

The prevalence and dynamics of social care receipt

Rowena Crawford
George Stoye

The Prevalence and Dynamics of Social Care Receipt

Rowena Crawford
George Stoye

Copy-edited by Judith Payne

The Institute for Fiscal Studies

Published by

The Institute for Fiscal Studies

7 Ridgmount Street
London WC1E 7AE

Tel: +44 (0) 20-7291 4800

Fax: +44 (0) 20-7323 4780

Email: mailbox@ifs.org.uk

Website: <http://www.ifs.org.uk>

© The Institute for Fiscal Studies, February 2017

ISBN 978-1-911102-29-8

Preface

This report was funded by the Health Foundation as part of a broader programme on the allocative efficiency of health and social care spending. The authors also gratefully acknowledge co-funding from the Economic and Social Research Council (ESRC) through the Centre for the Microeconomic Analysis of Public Policy (CPP) at IFS (grant number ES/M010147/1) and the 'Policies for longer working lives: understanding interactions with health and care responsibilities' project (grant number ES/P001688/1) that is part of the Joint Programme Initiative “More Years, Better Lives”.

The authors would like to thank members of the project advisory group, and James Banks, Carl Emmerson and Polly Simpson for providing useful comments throughout the course of this work. Any errors and all views expressed are those of the authors alone.

Data from the English Longitudinal Study of Ageing (ELSA) were made available through the UK Data Archive (UKDA). ELSA was developed by a team of researchers based at the National Centre for Social Research, University College London and the Institute for Fiscal Studies. The data were collected by the National Centre for Social Research.

The data creators, depositors, copyright holders and funders bear no responsibility for the analysis or interpretation of the data presented here.

Contents

Executive Summary	1
1. Introduction	6
2. Receipt of Social Care in 2014–15	8
2.1 Receipt of assistance with daily activities	9
2.2 Who receives assistance	11
2.3 Who is assistance received from?	14
2.4 Hours of help received	15
2.5 Local authority involvement and private spending on care services	16
3. Transitions in Care Receipt	18
3.1 Receipt of assistance over time	19
3.2 Characteristics associated with the new receipt of assistance	22
3.3 Characteristics associated with the end of assistance	30
4. Cohort Differences	35
5. Conclusion	45
Appendix A: The ELSA Data	47
Appendix B: Potential Need for Social Care	51
Appendix C: Additional Tables	56
References	63

Executive Summary

The long-term care needs of the growing older population are increasingly important issues for policymakers and society as a whole. This report uses new data from the English Longitudinal Study of Ageing – a panel survey representative of the household population aged 50 and over in England with respondents being re-interviewed biennially – to examine the prevalence of social care and the changes to the needs and care receipt of individuals across time and between different birth cohorts.

Chapter 2

This chapter uses data collected in 2014–15 to examine the prevalence of social care receipt in England among individuals aged 65 years and above, and to describe how care is funded.

A quarter of the population aged 65 and over received some form of assistance in 2014–15.

26% of individuals report receiving some form of assistance to address difficulties with activities of daily living.

The majority of assistance is provided by informal providers.

23% of individuals receive help from an informal provider, such as a spouse or child. 9% of individuals receive formal care. 6% of individuals receive help from both informal and formal sources.

Many individuals with specific difficulties do not receive help, and this varies considerably across activities.

78% of individuals who report a mobility difficulty do not receive help with this activity. On the other hand, more than 80% of individuals reporting difficulty with managing money or taking medication receive some assistance with these activities. It is not clear to what extent these differences accurately reflect met and unmet need in each category.

Many factors are associated with the receipt of care.

A number of factors are associated with the receipt of care, and these vary by type of care (informal or formal). Older individuals and those with a greater number of difficulties are more likely to receive all forms of care.

Family, and in particular partners, play an important role in determining what type of care individuals receive.

Individuals with a partner are more likely to receive informal care, but less likely to receive formal care, than an otherwise similar single individual. This is consistent with the evidence that partners are the most common providers of informal care. Individuals with children are also more likely to receive informal care and less likely to receive formal care.

Hours of formal care received are relatively low.

Only 36% of those who report receiving formal care in the last month received 5 or more hours of formal care in the last week. This is equivalent to 5% of those reporting any difficulties with daily activities or 3% of all individuals aged 65 and over.

A relatively small proportion of the population is exposed to domestic social care costs at a given point in time.

Just 2% of individuals were paying for home care workers or contributing to the cost of care arranged by the local authority in 2014-15.

Chapter 3

This chapter examines the individual characteristics and events that are associated with changes in the receipt of individual social care over time.

The prevalence of care is much more widespread when considering a longer period of time.

Between 2002-03 and 2010-11, half of respondents reported receiving some form of assistance in at least one interview.

The receipt of care is a dynamic process, with individuals entering and exiting care over time.

11% of respondents report new assistance after reporting no assistance two years earlier. 7% of respondents report no longer receiving care after reporting assistance in their previous interview.

Changes in individual circumstances are important factors associated with receipt of future care.

Individuals who previously did not report any care and who report new difficulties (such as with mobility) are more likely to receive future care. Individuals who previously reported care and who stop reporting difficulties are more likely to stop receiving assistance.

The loss of a partner is associated with a reduction in future receipt of informal care.

Individuals who previously received informal care and who become divorced, separated or widowed between interviews are 13.7 percentage points more likely to have stopped receiving informal care at the time of the next interview (compared with a 32.8% chance among all individuals who previously received informal care). Individuals who did not previously receive informal care and who lost a partner are also 11.5 percentage points less likely to report new informal care at the time of the next interview (compared with a 28.2% chance among all individuals who did not previously receive informal care).

Existing and new health conditions are associated with future receipt of care, even after controlling for specific difficulties.

A range of existing diagnoses are associated with an increased probability of receiving care in future. New diagnoses are generally associated with increased receipt of future care. In some cases, this represents a shift from one form of care to another. A particularly important example is that of Alzheimer's disease, where a new diagnosis is associated with a 22.1 percentage point increase in informal care receipt, but a 10.1 percentage point reduction in formal care receipt at the time of the next interview.

Chapter 4

This chapter examines how needs and receipt of social care for individuals of a given age have changed across birth cohorts.

Life expectancy is increasing across birth cohorts, particularly for men.

The latest ONS life expectancy projections indicate that compared with men born in 1915–24, men born in 1925–34 are expected to live 0.3 years longer, while men born in 1945–54 are expected to live 1.8 years longer. For women, these differences are 0.3 and 1.5 years respectively.

Women in later birth cohorts are more likely to be part of a couple at any age than women born in earlier cohorts.

In 2010, 39.6% of women born in 1925–34 were in a couple. These women are 7 percentage points more likely to be in a couple at a given age than women born in 1915–24. There are no significant differences in male partnership status, as a result of the average age difference between partners.

Women are more likely to receive care from a spouse in later birth cohorts.

Women born in 1925–34 are 4.0 percentage points more likely to receive care from a partner at a given age than women born in 1915–24. Women born in 1935–44 are 5.8 percentage points more likely to do so than the earliest cohort. These differences are not seen for men.

Men born in later birth cohorts are less likely to report difficulties with activities than earlier birth cohorts.

Compared with men born in 1915–24, men born in 1925–34 are 4.7 percentage points less likely to report any difficulties with daily activities, while men born in 1935–44 are 7.3 percentage points less likely to report any difficulties.

Men born in later birth cohorts also report receiving less formal care at a given age.

Central estimates imply that the proportion of men aged 86–95 receiving formal care will be 2.4 percentage points lower in 2020 than in 2010. This compares with the 13.2% of men in this age group who received formal care in 2010.

Reduced needs across cohorts will do little to offset increased demand for care due to a larger older population.

Demographic forecasts imply that the male population aged 86–95 will be 50.1% higher in 2020 than in 2010. Despite reduced per-capita use of formal care, these estimates imply that demand for formal care for men in this age group will be 41.0% higher in 2020 than in 2010. For women, where there is no evidence of reduced per-capita use of formal care, demand for formal care will be 15.4% higher in 2020 than in 2010. The population will increase further by 2030, while there is a smaller reduction in needs. The estimates imply additional demand for formal care of 122.5% for men and 54.3% for women compared with 2010.

1. Introduction

The long-term care needs of the older population are of considerable societal and policy interest. For many years, there has been debate over unmet need for social care¹ and over problems with how care services are funded and how the cost is shared between private individuals and the state. These issues were always expected to increase in importance as the population aged and demand for services increased. For example, these concerns in part motivated the Commission on Funding of Care and Support (the Dilnot Commission), which reported in 2011 with a number of recommendations for reform of the system of care funding. However, concern has increased in recent years, in the light of cuts to public spending on social care that have formed part of the government's budget cuts in the wake of the financial crisis. Greater understanding both of the underlying trends in care receipt due to demographic change and of how public spending cuts are likely to impact on individuals' care receipt and subsequent health and well-being, is therefore now of considerable importance.

Until recently, consideration of a holistic picture of social care receipt was inhibited by data availability – specifically, a lack of reliable data on people who fund their own care, particularly in a household setting. However, the inclusion of questions on the need for, and receipt of, social care in large-scale household surveys (such as the Health Survey for England and the English Longitudinal Study of Ageing) has helped to address this. Such data have now been used by a number of researchers to examine care receipt among the older population.² This existing research has found that care receipt is strongly associated with need (typically measured by difficulties with daily living) and that different types of care are more associated with different dimensions of need (for example, informal and publicly-funded support are more often received by those with difficulties with basic tasks such as bathing and getting dressed, while privately-funded support is more often received by those with difficulties with activities such as shopping and housework). Other demographic and socio-economic characteristics are also important – wealthier individuals are more likely to receive privately-funded care and less likely to receive state-funded care, while those without partners or children are less likely to receive informal care.

These existing studies typically examine the receipt of care, and the factors associated with this assistance, at a given point in time. However, care is a dynamic process, with the need for and receipt of care changing as individual circumstances develop over time. Understanding the factors associated with changes in the receipt of assistance over time is therefore important for policy and, until now, they have been underexplored.

The exact extent to which future demand for domestic assistance will grow will depend in part on the health of the ageing population. Under the assumption that different cohorts will have similar needs, demand for assistance will grow rapidly with the size of the older population. However, later cohorts may in fact have lower requirements for care at any given age (relative to the preceding cohorts). Understanding how needs have changed across cohorts is therefore a central question in planning for future expenditures on care. This question is addressed by this report.

¹ See, for example, Vlachantoni et al. (2011) and Mortimer and Green (2015).

² See, for example, Glaser et al. (2008), Breeze and Stafford (2010), Craig et al. (2012), Whalley (2013), Lloyd and Ross (2014), Maplethorpe, Darton and Wittenberg (2015) and Vlachantoni et al. (2015).

We use data from the English Longitudinal Study of Ageing to examine the prevalence and dynamics of social care received in private households. We start in Chapter 2 by using the latest available data to update existing evidence on the prevalence of receiving help with certain activities among the older population. Specifically, we describe, for a given point in time, who receives help, what type of help is received, how many hours of help are received from different sources, and the role of local authorities and private finance. To provide additional context, potential care needs among the older population are described in Appendix B. In Chapter 3, we exploit the longitudinal nature of the data to provide the first evidence on the dynamics of care receipt in England: how the proportion of individuals receiving domestic care changes when we consider a period of time rather than a snapshot, and what characteristics and factors are associated with starting and ending care receipt. Finally, in Chapter 4, we consider how the receipt of care differs across different date-of-birth cohorts, the possible drivers of this variation and its potential implications in the context of an ageing population. Chapter 5 concludes.

2. Receipt of Social Care in 2014–15

Key findings

A quarter of the population aged 65 and over received some form of assistance in 2014–15.

26% of individuals report receiving some form of assistance to address difficulties with activities of daily living.

The majority of assistance is provided by informal providers.

23% of individuals receive help from an informal provider, such as a spouse or child. 9% of individuals receive formal care. 6% of individuals receive help from both informal and formal sources.

Many individuals with specific difficulties do not receive help, and this varies considerably across activities.

78% of individuals who report a mobility difficulty do not receive help with this activity. On the other hand, more than 80% of individuals reporting difficulty with managing money or taking medication receive some assistance with these activities. It is not clear to what extent these differences accurately reflect met and unmet need in each category.

Many factors are associated with the receipt of care.

A number of factors are associated with the receipt of care, and these vary by type of care (informal or formal). Older individuals and those with a greater number of difficulties are more likely to receive all forms of care.

Family, and in particular partners, play an important role in determining what type of care individuals receive.

Individuals with a partner are more likely to receive informal care, but less likely to receive formal care, than an otherwise similar single individual. This is consistent with the evidence that partners are the most common providers of informal care. Individuals with children are also more likely to receive informal care and less likely to receive formal care.

Hours of formal care received are relatively low.

Only 36% of those who report receiving formal care in the last month received 5 or more hours of formal care in the last week. This is equivalent to 5% of those reporting any difficulties with daily activities or 3% of all individuals aged 65 and over.

A relatively small proportion of the population is exposed to domestic social care costs at a given point in time.

Just 2% of individuals were paying for home care workers or contributing to the cost of care arranged by the local authority in 2014–15.

We start by describing social care receipt among the older population using the most recent data available – those collected by the English Longitudinal Study of Ageing (ELSA) between Summer 2014 and Summer 2015. We focus on the population aged 65 and over, for whom ELSA contains a sample of over 5,000 individuals. However, it is important to note that ELSA is a representative survey of the *private household* population of England, and does not include in its core sample individuals in communal establishments such as residential or nursing homes.³ The ELSA data are described in more detail in Appendix A.

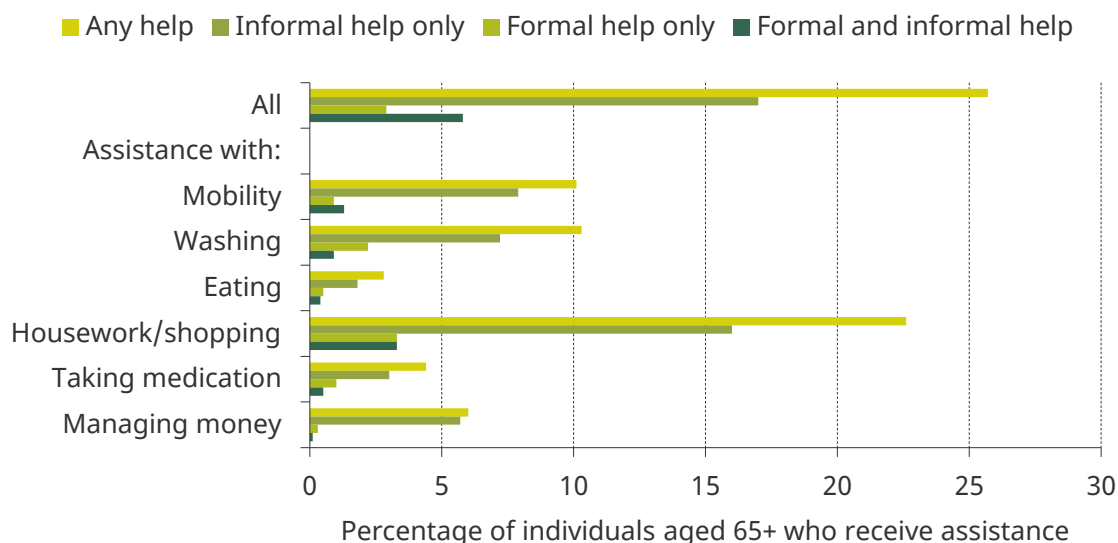
2.1 Receipt of assistance with daily activities

Individuals who are surveyed in ELSA are asked whether they have difficulty with a number of everyday activities. These activities, the prevalence of reported difficulties, and the characteristics of individuals who report having such difficulties are described in Appendix B. Those who report having difficulty with at least one daily activity are asked whether they received help from anyone in the last month (even if they do not normally need help) and, if so, who helped them. Figure 2.1 shows the percentage of individuals aged 65 years and over who report receiving assistance. Just over a quarter (26%) report receiving any help. Over a fifth (23%) report receiving help from an ‘informal provider’ (a partner, relative, friend or neighbour), while 9% report receiving help from a ‘formal provider’ (for example, a home care worker, voluntary helper, sheltered housing warden, cleaner, council handyman or a member of staff at a residential institution); 6% of individuals report receiving help from both informal and formal sources.

Figure 2.1 also illustrates the percentage of individuals reporting receiving help for six activity categories: **mobility** (walking 100 yards, walking across a room, climbing a single or multiple flights of stairs, getting into or out of bed, using the toilet), **washing** (bathing or showering, getting dressed), **eating** (including cutting up food), **housework** (shopping

³ According to the Census in 2011, 3.4% of the English population aged 65 and over lived in a communal establishment.

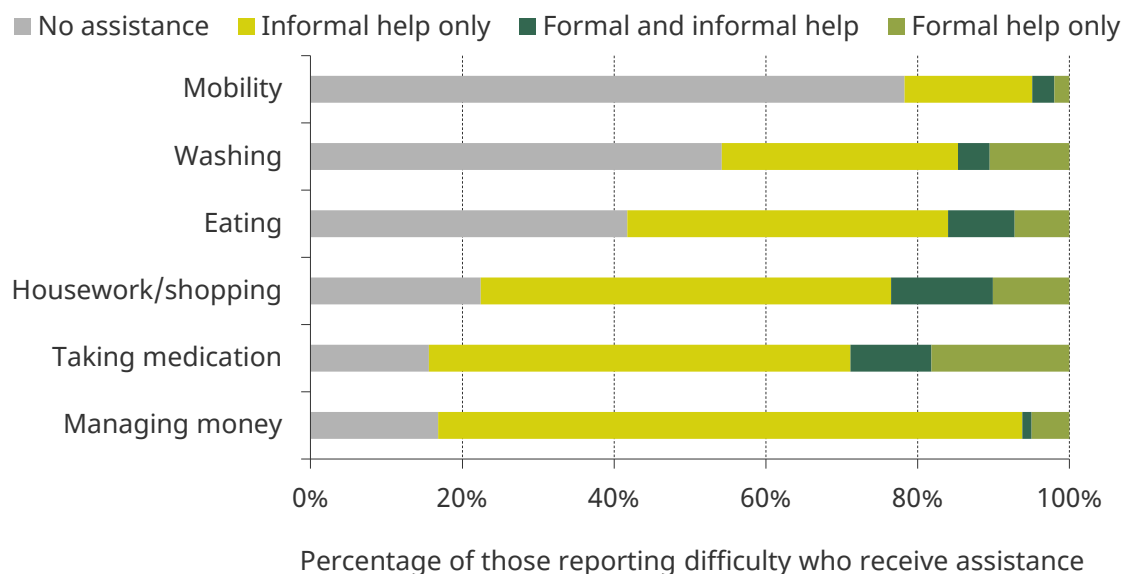
Figure 2.1. Receipt of assistance in the last month, by activity category



Note: Informal care is defined as care provided by a partner, relative, neighbour, friend or other unqualified individual. Formal care is provided by health or social workers, personal assistants, home helpers, sheltered housing wardens, members of reablement staff, voluntary helpers, council handymen and cleaners.

Source: Authors' calculations using ELSA 2014–15.

Figure 2.2. Receipt of assistance among those who report difficulty, by activity category



Note: For each bar, the sample of individuals is those who report difficulty with that particular activity category. Informal care is defined as care provided by a partner, relative, neighbour, friend or other unqualified individual. Formal care is provided by health or social workers, personal assistants, home helpers, sheltered housing wardens, members of reablement staff, voluntary helpers, council handymen and cleaners.

Source: Authors' calculations using ELSA 2014–15.

for groceries, doing work around the house or garden), **taking medication** and **managing money** (managing money, making phone calls). Help was most commonly reported being received in the last month with housework (23% of individuals), followed by mobility and washing (each reported by 10% of individuals).

The primary driver of whether or not an individual received assistance with a given activity in the last month is whether or not they have any difficulty with that activity. Potential need for assistance is explored more fully in Appendix B, but it should be noted here that some of these activity categories are more often reported as found to be difficult than others: among those aged 65 and over, 45% reported difficulty with mobility, 22% with housework, 20% with washing, 5% with managing money, 3% with taking medication and 3% with eating. Figure 2.2 therefore describes the proportion of individuals *who reported difficulty with a given activity* who receive assistance.

The majority of those who report difficulty with some daily activities do not actually receive any assistance. For example, 78% of those reporting difficulty with mobility do not report receiving assistance; neither do 54% of those reporting difficulty with washing and 42% of those reporting difficulty eating. Many studies have used this as a measure of ‘unmet need’ for social care services.⁴ However, it should be stressed that not all those who report experiencing difficulty with daily activities may want assistance with those activities (and, conversely, not all those who report receiving assistance may feel that their need for care services is satisfied by the assistance they receive). Among individuals who report difficulty with housework and shopping, taking medication and managing money, the majority (around four-fifths in each case) do receive assistance with those activities – primarily from informal sources.

2.2 Who receives assistance

In addition to an individual’s difficulty with daily activities, many other characteristics are associated with the receipt of help. Following the modelling of Anderson (1968), these can be thought of as falling into three categories: needs, determinants of access and predisposition. Table 2.1 reports the results of simple multivariate regression analysis that explores the association between individual characteristics and the receipt of assistance (considering any assistance as a whole first, before looking separately at formal care and informal care separately).

Note and Source for Table 2.1

Note: Results from linear probability models. For example, 0.059 in the first cell indicates that those aged 75–84 are 5.9 percentage points more likely to receive care than an otherwise-identical individual aged 65–74 (the reference category). Regressions also control for whether individuals are homeowners and whether they have ever had a diagnosis of lung disease, asthma, arthritis, cancer, psychiatric problems, blood disorders, hypertension, angina, heart attack, heart failure, heart murmur, heart rhythm, diabetes, stroke or high cholesterol (none of which is significantly associated with the probability of receiving help). Sample is restricted to individuals aged 65 years and over who complete a non-institutional questionnaire and report difficulty with at least one activity category. N = 2,289. Standard errors are robust to heteroscedasticity. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Source: Authors’ calculations using ELSA 2014–15.

⁴ For example, Vlachantoni et al. (2011) and Mortimer and Green (2015).

Table 2.1. Characteristics associated with receiving assistance

	Any care		Formal care		Informal care	
	Effect	Std error	Effect	Std error	Effect	Std error
Aged 65–74	.	.	.	.	.	.
Aged 75–84	0.059***	(0.020)	0.046***	(0.015)	0.033	(0.020)
Aged 85+	0.160***	(0.029)	0.153***	(0.028)	0.122***	(0.031)
Female	0.104***	(0.019)	0.025	(0.016)	0.095***	(0.020)
Male	.	.	.	.	.	.
Couple	.	.	.	.	.	.
Always single	0.064	(0.048)	0.112**	(0.053)	-0.053	(0.051)
Widowed	0.012	(0.023)	0.114***	(0.020)	-0.060**	(0.023)
Separated/divorced	-0.012	(0.029)	0.074***	(0.026)	-0.075***	(0.029)
Low education	0.014	(0.025)	-0.039*	(0.020)	0.044*	(0.024)
Mid education	0.010	(0.022)	0.018	(0.018)	-0.000	(0.022)
High education	.	.	.	.	.	.
Least wealthy	0.013	(0.030)	-0.076***	(0.027)	0.061**	(0.031)
Wealth quintile 2	-0.009	(0.030)	-0.018	(0.026)	0.008	(0.031)
Wealth quintile 3	0.012	(0.029)	-0.016	(0.026)	0.029	(0.030)
Wealth quintile 4	0.011	(0.029)	0.004	(0.027)	0.017	(0.029)
Wealthiest	.	.	.	.	.	.
No siblings	.	.	.	.	.	.
Has sibling(s)	-0.019	(0.020)	-0.040**	(0.018)	-0.004	(0.020)
No children	-0.076**	(0.033)	0.061*	(0.032)	-0.105***	(0.032)
Has child(ren)	.	.	.	.	.	.
<i>Difficulty with:</i>						
1 activity category	.	.	.	.	.	.
2 activity categories	0.365***	(0.026)	0.085***	(0.018)	0.334***	(0.026)
3 activity categories	0.529***	(0.027)	0.139***	(0.024)	0.518***	(0.028)
4 activity categories	0.611***	(0.032)	0.250***	(0.049)	0.648***	(0.035)
5 activity categories	0.663***	(0.034)	0.373***	(0.069)	0.653***	(0.046)
6 activity categories	0.666***	(0.058)	0.384**	(0.183)	0.575***	(0.096)
Walking speed (m/s)	-0.001***	(0.000)	-0.001***	(0.000)	-0.000	(0.000)
<i>Self-reported health:</i>						
Excellent	.	.	.	.	.	.
Very good	-0.038	(0.056)	-0.014	(0.048)	-0.078	(0.055)
Good	0.004	(0.054)	-0.022	(0.046)	-0.010	(0.054)
Fair	0.071	(0.055)	-0.000	(0.047)	0.063	(0.054)
Poor	0.134**	(0.059)	-0.003	(0.050)	0.116*	(0.059)
<i>Ever diagnosed with:</i>						
Osteoporosis	0.037	(0.023)	0.046**	(0.022)	0.022	(0.024)
Parkinson's	0.072	(0.059)	0.161***	(0.059)	-0.006	(0.067)
Alzheimer's	0.244***	(0.092)	-0.091	(0.096)	0.224**	(0.100)
Dementia	-0.055	(0.052)	0.032	(0.054)	-0.037	(0.055)
R-squared	0.413		0.221		0.381	

Note and Source appear on the previous page.

As would be expected, the number of activity categories that someone reports difficulty with is strongly associated with whether or not that individual receives care.⁵ Those who report difficulty with two activity categories are 36 percentage points more likely to receive care than those who only report difficulty with one category. This relationship is stronger for informal care than for formal care: those with difficulty with two activities are 9 percentage points more likely to receive formal care but 33 percentage points more likely to receive informal care than those who only have difficulty with one activity category. Other subjective and objective measures of health are also associated with care receipt, even after taking into account the number of specific difficulties reported. Those who self-report their general health as being poor are 12 percentage points more likely to receive informal care than those who self-report being in excellent health – though, interestingly, there is little association between self-reported health and formal care receipt. Those who have been diagnosed with Parkinson’s disease are much more likely to receive formal care (but not informal care) than those who have not, while those diagnosed with Alzheimer’s are much more likely to receive informal care (but not formal care) than those who have not.

In terms of characteristics that might be thought to reflect determinants of access to care services, wealth actually appears to have little association with care receipt. There is not a particularly strong wealth gradient in the receipt of care. However, there are significant differences between individuals at the extremes of the wealth distribution. For receipt of formal care, the least wealthy group are 7.6 percentage points less likely to receive formal care than individuals in the wealthiest quintile. In contrast, the least wealthy individuals are 6.1 percentage points more likely to receive informal care than individuals in the wealthiest quintile. This is somewhat at odds with the theory that providers of informal care are motivated by the prospect of future inheritances. Those without children are less likely to receive informal care (as has previously been shown by, for example, Grundy and Read (2012)) – since children are common providers of informal care – but are more likely to receive care from formal sources. Similarly, those in couples are more likely to receive informal care, and less likely to receive formal care, than single individuals.

Education levels are also significantly related to the receipt of care. Even after controlling for other factors that might affect access, including wealth, individuals with high education are less likely to receive informal care than individuals with low education. In contrast, they are more likely to receive formal care.

Other demographic characteristics, which might represent differences in preferences for care, are significantly associated with the type of care individuals report receiving. For example, women are more likely to receive informal care than men. Age also has a strong association with whether individuals receive care, even after controlling for the number of activity categories an individual has difficulty with and other objective and subjective measures of health.⁶ Those aged 85 and over are, for example, 16 percentage points more

⁵ The specific activity types also have different effects. An alternative specification, which replaces the number of difficulties with dummy variables for difficulties in each of the six categories, shows that problems with housework or shopping have the strongest association with the receipt of any care, followed by problems with eating and with managing money. The effects also vary across type of care: problems with housework/shopping are most strongly associated with the receipt of informal care, while problems with managing money are most strongly associated with the receipt of formal care. Results are available upon request.

⁶ Table 2.1 reports results for a specification that controls for age using 10-year age bands. Age could instead be entered into this specification in a different way. For example, if a quadratic in age is included instead of

likely to receive some form of care than those aged 65–74. In large part, this is likely due to unobservable needs differences between older and younger individuals – the number of activity categories that someone has difficulty with is a very crude measure of ‘needs’ which does not capture the intensity of any difficulty. However, we must be somewhat cautious with interpreting age associations that are estimated using data from only one point in time, as these could alternatively represent cohort differences (in other words, differences that arise because individuals were born at different points in time and have lived their lives through different periods, rather than because they are currently different ages). Cohort differences in care receipt are explored in more detail in Chapter 4.

2.3 Who is assistance received from?

Unsurprisingly, the most commonly reported ‘informal’ providers of help with daily activities are partners. Among individuals reporting receiving informal care with one or more daily activity, 48% reported that their spouse or partner helped them (54% have a spouse or partner). Around a third (34%) of individuals reported that their daughter helped them, while about a quarter (24%) reported that their son helped them (72% and 70% had one or more daughter or son, respectively). The next most commonly reported providers of informal assistance are friends (reported by 10% of those receiving any informal assistance), grandchildren (reported by 7%) and neighbours (reported by 6%).

Nearly two-thirds (65%) of individuals getting help from an informal provider reported that only one such person assisted them (and in only 56% of cases was that a partner). Nearly a quarter (23%) reported two informal providers of assistance, 8% reported three and 5% reported four or more.

The most commonly reported ‘formal’ providers of help with daily activities are home care workers, home helpers or personal assistants, who helped 45% of those reporting formal assistance with some daily activities. Over a quarter (28%) of individuals receiving formal help reported having a cleaner. A few individuals reported formal help from other sources – for example, 5% reported their help came (all or in part) from a member of staff at a care or nursing home, 3% reported their help came (all or in part) from a member of a reablement team and 2% reported that their help came (all or in part) from a voluntary helper.

Different providers help with different daily activities. Unsurprisingly, cleaners are almost exclusively reported assisting with housework, while members of reablement teams are most often reported assisting with mobility. In contrast, home care workers, home helpers and personal assistants are reported assisting with a range of activities: 71% of those receiving help with mobility, 85% of those receiving help with washing and 32% of those receiving help with housework or shopping reported receiving help with that activity from these social care providers.

age bands, there is a significant and negative effect of age on care receipt, but a significant and positive effect of age squared. This implies that there is initially a negative relationship between age and care receipt (holding constant other factors), but the oldest individuals (older than 87 years) receive more care than individuals at younger ages. Other coefficients are not sensitive to how age is defined.

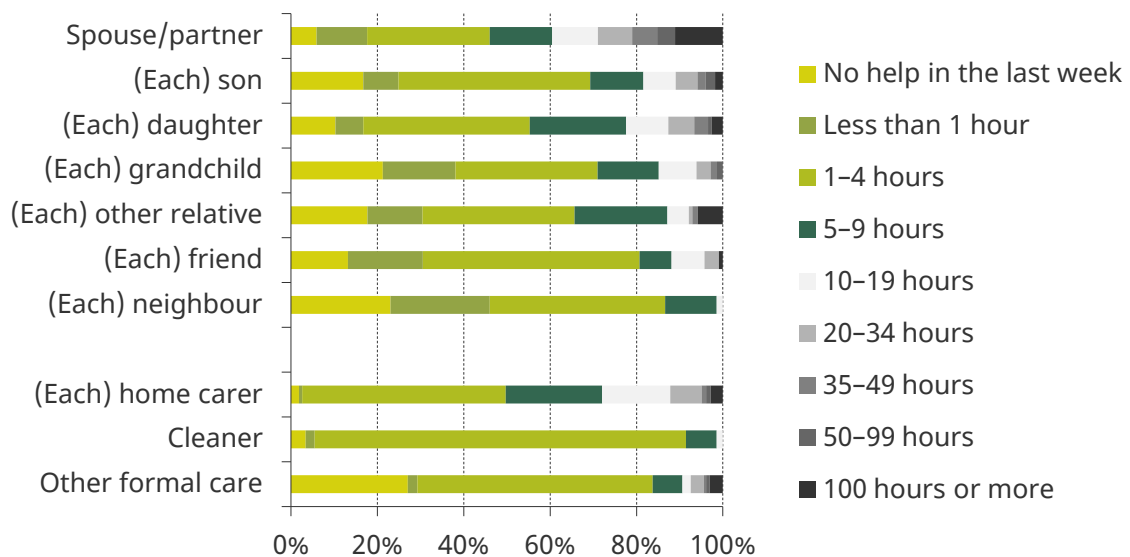
Different informal care providers are also more or less likely to be reported providing assistance with some activities. For example, children are less likely to be reported helping with daily tasks such as washing or eating than they are with activities such as housework/shopping and managing money (by individuals with the relevant needs). Friends and neighbours are more likely to be reported helping with mobility and housework/shopping than they are with more personal activities.

2.4 Hours of help received

The distribution of hours of help that are reported to be provided by different sources of care is shown in Figure 2.3. Assistance from home carers and cleaners is more frequent than informal or other formal care – as indicated by the fact that if care from these sources was reported in the last month, then some hours of care were normally received in the last week. However, in general, hours of care are relatively low. Cleaners typically help for between 1 and 4 hours a week (86% are reported as doing so). Around half (47%) of home care workers are reported to provide 1–4 hours of help per week, 22% provide 5–9 hours and 16% provide 10–19 hours. Of those receiving help from home care workers, 12% receive at least 20 hours per week.

Adding up the hours of formal care received from different sources by each individual, over a third (36%) of those who reported receiving any formal care in the last month received 5 or more hours of care in the last week. This equates to 5% of those reporting difficulty with some daily activities and 3% of all individuals aged 65 and over.

Figure 2.3. Hours of help in the last week provided by different sources (among those who received help in the last month from each source)



Note: The sample for each row is individuals reporting receiving assistance from that source in the last month. 'Other relative' includes sisters, brothers and other relatives, who are grouped together due to small sample sizes of these individuals being reported providing assistance. 'Other formal care' includes reablement teams, voluntary helpers, members of staff at nursing or care homes, and other formal care providers.

Source: Authors' calculations using ELSA 2014–15.

2.5 Local authority involvement and private spending on care services

Individuals who receive assistance with daily activities from ‘formal’ sources, or from ‘informal’ sources for 20 or more hours per week, are asked about local authority involvement with their care and about who pays for the care services they receive.⁷

They are first asked whether either (or both) of the following apply to their care:

- **Direct payments**, where the council gives you a payment to meet some or all of your social care needs. You can then choose how to spend the money. (This should not be confused with benefits paid directly into a bank account which may also be called direct payments.)
- **The local authority, council or social services manages the money** for you to meet all or some of your social care needs, and you may be able to choose which services to use.

Three-quarters of individuals reported neither of these, while 16% mentioned that they received ‘direct payments’ and 8% that the local authority managed the money. (These are similar to the proportions of individuals giving these responses when similar questions were asked in the Health Survey for England.⁸)

Individuals are also then asked whether they have ‘a Personal Budget, sometimes known as an Individual Budget? This is when the local authority/council/social services decides the amount or pot of money necessary to meet social care needs. You can choose how to spend this money which can be used for a range of services, not just social care’. Among those receiving formal care or 20+ hours of informal care, 6% report having a personal budget.

Among individuals aged 65 and over receiving some form of formal assistance, 22% reported that the local authority had arranged this care and 5% reported that the local authority had told them about the help but that they (or their family) had arranged it. Local authorities were more often reported being involved with help received from home carers, home helpers and personal assistants – 42% of recipients of this type of formal care reported it was arranged by the local authority and 9% that their local authority had told them about the service. This suggests that nearly half of home care services were arranged without significant input from the local authority.⁹

Where the local authority was involved (either arranging the help directly or telling the individual about the care), 40% of individuals reported paying for some or all of their care package out of their own income, savings or benefits. Analysis of the payments made by

⁷ It is worth bearing in mind that many individuals in this position may find these questions difficult to answer. Only 60% reported that they themselves deal with (some or all of) paying for their care, as opposed to a family member or friend – although around half of the other 40% had assistance answering these questions from another individual, which would be expected to improve the reliability of the data collected.

⁸ See Whalley (2013).

⁹ Individuals are asked which of the following apply to each provider of formal care that they receive: (i) arranged without involvement from local authority/council/social services; (ii) local authority, council or social services arranged this help; (iii) local authority, council or social services told me about this help but I arranged it myself or family arranged it; and (iv) other. A third (32%) of individuals receiving home care services report (i) and a further 15% report (iv). 2% of individuals do not know whether the local authority is involved with arranging or funding their care.

these individuals is limited by small sample sizes, but indicative estimates suggest the median payment was around £50 per week and the mean payment around £90 per week.

Where individuals received assistance from home care workers, home helpers or personal assistants, but these services did not involve the local authority, 67% reported paying for some or all of this care out of their own income, savings or benefits. Again, the sample size of individuals in this position is small, but indicative estimates suggest the median payment was around £40 per week and the mean payment around £140 per week.

Overall, relatively few older individuals in 2014–15 were themselves paying out of pocket for care services – around 2% of the population were paying for home care workers or contributing to the cost of care arranged by the local authority (5% of the population were themselves paying for any assistance with daily activities).¹⁰ This equates to around 3% (8%) of those aged 65 and over who reported difficulties with daily activities, and around 26% (60%) of those who reported receiving some form of formal assistance. Social care expenses therefore affect relatively few people at any given point in time. However, it is important to bear in mind that social care needs and receipt are not fixed states, since individuals move into and out of care over time as their health and circumstances change. A snapshot of care usage at a given point in time will therefore likely understate the proportion of individuals who will ever require social care. This is explored in more detail in the next chapter.

¹⁰ Figures from the 2014 Living Costs and Food Survey (LCFS) indicate that 2% of the population aged 65 and over paid for formal assistance in their home. Among those paying for care, the mean weekly payment was £50. Again, the sample size of individuals in this position was very small.

3. Transitions in Care Receipt

Key findings

The prevalence of care is much more widespread when considering a longer period of time.

Between 2002–03 and 2010–11, half of respondents reported receiving some form of assistance in at least one interview.

The receipt of care is a dynamic process, with individuals entering and exiting care over time.

11% of respondents report new assistance after reporting no assistance two years earlier. 7% of respondents report no longer receiving care after reporting assistance in their previous interview.

Changes in individual circumstances are important factors associated with receipt of future care.

Individuals who previously did not report any care and who report new difficulties (such as with mobility) are more likely to receive future care. Individuals who previously reported care and who stop reporting difficulties are more likely to stop receiving assistance.

The loss of a partner is associated with a reduction in future receipt of informal care.

Individuals who previously received informal care and who become divorced, separated or widowed between interviews are 13.7 percentage points more likely to have stopped receiving informal care at the time of the next interview (compared with a 32.8% chance among all individuals who previously received informal care). Individuals who did not previously receive informal care and who lost a partner are also 11.5 percentage points less likely to report new informal care at the time of the next interview (compared with a 28.2% chance among all individuals who did not previously receive informal care).

Existing and new health conditions are associated with future receipt of care, even after controlling for specific difficulties.

A range of existing diagnoses are associated with an increased probability of receiving care in future. New diagnoses are generally associated with increased receipt of future care. In some cases, this represents a shift from one form of care to another. A particularly important example is that of Alzheimer’s disease, where a new diagnosis is associated with a 22.1 percentage point increase in informal care receipt, but a 10.1 percentage point reduction in formal care receipt at the time of the next interview.

In the previous chapter, we described the social care receipt of individuals at a given point in time. However, receipt of care is likely to change over time as the circumstances and needs of individuals develop. In this chapter, we describe the receipt of social care among the older population over a longer period, and the factors associated with moving into (‘onsets’) and out of (‘offsets’) care over time.

In order to study how the receipt of care develops over time, we exploit the longitudinal nature of ELSA. We use data from the first five waves of ELSA, collected between 2002–03 and 2010–11. This allows us to examine whether respondents receive care at five different points over the eight-year period. We use these years because the questions asked to respondents about their care needs and receipt remain broadly consistent across this period.¹¹

We start by using these data to examine what proportion of the older population received some sort of assistance over the eight-year period. As we observe the same individual in multiple years, we then describe the characteristics associated with changes in the receipt of assistance over time.

3.1 Receipt of assistance over time

The prevalence of assistance is much more widespread when considering a period of time as opposed to a single snapshot in time. This suggests that examining care receipt only at a given point in time will underestimate the long-term incidence of care in the population. This is illustrated by Table 3.1, which shows the proportion of individuals aged 65 and above in 2002–03 (and whose care needs can be consistently measured over time) who report they receive assistance over different periods of time. For example, 25% of individuals reported receiving care in 2002–03. In 2004–05 (at the time of their next interview) 34% of individuals reported that they had received care in at least one of their two interviews (i.e. they reported receiving care in the 2002–03 interview, in the 2004–05

¹¹ The questions in ELSA on receipt of care change across different survey years. This occurs in two ways. First, the sample of individuals who are asked about their care needs changes over time. Second, the exact questions about who helps with which activities also change. Both the sample and the questions asked remain broadly consistent for the surveys carried out between 2002–03 and 2010–11 (with a small exception for certain questions in the 2006–07 version). See Sections A.2 and A.3 for more details on the sample and the questions, respectively.

interview or in both). The prevalence of care grows as we consider a longer period, with 50% of individuals reporting that they received care at the time of at least one interview between 2002–03 and 2010–11.

Panel B of Table 3.1 shows the same information by type of assistance. The majority of assistance is informal, with 46% of individuals receiving informal assistance by 2010–11. Formal assistance was received by 18%, with more individuals receiving privately-funded (12%) than publicly-funded (9%). Over this period, 13% of individuals received both informal and formal assistance.

It is important to note that the figures in Table 3.1 are likely to be conservative estimates of the proportion of individuals who received care during the eight-year period, for two reasons. First, the sample in Table 3.1 includes only individuals whose care receipt can be accurately tracked over time. This includes individuals who complete the survey in every year, individuals who are in institutions (and therefore no longer receive care in a private residence) and individuals who have died since 2002–03. For individuals who exit the survey for other reasons (and who may still receive assistance), we cannot estimate their receipt of care. Poor health is a leading reason for survey attrition, and so these individuals are likely to have higher needs for care than the individuals who remain in the sample.

Table 3.1. Cumulative proportion of individuals who have received assistance since 2002–03, by interview year

	2002–03	2004–05	2006–07	2008–09	2010–11
A: Assistance					
Reports assistance in at least one interview	0.25	0.34	0.41	0.46	0.50
Never reports receiving assistance	0.75	0.66	0.59	0.54	0.50
B: Type of assistance					
Informal	0.21	0.30	0.37	0.42	0.46
Formal	0.07	0.10	0.12	0.15	0.18
<i>Privately-funded</i>	0.04	0.06	0.08	0.10	0.12
<i>Publicly-funded</i>	0.03	0.05	0.06	0.07	0.09
Informal and formal	0.03	0.06	0.09	0.11	0.13
C: Other outcomes					
Institution	0.00	0.01	0.02	0.03	0.04
Died	0.00	0.10	0.21	0.31	0.42

Note: The sample includes individuals aged 65 or over in 2002–03, who (i) completed a survey in each year, (ii) was registered as being in an institution in a given year and/or (iii) died between 2002–03 and 2010–11. Individuals who exit from the survey for other reasons (for example, individuals for whom we do not know whether they received care or not) are excluded. Individuals can appear in multiple states (for example, received care in an earlier interview and died by 2010–11).

Source: Authors' calculations using ELSA 2002–03 to 2010–11.

Second, individuals only report care that has been received in the three months prior to their interview. Individuals who temporarily receive care more than three months before their interview will therefore not report this assistance. Assistance is most likely to be underestimated for individuals who die or move into institutions between interview years, as they would not be interviewed again or would not continue to receive home assistance after these events. Panel C of Table 3.1 indicates that 42% of the sample had died by 2010–11, of whom 54% reported in previous interviews that they had received care but would not include any new care provided between the last interview and the time of death. A further 4% of the sample had entered an institution at some point during the eight-year period and may not have reported any assistance provided in the home before this. As a result, underestimating the prevalence of care among these groups is likely to have a sizeable impact on estimating the prevalence of care among the wider population.

Table 3.1 indicates that individual receipt of assistance is a dynamic process, with more individuals receiving assistance over a longer window of time. In addition, some care will only be temporary, with individuals reporting that they receive assistance at only one interview and reporting no assistance in subsequent interviews. The process by which individuals transition into and out of care can be examined by following the same individuals over time, allowing us to describe the factors associated with changes in care receipt. It is important for policymakers to better understand these factors in order to enable them to remove barriers that prevent individuals from accessing care and to stop these individuals from subsequently losing any assistance.

To examine this process, we use data for all individuals who were interviewed in two consecutive years of the survey (for example, 2002–03 and 2004–05). In each year, individuals are asked to report if they received any assistance. As a result, we can identify individuals who:

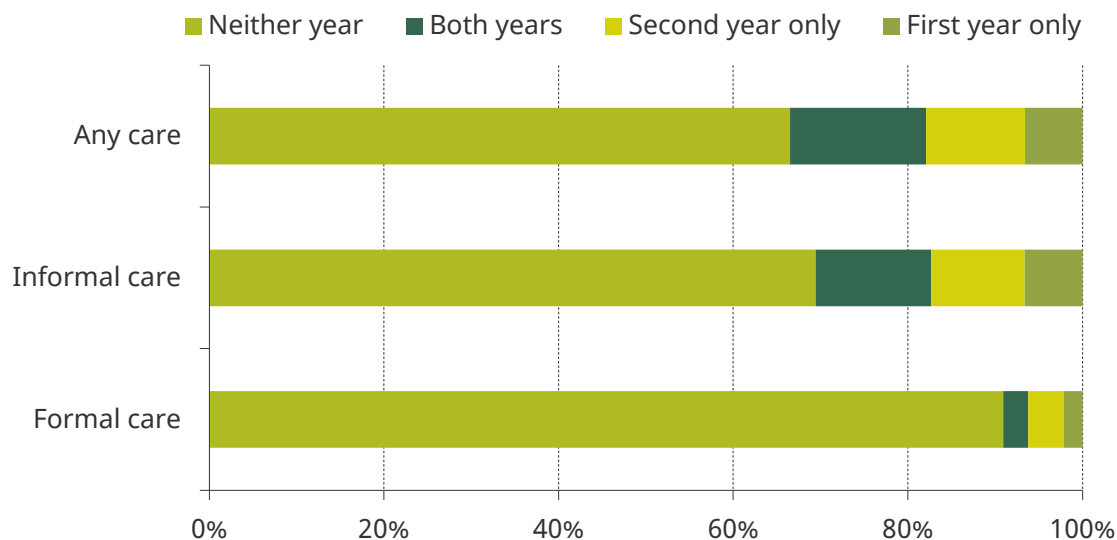
1. always receive assistance (report assistance in two consecutive interviews);
2. never receive assistance (do not report assistance in either interview);
3. transition into assistance (do not report assistance in their first interview but do in their second interview);
4. transition away from assistance (do report assistance in their first interview but do not in their second interview).

Figure 3.1 shows the proportion of individuals in the older population (aged 65 or over at the time of their initial interview) in each of the four categories. It also does this for each type of assistance. Over four-fifths (82%) of individuals do not report a change in their receipt of assistance between the two years, with 67% of individuals receiving no assistance in either year and 16% receiving assistance in both years.¹² The remaining 18% of individuals do report a change in the assistance that they receive, with 11% of individuals starting to receive assistance (an ‘onset’) and 7% no longer receiving care (an ‘offset’).

These patterns are largely driven by the receipt of informal care. Around a tenth (11%) of individuals report receiving new informal assistance after reporting no informal assistance

¹² Given that we are looking only at the receipt of any assistance, it is possible that the type or the amount of assistance changed for these individuals over time.

Figure 3.1. Change in receipt of care between consecutive survey waves for individuals aged 65 years and over in initial interview, by type of care



Note: The sample includes individuals who appear in two consecutive interviews (for example, 2002–03 and 2004–05). The same individual can appear in the sample multiple times if they remain in the sample for three or more consecutive interview years (for example, they are interviewed in 2002–03 and 2004–05 and in 2004–05 and 2006–07).

Source: Authors' calculations using ELSA 2002–03 to 2010–11.

in the previous interview, while 7% of individuals report that they no longer receive informal assistance.

The pattern is different for the receipt of formal care, where receipt of care is rare and appears to be more of a temporary measure. Among individuals in the sample, 91% do not report receiving any formal care at the time of either interview, while only 3% receive formal care in two consecutive interviews (compared with 13% who receive informal care in two consecutive interviews). Few individuals start to receive formal care (4%) or stop receiving formal care (2%), suggesting that the use of formal care over a sustained period of time is rare.

3.2 Characteristics associated with the new receipt of assistance

We now turn to analysing the factors associated with the onset of the receipt of assistance. We do this by examining the characteristics of individuals in the older population who completed interviews in two consecutive survey years (e.g. 2008–09 and 2010–11) and who did not report receiving any assistance at the time of the first interview (i.e. individuals in categories 2 and 3 above).¹³

¹³ Individuals must report at least one difficulty during one of their interviews to be included in the sample. This is because individuals who do not report difficulties are not asked about the assistance they receive (and would therefore not transition into care by definition). Separate results are presented in Appendix C for individuals who (i) have no difficulties at their initial interview but do report difficulties in their second interview and (ii) individuals with difficulties at the time of both interviews. In general, the sign and magnitude

Table 3.2. Factors associated with onset of assistance, by assistance type

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
<i>Difficulties at first interview with:</i>						
0 activity categories	.	.	.	.	.	.
1 activity category	0.027	(0.022)	0.034	(0.022)	0.033***	(0.011)
2 activity categories	0.228***	(0.032)	0.204***	(0.030)	0.116***	(0.015)
3 activity categories	0.410***	(0.048)	0.323***	(0.040)	0.159***	(0.018)
4+ activity categories	0.712***	(0.090)	0.486***	(0.110)	0.183***	(0.030)
Walking speed (m/s)	-0.000	(0.000)	0.000	(0.000)	-0.000***	(0.000)
<i>New report of difficulties with:</i>						
Mobility	0.041*	(0.022)	0.052**	(0.022)	0.036***	(0.011)
Washing	0.155***	(0.016)	0.151***	(0.016)	0.046***	(0.009)
Eating	0.099**	(0.047)	0.104**	(0.045)	0.064**	(0.027)
Housework/shopping	0.447***	(0.016)	0.359***	(0.016)	0.129***	(0.010)
Medicine	0.122***	(0.045)	0.132***	(0.046)	0.050*	(0.027)
Money	0.299***	(0.038)	0.330***	(0.036)	0.027	(0.020)
Aged 65–74	.	.	.	.	.	.
Aged 75–84	0.067***	(0.013)	0.052***	(0.012)	0.037***	(0.006)
Aged 85+	0.135***	(0.023)	0.089***	(0.023)	0.110***	(0.017)
Female	0.078***	(0.013)	0.054***	(0.012)	0.031***	(0.006)
Male	.	.	.	.	.	.
Couple	.	.	.	.	.	.
Always single	-0.176***	(0.031)	-0.189***	(0.029)	0.026	(0.020)
Widowed	-0.091***	(0.014)	-0.114***	(0.014)	0.040***	(0.008)
Separated/divorced	-0.123***	(0.021)	-0.154***	(0.020)	0.029**	(0.012)
Lose partner between interviews	-0.091***	(0.032)	-0.115***	(0.031)	0.058***	(0.022)

of the estimated relationships are similar for the two groups. The main differences relate to the onsets of specific difficulties, the education gradient (which is steeper among the second group) and new diagnoses of specific health conditions.

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
New partner between interviews	0.164	(0.101)	0.220**	(0.106)	-0.018	(0.058)
No siblings	.	.	.	.	.	.
Has sibling(s)	0.003	(0.012)	0.010	(0.012)	-0.016***	(0.006)
No children	0.013	(0.020)	-0.024	(0.019)	0.028**	(0.013)
Has child(ren)	.	.	.	.	.	.
Low education	-0.003	(0.016)	0.007	(0.016)	-0.026***	(0.010)
Mid education	0.007	(0.015)	0.011	(0.015)	-0.016*	(0.009)
High education	.	.	.	.	.	.
Least wealthy	0.117***	(0.031)	0.121***	(0.031)	-0.035*	(0.018)
Wealth quintile 2	0.100***	(0.020)	0.109***	(0.020)	-0.013	(0.010)
Wealth quintile 3	0.068***	(0.017)	0.075***	(0.016)	-0.010	(0.010)
Wealth quintile 4	0.060***	(0.016)	0.058***	(0.016)	0.001	(0.010)
Wealthiest	.	.	.	.	.	.
Homeowner	0.053**	(0.027)	0.052**	(0.026)	-0.026	(0.016)
Other tenure	.	.	.	.	.	.
<i>Self-reported health:</i>						
Excellent/Very good	.	.	.	.	.	.
Good	0.024*	(0.013)	0.022*	(0.013)	0.014*	(0.007)
Fair/Poor/Very bad	0.061***	(0.016)	0.052***	(0.016)	0.011	(0.008)
<i>Ever diagnosed with:</i>						
Arthritis	0.020*	(0.012)	0.025**	(0.012)	-0.007	(0.007)
Psychiatric problems	0.042*	(0.023)	0.018	(0.022)	0.039***	(0.013)
Dementia	0.078	(0.073)	0.120*	(0.069)	-0.028	(0.034)
Angina	0.018	(0.018)	0.038**	(0.017)	-0.012	(0.009)
Congestive heart failure	0.114*	(0.063)	0.068	(0.061)	0.041	(0.036)
Diabetes	0.043**	(0.018)	0.033*	(0.018)	0.016	(0.010)
High cholesterol	-0.035**	(0.015)	-0.032**	(0.014)	0.002	(0.008)

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
<i>New diagnoses:</i>						
Dementia	0.146**	(0.057)	0.064	(0.061)	0.060	(0.039)
Alzheimer's disease	0.144*	(0.083)	0.221***	(0.078)	-0.101***	(0.037)
Cancer	0.044	(0.035)	0.085**	(0.035)	-0.014	(0.018)
Asthma	-0.090**	(0.040)	-0.103***	(0.036)	0.007	(0.025)
Observations	5,295		5,615		7,570	
R-squared	0.327		0.262		0.138	

Note: Results from linear probability models. For example, 0.027 in the first cell indicates that those who report a difficulty with one activity category in their initial interview are 2.7 percentage points more likely to report receiving care in their next interview than an otherwise-identical individual who initially reported no difficulties (the reference category). Results are clustered at the individual level, and standard errors are robust to heteroscedasticity. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. Regressions control for whether individuals ever had a diagnosis of lung disease, asthma, arthritis, cancer, psychiatric problems, blood disorders, hypertension, angina, heart attack, heart failure, heart murmur, heart rhythm, diabetes, stroke, Parkinson's disease, Alzheimer's disease, dementia, osteoporosis or high cholesterol, whether they experienced a new diagnosis of one of these categories between interviews, and dummy variables for the wave in which they were first interviewed. Related coefficients that are not statistically significant are not displayed in this table. Sample is restricted to individuals who appeared in two consecutive surveys, who did not receive care at the time of their initial interview and who report at least one difficulty in at least one interview.

Source: Authors' calculations using ELSA 2002-03 to 2010-11.

Table 3.2 reports the results of simple multivariate regression analysis that explores the association between the characteristics of individuals and their future receipt of assistance. Results are first presented for the receipt of any care, before looking at the receipt of informal and formal care separately. Table 3.3 presents results for a similar analysis, looking at the receipt of privately- and publicly-funded formal care separately.

As would be expected, and consistent with the evidence shown in Table 2.1, individuals with a greater number of difficulties at the time of their initial interview are more likely to receive assistance at the time of their next interview. Individuals who initially reported difficulties with four or more activities are 71 percentage points more likely to receive future assistance than individuals who did not report any difficulties. Over and above these difficulties, walking speed appears to have little impact on the receipt of future care, with no significant relationship with informal care and a very small (negative) association with formal care.

In addition to the original difficulties faced by individuals, the change in these difficulties over time is also significantly related to receiving assistance in the future. The exact impact of developing a new difficulty differs across the type of difficulty experienced. Individuals who report a new difficulty with housework/shopping are 45 percentage points more likely to report receiving any assistance at the time of the next interview than individuals who do not report a new difficulty with housework/shopping. Individuals who report a new difficulty with mobility are 4 percentage points more likely to report any assistance in the next interview.

Table 3.3. Factors associated with onset of formal assistance, by funding

	Formal assistance		Privately-funded		Publicly-funded	
	Effect	Std error	Effect	Std error	Effect	Std error
<i>Difficulties at first interview with:</i>						
0 activity categories	.	.	.	.	.	.
1 activity category	0.033***	(0.011)	0.020**	(0.010)	0.018***	(0.006)
2 activity categories	0.116***	(0.015)	0.085***	(0.014)	0.053***	(0.009)
3 activity categories	0.159***	(0.018)	0.117***	(0.015)	0.080***	(0.011)
4+ activity categories	0.183***	(0.030)	0.092***	(0.022)	0.119***	(0.023)
Walking speed (m/s)	-0.000***	(0.000)	-0.000**	(0.000)	-0.000***	(0.000)
<i>New report of difficulties with:</i>						
Mobility	0.036***	(0.011)	0.020**	(0.010)	0.022***	(0.006)
Washing	0.046***	(0.009)	0.019**	(0.008)	0.039***	(0.007)
Eating	0.064**	(0.027)	0.007	(0.021)	0.057***	(0.021)
Housework/shopping	0.129***	(0.010)	0.103***	(0.009)	0.032***	(0.006)
Medicine	0.050*	(0.027)	-0.007	(0.018)	0.053**	(0.024)
Money	0.027	(0.020)	-0.025*	(0.014)	0.059***	(0.018)
Aged 65–74	.	.	.	.	.	.
Aged 75–84	0.037***	(0.006)	0.030***	(0.006)	0.010**	(0.004)
Aged 85+	0.110***	(0.017)	0.068***	(0.015)	0.056***	(0.011)
Female	0.031***	(0.006)	0.030***	(0.005)	-0.000	(0.005)
Male	.	.	.	.	.	.
Couple	.	.	.	.	.	.
Always single	0.026	(0.020)	-0.002	(0.018)	0.040***	(0.014)
Widowed	0.040***	(0.008)	0.031***	(0.007)	0.022***	(0.005)
Separated/divorced	0.029**	(0.012)	0.018*	(0.010)	0.019**	(0.008)
Lose partner between interviews	0.058***	(0.022)	0.026	(0.018)	0.059***	(0.017)
New partner between interviews	-0.018	(0.058)	-0.037	(0.045)	0.002	(0.043)
No siblings	.	.	.	.	.	.

	Formal assistance		Privately-funded		Publicly-funded	
	Effect	Std error	Effect	Std error	Effect	Std error
Has sibling(s)	-0.016***	(0.006)	-0.009	(0.005)	-0.013***	(0.004)
No children	0.028**	(0.013)	0.036***	(0.012)	0.006	(0.008)
Has child(ren)	.	.	.	.	.	.
Low education	-0.026***	(0.010)	-0.031***	(0.009)	0.002	(0.006)
Mid education	-0.016*	(0.009)	-0.009	(0.009)	0.000	(0.005)
High education	.	.	.	.	.	.
Least wealthy	-0.035*	(0.018)	-0.063***	(0.016)	0.023*	(0.013)
Wealth quintile 2	-0.013	(0.010)	-0.031***	(0.009)	0.018***	(0.006)
Wealth quintile 3	-0.010	(0.010)	-0.025***	(0.009)	0.018***	(0.006)
Wealth quintile 4	0.001	(0.010)	-0.008	(0.010)	0.012**	(0.005)
Wealthiest	.	.	.	.	.	.
Homeowner	-0.026	(0.016)	-0.023*	(0.014)	-0.004	(0.012)
Other tenure	.	.	.	.	.	.
<i>Self-reported health:</i>						
Excellent/Very good	.	.	.	.	.	.
Good	0.014*	(0.007)	0.013**	(0.006)	-0.002	(0.005)
Fair/Poor/Very bad	0.011	(0.008)	0.013*	(0.007)	-0.007	(0.006)
<i>Ever diagnosed with:</i>						
Lung disease	-0.012	(0.011)	-0.012	(0.009)	-0.013*	(0.007)
Psychiatric problems	0.039***	(0.013)	0.033***	(0.012)	0.002	(0.009)
Dementia	-0.028	(0.034)	-0.058***	(0.016)	0.036	(0.036)
Alzheimer's disease	-0.002	(0.073)	-0.037*	(0.021)	0.023	(0.069)
<i>New diagnoses:</i>						
Alzheimer's disease	-0.101***	(0.037)	-0.039	(0.026)	-0.045	(0.037)
Parkinson's disease	-0.043	(0.049)	-0.018	(0.039)	-0.052**	(0.026)
Osteoporosis	0.024	(0.023)	0.013	(0.020)	0.037**	(0.018)
High cholesterol	-0.016	(0.011)	-0.014	(0.009)	-0.013*	(0.007)
Observations	7,570		7,782		8,022	
R-squared	0.138		0.100		0.100	

Note: Results from linear probability models. For example, 0.033 in the first cell indicates that those who report a difficulty with one activity category in their initial interview are 3.3 percentage points more likely to report receiving formal care in their next interview than an otherwise-identical individual who initially reported no difficulties (the reference category). Results are clustered at the individual level, and standard errors are robust to heteroscedasticity. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. Regressions control for whether individuals ever had a diagnosis of lung disease, asthma, arthritis, cancer, psychiatric problems, blood disorders, hypertension, angina, heart attack, heart failure, heart murmur, heart rhythm, diabetes, stroke, Parkinson's disease, Alzheimer's disease, dementia, osteoporosis or high cholesterol, whether they experienced a new diagnosis of one of these categories between interviews, and dummy variables for the wave in which they were first interviewed. Related coefficients that are not statistically significant are not displayed in this table. Sample is restricted to individuals who appeared in two consecutive surveys, who did not receive any care at the time of their initial interview and who report at least one difficulty in at least one interview.

Source: Authors' calculations using ELSA 2002-03 to 2010-11.

These impacts also differ with the type of care received. While a new difficulty with any of the six activity categories is strongly associated with new receipt of informal assistance, the relationships with receipt of formal care are weaker for difficulties with medicine and money. Table 3.3 shows that these relationships also differ across the funding types of formal care. Receipt of publicly-funded care is positively associated with a new difficulty in any of the six categories. Privately-funded care is positively associated with a new difficulty with mobility, washing or housework/shopping and is negatively associated with a new difficulty with money.

Older individuals are more likely to receive assistance in the future, with those aged 85 or above at the time of their initial interview 14 percentage points more likely to receive assistance at the time of their next interview, even after controlling for observable differences in the level and changes of reported difficulties. This relationship is strongest for formal assistance (both privately- and publicly-funded). Females are 8 percentage points more likely to receive new assistance than males.

Partnership status is an important factor in the receipt of future assistance. Individuals who are single (and never married), widowed, or separated or divorced are all less likely to receive future assistance than individuals who live with a partner (married, in a civil partnership or cohabiting). These relationships are driven by the reduced probability of receiving informal care. In contrast, widowed and separated/divorced individuals are more likely to receive formal assistance than individuals in couples. For example, widowed individuals are 4 percentage points more likely to receive formal assistance at the time of their next interview than individuals living with a partner.

Changes in partnership status over time are also significantly related to the receipt of future assistance. Individuals who lose a partner between interviews are 9 percentage points less likely to receive any care at the time of the next interview. This is driven by a reduction in the receipt of informal care, with individuals who lose a partner 12 percentage points less likely to receive informal care. In contrast, the probability of receipt of formal care increases by 6 percentage points due to increased receipt of publicly-funded formal care. A new partner has the opposite effect, with individuals who report a new partner over the period 22 percentage points more likely to receive future informal assistance compared with individuals who do not report a new partner.

Wider family structure also has a significant association with the receipt of future assistance. Individuals with surviving siblings are 2 percentage points less likely to receive new formal assistance. Individuals without children are 3 percentage points more likely to receive future formal assistance. Taken together with the relationship between partnership status and the receipt of care, these results suggest that individuals may, to some extent, substitute between informal and formal care. Individuals with fewer potential informal carers (spouses, siblings or children) are typically less likely to receive informal care and more likely to receive formal care.¹⁴

There is little evidence of a clear effect of education on the probability of future receipt of informal care after conditioning for wealth and other characteristics. However, the results indicate that education is positively related to the receipt of future formal care. Individuals with low education are 3 percentage points less likely to receive formal assistance at the time of the next interview than individuals with high education. This is due to the reduced probability of receiving privately-funded formal assistance among this group.

There are also significant associations between wealth and the likelihood of receiving any form of assistance in the next period. Individuals in the wealthiest quintile are, holding all other factors equal, less likely to report receiving any assistance at the time of the next interview than individuals at any other point of the wealth distribution. For example, individuals in the bottom wealth quintile are 12 percentage points more likely to report receiving assistance in the next interview than individuals in the richest wealth quintile. These effects are driven by a reduced probability of receiving informal care among the richest quintile. However, individuals who are homeowners are more likely to receive informal care (after controlling for their total wealth).

When looking at the receipt of any formal care, there does not immediately appear to be a very clear relationship between wealth and future receipt of care. However, this is due to a contrast in the probability of receiving privately-funded and publicly-funded formal care. Table 3.3 indicates that the wealthiest individuals are more likely to receive privately-funded formal care than individuals in the bottom 60% of the wealth distribution. This difference is greatest between individuals in the top and the bottom quintiles, with individuals in the least wealthy quintile 6 percentage points less likely to receive privately-funded formal care. In contrast, the wealthiest are less likely to receive publicly-funded formal care, after controlling for other factors, than an individual in any other part of the wealth distribution. These results are consistent both with the means-tested provision of some formal care and with individuals substituting between different types of formal care, with wealthier individuals able to fund more private care.

Self-reported health is also an important factor associated with the future receipt of care, even after controlling for the specific difficulties that individuals report. Individuals who self-report their general health as good rather than excellent or very good in their initial interview are 2 percentage points more likely to receive any assistance in the following period. Individuals who self-report their health as fair, poor or very bad are 6 percentage points more likely to receive assistance than the self-reported healthiest. Interestingly, self-reported health has only a weakly statistically significant relationship with the receipt of formal assistance. There is some evidence of individuals with worse self-reported health

¹⁴ This is consistent with existing evidence on substitution between different types of care (Charles and Sevak, 2005; Bonsang, 2009; Kim and Lim, 2015). However, it does not indicate the extent to which these types of care are perfect substitutes in terms of quantity (hours) or quality. This merits further exploration in future work.

being more likely to receive privately-funded formal care. The results in Table 3.3 also indicate that individuals who self-report fair, poor or very bad health are no more likely to receive publicly-funded formal care than those who report excellent or very good health. This suggests that means-tested publicly-provided care may be targeted towards people with the difficulties that care is specifically targeted towards solving (as reflected by the results related to difficulties with different activities), rather than towards individuals who are in overall poorer health.

The presence of a number of health conditions is also associated with the future receipt of assistance, even after taking into account the number of difficulties and the change in difficulties associated with particular activities (for example, mobility), which may be in part caused by these conditions. For example, an individual who has ever been diagnosed with arthritis, dementia, angina and/or diabetes has a higher probability of receiving future informal care than an individual without one of these diagnoses. However, individuals with Alzheimer's disease and dementia are less likely to privately pay for future assistance. Individuals with high cholesterol have lower overall rates of future assistance.

Changes in these health conditions are also important. A new diagnosis of dementia or Alzheimer's disease is associated with new receipt of assistance, with individuals 15 and 14 percentage points more likely to receive some assistance in the next interview, respectively, following a new diagnosis of these conditions. Interestingly, a new Alzheimer's diagnosis is associated with an increase in the receipt of informal care but a reduction in the receipt of formal care. A new cancer diagnosis is associated with an increased receipt of informal care, while a new diagnosis of osteoporosis is associated with a 4 percentage point increase in the probability of receiving publicly-funded formal care. In contrast, a new diagnosis of asthma is associated with a reduction in the future receipt of informal care, while a new diagnosis of Parkinson's disease is associated with a reduction in future publicly-funded formal care.

3.3 Characteristics associated with the end of assistance

Figure 3.1 indicated that in addition to the individuals who start to receive assistance over time, 7% of respondents reported that they stopped receiving assistance between interviews. Table 3.4 reports the results of simple multivariate regression analysis that explores the association between individual characteristics and an offset in receiving assistance. Results are presented first for the receipt of any care and then separately for the receipt of informal and formal care.¹⁵

As expected, individuals who report a greater number of difficulties in their initial interview are less likely to have stopped receiving assistance two years later. Individuals with difficulties in four or more activity categories are 61 percentage points less likely to do so than individuals who reported difficulties with only one activity.¹⁶ This pattern holds for both informal and formal care. Walking speed also has a statistically significant

¹⁵ We do not repeat the analysis separately for privately- and publicly-funded formal care due to small sample sizes.

¹⁶ Due to the structure of the survey, all individuals who report receiving assistance at the time of their initial interview reported at least one difficulty at this time (i.e. individuals are only asked about the assistance that they receive if they report a difficulty).

(positive) relationship with the receipt of any, and particularly formal, assistance; however, these estimates are very close to zero in magnitude.

Table 3.4. Factors associated with offset of assistance, by assistance type

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
<i>Difficulties at first interview with:</i>						
1 activity category	.	.	.	.	.	.
2 activity categories	-0.271***	(0.023)	-0.238***	(0.025)	-0.177**	(0.077)
3 activity categories	-0.499***	(0.026)	-0.474***	(0.028)	-0.287***	(0.086)
4+ activity categories	-0.607***	(0.031)	-0.608***	(0.034)	-0.385***	(0.106)
Walking speed (m/s)	0.000**	(0.000)	0.000	(0.000)	0.001**	(0.000)
<i>No longer reports difficulties with:</i>						
Mobility	0.251***	(0.026)	0.244***	(0.027)	0.261***	(0.080)
Washing	0.199***	(0.019)	0.207***	(0.021)	0.115**	(0.050)
Eating	0.044	(0.031)	0.059	(0.038)	0.046	(0.090)
Housework/shopping	0.377***	(0.020)	0.315***	(0.022)	0.352***	(0.045)
Medicine	0.056	(0.036)	0.065	(0.041)	0.115	(0.111)
Money	0.136***	(0.030)	0.158***	(0.034)	0.023	(0.091)
Aged 65–74	.	.	.	.	.	.
Aged 75–84	-0.026*	(0.015)	0.006	(0.017)	0.010	(0.045)
Aged 85+	-0.032	(0.022)	-0.003	(0.027)	-0.048	(0.055)
Female	-0.059***	(0.016)	-0.043**	(0.018)	-0.091**	(0.046)
Male	.	.	.	.	.	.
Couple	.	.	.	.	.	.
Always single	0.080*	(0.042)	0.225***	(0.064)	-0.164**	(0.082)
Widowed	0.033*	(0.018)	0.061***	(0.021)	-0.096*	(0.054)
Separated/divorced	0.108***	(0.031)	0.153***	(0.036)	-0.096	(0.074)
Lose partner between interviews	0.122***	(0.038)	0.137***	(0.042)	-0.123	(0.084)
No siblings	.	.	.	.	.	.

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
Has sibling(s)	-0.015	(0.014)	-0.029*	(0.016)	-0.018	(0.043)
No children	-0.015	(0.024)	0.034	(0.029)	-0.086*	(0.047)
Has child(ren)	.	.	.	.	.	.
<i>Ever diagnosed with:</i>						
Dementia	-0.097**	(0.045)	-0.087*	(0.049)	-0.165	(0.114)
Psychiatric problems	0.006	(0.023)	-0.007	(0.026)	0.094*	(0.054)
High blood pressure	0.004	(0.015)	0.002	(0.016)	-0.085**	(0.040)
<i>New diagnoses:</i>						
Asthma	0.032	(0.066)	-0.034	(0.065)	0.298**	(0.139)
Dementia	0.012	(0.043)	0.008	(0.047)	0.273*	(0.148)
Cancer	0.074	(0.045)	0.113**	(0.052)	-0.004	(0.092)
Parkinson's disease	0.014	(0.052)	-0.006	(0.058)	-0.282***	(0.094)
Psychiatric problems	-0.069	(0.051)	-0.110**	(0.055)	-0.047	(0.203)
Heart attack	-0.099**	(0.048)	-0.155***	(0.053)	0.010	(0.127)
Heart murmur	-0.065	(0.044)	-0.110**	(0.047)	0.049	(0.101)
Irregular heart rhythm	0.002	(0.032)	0.002	(0.037)	-0.183**	(0.077)
High blood pressure	0.064*	(0.033)	0.050	(0.036)	-0.061	(0.093)
High cholesterol	-0.049*	(0.029)	-0.068**	(0.032)	-0.063	(0.074)
Observations	3,231		2,889		742	
R-squared	0.392		0.341		0.322	

Note: Results from linear probability models. For example, -0.271 in the first cell indicates that those who report difficulties with two activity categories in their initial interview are 27.1 percentage points less likely to have stopped receiving care in their next interview than an otherwise-identical individual who initially reported difficulty with one activity (the reference category). Results are clustered at the individual level, and standard errors are robust to heteroscedasticity. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. Regressions control for wealth quintile, education level, homeownership status, self-reported health status, whether individuals ever had a diagnosis of lung disease, asthma, arthritis, cancer, psychiatric problems, blood disorders, hypertension, angina, heart attack, heart failure, heart murmur, heart rhythm, diabetes, stroke, Parkinson's disease, Alzheimer's disease, dementia, osteoporosis or high cholesterol, whether they experienced a new diagnosis of one of these categories between interviews, whether the individual reported a new partner in the second interview, and dummy variables for the wave in which they were first interviewed. Related coefficients that are not statistically significant are not displayed in this table. Sample is restricted to individuals who appeared in two consecutive surveys and who did receive care at the time of their initial interview.

Source: Authors' calculations using ELSA 2002-03 to 2010-11.

Reduced difficulties with individual activities are also strongly associated with the end of assistance. Individuals who report that they no longer have difficulties with mobility, washing, housework/shopping or money are more likely to stop receiving assistance with any activity. These associations are statistically significant at the 5% level for both informal and formal assistance (except for formal assistance with money, where the effect is not statistically significant but still positive). The magnitude of these relationships varies, with the strongest associations found for help with housework/shopping.

Women are 6 percentage points less likely to stop receiving care than men. There is also some evidence that older individuals are less likely to stop receiving assistance, with 75- to 84-year-olds 3 percentage points less likely to experience a care offset. However, the remaining estimated relationships with age are not statistically significantly different from zero.

Single individuals are more likely to transition away from assistance. Those who have always been single are 8 percentage points more likely to stop receiving assistance than those who have a partner at baseline. Widowed, separated or divorced individuals are also more likely to transition away from care. These associations are driven by the increased probability of moving out of informal care. However, these individuals are also less likely to transition out of formal care.

A change in partnership status between interviews is also strongly associated with offsets in care. Individuals with a partner in their initial interview but not at the time of the next interview are 12 percentage points more likely to stop receiving assistance than individuals who do not lose their partner. This is due to the increased probability of no longer receiving informal care. The estimated association with formal care has the opposite sign (negative), but is not statistically significant even at the 10% level.

Individuals with siblings at the time of the initial interview are 3 percentage points less likely to lose informal care, while individuals with no children are 9 percentage points less likely to lose formal care. These results are all consistent with the importance of family structure for informal care. Individuals with potential informal carers (for example, a spouse, siblings or children) are all more likely to receive informal assistance at the time of both interviews, while individuals without these connections are more likely to remain in formal care.

There is no significant relationship between self-reported health and the probability of no longer receiving assistance in the future. However, other objective measures of poor health do have significant relationships. Individuals who have ever been diagnosed (at the time of the initial interview) with dementia are 10 percentage points less likely to stop receiving assistance. Individuals with high blood pressure are 9 percentage points less likely to stop receiving formal care, while individuals with psychiatric problems are 9 percentage points more likely to stop receiving formal care.

New doctor diagnoses (between interviews) of particular conditions are also strongly related to the probability of stopping receiving assistance. The majority of these diagnoses have the expected effect, with new diagnoses associated with a decreased probability of no longer receiving care. For example, individuals who are diagnosed with Parkinson's disease between interviews are 28 percentage points less likely to stop receiving formal assistance than individuals who do not receive this diagnosis. Individuals who are

diagnosed with new psychiatric problems, a heart attack, heart murmur or high cholesterol are also less likely to stop receiving informal assistance.

However, individuals who are diagnosed with dementia between interviews are 27 percentage points more likely to stop receiving formal care by the time of the next interview than individuals who do not receive such a diagnosis. Similarly, individuals who are diagnosed with cancer are 11 percentage points more likely to stop receiving informal care. In both cases, there is little evidence to suggest that these associations are offset by a reduced probability of no longer receiving another type of care (informal or formal). These results are surprising given that we would expect individuals who have been newly diagnosed with these conditions to require more rather than less assistance.

4. Cohort Differences

Key findings

Life expectancy is increasing across birth cohorts, particularly for men.

The latest ONS life expectancy projections indicate that compared with men born in 1915–24, men born in 1925–34 are expected to live 0.3 years longer, while men born in 1945–54 are expected to live 1.8 years longer. For women, these differences are 0.3 and 1.5 years respectively.

Women in later birth cohorts are more likely to be part of a couple at any age than women born in earlier cohorts.

In 2010, 39.6% of women born in 1925–34 were in a couple. These women are 7 percentage points more likely to be in a couple at a given age than women born in 1915–24. There are no significant differences in male partnership status, as a result of the average age difference between partners.

Women are more likely to receive care from a spouse in later birth cohorts.

Women born in 1925–34 are 4.0 percentage points more likely to receive care from a partner at a given age than women born in 1915–24. Women born in 1935–44 are 5.8 percentage points more likely to do so than the earliest cohort. These differences are not seen for men.

Men born in later birth cohorts are less likely to report difficulties with activities than earlier birth cohorts.

Compared with men born in 1915–24, men born in 1925–34 are 4.7 percentage points less likely to report any difficulties with daily activities, while men born in 1935–44 are 7.3 percentage points less likely to report any difficulties.

Men born in later birth cohorts also report receiving less formal care at a given age.

Central estimates imply that the proportion of men aged 86–95 receiving formal care will be 2.4 percentage points lower in 2020 than in 2010. This compares with the 13.2% of men in this age group who received formal care in 2010.

Reduced needs across cohorts will do little to offset increased demand for care due to a larger older population.

Demographic forecasts imply that the male population aged 86–95 will be 50.1% higher in 2020 than in 2010. Despite reduced per-capita use of formal care, these estimates imply that demand for formal care for men in this age group will be 41.0% higher in 2020 than in 2010. For women, where there is no evidence of reduced per-capita use of formal care, demand for formal care will be 15.4% higher in 2020 than in 2010. The population will increase further by 2030, while there is a smaller reduction in needs. The estimates imply additional demand for formal care of 122.5% for men and 54.3% for women compared with 2010.

A further question is whether different generations look different in terms of the proportions who receive help with daily activities. This has important implications for public policy – in particular for understanding the public finance implications of future demand for social care, for the government’s ambitions to extend working lives, and even potentially for state pension age policy.

There are at least two reasons why individuals in later birth cohorts might be expected to have different levels of care receipt than previous generations. First, life expectancies are increasing and individuals are expected to enjoy more years in good health.¹⁷ This would lead to lower needs for care (at a given age) among individuals in later cohorts. Second, but related, the family composition of older individuals is changing.¹⁸ As life expectancies are increasing, the proportion of older individuals who are still members of a couple is also increasing. Given that spouses are the dominant source of care for individuals who report difficulties with daily activities, this implies that individuals in later cohorts would be expected to be more likely to receive help, because they have a partner available to provide that help.

We do not attempt to predict future receipt of care here (such an exercise is undertaken for the period up to 2022–23 by Emmerson, Heald and Hood, 2014). However, we add to the existing evidence base by examining whether, amongst the current older population, cohorts look different in terms of the proportions who receive help with daily activities. Are those born later more or less likely to receive help at any given age? We explore this question using the comparable data on care receipt from the first five collections of the ELSA survey (gathered between 2002–03 and 2010–11) that were examined in Chapter 3.

¹⁷ The extent to which additional years of life will be spent in good health is unclear. The UK has experienced increases in both life expectancy and healthy life expectancy over the past decades, with stronger growth in healthy life (compared with life) expectancy at birth between 2002 and 2011 (Office for National Statistics, 2014). This means that individuals born during that period will experience additional years in good health. However, although healthy life expectancy did grow for people aged 65 during this period, this growth was outstripped by growth in their life expectancy (Office for National Statistics, 2014). As a result, these individuals will experience some additional years in good health and others in poor health. See Jagger (2015) for a summary of these issues in the UK context.

¹⁸ See Emmerson, Heald and Hood (2014).

In each year of data, we group individuals according to their sex and date of birth, focusing on four cohorts: those born in 1915–24, those born in 1925–34, those born in 1935–44 and those born in 1945–54. Figure 4.1 plots, for each year in which the data were collected, the average life expectancy for each group against their average age when observed. Men are shown in black and women in green. The graph clearly illustrates that remaining life expectancy is decreasing with age and that those born later have substantially higher life expectancies at a given age than those born earlier. Using regression techniques¹⁹ to estimate these cohort differences suggests that compared with men born in 1915–24, those born in 1925–34 are on average expected to live 0.3 years longer, those born in 1935–44 are on average expected to live 1.2 years longer and those born in 1945–54 are on average expected to live 1.8 years longer. For women, the equivalent figures are 0.3 years, 1.0 years and 1.5 years.

Figure 4.2, constructed in the same way as Figure 4.1, indicates that there are also differences between the cohorts in the average partnership status of women (who are shown in green). Regression analysis suggests that those born in 1925–34 are on average 7 percentage points more likely (and those born in 1935–44 are on average 10 percentage points more likely) to be in a couple at a given age than those born in 1915–24. This is due to the increases in male life expectancy leading to male partners surviving for longer. There are therefore important cohort differences in the availability of potential male care givers. In contrast, due to the average relative ages of partners (where men are typically older than women), improvements in female life expectancy do not also translate into differences in male partnership status across cohorts.

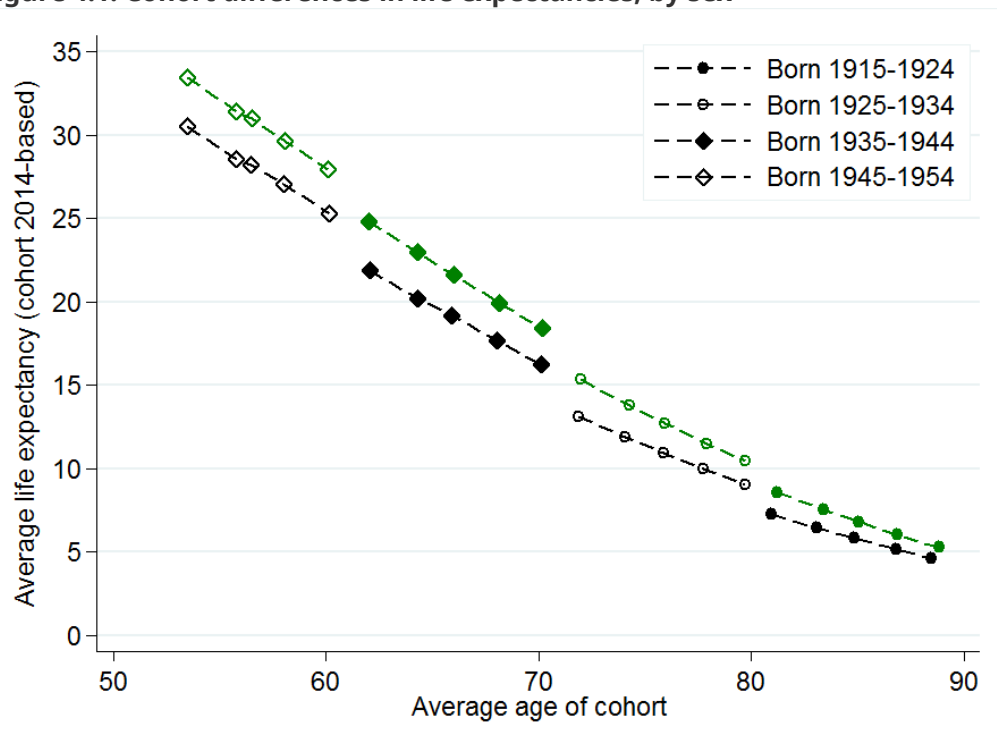
Figure 4.3 plots the proportion of individuals reporting receiving assistance with any daily activities (from any source). Again, men are shown in black and women in green. There is little evidence of noticeable differences between the cohorts. Regression analysis, the results of which are presented in the first two columns of Table 4.1, shows no differences in care receipt between cohorts of men. For women, there is some indication that care receipt is around 3–4 percentage points higher among those born in 1925–34 and 1935–44 than among those born in 1915–24, although the results for 1935–44 are not statistically significant.

Of course, differences in overall care receipt are the net effect of two factors: cohorts may differ in their difficulties with daily activities (i.e. their need for assistance) and cohorts may differ in how likely they are to receive help conditional on having needs (for example, because of differences in the availability of carers). Results separating out these two effects are presented in the final four columns of Table 4.1.

Among men, those born in 1925–34 are on average 5 percentage points less likely to report having difficulties with any daily activities (at the same age) than those born in 1915–24, and those born in 1935–44 are on average 7 percentage points less likely (those born in 1945–54, however, appear no less likely to report any difficulties than those born in 1915–24). That this does not feed through into lower proportions receiving assistance

¹⁹ We estimate a linear age-period-cohort model, which aims to identify separately the influences associated with the process of ageing, the influences associated with the date at which the individuals are observed and the influences associated with the individual's date of birth. We employ a linear model, where the outcome of interest is assumed to be a linear additive function of dummies representing each age, period and cohort value observed in the sample, and employ the method of Deaton and Paxson (1994), which uses the assumption that the period dummies sum to zero in order to obtain identification.

Figure 4.1. Cohort differences in life expectancies, by sex



Note: Weighted pooled cross-sectional data. Women are shown in green and men in black.

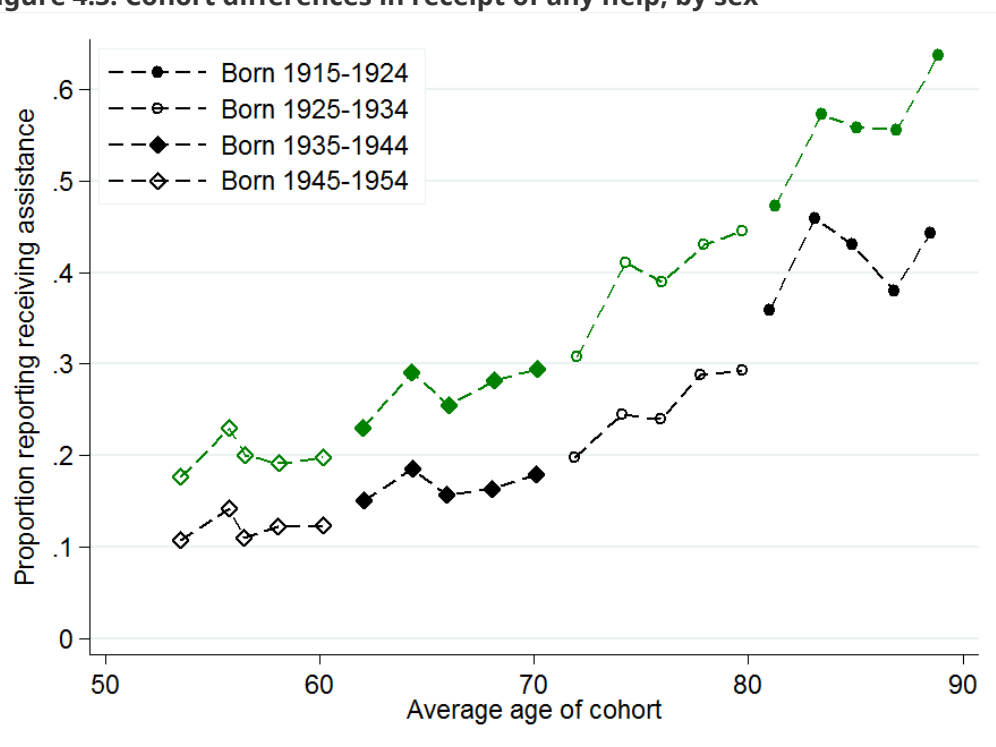
Source: Authors' calculations using ELSA 2002-03 to 2010-11 and ONS 2014-based cohort life expectancies.

Figure 4.2. Cohort differences in partnership status, by sex



Note: Weighted pooled cross-sectional data. Women are shown in green and men in black.

Source: Authors' calculations using ELSA 2002-03 to 2010-11.

Figure 4.3. Cohort differences in receipt of any help, by sex

Note: Weighted pooled cross-sectional data. Women are shown in green and men in black.

Source: Authors' calculations using ELSA 2002-03 to 2010-11.

Table 4.1. Cohort differences in care receipt, difficulties, and care receipt conditional on difficulties

Cohort <i>Relative to 1915-24</i>	Proportion receiving any help		Proportion reporting any difficulties		Proportion receiving any help (conditional on reporting difficulties)	
	Men	Women	Men	Women	Men	Women
1925-34	-0.009 (0.019)	0.038** (0.018)	-0.047** (0.021)	0.022 (0.016)	0.023 (0.026)	0.033 (0.020)
1935-44	-0.012 (0.024)	0.031 (0.024)	-0.073*** (0.028)	0.007 (0.022)	0.032 (0.035)	0.032 (0.029)
1945-54	0.005 (0.050)	-0.002 (0.053)	0.029 (0.057)	-0.016 (0.047)	0.002 (0.076)	-0.013 (0.069)

Note: Coefficients (standard errors in parentheses) are from a linear regression model that also includes dummies for each age and each wave, under the Deaton and Paxson (1994) assumption that period effects sum to zero. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. N = 10,442 men and 13,032 women for columns 1-4 and 6,339 men and 9,847 women for columns 5 and 6.

Source: Authors' calculations using ELSA 2002-03 to 2010-11.

appears to be because a slightly higher proportion of those with difficulties get assistance among later cohorts – those born in 1925–34 who report difficulties are on average 2 percentage points more likely to receive help (at the same age) than those born in 1915–24, and those born in 1935–44 are on average 3 percentage points more likely – though these differences are not statistically significant.

For women, the results suggest that, if anything, those in the 1925–34 and 1935–44 cohorts are slightly more likely to receive help conditional on having needs (at the same age) than those born in 1915–24 (by around 3 percentage points). Needs are relatively similar over time, with slightly higher needs in the 1925–34 cohort but no change in needs for the 1935–44 cohort, relative to those born between 1915 and 1924. However, in all cases, the estimates for need and for help conditional on needs are not statistically significant for women. This situation is driven by differences in the receipt of informal care

Table 4.2. Cohort differences in care receipt, difficulties, and care receipt conditional on difficulties, by type of care

Cohort <i>Relative to 1915–24</i>	Proportion receiving help		Proportion reporting any difficulties		Proportion receiving help (conditional on reporting difficulties)	
	Men	Women	Men	Women	Men	Women
Informal care						
1925–34	0.004 (0.019)	0.040** (0.019)	-0.027 (0.023)	0.033* (0.017)	0.028 (0.027)	0.033 (0.022)
1935–44	-0.004 (0.025)	0.048* (0.025)	-0.041 (0.030)	0.020 (0.023)	0.018 (0.037)	0.049 (0.031)
1945–54	0.002 (0.050)	0.016 (0.054)	0.063 (0.059)	0.016 (0.049)	-0.029 (0.078)	-0.011 (0.072)
Formal care						
1925–34	-0.024*** (0.009)	0.002 (0.011)	-0.027 (0.023)	0.033* (0.017)	-0.026** (0.013)	-0.003 (0.014)
1935–44	-0.015 (0.012)	-0.008 (0.015)	-0.041 (0.030)	0.020 (0.023)	-0.011 (0.018)	-0.016 (0.020)
1945–54	0.003 (0.023)	-0.008 (0.033)	0.063 (0.059)	0.016 (0.049)	0.014 (0.039)	-0.018 (0.046)

Note: Coefficients (standard errors in parentheses) are from a linear regression model that also includes dummies for each age and each wave, under the Deaton and Paxson (1994) assumption that period effects sum to zero. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. N = 8,620 men and 10,715 women for columns 1–4 and 5,237 men and 8,098 women for columns 5 and 6.

Source: Authors' calculations using ELSA 2002–03, 2004–05, 2008–09 and 2010–11.

(rather than formal care) across cohorts of women. Table 4.2 shows the results when the cohort differences for informal and formal care are analysed separately.²⁰

Table 4.3 conducts the same analysis separately for help received from spouses only. The results indicate that cohorts of women born later receive more help from a spouse, while we do not observe any statistically significant differences in the care received from a spouse across cohorts of men. Once we condition on reporting any difficulties, this pattern remains, with women born in 1925–34 being 4.5 percentage points more likely, and women born in 1935–44 being 7.1 percentage points more likely to receive care from a spouse than women born in 1915–24. No differences are observed for male cohorts, with the exception of those born in 1945–54 (who are less likely to receive care from a spouse than men born in 1915–24). The increasing prevalence of spousal care for women is consistent with the evidence in Figure 4.2 that the probability of women remaining in a couple at older ages has increased.

From 2006–07 onwards, the ELSA survey also asked whether individuals received any assistance separately for six particular activity categories: mobility, washing, eating, housework/shopping, taking medication and managing money. Tables 4.4 and 4.5 report the results of regression analysis exploring cohort differences in the receipt of help with these activities for women and men respectively.

Table 4.3. Cohort differences in spousal care receipt, difficulties, and spousal care receipt conditional on difficulties

Cohort <i>Relative to 1915–24</i>	Proportion receiving help from a spouse		Proportion reporting any difficulties		Proportion receiving any help from a spouse (conditional on difficulties)	
	Men	Women	Men	Women	Men	Women
1925–34	0.012 (0.017)	0.040*** (0.014)	–0.027 (0.023)	0.033* (0.017)	0.031 (0.024)	0.045*** (0.017)
1935–44	–0.015 (0.022)	0.058*** (0.019)	–0.041 (0.030)	0.020 (0.023)	–0.014 (0.033)	0.071*** (0.024)
1945–54	–0.061 (0.043)	0.023 (0.040)	0.063 (0.059)	0.016 (0.049)	–0.142** (0.069)	0.010 (0.055)

Note: Coefficients (standard errors in parentheses) are from a linear regression model that also includes dummies for each age and each wave, under the Deaton and Paxson (1994) assumption that period effects sum to zero. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. N = 8,620 men and 10,715 women for columns 1–4 and 5,237 men and 8,098 women for columns 5 and 6.

Source: Authors' calculations using ELSA 2002–03, 2004–05, 2008–09 and 2010–11.

²⁰ The results in Tables 4.2 and 4.3 exclude data collected during the interview phase in 2006–07. This is because respondents were asked slightly different questions (relative to interviews before and after this date) about who helped them with different tasks (see Section A.3 for details). To ensure that the results are not affected by inconsistencies in the interview structure, we omit data from 2006–07. As a result, Tables 4.2 and 4.3 have marginally different results from Table 4.1 in columns 3 and 4 (cohort differences in difficulties). However, these results are not statistically different from one another and do not change the interpretation of results.

For both sexes, there is evidence that cohorts born later are less likely to receive help with mobility-related activities than those born earlier. For example, women born in 1945–54 are 12 percentage points less likely to get help with mobility than women born in 1915–24, while the equivalent figure for men is 9 percentage points. This is largely driven by a decline in the probability of getting help among those reporting having difficulties with mobility (on average, the proportion of individuals reporting difficulties is also lower in later female cohorts while difficulties have increased across male cohorts, but these differences are not statistically significant).

Table 4.4. Cohort differences in care receipt for particular activity categories: women

Cohort <i>Relative to 1915–24</i>	Activity category					
	Mobility	Washing	Eating	Housework/ shopping	Medication	Money
A. Proportion receiving any help with the activity						
1925–34	-0.018 (0.028)	0.051** (0.022)	0.018 (0.016)	0.066** (0.029)	0.020** (0.009)	0.027* (0.014)
1935–44	-0.056 (0.035)	0.036 (0.028)	0.005 (0.021)	0.055 (0.037)	0.005 (0.011)	0.007 (0.018)
1945–54	-0.123** (0.055)	0.003 (0.043)	-0.017 (0.032)	0.004 (0.057)	0.016 (0.018)	0.014 (0.027)
B. Proportion reporting any difficulties with the activity						
1925–34	-0.020 (0.034)	0.072** (0.030)	0.001 (0.018)	0.051* (0.030)	0.024** (0.010)	0.007 (0.015)
1935–44	-0.052 (0.044)	0.067* (0.038)	-0.008 (0.023)	0.033 (0.039)	0.012 (0.013)	-0.019 (0.019)
1945–54	-0.065 (0.068)	0.033 (0.059)	-0.032 (0.036)	-0.000 (0.060)	0.018 (0.020)	-0.013 (0.030)
C. Proportion receiving help conditional on having difficulties						
1925–34	-0.019 (0.042)	0.065 (0.060)	0.135 (0.095)	0.060 (0.044)	-0.054 (0.180)	0.266*** (0.100)
1935–44	-0.070 (0.056)	0.010 (0.087)	0.034 (0.134)	0.076 (0.064)	-0.442 (0.270)	0.263* (0.153)
1945–54	-0.212** (0.095)	-0.086 (0.172)	-0.050 (0.299)	-0.093 (0.125)	0.533 (0.559)	0.340 (0.317)

Note: Coefficients (standard errors in parentheses) are from a linear regression model that also includes dummies for each age and each wave, under the Deaton and Paxson (1994) assumption that period effects sum to zero. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. N = 7,638 in panels A and B. For panel C, sample sizes are 4,203 for mobility, 1,756 for washing, 526 for eating, 2,025 for housework/shopping, 147 for medication and 354 for money.

Source: Authors' calculations using ELSA 2006–07 to 2010–11.

Among women, there are also largely consistent patterns across cohorts in the receipt of help with washing, housework/shopping and medication – the probabilities of help with these activities are decreasing across cohorts from those born in 1925–34 onwards (but remain above or at the same level as those reported by the 1915–24 cohort), as a result of lower prevalence of reported difficulty with these activities.

For men, the same is true of help with eating – this is less prevalent among cohorts born later, as a result of lower needs. However, the lower prevalence of help with washing

Table 4.5. Cohort differences in care receipt for particular activity categories: men

Cohort <i>Relative to 1915–24</i>	Activity category					
	Mobility	Washing	Eating	Housework/ shopping	Medication	Money shopping
A. Proportion receiving any help with the activity						
1925–34	-0.025 (0.028)	-0.004 (0.025)	-0.035** (0.016)	0.015 (0.028)	0.009 (0.011)	0.023 (0.018)
1935–44	-0.065* (0.035)	-0.017 (0.030)	-0.035* (0.020)	0.028 (0.034)	-0.008 (0.014)	-0.004 (0.022)
1945–54	-0.094* (0.051)	-0.063 (0.044)	-0.049* (0.029)	0.047 (0.050)	-0.026 (0.020)	-0.005 (0.032)
B. Proportion reporting any difficulties with the activity						
1925–34	0.014 (0.041)	0.035 (0.035)	-0.039** (0.019)	-0.004 (0.032)	0.014 (0.012)	0.037* (0.020)
1935–44	0.011 (0.051)	0.037 (0.043)	-0.045** (0.023)	0.000 (0.039)	-0.000 (0.015)	0.008 (0.024)
1945–54	0.023 (0.074)	0.051 (0.063)	-0.036 (0.033)	0.026 (0.057)	-0.006 (0.022)	0.017 (0.036)
C. Proportion receiving help conditional on having difficulties						
1925–34	-0.068 (0.056)	-0.057 (0.085)	0.006 (0.125)	0.072 (0.076)	-0.032 (0.169)	-0.033 (0.118)
1935–44	-0.177** (0.074)	-0.143 (0.110)	0.220 (0.188)	0.144 (0.106)	-0.318 (0.257)	-0.180 (0.186)
1945–54	-0.285** (0.123)	-0.463** (0.180)	-0.336 (0.318)	0.099 (0.182)	-1.351*** (0.453)	-0.441 (0.338)

Note: Coefficients (standard errors in parentheses) are from a linear regression model that also includes dummies for each age and each wave, under the Deaton and Paxson (1994) assumption that period effects sum to zero. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. N = 6,097 in panels A and B. For panel C, sample sizes are 2,356 for mobility, 1,256 for washing, 293 for eating, 993 for housework/shopping, 118 for medication and 329 for money.

Source: Authors' calculations using ELSA 2006–07 to 2010–11.

(which is not statistically significant) appears to be the result of lower prevalence of help conditional on needs and, if anything, slightly higher needs among later cohorts.

Overall, these results indicate that changes over time in the prevalence of difficulties at a given age may have important implications for future demand for care. Amongst the cohorts considered here, there is some evidence of later generations being less likely to have difficulties with washing, housework/shopping and medication (women) and eating and managing money (men), and that this is feeding through into lower prevalence of help with these activities. Changes in family structure – particularly increased rates of partnership at older ages – have also increased the availability of informal care. It is therefore important to take these changes into account when considering future care needs.

The extent to which any reductions in the need for and receipt of care across cohorts will offset demographic pressures is of crucial importance for policy. Falls in per-capita need for care may reduce pressures on care services, but may only have small effects in comparison with large increases in the at-risk population. Some measure of these contrasting effects can be seen if we combine the latest demographic forecasts produced by the Office for National Statistics (ONS), which indicate the expected size of the future population in different age groups, with the central estimates found in Table 4.2.

In 2010 (the year in which the fifth collection of ELSA commenced), individuals in the 1915–24 birth cohort were between 86 and 95 years old. Responses to the ELSA survey indicate that 13.2% of men in this cohort and 29.9% of women in this cohort received formal care. The ONS demographic forecasts indicate that the number of men aged between 86 and 95 will grow by 50.1% between 2010 and 2020, and the number of women will grow by 15.3%. If needs for care do not change over time, this would imply that the numbers of men and women using formal care would rise in line with the population.

However, it is likely that the need for and availability of formal care will change over time. In 2020, individuals aged between 86 and 95 will belong to the 1925–34 cohort. Using the central estimates reported in Table 4.2, the proportion of men aged between 86 and 95 receiving formal care will have fallen by 2.4 percentage points, while there is little change for women (an increase of 0.2 percentage points).

These estimates imply that, despite some reductions in the per-capita receipt of formal care for men, the number of men aged 86–95 receiving formal care will grow by 41.0% between 2010 and 2020. For women, where the central estimates do not suggest any reductions in per-capita formal care use (and in fact indicate an increase of 0.2 percentage points), the number of women aged 86–95 receiving formal care would increase by 15.4%. A similar calculation can also be made for 2030, where the cohort effects are smaller in magnitude while the size of the male cohort will have grown by 138.2% and the female cohort by 55.8%. Using the estimates in Table 4.2, this implies a 122.5% increase in the receipt of formal care for men in 2030 relative to 2010 and a 54.3% increase for women. Taken together, these results suggest that demographic pressures will result in much greater demand for care, even after accounting for reductions in the need for care across cohorts.

5. Conclusion

Addressing the long-term care needs of the older population is an increasingly important issue for policymakers and practitioners. Strong forecasted growth in the size of the older population, combined with recent cuts to publicly-provided social care, requires that larger demand for care is met with fewer resources. Understanding who needs and receives care, the characteristics associated with this receipt, and how this is likely to change over time is therefore a key policy challenge.

In this report, we used detailed and newly-available data from the seventh collection of the English Longitudinal Study of Ageing to describe the prevalence of care among the population aged 65 and over in 2014–15. Just over a quarter (26%) of this population reported receiving some assistance in their own home. Receipt of care is strongly associated with individual needs, with individuals who report a greater number of difficulties most likely to receive informal and formal care. Informal care is the most prevalent type of care, and family structure has a strong association with the receipt of care. Individuals in couples or with other family members (such as children or siblings) are more likely to receive informal care and less likely to receive formal care. For those who received formal care, the most common source of care was home care workers, home helpers or personal assistants, who provided help with a range of activities.

The need for care is a dynamic process, with individual circumstances and characteristics evolving over time. Individuals who do not receive care at a given point in time may well require care in the near future. Examining only a single point in time therefore underestimates the prevalence of care. When considering an eight-year period between 2002–03 and 2010–11, 50% of the population aged 65 and over reported receiving care in at least one interview. The probability of receiving future care is strongly linked to changes in the difficulties experienced by individuals, and there is again a strong role for family members in providing care. For example, individuals who lost their partner between interviews (either as a result of death or separation) were 12 percentage points less likely to start receiving informal care at the time of the following interview, and 14 percentage points more likely to lose any informal care they previously received, relative to individuals who did not lose their partner over this period.

The average need for care is also changing over time. Successive cohorts have experienced increases in life expectancy and a reduction in their care needs, while (related) changes to partnership status at older ages have increased the probability of receiving care from a spouse. This is important for planning future care.

Taken together, the evidence in this report has two important implications for policy and future research. First, the results indicate that among the cohorts considered here, there is some evidence of later generations having reduced care needs (and this has fed through into lower prevalence of help with particular activities for these cohorts). It is therefore important when thinking about future demand for care, and the implications of that for family circumstances and public policy, to take into account likely future health improvements. Our central estimates suggest that lower per-capita demand is likely to only offset a small amount of the increase in overall demand for care arising from the growth in the size of the older population. Future research should continue to examine changes in the general health and care needs across cohorts to better forecast future needs.

Second, the importance of the role played by family in providing care is clear throughout this report. The majority of assistance received by the older population is from informal sources, with partners playing a particularly important role. It is therefore vital to consider changes over time in family composition when thinking about the extent to which informal care can meet future needs. The biggest driver of differences in care receipt among the cohorts we considered appears to be the increasing availability of partners to provide help to older women. With increasing life expectancies, this is a trend that looks set to continue (though the extension of working lives may act to reduce the availability of younger partners to provide daily assistance). This means that it is increasingly important to understand the extent to which informal care substitutes for formal care (i.e. reduces the demand for formal care), since this has implications for both individuals' private saving decisions and the pressures on public funding of social care.

Appendix A: The ELSA Data

The English Longitudinal Study of Ageing (ELSA) is a survey collected every two years. It follows the same individuals (who were all aged 50 years or over when first interviewed) over time and collects information on their health, well-being, social and economic circumstances. The survey began in 2002 with a sample of people who were selected to be representative of individuals aged 50 years and over, and who lived in private households in England. These participants were drawn from individuals who had completed the Health Survey for England (HSE) in 1998, 1999 and 2001. The survey was replenished with new participants in waves 3, 4, 6 and 7 from HSE to maintain sample size and representativeness.

Individuals are surveyed every two years. Seven collections of the survey have taken place so far (2002–03, 2004–05, 2006–07, 2008–09, 2010–11, 2012–13 and 2014–15) and an eighth collection is planned for 2016–17. All survey participants have a face-to-face interview (consisting of a computer-assisted interview and a self-completion questionnaire). Individuals also have a nurse visit in waves 2, 4 and 6 (2004–05, 2008–09 and 2012–13) where further objective measures of health are recorded. ELSA data are also linked to the Office for National Statistics death registrations. As a result, individuals who attrite from the sample as a result of mortality can be analysed separately from individuals who attrite for other (potentially unknown) reasons.

The survey collects a wide range of topics related to health, well-being and the social and economic circumstances of individuals. Health measures include both subjective (for example, self-reported health measure and self-reported difficulties with activities) and objective measures (for example, grip strength, walking speed and biomarkers). Information is collected on the need for and receipt of assistance with activities in the home. The exact wording of questions related to the need for and receipt of care, and the sample covered by these questions, vary across interviews. Details of the changes are provided in Sections A.2 and A.3.

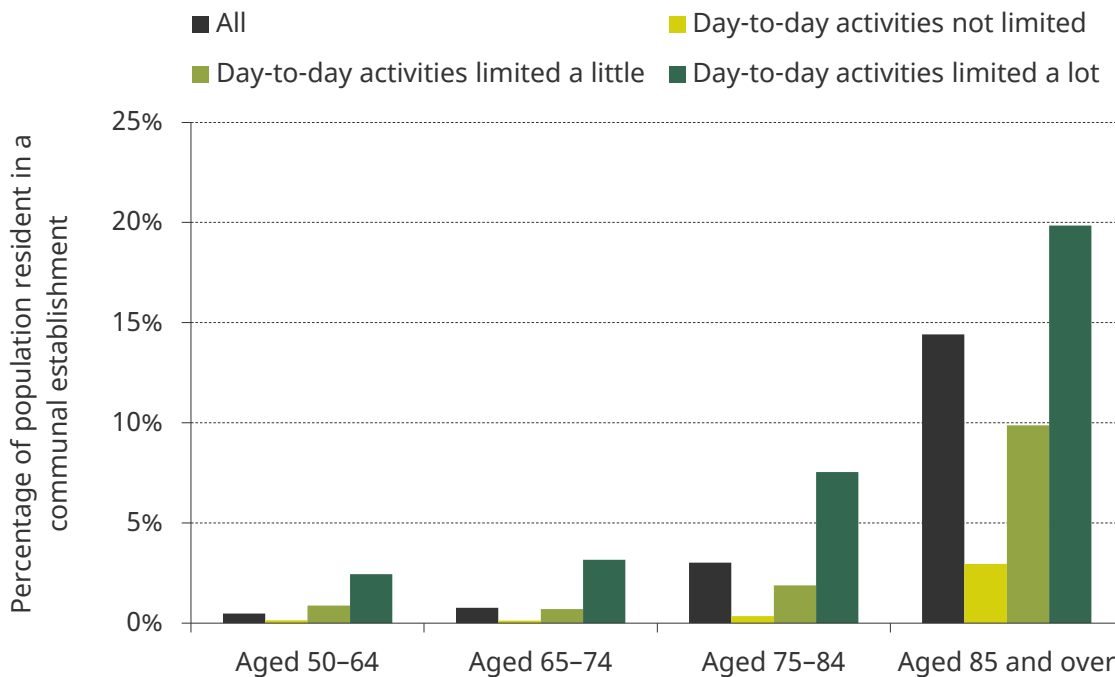
A.1 Individuals in institutions

ELSA is a representative survey of the private household population of England and, as such, does not include in its core sample individuals in communal establishments such as residential or nursing homes.²¹ This is important to bear in mind when focusing on the older population, and in particular on the disability and care receipt of this population, since these individuals are those more likely to be resident in such establishments.

According to the Census in 2011, 3.4% of the English population aged 65 and over lived in a communal establishment (of whom 97% were resident in a medical or care establishment that was not an NHS hospital). The proportion increases significantly with age: among the population aged 65–74 only 0.8% lived in communal establishments, but this increased to 3.0% among those aged 75–84 and 14.2% among those aged 85 and over.

²¹ When following individuals over time, ELSA does attempt to continue interviewing those from the original core sample who move into institutions. This means that there are individuals who live in institutions who respond to ELSA, and this provides useful information on the onset of institutional care. However, the survey is not representative of the population who live in institutions.

Figure A.1. Percentage of the population resident in communal establishments, by age and self-reported limitations



Note: The Census asks individuals ‘Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months?’, with the available answers being ‘Yes, limited a lot’, ‘Yes, limited a little’ and ‘No’. Individuals are prompted to include problems related to old age.

Source: Authors’ calculations using Office for National Statistics Census 2011 (accessed via Nomis).

Those who report limitations with their day-to-day activities due to health problems or disability are also much more likely to be resident in communal establishments, as is illustrated in Figure A.1. Focusing on the population aged 65 and over, among those who report no limitations only 0.3% live in communal establishments, compared with 2.5% of those who report that their activities are a little limited and 9.6% of those who report their activities are limited a lot.

A.2 Sample restrictions for care questions

The questions on receipt of care asked in ELSA change somewhat over time (see Section A.3 for details), but generally take the form of asking individuals who report having difficulty with a particular activity, whether or not they receive any help with that activity (and from whom). One possible concern with this type of question routing – where being asked about receipt of care depends on an individual first reporting having difficulty with activities – is that individuals may not report having difficulty in the first place if they are receiving help from someone that alleviates the difficulty.

A change to the way the questions were asked in wave 6 of ELSA (2012–13) means that we can partially investigate this concern. Prior to wave 6, respondents were only asked if they received help with a particular activity if they reported a difficulty with *that particular* activity. From wave 6, respondents were instead asked whether they received help with each activity if they reported a difficulty with *any* activity. For example, previously, only

Table A.1. Impact of routing restriction on reporting of assistance

	% reporting	Of whom:	
		did not receive help	received help
Problem with mobility	64.9	84.2	15.8
No problem with mobility	35.1	99.8	0.2
Problem with washing	21.4	55.1	44.9
No problem with washing	78.6	98.6	1.4
Problem with eating	8.3	67.6	32.4
No problem with eating	91.7	99.6	0.4
Problem with medication	3.2	14.8	85.2
No problem with medication	96.8	98.3	1.7
Problem with housework/shopping	23.5	23.8	76.2
No problem with housework/shopping	76.5	91.9	8.1
Problem with managing money	5.1	20.2	79.8
No problem with managing money	94.9	98.0	2.0

Source: Authors' calculations using ELSA wave 6 (2012–13).

those who reported a difficulty with housework or shopping were asked who (if anyone) helped them with housework or shopping. However, in wave 6, all those who reported any difficulty were asked who (if anyone) helped them with housework or shopping, even if they did not report having difficulty with those particular activities.

Table A.1 illustrates how many additional instances of assistance are recorded given this more encompassing routing. Note that these figures may still represent an underestimate of care receipt, since there may be individuals who receive assistance and as a consequence (or for another reason) do not report *any* difficulties. For most activity categories, there are few individuals who do not report a difficulty but who do report receiving help with that activity. For example, virtually no one reported receiving assistance with mobility or eating if they did not report having a difficulty with these activities. Housework or shopping is the only category where a notable proportion (8%) of individuals who did not report a difficulty with these activities also reported receiving help with them. This suggests that, on the whole, the routing structure of the ELSA questionnaire does not lead to significant under-reporting of care receipt.

A.3 Changes to care questions over time

As noted in Section A.2, prior to wave 6, individuals were asked about their receipt of care for activities for which they reported a difficulty. In waves 6 and 7, individuals were asked

to report assistance for different activities if they reported any difficulty. As a result, the sample of who is asked about care could potentially be different over time. In waves 1–5 (2002–03 to 2010–11), the sample remains broadly consistent. In waves 6 and 7 (2012–13 and 2014–15), the sample is also consistent. This is why we restrict our dynamic analysis to the period between 2002–03 and 2010–11.

In addition to changes to the questionnaire routing, the exact wording of the questions also varies over time in two ways. First, the period covered by the questions changes over time. For waves 1–5, the questions refer to the care received for difficulties that *'last more than three months'*. Waves 6 and 7 instead ask about any care received in the last month.

Second, there is a slight difference in the difficulty categories that individuals are asked about in wave 3. Although the data collected on the receipt of *any* help is consistent across waves 1–5, the information on *who* provides this care is slightly different in wave 3. This is because in wave 3, individuals are only asked to list the individual who helps them with six specific categories (mobility, dressing/bathing, eating, housework/shopping, money, medication), while individuals are asked about who helps them with any 'other difficulties' in the other interviews before wave 6. Help with 'other activities' can be separated in waves 3–5 (as questions are asked by category) but not in waves 1 and 2 (where receipt is reported by individual rather than function). As a result, we exclude data from wave 3 in our cohort sub-analysis (by type of care) in Tables 4.2 and 4.3, but include wave 3 when examining all care (Table 4.1) and for particular types of care (Tables 4.4 and 4.5 – which use the consistent categories reported in waves 3–5).

Full ELSA questionnaires for each wave are available from the UK Data Service website, <https://www.ukdataservice.ac.uk/>.

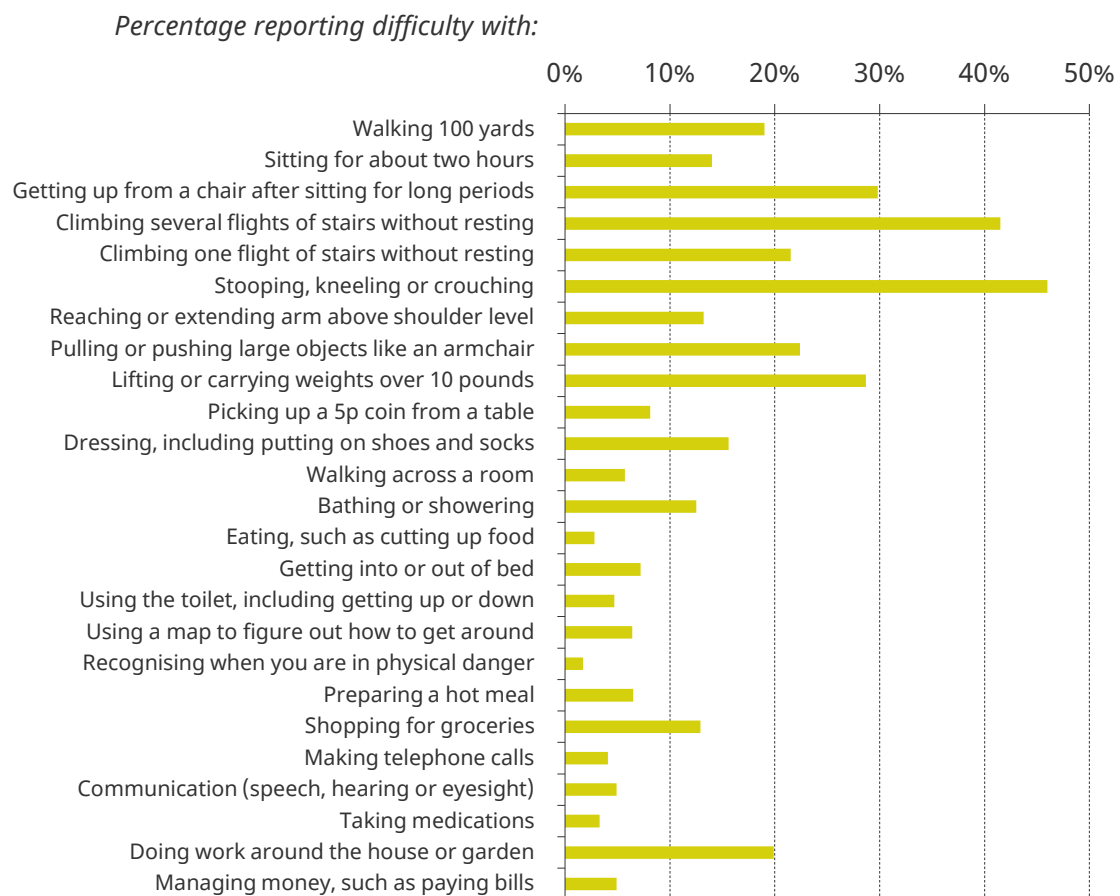
Appendix B: Potential Need for Social Care

To provide context for the patterns of care receipt described in Chapter 2, this appendix describes the potential need for care among the older population in 2014–15.

B.1 Self-reported difficulties with daily activities

Figure B.1 presents, for the population aged 65 and over in 2014–15, the percentage of individuals who report difficulties with a number of everyday activities. Nearly two-thirds of individuals (65%) report difficulty with one or more activities. The most commonly reported difficulties are with mobility activities, particularly climbing multiple flights of stairs without resting (42%) and stooping, kneeling or crouching (46%). Relatively few individuals reported difficulties with basic living tasks such as bathing or showering (13%),

Figure B.1. Prevalence of self-reported difficulties with activities among the 65+ population



Note: Question wording is as follows: ‘Individuals are shown lists of the above activities and asked “Because of a health (or memory) problem, do you have any difficulty doing any of the activities on this card? Exclude any difficulties you expect to last less than three months.”’

Source: Authors’ calculations using ELSA 2014–15.

using the toilet (5%) or eating (3%), or with activities that rely more on cognitive function such as managing money (5%) or taking medications (3%).

For the purposes of asking individuals who helps them with different activities, the main daily activities are grouped into six categories:

- *mobility*: walking 100 yards, climbing a single or multiple flights of stairs, walking across a room, getting into or out of bed, or using the toilet;
- *washing*: dressing, bathing or showering;
- *eating*: eating;
- *housework*: shopping for groceries or doing work around the house or garden;
- *medication*: taking medication;
- *managing money*: managing money or making phone calls.

The proportion of individuals aged 65 and over reporting difficulty with some aspect of 'mobility' is 45%, with 'washing' is 20% and with 'housework' is 22%.

There may be some concern about individuals' reporting behaviour when asked about their difficulties with activities. For example, individuals in different circumstances may have different opinions as to what constitutes 'difficulty', or individuals who receive assistance with certain activities may no longer report themselves as having difficulties. However, the ELSA data are reassuring about the quality of self-reported difficulties, for two reasons:

Table B.1. Distribution of walking speed by self-reported difficulty with walking or using stairs

	% did not do the test	Distribution of walking speed (m/s)		
		25 th percentile	Median	75 th percentile
<i>Difficulty with:</i>				
Walking 100 yards: no	10.0	0.70	0.87	1.03
Walking 100 yards: yes	50.3	0.38	0.51	0.65
Walking across a room: no	14.0	0.65	0.83	1.01
Walking across a room: yes	77.0	0.29	0.40	0.56
Climbing a single flight of stairs: no	10.5	0.71	0.87	1.03
Climbing a single flight of stairs: yes	43.8	0.38	0.53	0.69
Climbing several flights of stairs: no	9.0	0.75	0.90	1.06
Climbing several flights of stairs: yes	29.8	0.49	0.67	0.85

Note: Individuals did not take the timed walk test if (i) they reported that they could not walk unassisted (use of walking aid allowed), (ii) a health condition temporarily prevented them from walking (for example, recent surgery), (iii) they were unwilling to perform the test, (iv) the interviewer did not feel that it was safe to perform the test or (v) there was insufficient space to perform the test.

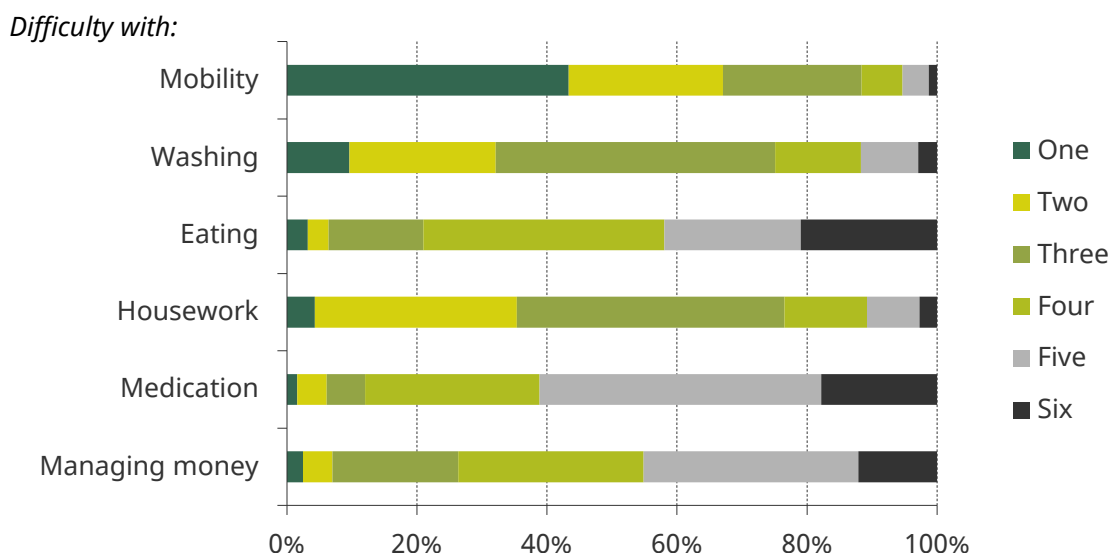
Source: Authors' calculations using ELSA 2014–15.

- First, there are some objective measures of individuals' mobility which accord well with self-reported difficulties. For example, there is a timed walk test where individuals are timed to walk 8 feet. Those who reported difficulties with walking or climbing stairs were much less likely to be able to take the test than those who reported no such difficulties. Among those who did take the test, those who reported difficulties walking or climbing stairs were significantly slower. (See Table B.1.)
- Second, individuals who report difficulty with *any* activity are asked whether anyone helps them with a range of activities – even if they did not specifically report a difficulty with each of those activities. Very few individuals report receiving help with an activity that they did not report having difficulties with. For example, only 1% of those reporting no difficulty with mobility, washing or eating reported receiving help with those activities.

There is more evidence of under-reporting of 'underlying' difficulties among those who have aids to assist them with daily activities. For example, 16% of those who reported no difficulty walking 100 yards also reported using some form of mobility assistance equipment (canes / walking sticks / Zimmer frames / wheelchairs / buggies / scooters / crutches). A tenth (10%) of those who reported no difficulties eating also reported using special eating utensils. However, this is perhaps of less concern in our context, where we are arguably interested in need for social care services over and above the provision of equipment.

The circumstances and care needs of people reporting difficulty with a given activity can vary substantially. The severity of the difficulty they face may differ, and the condition that causes difficulty with that activity may or may not also cause difficulty with other activities.

Figure B.2. Number of activity categories with which difficulty is reported, by whether difficulty with a particular activity is reported



Note: 'Mobility' is walking 100 yards, climbing a single or multiple flights of stairs, walking across a room, getting into or out of bed, or using the toilet. 'Washing' is dressing, bathing or showering. 'Housework' is shopping for groceries or doing work around the house or garden.

Source: Authors' calculations using ELSA 2014–15.

Figure B.2 illustrates how common having difficulty with multiple activities is, for those who report difficulties with certain activities. Among those who report difficulty with mobility, 43% report not having difficulties with activities in the other five main categories, while 1% report having difficulties with all categories. In other words, it is relatively common for those reporting some mobility difficulties to not have difficulties with more cognitive tasks or more basic living functions. In contrast, the vast majority of those reporting difficulties with eating, taking medication or managing money report difficulty with three or more categories of activity (94%, 94% and 93% respectively).

B.2 Who reports difficulty with different activities

Older individuals are more likely than younger individuals to report difficulties with all daily activities. Table B.2 presents the results of multivariate regression analysis that explores the association between the probability of reporting difficulty and each characteristic while holding all other characteristics the same. For example, those who are aged 75–84 are 16.8 percentage points more likely to report difficulty with mobility than individuals aged 65–74, while individuals aged 85 and over are 35.7 percentage points more likely to report difficulty with mobility.

Women are (all else equal) more likely than men to report difficulty with mobility (by 9.5 percentage points) and housework/shopping (by 4.3 percentage points), but if anything are slightly less likely to report difficulty with washing and medication. For the most part, current marital status is unrelated to the probability that an individual reports difficulties. However, the exception is that widowed and separated/divorced individuals are around 6 percentage points more likely to report having difficulty with housework/shopping than those in couples. This could be an indication that these individuals are still living in properties that were suitable for a couple but that are relatively hard for a single individual to maintain.

Individuals with low education are more likely to report difficulties than individuals with high education. Individuals with low education report more difficulties with mobility, washing, shopping and housework, and managing money. Individuals with a middle level of education also report more difficulties with mobility and shopping and housework than individuals with the highest education.

Wealth is also correlated with the probability of reporting difficulties. Those with higher levels of wealth are less likely than less wealthy individuals to report difficulties with mobility or physical activities such as washing and housework/shopping, in particular. Similarly, those who own their own homes are less likely to report difficulty with all the categories of activities than those who do not.

Interestingly, those with siblings are around 2 percentage points less likely to report difficulties taking medication or managing money than those without. Having children, however, is generally not associated with a significantly higher or lower probability of reporting difficulty with daily activities.

Table B.2. Characteristics associated with the probability of reporting difficulties with different activity categories

	Mobility	Washing	Eating	Housework/ shopping	Medication	Money
Aged 75–84	0.168*** (0.016)	0.077*** (0.013)	0.029*** (0.006)	0.096*** (0.013)	0.022*** (0.006)	0.016** (0.007)
Aged 85+	0.357*** (0.025)	0.219*** (0.026)	0.058*** (0.013)	0.337*** (0.026)	0.064*** (0.014)	0.139*** (0.019)
Female	0.095*** (0.014)	-0.023* (0.012)	0.009* (0.005)	0.043*** (0.012)	-0.010* (0.006)	0.002 (0.007)
Always single	-0.024 (0.042)	-0.063* (0.034)	-0.014 (0.017)	-0.052 (0.034)	-0.014 (0.017)	-0.020 (0.020)
Widowed	0.016 (0.018)	0.025 (0.017)	-0.004 (0.008)	0.063*** (0.018)	-0.004 (0.008)	0.013 (0.010)
Separated/divorced	0.014 (0.025)	-0.006 (0.022)	0.009 (0.010)	0.057** (0.022)	-0.007 (0.009)	-0.004 (0.012)
Low education	0.063*** (0.019)	0.036** (0.016)	0.009 (0.006)	0.062*** (0.016)	0.010 (0.008)	0.023** (0.010)
Mid education	0.036** (0.017)	0.010 (0.013)	0.001 (0.005)	0.029** (0.013)	-0.006 (0.006)	-0.010 (0.007)
Least wealthy	0.207*** (0.024)	0.158*** (0.022)	0.022** (0.010)	0.121*** (0.022)	0.042*** (0.011)	0.045*** (0.013)
Quintile 2	0.127*** (0.022)	0.103*** (0.019)	0.011 (0.008)	0.071*** (0.018)	0.018** (0.008)	0.021** (0.010)
Quintile 3	0.101*** (0.021)	0.045*** (0.016)	0.000 (0.007)	0.037** (0.017)	0.007 (0.007)	0.016* (0.009)
Quintile 4	0.057*** (0.020)	0.028* (0.015)	0.013* (0.007)	0.029* (0.016)	0.017** (0.007)	0.017** (0.008)
Homeowner	-0.144*** (0.021)	-0.076*** (0.021)	-0.012 (0.010)	-0.095*** (0.021)	-0.007 (0.011)	-0.026* (0.014)
Has siblings	-0.018 (0.016)	-0.019 (0.014)	0.002 (0.006)	-0.017 (0.014)	-0.022*** (0.007)	-0.020** (0.008)
No children	0.014 (0.025)	0.010 (0.022)	0.013 (0.011)	0.035* (0.021)	0.011 (0.011)	0.009 (0.014)
Constant	0.438*** (0.031)	0.212*** (0.029)	0.005 (0.012)	0.180*** (0.028)	0.029** (0.014)	0.039** (0.019)
R-squared	0.14	0.08	0.02	0.14	0.03	0.07
Observations	5,112	5,112	5,112	5,112	5,112	5,112

Note: Results from linear probability models. For example, 0.168 in the first cell indicates that an individual aged 75–84 is 16.8 percentage points more likely than an individual aged 65–74 (the reference category) to report having difficulty with mobility, once differences in sex, marital status, education, wealth, homeownership and the existence of siblings and children have all also been controlled for. Standard errors are in parentheses. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Source: Authors' calculations using ELSA 2014–15.

Appendix C: Additional Tables

Section 3.2 explored the factors associated with the onset of assistance. To be included in the sample for analysis, survey respondents must have reported a difficulty in at least one interview. This is due to the structure of the interview, which only asks individuals about any assistance that they receive if they report having difficulty with at least one task.

There are two distinct groups within this sample. First, some individuals do not report any difficulties in their initial interview but do report a difficulty during the next interview. These individuals will have no assistance (by definition) in the first interview, but may start to receive assistance in the second interview. Second, some individuals may report a difficulty in both their initial and second interviews. This means they have the opportunity to report receiving care in either or both interviews, although they were not receiving care at the time of their first interview.

Individuals in the first group therefore develop an initial difficulty between interviews. Individuals in the second group already reported a difficulty at the time of the initial interview (but did not receive assistance). The relationship between individual characteristics and onset of care may therefore differ between these groups. Tables C.1 and C.2 present the results of simple multivariate regression analysis that explores the association between individuals' characteristics and their future receipt of assistance for the two samples respectively.

For the majority of individual characteristics, the sign and magnitude of the relationships are the same across the samples. The statistical significance of the estimates does change across the samples but this is in part due to the use of smaller sample sizes in both sets of regressions (and in particular for the estimates in Table C.1). With this taken into account, there are some important differences across the samples.

Table C.1. Factors associated with onset of assistance for individuals with no difficulties at time of initial interview, by assistance type

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
<i>New report of difficulties with:</i>						
Mobility	-0.052*	(0.027)	-0.029	(0.027)	0.014	(0.016)
Washing	0.098***	(0.025)	0.094***	(0.025)	0.038**	(0.015)
Eating	0.145*	(0.076)	0.192**	(0.075)	-0.001	(0.055)
Housework/shopping	0.455***	(0.026)	0.373***	(0.027)	0.148***	(0.018)
Medicine	0.161**	(0.075)	0.177**	(0.075)	0.104*	(0.059)
Money	0.327***	(0.059)	0.361***	(0.058)	0.051	(0.041)
Walking speed (m/s)	-0.000	(0.000)	-0.000	(0.000)	0.000	(0.000)
Aged 65–74	.	.	.	.	.	.

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
Aged 75–84	0.071***	(0.021)	0.062***	(0.021)	0.029***	(0.011)
Aged 85+	0.115***	(0.041)	0.109***	(0.042)	0.047*	(0.028)
Female	0.079***	(0.020)	0.069***	(0.020)	0.014	(0.009)
Male	.	.	.	.	.	.
Couple	.	.	.	.	.	.
Always single	-0.209***	(0.047)	-0.167***	(0.047)	-0.049	(0.032)
Widowed	-0.127***	(0.023)	-0.144***	(0.023)	0.013	(0.014)
Separated/divorced	-0.149***	(0.032)	-0.159***	(0.032)	0.002	(0.020)
Lose partner between interviews	-0.059	(0.057)	-0.040	(0.059)	0.040	(0.042)
New partner between interviews	0.244	(0.191)	0.285	(0.195)	0.080	(0.112)
No siblings	.	.	.	.	.	.
Has sibling(s)	-0.018	(0.019)	-0.025	(0.019)	-0.005	(0.011)
No children	0.038	(0.033)	-0.018	(0.034)	0.057**	(0.024)
Has child(ren)	.	.	.	.	.	.
Low education	0.028	(0.026)	0.023	(0.026)	0.010	(0.015)
Mid education	0.041*	(0.024)	0.033	(0.024)	0.005	(0.013)
High education	.	.	.	.	.	.
Least wealthy	0.107**	(0.053)	0.106*	(0.056)	-0.025	(0.041)
Wealth quintile 2	0.107***	(0.032)	0.128***	(0.032)	-0.021	(0.017)
Wealth quintile 3	0.042	(0.026)	0.062**	(0.025)	-0.031**	(0.014)
Wealth quintile 4	0.058**	(0.025)	0.072***	(0.024)	-0.005	(0.015)
Wealthiest	.	.	.	.	.	.
Homeowner	0.044	(0.045)	0.029	(0.049)	-0.003	(0.037)
Other tenure	.	.	.	.	.	.
<i>Self-reported health:</i>						
Excellent/Very good	.	.	.	.	.	.
Good	0.008	(0.020)	0.002	(0.020)	-0.001	(0.011)

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
Fair/Poor/Very bad	0.062**	(0.028)	0.061**	(0.027)	-0.008	(0.016)
<i>Ever diagnosed with:</i>						
Parkinson's disease	-0.097	(0.135)	-0.058	(0.126)	-0.078**	(0.032)
Alzheimer's disease	0.370***	(0.140)	0.381***	(0.135)	0.295**	(0.125)
Blood disorder	0.080	(0.149)	0.139	(0.148)	-0.067*	(0.039)
Congestive heart failure	0.400***	(0.131)	0.421***	(0.132)	-0.034	(0.027)
<i>New diagnoses:</i>						
Dementia	0.201*	(0.103)	0.165	(0.104)	-0.001	(0.056)
Alzheimer's disease	0.135	(0.135)	0.187	(0.126)	-0.181***	(0.054)
Asthma	-0.178***	(0.055)	-0.168***	(0.057)	0.009	(0.037)
High blood pressure	-0.072*	(0.043)	-0.066	(0.041)	0.001	(0.019)
Congestive heart failure	0.050	(0.104)	0.079	(0.121)	-0.071*	(0.038)
Angina	-0.049	(0.081)	-0.027	(0.079)	-0.050**	(0.021)
Diabetes	-0.036	(0.054)	-0.018	(0.055)	-0.041***	(0.014)
Stroke	0.042	(0.058)	0.061	(0.060)	-0.063**	(0.027)
High cholesterol	-0.002	(0.040)	0.024	(0.039)	-0.036**	(0.014)
Parkinson's disease	-0.184**	(0.083)	-0.188**	(0.085)	-0.147*	(0.084)
Observations	1,842		1,842		1,842	
R-squared	0.358		0.318		0.175	

Note: Results from linear probability models. For example, -0.052 in the first cell indicates that those who report a new difficulty with mobility between interviews are 5.2 percentage points less likely to report receiving care in their next interview than an otherwise-identical individual who did not report a new mobility difficulty (the reference category). Results are clustered at the individual level, and standard errors are robust to heteroscedasticity. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. Regressions control for whether individuals ever had a diagnosis of lung disease, asthma, arthritis, cancer, psychiatric problems, blood disorders, hypertension, angina, heart attack, heart failure, heart murmur, heart rhythm, diabetes, stroke, Parkinson's disease, Alzheimer's disease, dementia, osteoporosis or high cholesterol, whether they experienced a new diagnosis of one of these categories between interviews, and dummy variables for the wave in which they were first interviewed. Related coefficients that are not statistically significant are not displayed in this table. Sample is restricted to individuals who appeared in two consecutive surveys, who did not receive care at the time of their initial interview and who did not report any difficulties in their initial interview (but do in their second interview).

Source: Authors' calculations using ELSA 2002-03 to 2010-11.

Table C.2. Factors associated with onset of assistance for individuals with at least one difficulty at time of initial interview, by assistance type

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
<i>Difficulties at first interview with:</i>						
1 activity category	.	.	.	.	.	.
2 activity categories	0.221***	(0.022)	0.188***	(0.021)	0.084***	(0.010)
3 activity categories	0.416***	(0.040)	0.320***	(0.033)	0.125***	(0.013)
4+ activity categories	0.742***	(0.084)	0.505***	(0.105)	0.151***	(0.028)
Walking speed (m/s)	-0.000	(0.000)	0.000	(0.000)	-0.000***	(0.000)
<i>New report of difficulties with:</i>						
Mobility	0.204***	(0.033)	0.181***	(0.032)	0.054***	(0.017)
Washing	0.190***	(0.022)	0.185***	(0.021)	0.048***	(0.012)
Eating	0.072	(0.060)	0.073	(0.055)	0.071**	(0.031)
Housework/shopping	0.441***	(0.020)	0.348***	(0.020)	0.125***	(0.013)
Medicine	0.088	(0.055)	0.089	(0.058)	0.038	(0.030)
Money	0.288***	(0.049)	0.323***	(0.046)	0.017	(0.024)
Aged 65–74	.	.	.	.	.	.
Aged 75–84	0.064***	(0.016)	0.045***	(0.015)	0.039***	(0.008)
Aged 85+	0.151***	(0.029)	0.083***	(0.027)	0.124***	(0.020)
Female	0.084***	(0.017)	0.051***	(0.016)	0.033***	(0.008)
Male	.	.	.	.	.	.
Couple	.	.	.	.	.	.
Always single	-0.168***	(0.041)	-0.200***	(0.038)	0.051**	(0.024)
Widowed	-0.076***	(0.019)	-0.104***	(0.018)	0.049***	(0.010)
Separated/divorced	-0.115***	(0.027)	-0.155***	(0.026)	0.036**	(0.014)
Lose partner between interviews	-0.108***	(0.039)	-0.145***	(0.037)	0.062**	(0.025)
New partner between interviews	0.106	(0.103)	0.160	(0.114)	-0.060	(0.069)
No siblings	.	.	.	.	.	.

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
Has sibling(s)	0.012	(0.015)	0.025*	(0.015)	-0.021***	(0.007)
No children	-0.001	(0.026)	-0.029	(0.024)	0.020	(0.015)
Has child(ren)	.	.	.	.	.	.
Low education	-0.030	(0.021)	-0.010	(0.020)	-0.038***	(0.012)
Mid education	-0.021	(0.019)	-0.007	(0.018)	-0.024**	(0.012)
High education	.	.	.	.	.	.
Least wealthy	0.133***	(0.039)	0.133***	(0.038)	-0.033	(0.021)
Wealth quintile 2	0.104***	(0.026)	0.105***	(0.025)	-0.010	(0.013)
Wealth quintile 3	0.087***	(0.022)	0.083***	(0.022)	-0.004	(0.012)
Wealth quintile 4	0.063***	(0.021)	0.053***	(0.020)	0.004	(0.012)
Wealthiest	.	.	.	.	.	.
Homeowner	0.060*	(0.032)	0.061*	(0.031)	-0.028	(0.018)
Other tenure	.	.	.	.	.	.
<i>Self-reported health:</i>						
Excellent/Very good	.	.	.	.	.	.
Good	0.035**	(0.017)	0.031*	(0.017)	0.023**	(0.010)
Fair/Poor/Very bad	0.067***	(0.020)	0.054***	(0.020)	0.020*	(0.010)
<i>Ever diagnosed with:</i>						
Lung disease	0.008	(0.025)	0.027	(0.024)	-0.021*	(0.012)
Arthritis	0.024	(0.015)	0.032**	(0.014)	-0.012	(0.008)
Psychiatric problems	0.033	(0.027)	0.004	(0.026)	0.037**	(0.015)
Dementia	0.206*	(0.116)	0.216**	(0.104)	-0.047	(0.030)
Angina	0.018	(0.021)	0.047**	(0.020)	-0.011	(0.011)
Diabetes	0.040*	(0.022)	0.034	(0.021)	0.014	(0.012)
High cholesterol	-0.047**	(0.018)	-0.050***	(0.018)	0.003	(0.009)
<i>New diagnoses:</i>						
Alzheimer's disease	0.119	(0.098)	0.228**	(0.095)	-0.082*	(0.044)
Cancer	0.025	(0.048)	0.076*	(0.046)	-0.017	(0.024)
Asthma	-0.048	(0.051)	-0.082*	(0.046)	0.008	(0.031)

	Any assistance		Informal assistance		Formal assistance	
	Effect	Std error	Effect	Std error	Effect	Std error
Arthritis	-0.066**	(0.032)	-0.027	(0.031)	-0.039**	(0.017)
Observations	3,453		3,773		5,728	
R-squared	0.331		0.256		0.139	

Note: Results from linear probability models. For example, 0.221 in the first cell indicates that those who report a difficulty with two activity categories in their initial interview are 22.1 percentage points more likely to report receiving care in their next interview than an otherwise-identical individual who initially reported one difficulty (the reference category). Results are clustered at the individual level, and standard errors are robust to heteroscedasticity. ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively. Regressions control for whether individuals ever had a diagnosis of lung disease, asthma, arthritis, cancer, psychiatric problems, blood disorders, hypertension, angina, heart attack, heart failure, heart murmur, heart rhythm, diabetes, stroke, Parkinson's disease, Alzheimer's disease, dementia, osteoporosis or high cholesterol, whether they experienced a new diagnosis of one of these categories between interviews, and dummy variables for the wave in which they were first interviewed. Related coefficients that are not statistically significant are not displayed in this table. Sample is restricted to individuals who appeared in two consecutive surveys, who did not receive care at the time of their initial interview and who report at least one difficulty in both interviews.

Source: Authors' calculations using ELSA 2002-03 to 2010-11.

The relationship between new difficulties and the onset of care differs for certain types of difficulties. A new difficulty with mobility is associated with reduced future care for the sample who report no difficulties at baseline, while a strong positive relationship is found in the sample that report difficulty in both interviews. There are also differences in the relationships between newly-reported difficulties with eating and the receipt of informal and formal care, and between difficulties with medicine and the receipt of any care, particularly informal.

Age and gender have a stronger association with the receipt of formal care among the sample who always report a difficulty. Those aged 85 and above are 12 percentage points more likely to receive formal care than individuals who are aged between 65 and 74, among those who always report difficulties. This is substantially larger than the equivalent 5 percentage point estimate found for those who report no difficulties at baseline. There is also a significant difference in the estimated relationship between gender and formal care receipt across the two samples, with females 3 percentage points more likely to receive formal care among those who always report difficulties while no significant difference is found among men and women in the other sample.

There are differences in the association between potential informal carers (partners, siblings and children) and formal care receipt across the two samples. Individuals in couples who report difficulties in both waves are less likely to receive formal care than those who are single, widowed, divorced or separated. This relationship is not found among the sample with no difficulties at baseline. The loss of a partner between interviews also has a much stronger association with future care receipt (all types) among the sample who always report a difficulty. The estimates in Table C.2 indicate that the loss of a partner is associated with a reduction in future informal care and an increase in future formal care. Although the estimates in Table C.1 indicate relationships with the same signs, these are much smaller in magnitude and are not statistically significant from zero. There are also some differences in the relationship with the presence of siblings and

of children. In Table C.1, an individual with no children is 6 percentage points more likely to receive formal care at the next interview (this is insignificant in Table C.2), while there is no statistically significant relationship between care receipt and siblings (this is statistically significant and negative for formal care in Table C.2).

There is a more distinct education gradient in the receipt of formal care among the sample who always report a difficulty. Table C.2 shows that individuals with low or mid education are respectively 4 or 2 percentage points less likely to receive formal care than individuals with high education. This compares with no significant relationships between education and the receipt of formal care in Table C.1. There is also a statistically significant relationship between homeownership status in Table C.2 (with homeowners more likely to receive informal care than non-homeowners), while this is not found in Table C.1.

Finally, the relationship between health measures and the receipt of care also varies across the two samples. Self-reported health has a statistically significant relationship with the receipt of formal care in Table C.2 but not in Table C.1 (the sign and magnitude of the relationship are also different). The presence of pre-existing conditions and the new diagnosis of conditions also have different effects across the samples. For example, the negative association between a new diagnosis of asthma and any care, observed in Table C.1 is not observed in Table C.2. Similarly, the negative relationship between a new arthritis diagnosis and formal care in Table C.2 is not present in Table C.1. The differences between the samples in the remaining estimates are not statistically significant.

References

- Anderson, R. (1968), *A Behavioral Model of Families' Use of Health Services*, Chicago: Center for Health Administration Studies, University of Chicago.
- Bonsang, E. (2009), 'Does informal care from children to their elderly parents substitute for formal care in Europe?', *Journal of Health Economics*, vol. 28, pp. 143–54.
- Breeze, E. and Stafford, M. (2010), 'Receipt and giving of help and care', in J. Banks, C. Lessof, J. Nazroo, N. Rogers, M. Stafford and A. Steptoe (eds), *Financial Circumstances, Health and Well-Being of the Older Population in England: ELSA 2008 (Wave 4)*, London: Institute for Fiscal Studies (<http://www.elsa-project.ac.uk/publicationDetails/id/5315>).
- Charles, K. and Sevak, P. (2005), 'Can family caregiving substitute for nursing home care?', *Journal of Health Economics*, vol. 24, pp. 1174–90.
- Commission on Funding of Care and Support (2011), *Fairer Care Funding* (<http://webarchive.nationalarchives.gov.uk/20130221130239/http://dilnotcommission.dh.gov.uk/files/2011/07/Fairer-Care-Funding-Report.pdf>).
- Craig, R., Darton, R., Hancock, R., Henderson, C., Morciano, M., Sadler, K. and Wittenberg, R. (2012), 'Social care', in R. Craig and J. Mindell (eds), *Health Survey for England 2011 – Volume 1: Health, Social Care and Lifestyles*, Health and Social Care Information Centre (<http://content.digital.nhs.uk/catalogue/PUB09300/HSE2011-Ch5-Social-Care.pdf>).
- Deaton, A. and Paxson, C. (1994), 'Saving, growth and aging in Taiwan', in D. Wise (ed.), *Studies in the Economics of Aging*, Cambridge, MA: National Bureau of Economic Research (<http://www.nber.org/chapters/c7349.pdf>).
- Emmerson, C., Heald, K. and Hood, A. (2014), *The Changing Face of Retirement: Future Patterns of Work, Health, Care and Income among the Older Population*, IFS Report no. R95, London: Institute for Fiscal Studies (<https://www.ifs.org.uk/uploads/publications/comms/r95.pdf>).
- Glaser, K., Stuchbury, R., Tomassini, C. and Askham, J. (2008), 'The long-term consequences of partnership dissolution for support in later life in the United Kingdom', *Ageing and Society*, vol. 28, pp. 329–51.
- Grundy, E. and Read, S. (2012), 'Social contacts and receipt of help among older people in England: are there benefits of having more children?', *Journals of Gerontology: Series B – Psychological Sciences and Social Sciences*, vol. 67, pp. 742–54.
- Jagger, C. (2015), 'Trends in life expectancy and healthy life expectancy', *Future of an Ageing Population: Evidence Review*, London: Government Office for Science (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/464275/gs-15-13-future-ageing-trends-life-expectancy-er12.pdf).
- Lloyd, J. and Ross, A. (2014), *The Bigger Picture: Understanding Disability and Care in England's Older Population*, London: Strategic Society Centre

(<http://strategicsociety.org.uk/wp-content/uploads/2014/11/The-Bigger-Picture-Understanding-disability-and-care-in-Englands-older-population.pdf>).

Kim, H. and Lim, W. (2015), 'Long-term care insurance, informal care, and medical expenditures', *Journal of Public Economics*, vol. 125, pp. 128–42.

Maplethorpe, N., Darton, R. and Wittenberg, R. (2015), 'Social care: need for and receipt of help', in R. Craig, E. Fuller and J. Mindell (eds), *Health Survey for England 2014 – Volume 1: Health, Social Care and Lifestyles*, Health and Social Care Information Centre (<http://content.digital.nhs.uk/catalogue/PUB19295/HSE2014-ch5-soc-care-need.pdf>).

Mortimer, J. and Green, M. (2015), *Briefing: The Health and Care of Older People in England 2015*, AgeUK Briefing.

Office for National Statistics (2014), 'Health expectancies at birth and at age 65 in the United Kingdom, 2009–11', Statistical Bulletin (<http://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/healthexpectanciesatbirthandatage65intheunitedkingdom/2014-11-18>).

Vlachantoni, A., Shaw, R. J., Evandrou, M. and Falkingham, J. (2015), 'The determinants of receiving social care in later life in England', *Ageing and Society*, vol. 35, pp. 321–45.

Vlachantoni, A., Shaw, R. J., Willis, R., Evandrou, M., Falkingham, J. and Luff, R. (2011), 'Measuring unmet need for social care amongst older people', *Population Trends*, no. 145, pp. 60–76.

Whalley, R. (2013), 'Social care: need for and receipt of help', in R. Craig and J. Mindell (eds), *Health Survey for England 2012 – Volume 1: Health, Social Care and Lifestyles*, Health and Social Care Information Centre (http://healthsurvey.hscic.gov.uk/media/1019/chpt-8_social-care-need-and-receipt.pdf).