengths and weaknesses of using LOS data.

[Chapter 2](#) will examine the scale of onset and offset transitions that have occurred between Wave One and Wave Three.

[Chapter 3](#) will describe differences across Wave One and Wave Three in work status transitions, with relation to impairment status transitions and other characteristics and circumstances such as age, economic status, occupation and caring responsibilities.

[Chapter 4](#) provides an overview of participation restriction across life areas followed by a focus on participation restriction to the life area of leisure. Chapter 4 also looks at barriers to participation, such as difficulties in accessing culture, sport and leisure activities, and the effect of impairment status on how adults choose to live their lives.

[Chapter 5](#) explores how the level of social contact experienced by adults varies according to impairment status. It also looks at barriers to social contact, such as difficulties in getting in or out of the home, by impairment status.

[Chapter 6](#) provides a summary of the findings of the report.

As noted above, there is a focus on 3 of the 8 LOS life areas: work, leisure activities and social contact. These topics were chosen to understand more about the experience of onset and offset transitions over time and to examine some of the barriers to participation and access in these life areas at Wave Three.

The data have been weighted to provide estimates for the general population. This is done to improve the estimates, adjusting for sample non-coverage and non-response. As LOS is a longitudinal survey, this adjustment has been done based on the population at Wave One. LOS is therefore not suitable for calculating cross-sectional estimates of impairment prevalence at Wave Two and Wave Three. Section 1.6 has more information on the specific strengths and weaknesses for LOS.

Further information on weighting of LOS Wave One to Wave Three data can be found in Section 1.5.

## **Longitudinal analysis groups**

Throughout the report comparisons are made between the 4 groups of adults as described in Section 1.2 - adults with impairment at both waves, offset adults, onset-acquired adults and adults without impairment at both waves. The 4 groups reflect the diversity of impairment status, in that impairment status may be stable, or may change over time. A person may have impairments at both waves or be without impairment at both waves. Alternatively, they may no longer have impairments or they may acquire an impairment at Wave Three.

## **Participation restriction and barriers**

An adult has a participation restriction in a life area if they experience at least 1 barrier in that area. For example, in community, leisure and civic life, respondents were asked if there were any activities that they would like to do more of but were not able to<sup>1</sup>. If they answered "yes", they were then asked to specify the barrier(s) experienced. Barriers in this life area included:

- too busy/not enough time
- too expensive
- no-one to go with
- fear of crime
- fear of crowds
- lack of availability
- lack of help or assistance
- a health condition, illness or impairment
- disability related reasons
- attitudes of other people
- difficulty with transport
- difficulty getting into buildings
- difficulty using facilities
- caring responsibilities
- feel that I am not welcome

For another life area, the barriers reported may be different. For example, "lack of job opportunities" is a barrier applicable to work, whereas "difficulty getting to stop or station" is a barrier applicable to the use of public transport such as local buses and long distance trains. Analysis of barriers is presented in charts showing the top barriers that were reported by each group at Wave Three.

The top barriers form the focus of our analysis given the small number of respondents selecting other barrier types. The top 4 barriers are considered in [Chapter 4](#) and the top 6 in [Chapter 5](#). Where direct comparisons between analysis groups or age groups are made within the text, these are statistically significant at the 95% confidence level unless otherwise stated. Where the text describes the most common barriers, or the ordering of barriers within an analysis group, no significance testing has been carried out.

### **Why is it important to study barriers to participation to understand disability?**

The results from the longitudinal analysis of the LOS will be used to further inform a new understanding of the dynamic nature of the disabled population and of the barriers faced by people with impairment. It is important to understand more about the dynamic nature of disability and the barriers people with impairments face. Such findings can be used to inform the development of policies relating to health and disability.

### **Notes for 1.4 Wave Three Analyses**

1. [Life Opportunities Survey Wave One Questionnaire \(678.4 Kb Pdf\)](#)

## **6 . Interpreting survey results**

## Units, presentation and accuracy

Detailed definitions of the terms and categories used in this report are provided in the [Glossary](#).

All estimates presented in the tables and charts have been analysed using longitudinal weights so that they have been adjusted for non-response, differential sampling probabilities of selection at Wave One, and loss to follow-up at Wave Two and Wave Three.

The weighting of the Wave One to Wave Three data was carried out in 2 steps:

Step 1: An adjustment to loss to follow-up was applied to the Wave One to Wave Two weights of all cases that were present in Wave One and responded in Wave Three. The same method was applied that was used in Wave Two, described in Annex 1 of the [Wave Two report](#). The adjusted weights were then calibrated to the Wave One population totals.

Step 2: The dataset used in step 1 was expanded to add the cases from the screening group that received a face-to-face interview in Wave Three (because they had "onset" to impairment). The same weight adjustment procedure was applied that was used in the Wave One to Wave Two dataset, described in Annex 1 of the [Wave Two report](#).

## Calculating percentages

Percentages reported throughout the document have been calculated using population estimates rounded to integers. When calculating percentages, the values of residual categories such as "no answer" or "don't know" have been excluded from the denominator.

## Sample attrition, household and individual response rates

The response rate for LOS Wave Three can be calculated at both household and individual level. The LOS Wave Three achieved a household level response rate of 66%. In this case responding households were those in which information was collected in person or by proxy for all adults. The survey achieved an individual response rate of 64%, among adults who were eligible for a face-to-face interview.

For longitudinal surveys, the sample is subject to attrition moving from 1 wave to the next. For the LOS, a subset of the original sample at Wave One were not contactable, did not respond, or refused further participation at Wave Two and Wave Three. More information on sample attrition and the household and individual response rates can be found in [Annex 3 \(106 Kb Pdf\)](#).

## Statistical significance

Unless otherwise stated, changes and differences mentioned in the text have been found to be statistically significant at the 95% confidence level. Different tests were used when comparing differences between waves (non-independent) and differences between analysis groups or age groups (independent).

There are 3 notable exceptions to this:

## Chapter 2

For comparisons of offset and onset rates by impairment type (Tables 2.7 and 2.10), unless they involve comparing age groups, no significance testing has been carried out. This is because individuals can experience more than 1 impairment type, so any differences are not independent and would require a different form of significance testing.

Significance testing has not been carried out on Tables 2.1 to 2.4 and 2.11 to 2.14, comparing the severity and frequency of impairment types. This is because individuals can experience more than one impairment type, so any differences are not independent and would require a different form of significance testing.

## Chapter 4

The analysis of the types of barriers adults experienced are presented as a description comparing the top barriers. Where the text describes the most common barriers, or the ordering of barriers within an analysis group, no significance testing has been carried out. Where direct comparisons between analysis groups or age groups are made within the text, testing has been undertaken and differences are statistically significant at the 95% confidence level unless otherwise stated.

# 7 . Strengths and weaknesses

## Specific strengths of using the LOS:

- LOS is a longitudinal survey that has been designed to follow respondents over time to provide an insight and understanding into the transient nature of impairment. An important key component of the survey design is the ability to compare the experience of barriers to participation between people with impairment and those without impairment over time to assess the equality in access in different life areas. The formation, at Wave Two, of a control group from within the respondents who did not have any impairments at Wave One, allows experiences to be compared between the 2 groups. The analysis in this report compares Wave One with Wave Three.
- As the first longitudinal survey of its kind, the data collected provides a unique and rich source of data for use by analysts. It provides understanding about the transitions into and out of impairment, as well as different types and severity of impairment experienced by adults in Great Britain.
- Survey design. The LOS uses an unclustered sample designed to produce efficient estimates for the sample size and Great Britain. The unclustered sample allows greater precision to be achieved in LOS outputs because it helps to make the sample more representative of all groups in society <sup>1</sup>.
- The size of the Wave One sample was sufficient to accommodate for attrition over time. As a result, at Wave Three, the sample remains of a sufficient size to allow for comparisons and analysis to be conducted among subgroups of the sample.

## Specific weaknesses of using the LOS:

- Potential under- or over-reporting of impairment. The LOS collects self-reported impairment data which is dependent upon the respondent's perception of the limitations and severity of the impairment at the time of the interview. A self-reporting measure of this kind is prone to both over- and under-reporting as the perception of the existence and effect of impairment is dependent upon each respondent's own personal opinion on the day they are interviewed.
- One consequence of this is that the respondent's perception of the impairment may differ over time causing transitions to be recorded that may or may not be real. For example, the LOS definition of impairment is dependent upon the respondent reporting more than "mild" difficulty. If at Wave One they report "moderate" difficulty, they will be classed as having an impairment according to the LOS definition. However, if at Wave Two we assume that there has been no change in the impairment and the respondent reports "mild" difficulty, LOS will no longer class them as having an impairment. Using this example, the respondent will be treated as having offset from impairment at Wave Two. This approach has also been applied at Wave Three.
- Cross-sectional weights are not available on the LOS Wave Two and Wave Three datasets and therefore estimates of impairment prevalence cannot be calculated. Overall estimates of disability prevalence are available from the Family Resources Survey<sup>2</sup>.

The LOS is a sample survey and so is subject to weaknesses which also exist for other surveys, including:

- Non-sampling error. Estimates from all sample surveys, including those derived from the LOS data, will contain a degree of uncertainty due to non-sampling and sampling error. Non-sampling error generally arises from errors in the collection, measurement and processing of the data<sup>3</sup>. To minimise non-sampling error, the LOS questionnaire was administered using computer-assisted interviewing (CAI), which ensured that the questionnaire routing was followed correctly during the interview and inconsistencies and potential collection errors were able to be queried, and where appropriate, corrected during the interview<sup>1</sup>. Again, to minimise non-sampling error, as a result of errors arising from data collection, all of our ONS interviewers received both generic interviewer training and specific LOS training prior to working on the LOS. The LOS Wave One Technical Report provides further information about the data collection and processing of the data<sup>3</sup>.
- Sampling error. This relates to the fact that the sample chosen is only one of a large number of samples that could have been chosen. It follows then that any estimate derived from the sample is only one of a large number of estimates that could have been made. For users of survey data, the precision of the estimate is of interest, that is, how much the estimate would vary when different samples are drawn<sup>4</sup>. In general, the larger the sample size from which the estimate is derived, the more precise, or robust, is the estimate.
- Non-response and missing information. The information from a household which co-operates in the survey may be incomplete. This can be due to one of the following reasons: a partial refusal (for example, to income); because information was collected by proxy, therefore certain questions were omitted from the interview; or a particular item was missed because of a lack of understanding or an error.
- Survey coverage. The LOS Wave One sample was designed to cover private households in Great Britain. Therefore individuals in care or retirement homes, for example, will not be included. This means that figures relating to the severely disabled and the most elderly individuals may not be representative of the Great Britain population, as many will have moved into homes where they can receive more frequent help.
- The survey at Wave Two followed individuals and their households and remains a private household survey. This means that any respondents who moved into institutions (care or retirement homes, prison, etc) between Waves One and Two were not followed at Wave Two and were recorded as not eligible to participate in the survey. Similarly, respondents who moved into institutions between Waves Two and Three were not followed at Wave Three and were recorded as not eligible to participate in the survey.
- The LOS Wave Two set sample comprised only of households of individuals who had participated at Wave One and did not include any new households. This approach does not allow the sample to be refreshed to include any new population sub-groups that may have entered the country since the sample was drawn for Wave One. However, any adult or child who had entered a LOS household since the Wave One interview are included as new survey entrants at Wave Two. This approach has been applied at Wave Three.
- Survey bias. Although work has been undertaken to try to ensure that the figures that have been collected are valid and that adjustments are made for attrition, survey bias may still remain. This may be partly due to misreporting of certain data items and sampling error, but also may reflect non-response biases not controlled for in the weighting factors. As with Waves One and Two, efforts were continually made at Wave Three to minimise these issues, for example, through greater reliance on documentary evidence at the interview and maintaining response rates.

## Notes for 1.6 Strengths and weaknesses

1. [Wave One Technical Report](#)
2. [Family Resources Survey 2013 to 2014](#)
3. For more information on non-sampling errors please see Page 200 of the [Wave One Report](#)
4. The precision of the estimate can be gauged by its confidence interval – the range of values within which the population parameter is estimated to lie. The narrower the interval, the more precise is the estimate

## 8 . Availability of detailed and unpublished data

A summary of this report is available in alternative formats such as Large Print, Braille, Audio or Easy Read. [The Easy Read version \(1.35 Mb Pdf\)](#) is available via our website. Large Print and Braille copies are available from the ONS LOS team. The Audio version is available via the DWP website <sup>1</sup>. Contact the LOS team by email [LOS@ons.gsi.gov.uk](mailto:LOS@ons.gsi.gov.uk) or by telephoning +44 (0)1633 455703.

The LOS Wave Three datasets will be made publicly available in 2015, via the UK Data Service <sup>2</sup>.

### Notes for 1.7 Availability of detailed and unpublished data

1. [Life Opportunities Survey](#)
2. [UK Data Service](#)

## 9. Background notes

1. All tables contain figures based on sample estimates that have been weighted so that they apply to the overall population. This involves the use of a set of adjustment (or grossing) factors that attempt to correct for differential attrition between Wave One and Wave Three. The unweighted sample counts, shown in the tables as "sample size=100%", therefore can help users to judge the robustness of the information (the larger the sample size the more robust the relevant estimate). Note that the unweighted sample counts have been rounded to the nearest 10. All figures in this report have been rounded independently. Therefore, the sum of component items will not necessarily equal the totals shown.
2. Households who did not co-operate at both Wave One and Wave Three are omitted from all analyses. Those who omitted whole sections because they were partial refusals or interviewed by proxy are not included in the analyses of that section. The "no answers" arising from omission of particular items have been excluded from the base numbers shown in the tables and from the bases used when calculating percentages.
3. Missing answers are excluded from the tables and in some cases this is reflected in the sample bases, that is, these numbers vary between tables. For this reason, the weighted bases are excluded from tables as they are not recommended as a source for population estimates.
4. Details of the policy governing the release of new data are available by visiting [www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html](http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html) or from the Media Relations Office email: [media.relations@ons.gsi.gov.uk](mailto:media.relations@ons.gsi.gov.uk)