



Department
of Health &
Social Care

Feasibility Study for Survey of Incomes and Assets of Adults with Social Care Needs

**Workstream 5 report: Assessing proxies for housing wealth,
non-housing wealth and income**

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Contents

1. Executive Summary	4
2. Background	5
3. Methods.....	8
4. Results	11
4.2 GLM results	12
4.3 Logistic regression results	13
5. Conclusion.....	15

This research was commissioned under the previous administration (11th May 2010 to 5th July 2024) and therefore does not reflect the policies of the current government. The views expressed are the authors' and do not necessarily reflect those of the government.

1. Executive Summary

This report presents findings from workstream 5 of a project about the feasibility of collecting data about income and assets from people with care needs. This workstream involved further secondary analysis of data from the English Longitudinal Study of Ageing (ELSA) to explore how potential high level proxy measures of financial circumstance were related to more detailed financial evidence of the type needed for modelling.

To model the costs of the charging reforms detailed demographic, financial and receipt of care data are required. Earlier work from workstream 3 of this project indicated that asking survey respondents for detailed financial data presents challenges including poor response rates (both overall and item non-response). The aim of this analysis was to assess whether data which can be more easily captured in a sample survey with people with care and support needs or their carers could constitute robust proxies for the data on incomes and assets required for modelling the impact of the charging reforms. As part of the overall project at workstream 4 various measures of financial status were tested. These included new questions and those adapted from existing surveys, some of which are being considered as potential proxies for the more detailed data required for modelling. After testing how able and willing participants are to respond to these questions accurately, it is important to explore how useful they would be in meeting DHSC's modelling requirements.

The financial data required for modelling the reforms are net housing wealth (i.e., net of any mortgage debt), net non-housing wealth, individual net income, and, ideally, components of individual income, since some components are disregarded in the means test for publicly funded care. The tails of the distribution are especially important since (a) under the current system people with low savings (less than the lower capital limit of £14,250) only contribute towards the cost of their care from their income, this will remain the same under the reforms, subsequently these people will not benefit from them, and (b) people with high savings, who under the current system need to meet the full costs of their care, will potentially benefit from the reforms (the lifetime cap) and the rate at which they progress (meter) toward the cap will be determined by what the cost of their care would be if the local authority was meeting their needs.

This analysis concluded that the potential proxies examined are not sufficiently robust to model the adult social care charging reforms. They would over-estimate the incomes (non-housing assets) of those with low incomes (assets) and under-estimate the incomes (non-housing assets) of those with high incomes (assets). This means that analyses of the impacts of the charging reforms using data where incomes and non-housing assets were imputed using the proxy variable data would not be robust.

2. Background

2.1 Background and objectives of the Paying for Care Survey project

The project was commissioned by DHSC as there is currently a lack of robust data about the income and assets of the population using care services, as well as other information such as demographics and spending on care. The collection of these data can be complex and sensitive with important ethical implications. The overall project therefore looks to explore the different options for potential data collection and their benefits and drawbacks. This will help DHSC to have a better understanding of the different future options available to them and what these options may look like.

Continuing to develop the existing evidence base on the funding issues, income, and assets (e.g. property and/or savings) of people with care and support needs is essential to understand the needs of care users and how well they are supported by the systems and policies in place. However, there are challenges involved in collecting robust data on individuals' funding status, incomes and assets, particularly from a population that includes vulnerable people. DHSC has therefore commissioned Ipsos and the Care Policy and Evaluation Centre (CPEC) at LSE to conduct a study to explore the feasibility and acceptability of conducting a survey to collect data on the characteristics of people with care needs, including financial data.

From the different options explored throughout this project, DHSC would like to understand how feasible it is to answer the following questions from any data:

- how people with care and support needs' assets are impacted as they move through the care system
- how funding arrangements play out in the real world, and the issues faced by those in different funding scenarios
- what the demographic characteristics of people with care and support needs are

Improved data on the income, assets and wealth of people using care services will help DHSC to better understand the impacts of government policy and current work to shape the charging reforms in the ASC sector. DHSC is interested in data which could be collected or analysed in advance of the implementation of the charging reforms, as well as future collection once when the reforms are implemented. Existing survey data, administrative data and new surveys are all potential options to be considered.

2.2 The five workstreams

The project was divided into five work streams which were conducted iteratively between December 2021 and October 2023. Earlier workstreams, which have been reported separately, involved conducting interviews with care providers, local authorities and other key informants to assess the feasibility of collecting data on the income and assets of people with care and support needs, as well as interviews with people with care and support needs and carers:

Workstream 1: CPEC at LSE carried out a rapid evidence review of past studies on income and assets of people with care needs. They looked at existing large scale national population datasets as well as previous bespoke surveys of people receiving care and support and their carers which collected data on income and savings. This provided DHSC with an overview of previous and current data collection.

Workstream 2: Ipsos explored the views of stakeholders with an interest in or understanding of the adult social care (ASC) sector. Participants were asked about the different ways that data on the income, assets and wealth of people with care and support needs are currently recorded or collected and their thoughts on further potential data collection activities (such as a survey). A first Expert Reference Group (ERG) meeting was then held to discuss findings from WS1 and WS2, and inform the next phase.

Workstream 3: It consisted of secondary data analysis (phase 1) and an options appraisal (phase 2). For the secondary analysis CPEC investigated the response rates to questions about the financial circumstances of respondents in two major national longitudinal surveys, the English Longitudinal Study of Ageing (ELSA) and UK Household Longitudinal Study (UKHLS). The objective was to identify how well these questions in ELSA and UKHLS capture the financial information they are designed to capture. In the options appraisals, Ipsos looked at the different data collection options available. Three groups of options were considered, and their benefits and drawbacks identified. Each option was appraised on a range of topics including: coverage of the target population, information that the option would provide and whether this would meet DHSC needs, impact on people with care needs, impact on carers and families, required involvement of organisations, technical and practical considerations and, data analysis and use. Findings from Workstreams 1 and 2 and from CPEC's secondary data analysis fed into the options' appraisal. This options' appraisal was conducted prior to the 2022 Autumn Statement announcement that the implementation of charging reform would be delayed.

Workstream 4 phase 1: It explored the views of people with care needs, unpaid carers, and people with Power of Attorney for the financial affairs of a family member with care needs, focusing on:

- their willingness to take part in a survey asking about their income and assets, or those of the family member they support;
- what level of detail they would be willing to provide when answering questions on care needs, assets and income for themselves, or for the family member they support;
- how easy or difficult it would be to provide the required information about care needs, current care plan, income and wealth;
- the role of family members in helping to provide the required information;
- possible concerns about how the data may be used; and
- how concerns could be reduced and alleviated and how people should be approached

Findings from these interviews informed the design of questions aiming to collect information on care needs, income and assets, which are included in this report. Once finalised these questions were cognitively tested during the second phase of WS4.

Workstream 4 phase 2: In this phase, Ipsos cognitively tested the survey questions drafted on the basis of the findings from WS4 phase 1. The cognitive interviews sought to understand:

- the extent to which unpaid carers and people with care needs understood the draft questions in the way they were intended;
- how easy or difficult it would be for carers and people with care needs to complete a survey using these questions; and
- the acceptability of the draft questions

A second ERG meeting was convened at the end of WS4 to discuss WS4 findings, the overall project findings and their implications.

Workstream 5: CPEC conducted further secondary analysis of ELSA data to explore how high level potential proxy measures of financial circumstances were related to more detailed financial evidence of the type needed for modelling the impact of the charging reforms.

3. Methods

3.1 Data

Our analysis uses Wave 9 of the English Longitudinal Study of Ageing (ELSA) for which data collection took place in 2018-2019. The ELSA sample comprises people aged 50 years or over, living in a private household in England at the time of joining the sample. Partners of original sample members and new partners who have moved into the household since the survey base are also included. Our analyses focus on the subsample of ELSA respondents who are aged 65 and older in Wave 9. Data is collected from a longitudinal sample of individuals every two years. The social care module was introduced in wave 6 (2012-13). Further details about ELSA can be found in our report of workstream 1 of this study (Wittenberg and King 2022).

The ELSA study team derive detailed estimates of financial data based on the data collected in the survey. These include estimates of net housing wealth and net non-housing wealth at the benefit unit level. The components of total income – employment income and income from state and private pensions and state benefits - are estimated at the individual level. The survey does not estimate income from assets or debts at the individual level. We estimated individual total income, at the individual level, from the available data.

The proxy measures we examined for each of the financial measures are as follows:

1. For net housing wealth, a question in the survey asking for the current value of the respondent's home, if they were homeowners, was used as a proxy: "How much would you expect to get for your home if it was sold today?"
2. For net non-housing wealth and individual total income, the proxies considered were three general questions on financial wellbeing, the highest level of education achieved and whether or not the respondent received Pension Credit.

The general questions on financial wellbeing are as follows:

- a. How the respondent (and partner) were getting along financially currently
- b. Whether the respondent finds she/he as too little money to spend on their needs
- c. Respondent stopped buying first choice food items due to having too little money

These questions are available in ELSA data from wave 9 and were included in the workstream 4 cognitive testing in this or a similar form.

3.2 Statistical Analysis

We first produced descriptive statistics for the distribution of the ELSA derived measures of net housing wealth, net non-housing wealth and estimated individual total income.

Next, we calculated the pairwise correlation of derived housing wealth and the proposed proxy, respondent's estimate of house value.

We then produced statistical models for both non-housing wealth and total income. Generalised linear models (GLM)¹ were estimated in which non-housing wealth and total income were modelled as the dependent variable and the three general questions on financial wellbeing, education and receipt of Pension Credit as independent variables. The age band (65-74 years, 75-84 years and 85 years and over) and sex were included in the models as covariates. Marital status was added as a covariate to the models of non-housing wealth as, in ELSA, this was estimated at the level of the benefit unit. The results are summarised at section 4.2.

For each model we estimated the predicted values of the regression equation and plotted these against the observed values and the deviance residuals. Deviance residuals are recommended by McCullagh and Nelder (1989)² and by others as having the best properties for examining the goodness of fit of a GLM.

We further created binary variables indicating low non-housing wealth, high non-housing wealth, low total income and high total income to estimate how well the proxies predict at (a) low levels of non-housing wealth or income such that the person would likely receive free care under the current means test for local authority supported social care services, and (b) high levels that would suggest lifetime ineligibility for local authority support under the current means test but potential to benefit from a cap on liability to meet care charges. These levels are as follows:

- low non-housing wealth: 1 – Below £23,500; 0 - £23,500 or above (£23,500 being the upper capital limit for local authority support for care)

¹ Generalised Linear Models are a method of statistical regression analysis that accommodates a variety of data distributions. Unlike linear regression, which assumes data has a normal distribution, GLM can be used to data with other distributions (e.g. Poisson, Gamma). This makes it a suitable method to model financial data as these are often skewed. Additionally, the expected value of the outcome variable can be linked to the linear combination of the independent variables through a suitable link function.

² McCullagh, P., and J. A. Nelder. 1989. *Generalized Linear Models*. 2nd ed. London: Chapman & Hall/CRC.

- high non-housing wealth: 0 – Below £100,000; 1 - £100,000 or above
- low income: 1 – Below £200 a week; 0 - £200 a week or above
- high income: 0 – Below £750 a week; 1- £750 a week or above

We estimated logistic regression models³, for each of these variables with the same independent variables and covariates used in the GLM models. We report the sensitivity, specificity and the percentage of observations correctly classified for each model.

Sensitivity is defined as the percentage of ‘cases’ in the data that are correctly predicted as ‘cases’ by the model. Specificity is defined as the percentage of ‘non-cases’ that are correctly predicted as ‘non-cases’ by the model. The percentage correctly classified is defined as the percentage of ‘cases’ AND ‘non-cases’ that are correctly predicted by the model. Results are summarised at section 4.3.

³ Logistic regression is a statistical method for modelling a binary variable which may indicate a certain class or event taking place versus the alternative. The log-odds of the event (or class) is modelled as a linear combination of one or more independent variables. The numeric function that converts log-odds to probability is the logistic function.

4. Results

4.1 Distribution

Wave 9 of ELSA included responses from N=5,428 individuals aged 65 and over. The distribution of the ELSA derived financial variables are presented in Table 1. The distribution of the proxy variables and covariates are presented in Table 2.

Table 1: Distribution of ELSA derived financial variables among older (age 65+) respondents (unweighted)

Variable	N	Mean	Median	Interquartile range
Older persons (age 65 and over)				
Housing wealth (benefit unit; £)	5,375	295,000	250,000	130,000-400,000
Non-housing wealth (benefit unit; £)	5,331	216,700	60,000	11,000-207,000
Total income per week (£)	5,372	330	270	170-400

(These data and those used in the analyses include people with zero or negative housing or non-housing wealth and people with zero income but exclude people with negative income.)

4.1.1 Housing wealth

Our analysis suggests that the simple question regarding current value of home was a very good proxy for net housing wealth. The pairwise correlation was 0.92 based on 5375 observations ($p < 0.0001$). The high correlation between the two housing variables is not surprising since the net housing wealth variable is derived from the question about self-reported value of the house/flat. The analysis included only 5,375 observations (rather than 5,428) due to missing values for some of the variables.

Table 2: Distribution of ELSA proxy variables among older (age 65+) respondents (unweighted)

Variable	Percent
Age band	
65-75	56.7
75-84	32.7
85+	10.5
Sex	
Female	54.9
Male	45.1
Marital status	
Married/cohabitating	67.3
Single	32.7
How getting along financially	
Manage very well	51.6

Manage quite well	30.2
Get by alright	16.7
Don't manage very well	0.7
Have some financial difficulties	0.7
Have severe financial difficulties	0.1
Too little money to spend on needs	
Never	62.9
Rarely	23.6
Sometimes	11.1
Often	1.5
Most of the time	0.9
Education (highest qualification)	
University	19.9
Between O-Level and University	16.0
O-Level	21.8
Below O-Level	42.3

4.2 GLM results

4.2.1 Results of GLM model of non-housing wealth

The education and financial variables are statistically significantly associated with respondents self-reported benefit unit non-housing wealth as are the covariates apart from gender. However, examination of the deviance residuals indicates that predicted values from the GLM model are highly bunched such that relatively high levels of non-housing wealth are under-estimated and relatively low levels over-estimated. The analysis included only 4,641 observations (rather than 5,428) due to missing values for some of the variables.

4.2.2 Results of GLM model of total income

The education variable and 'how the respondent (and partner) were getting along financially currently' financial variable, but not the 'whether the respondent finds she/he has too little money to spend on their needs' financial variable, are statistically significantly associated with respondents' self-reported individual total income as are all the covariates. However, examination of the deviance residuals indicates that predicted values from the GLM model are highly bunched such that relatively high levels of income are under-estimated and relatively low levels over-estimated. The analysis included only 4,664 observations (rather than 5,428) due to missing values for some of the variables.

4.3 Logistic regression results

The distribution of the ELSA older respondent sub-sample across the dichotomised categories created for the purpose of the logistic regression analyses are presented in Table 3. Table 4 presents the summary statistics of the goodness of fit of each model⁴.

Table 3: Distribution of ELSA older adults sub-sample between dichotomised categories of low non-housing wealth, high non-housing wealth, low income and high income

Low non-housing wealth	Frequency	Percentage
0 - £23,500 and above	3506	65.8%
1 – Below £23,500	1825	34.2%
Total	5331	
High non-housing wealth	Frequency	Percentage
0 – Below £100,000	3216	60.3%
1 – £100,000 and above	2115	39.7%
Total	5331	
Low income	Frequency	Percentage
0 – Below £200 per week	3648	67.9%
1 – £200 /week or above	1724	32.1%
Total	5372	
High income	Frequency	Percentage
0 – Below £750 per week	5124	95.4%
1 – £750/week or above	248	4.6%
Total	5372	

Table 4: Summary statistics of goodness-of-fit of the logistic regression models

	N	Sensitivity	Specificity	Percent Correctly classified
Low non-housing wealth (<£23,5000)	4635	51.6%	89.7%	76.4%
High non-housing wealth (>£100,000)	4604	63.7%	80.3%	73.8%
Low income (<£200/week)	4664	29.8%	89.0%	71.3%
High income (>£750/week)	4523	0%	100%	95.1%

4.3.1 Low non-housing wealth

34.2% of the sample reported benefit unit non-housing wealth below £23,500. The logistic

⁴ Note that there are no set rules regarding what constitutes the minimum acceptable proportion of correct predictions from logistic regression models. A judgement of what is an acceptable proportion will depend on the context. That is, how much importance is placed on correct predictions, and the implications of incorrect predictions.

regression predicted that just 51.6% of those with non-housing wealth below that level had non-housing wealth below £23,500 and that 89.7% of those with non-housing wealth above that level had non-housing wealth above £23,500. The overall proportion of correct predictions is 76.4%, despite that all the independent variables are statistically significantly associated with a low level of non-housing wealth apart from age.

4.3.2 High non-housing wealth

39.7% of the sample reported benefit unit non-housing wealth of £100,000 or more. The logistic regression predicted that just 63.7% of those with non-housing wealth at or above £100,000 had non-housing wealth at that level and that 80.3% of those with non-housing wealth below that level had non-housing wealth below £100,000. The overall proportion of correct predictions is 73.8%, despite that all the independent variables are statistically significantly associated with a high level of non-housing wealth.

4.3.3 Low income

32.1% of the sample reported individual income of less than £200 per week. The logistic regression predicted that 29.8% of those with low income had income below £200 per week and that 89.0% of those with individual income above that level had income of £200 per week or more. The overall proportion of correct predictions is 71.3%, despite that most of the independent variables are statistically significantly associated with a low level of income.

4.3.4 High income

4.6% of the sample reported individual income of £750 per week or more. The logistic regression model of high income (income greater than £750 per week) fails to predict any respondents to have income above this level because of the small percentage of the sample with income at this level. The model predicted that 100% of those with individual income below that level had income below £750 per week or less. The overall proportion of correct predictions is 95.4%, despite that almost all the independent variables are statistically significantly associated with a high level of income.

5. Conclusion

The analyses identify a range of demographic and financial characteristics among the older population which are statistically significantly associated with benefit unit non-housing assets and with individual income. These findings would be valuable in a study of sources of variation in assets and incomes. However, the objective in this study is to find proxies for assets and incomes that could be used to model the adult social care charging reforms. For that purpose, it would be important to proxy assets and incomes reliably across the distribution of assets and incomes respectively. The analyses however show that the potential proxies examined are not sufficiently robust for that purpose. They would over-estimate the incomes (non-housing assets) of those with low incomes (assets) and under-estimate the incomes (non-housing assets) of those with high incomes (assets). This means that analyses of the impacts of the charging reforms using data where incomes and non-housing assets were imputed using the proxy variable data would not be robust.