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Who cares? Continuity and  
change in the prevalence of  
caring, and characteristics  
of informal carers, in  
England and Wales 2001-  
2011

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James Robards  
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## **ABSTRACT**

Over the past two decades there has been a growing recognition of the key contribution made to social care by unpaid care provided by family, neighbours and friends. Increases in the proportion of the population aged 75 and over in England and Wales, combined with continuing local authority budget cuts, means that the provision of unpaid care is, and is likely to remain, a key social policy issue. Reflecting the importance of informal caring, the 2001 and 2011 UK Censuses included a question on provision of informal care and the intensity of any care provided. In 2001 5.9 million people were providing informal care; by 2011 this had increased to 6.5 million. This paper presents the first comparative analysis of the prevalence of informal caring in 2001 and 2011 using the Office for National Statistics (ONS) Longitudinal Study (LS) to identify the determinants of providing informal care at 2001 and at 2011. This analysis benchmarks the ONS LS results against national level census results before examining the prevalence of informal caring, and the intensity of care provided, by a range of demographic and socio-economic characteristics including gender, age, marital status, ethnicity, housing tenure, economic activity and health. The research investigates the influence of different characteristics at 2001 and 2011 using binary logistic regression models. In so doing we profile a range of characteristics associated with informal caring, and compare 2001 and 2011 side by side for the first time.

## **KEYWORDS**

Informal caring; living arrangements; health; older people; census; Office for National Statistics Longitudinal Study.

## **EDITORIAL NOTE**

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## **ACKNOWLEDGEMENTS**

The authors wish to acknowledge the support of colleagues in the Engineering and Physical Sciences Research Council (EPSRC) Care Life Cycle (CLC) project (grant number EP/H021698/1) and the Economic and Social Research Council (ESRC) Centre for Population Change (CPC) (grant numbers RES-625-28-0001 and ES/K007394/1) at the University of Southampton.

This work was completed in collaboration with Julie Jefferies and Angele Storey of the Office for National Statistics Population Statistics Division as part of the Beta Testing Project 401007. Thank you to the Office for National Statistics Longitudinal Study Development Team, MAUS, Shayla Leib, Kevin Lynch and James Warren for their guidance and user support.

The permission of the Office for National Statistics to use the Longitudinal Study is gratefully acknowledged, as is the help provided by staff of the Centre for Longitudinal Study Information & User Support (CeLSIUS). CeLSIUS is supported by the ESRC Census of Population Programme (Award Ref: ES/K000365/1). The authors alone are responsible for the interpretation of the data.

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The ESRC Centre for Population Change (CPC) is a joint initiative between the Universities of Southampton, St Andrews, Edinburgh, Stirling, Strathclyde, in partnership with the Office for National Statistics (ONS) and the National Records of Scotland (NRS). The Centre is funded by the Economic and Social Research Council (ESRC) grant numbers RES-625-28-0001 and ES/K007394/1.

This working paper series publishes independent research, not always funded through the Centre. The views and opinions expressed by authors do not necessarily reflect those of the CPC, ESRC, ONS or NRS.

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PREVALENCE OF CARING, AND CHARACTERISTICS  
OF INFORMAL CARERS, IN ENGLAND AND WALES  
2001-2011**

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## **1. INTRODUCTION**

Over the past two decades there has been a growing recognition of the key contribution made to social care by unpaid care provided by family, neighbours and friends. Increases in the proportion of the population aged 75 and over in England and Wales, combined with continuing local authority budget cuts in the face of fiscal constraints due to austerity measures, means that the provision of unpaid care is, and is likely to remain, a key social policy issue. Inclusion of a question at the 2001 and 2011 UK Censuses asking about provision of informal care (Blackwell et al., 2005) reflects the importance of this issue on the national agenda. Understanding the characteristics of informal carers in the UK is critical, as they continue to make a major contribution to the overall supply of social care, and changes in the composition of the carers' population will have a direct impact on the future design of formal social care services and the distribution of its financial cost. In addition, current demographic changes may affect both the supply of and demand for social care; for example improving life expectancy for men at older ages may increase the amount of spousal care provided by men, while population ageing is projected to place greater pressure on local governments to provide social care for older people. For the recipient, receipt of informal care may delay movement into formal care settings and at the same time a desire among care recipients to 'keep my home' may motivate provision of informal care (McCann et al., 2012; Ramsay et al., 2013).

Analysis of 2001 UK Census data identified the prevalence of informal caring nationally for the first time with an estimated 5,884,470 people in the UK providing informal care (Doran et al., 2003). Of these over one million were aged 65 and over, more than a fifth were caring for at least 50 hours per week and more than a quarter of those with a heavy burden of care rated their health as 'not good'. Half of those aged 85 years and over and providing care did so for 50 hours or more per week (Evandrou, 2005). Analysis using the Office for National Statistics Longitudinal Study has identified worse self-reported health (also first recorded at the 2001 Census) among informal carers (Young et al., 2005), although the direction of causation is not clear cut. Findings, using the same data, that the economic (in)activity of an individuals' spouse/ partner may influence the former's labour market withdrawal (Dini, 2010) are further supported by a study using the English

Longitudinal Study of Ageing which found that as the prevalence of economic activity decreased, the intensity or number of hours of care provision rose (Vlachantoni, 2010). Research examining associations between employment history, marital status and unpaid care provision has stressed a gender dimension in care provision, interacting with marital status and employment (Young and Grundy, 2008). Dahlberg et al. (2007) showed that while informal caregiving was most common among those in their mid-life, elderly people spent a greater amount of time caregiving than younger people, highlighting that informal caregiving is most prevalent in those groups of the population that may experience most strain from doing so: elderly people who may be frail and often are in a spousal relationship with the care-recipient, and middle-aged women with multiple roles. The study also highlights the importance of older men as informal carers; it is likely that this group will become more important because of increases in male life expectancy.

Headline results from the 2011 Census show that in England and Wales the prevalence of informal care had increased from 2001; especially among those providing 20-49 hours and 50 hours plus per week (ONS, 2013a). Local authorities with higher percentages of their population who reported being 'limited a lot' in daily activities, also exhibited higher prevalence of unpaid care (ONS, 2013a). A north-south divide in the provision of unpaid care was identified, with London seeing a decline in the provision of unpaid care (related to the younger overall age structure) and an increase in the South West region (related to growth in the population 60-69 years since 2001). As was the case in 2001, there are clear gender differences in unpaid care provision, with women constituting 58% of all informal carers; although this differential diminishes among retired people (ONS, 2013b). Among the economically active, part-time workers were most likely to be providing unpaid care; 16% of women working part-time providing some level of unpaid care (ONS, 2013b). The ONS report also highlighted the poorer health of women working full-time and providing 50 hours or more unpaid care.

This paper adds to the preliminary reports of the results of the 2011 Census published by ONS (ONS, 2013a, b and c), comparing the prevalence and intensity of informal caring by a range of demographic and socio-economic characteristics to identify where there has been change between 2001 and 2011. The research uses the

Office for National Statistics (ONS) Longitudinal Study (LS), an approximate 1% sample of the population of England and Wales. The dataset is composed of linked data from the 1971-2011 Censuses, the National Health Service Central Register (NHSCR) and the vital registration system (births and deaths) (Hattersley and Creeser, 1995). Individual census responses (2011) for individuals with an LS date of birth are traced (matched) to those at past censuses (1971, 1981, 1991 and 2001). Using this data this research validates the number and percentage of informal carers at 2001 and 2011 against national census results and then identifies the characteristics of informal carers using bivariate and multivariate analyses. In so doing we provide information on the key predictors of informal caring, comparing 2001 and 2011 side by side for the first time.

## **2. RESEARCH QUESTIONS AND METHOD**

This paper addresses three related research questions which compare caring at 2001 with 2011:

- i. What was the overall prevalence of informal caring in the ONS LS at 2011 and how does this compare with 2001, and aggregate census results?
- ii. How does the prevalence of caring vary by key demographic and socio-economic characteristics, and how has this changed between 2001 and 2011?
- iii. What are the characteristics associated with informal caring at 2001 and 2011? And among those who provide care, what characteristics are associated with providing high intensity care (50 hours or more) at 2001 and 2011?

To answer research question one, we produce tables for informal caring intensities specified at the 2001 and 2011 Censuses. The question included in the Census was very specific and asked the respondent if they provided any help or support for family members, friends, neighbours or others because of physical or mental ill-health or disability or problems related to old age (not including anything as part of paid employment). Respondents could choose from four options: No; Yes 1-19 hours per week; Yes, 20-49 hours per week; and Yes, 50+ hours per week; These



options are taken to reflect low, medium and high caring intensity. We use two samples of ONS LS members, those present at the 2001 Census and those at the 2011 Census and identify the percentages caring in the ONS LS compared to aggregate census results.

In answering research question two, we examine the prevalence of caring and caring intensity at 2001 and 2011 by key socio-demographic characteristics including age, sex, marital status, ethnic group, employment, tenure and self-reported health status.

Extending the bivariate work, to answer the third research question we use binary logistic regression models to consider firstly, characteristics associated with caring at 2001 and caring at 2011; and then secondly, among all those providing care the characteristics associated with providing high intensity caring (50 hours or more care per week) at 2001 and 2011. Models are specified which consider those ONS LS members aged 16-74 years at 2001 or 2011 and include demographic characteristics (sex, age, marital status, ethnic group), socio-economic characteristics (tenure, employment, highest educational qualification, household access to a car) and health status variables (self-reported health, limiting long-term illness) and region (formerly Government Office Regions). The 2011 Census variable on marital status combines the new categories at the 2011 Census which have been matched to the equivalent marital status from 2001 to avoid small numbers and recognise the household living arrangements (important for informal caring roles) and enable comparison to 2001. Anyone living in a communal establishment was excluded from the analysis using the household tenure variable.

At the 2001 Census, an 'edit rule' in place as part of post-census processing meant anyone under the age of 16 years or over 74 years who did not respond to the question on informal caring was assigned a value of 'not caring' (Buxton and Smith, 2010). Using a flag within the dataset, we have excluded these cases as inclusion of the edited cases in our denominator would lead to an underestimation of the prevalence of informal caring at younger and older ages. The multivariate analysis is further restricted to the sub-sample aged 16-74 as those aged under 16 years or over

74 years were not asked questions relating to employment and economic activity and therefore did not have a valid code for economic activity.

### 3. RESULTS

Table 1 shows the prevalence of informal care in the ONS LS in comparison to the aggregate Census figures for England and Wales in 2001 and 2011. In total, 55,304 LS members were caring in 2001 and 61,962 were caring in 2011. Comparing the ONS LS to the aggregate census data in 2001, there is a slight difference in the percentage of people providing no care (89.2% compared to 90%) and in the 1-19 hours per week group (7.3% compared to 6.8%); but the difference is less marked in 2011 (6.6% v 6.5%). Looking at change across the decade, reassuringly the data from the ONS LS reflect the same pattern of change in the profile of care seen in the aggregate census results; most notably the rise in the high intensity carer group (2.3% to 2.5%) and medium intensity carer group (1.2% to 1.4%) between 2001 and 2011.

Caring level	Informal caring at 2001 Census				Informal caring at 2011 Census			
	ONS LS		Census		ONS LS		Census	
	N	%	N	%	N	%	N	%
<b>No care provided</b>	457,662	89.2	46,824,111	90.0	521,681	89.4	50,275,666	89.7
<b>1-19 hours per week</b>	37,567	7.3	3,555,822	6.8	38,796	6.6	3,665,072	6.5
<b>20-49 hours per week</b>	6,074	1.2	573,647	1.1	8,428	1.4	775,189	1.4
<b>50+ hours per week</b>	11,663	2.3	1,088,336	2.1	14,738	2.5	1,359,985	2.4
<b>Total carers</b>	55,304	10.8	5,217,805	10.0	61,962	10.6	5,800,246	10.3
<b>TOTAL</b>	512,966	100	52,041,916	100	583,643	100	56,075,912	100

**Table 1:** Number and percentage of informal carers in aggregate census data and the ONS LS by caring intensity, 2001 and 2011

**Source:** Aggregate England and Wales informal caring percentages are from 'Office for National Statistics (2013) 2011 Census Analysis: Unpaid care in England and Wales, 2011 and comparison with 2001, 15 February 2013.' Authors own analysis of ONS LS. Excluding edited carer cases from 2001 Census.

Having benchmarked the ONS LS data, the remainder of the paper presents results from the ONS LS only. The first step is to disaggregate results in Table 1 for men and women. In 2001, men accounted for 42.6% of all carers; by 2011 this had fallen very slightly to 42.0%. As Table 2 shows, in 2001 12% of women and 9.5% of men reported providing care; this did not alter significantly across the decade. However there were changes in the intensity of care provided, with a decrease in the percentages of men and women providing 1-19 hours of informal care per week (from

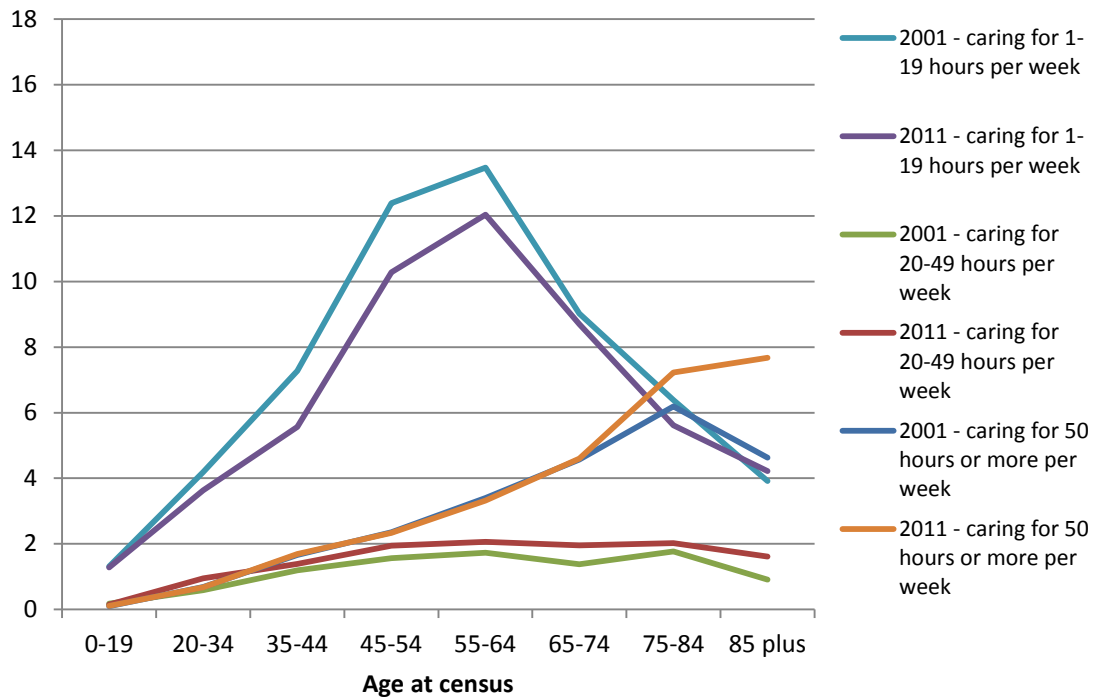
6.7% to 5.9% for men and 7.9% to 7.4% for women) and an increase in the prevalence of medium and high intensity care.

Caring level	Informal caring at 2001 Census					Informal caring at 2011 Census				
	N		%			N		%		
	Male	Female	Male	Female	All	Male	Female	Male	Female	All
<b>No care provided</b>	225,318	232,344	90.5	88.0	89.2	257,607	264,074	90.8	88.0	89.4
<b>1-19 hours per week</b>	16,592	20,975	6.7	7.9	7.3	16,692	22,104	5.9	7.4	6.6
<b>20-49 hours per week</b>	2,417	3,657	1.0	1.4	1.2	3,554	4,874	1.3	1.6	1.4
<b>50+ hours per week</b>	4,595	7,068	1.8	2.7	2.3	5,798	8,940	2.0	3.0	2.5
<b>Total carers</b>	23,604	31,700	9.5	12.0	10.8	26,044	35,918	9.2	12.0	10.6
<b>TOTAL</b>	248,922	264,044	100	100	100	283,651	299,992	100	100	100

**Table 2:** Number and percentage of informal carers in the ONS LS by caring intensity and sex, 2001 and 2011.

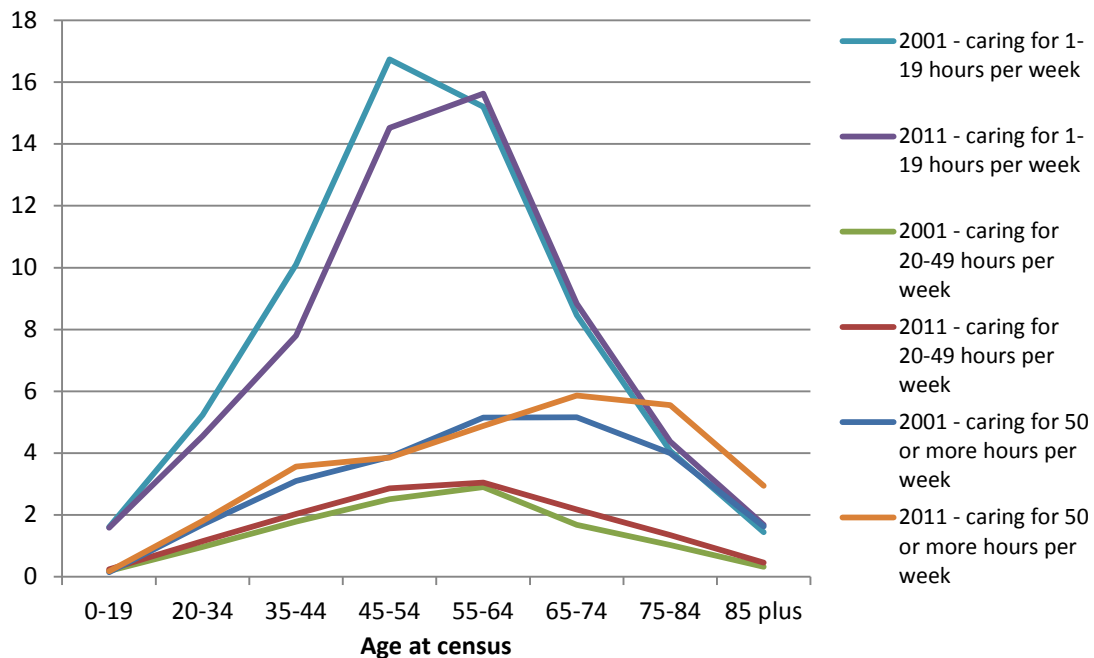
**Source:** Authors own analysis of ONS LS. Excluding edited carer cases from 2001 Census.

Figures 1 and 2 show the prevalence of informal care by intensity at the 2001 and 2011 Censuses by age and sex. There are higher percentages of women (Figure 2) caring at a low intensity compared to the equivalent for men (Figure 1). Provision of low intensity care (1-19 hours) peaks in mid-life, and comparing 2001 and 2011 there appears to have been a slight increase in the age where this type of care is more likely to occur, especially amongst women. Among the medium intensity care group there is a great deal of stability in the age profile, but with higher levels across all ages at 2011. The main changes across the decade, however, have occurred in the provision of high intensity care (50 hours or more per week) where there is a marked increase in the percentages providing this level of care at older ages, especially amongst older men. Indeed, in 2011 amongst those aged 85 and over, the proportions of men providing intense care are twice those for women. This is likely to be related to increasing male life expectancy and resulting longer durations living together in co-residential spousal caring arrangements at older ages.



**Figure 1:** Percentage informal carers by age group – males, 2001 and 2011

**Source:** Authors own analysis of ONS LS. Excluding edited carer cases from 2001 Census.



**Figure 2:** Percentage informal carers by age group – females, 2001 and 2011

**Source:** Authors own analysis of ONS LS. Excluding edited carer cases from 2001 Census.

How does the prevalence of caring vary by other demographic and socio-economic characteristics and how has this changed over time? Tables 3 and 4 show the number and percentage of informal carers at 2001 and 2011 by marital status at the census. Consistent with previous research, those who are married are most likely to provide care, whilst those who are widowed or never married are least likely to. At both 2001 and 2011, around 17% of people aged 16-74 who were married were providing some level of informal care; with a slight increase across the decade in the percentages providing 20-49 hours care per week (1.8% to 2.2%) and 50 hours or more care per week (4.1% to 4.6%).

Caring level	Never married		Married		Separated		Divorced		Widowed		All	
	N	%	N	%	N	%	N	%	N	%	N	%
No care provided	206,465	95.4	182,917	82.8	8,593	89.0	29,101	87.0	30,584	93.4	457,660	89.2
1-19 hours per week	7,268	3.4	24,875	11.3	748	7.7	3,135	9.4	1,541	4.7	37,567	7.3
20-49 hours per week	1,173	0.5	4,031	1.8	128	1.3	524	1.6	218	0.7	6,074	1.2
50+ hours per week	1,419	0.7	8,969	4.1	188	1.9	684	2.0	403	1.2	11,663	2.3
Total carers	9,860	4.6	37,875	17.2	1,064	11.0	4,343	13.0	2,162	6.6	55,304	10.8
TOTAL	216,325	100	220,792	100	9,657	100	33,444	100	32,746	100	512,964	100

**Table 3:** Number and percentage of informal carers in the ONS LS by caring intensity and marital status, 2001

**Source:** Authors own analysis of ONS LS. Excluding edited carer cases from 2001 Census.

Caring level	Never married		Married		Separated		Divorced		Widowed		All	
	N	%	N	%	N	%	N	%	N	%	N	%
No care provided	248,975	95.0	193,807	83.0	10,760	87.4	36,480	86.7	31,652	94.0	521,674	89.4
1-19 hours per week	8,959	3.4	23,768	10.2	977	7.9	3,736	8.9	1,356	4.0	38,796	6.6
20-49 hours per week	1,912	0.7	5,200	2.2	277	2.2	812	1.9	227	0.7	8,428	1.4
50+ hours per week	2,190	0.8	10,787	4.6	301	2.4	1,034	2.5	426	1.3	14,738	2.5
Total carers	13,061	5.0	39,755	17.0	1,555	12.6	5,582	13.3	2,009	6.0	61,962	10.6
TOTAL	262,036	100	233,562	100	12,315	100	42,062	100	33,661	100	583,636	100

**Table 4:** Number and percentage of informal carers in the ONS LS by caring intensity and marital status, 2011

**Source:** Authors own analysis of ONS LS.

Tables 5 and 6 show the percentages of each ethnic group providing informal care by the different caring intensities. In both tables the total column provides a benchmark against which to compare each of the ethnic groups. Looking at the situation in 2011 (Table 6), people from White British heritage are most likely to be providing care. Interestingly, however, those of Bangladeshi heritage are most likely to be providing intense care (3.4% v 2.5% for the population as whole). These bi-variate results do not control for the age composition of different sub-populations.

Looking at changes over the decade, among the White British (by far the largest group), there have been increases in the percentages providing informal care at caring intensities over 20 hours per week between 2001 and 2011, indeed the increase for the 50 hours or more care per week group (2.2% to 2.7%). Change among the Irish group mirrors that of the White British, with a slight decrease in prevalence among the low intensity carers between 2001 and 2011 (6.9% to 6.6%) but an increase for the medium intensity carers (1.3% to 1.5%) and high intensity carers (2.6% to 2.9%). The decline in the prevalence of caring amongst the 'Other White' group between 2001 and 2011 is likely to be a result of change in the composition (and age profile) of the group over the ten years from 2001, reflecting the in-migration of younger migrants from the eight European countries which joined the EU in 2004.

Tables 7 and 8 show informal caring by intensity and housing tenure at 2001 and 2011. Among those owning outright there is an overall increase in the prevalence of caring from 15.6% in 2001 to 15.9% in 2011. This has been driven by increases in medium intensity care (20-49 hours per week) (1.6% to 2%) and 50 hours or more (3.4% to 3.9%). At the lowest care intensity, there was actually a slight decrease (10.6% to 10.1%). Among those who own with a mortgage, we see a similar pattern of change in the intensities. For the social rented category there is an increase in the percentage providing intense care (50+ hours) from 3.7% in 2001 to 4.3% in 2011. Tables 9 and 10 show informal caring prevalence by economic activity at 2001 and 2011. At both time points we see that those who were 'looking after the home' were the most likely to be providing informal care (24% in 2001 and 25.4% in 2011). Indeed, at 2001 10.1% of this group were providing 50 hours or more care per week, while 13.1% were providing 50 hours or more care in 2011. Among those working part-time, there is a decrease in the proportion providing care from 16.5% to 15.5%,

but this has been driven by the decline in low intensity care givers from 12.8% to 10.9%. At the medium and higher intensities there were actually increases (1.6% to 2.1% and 2.1% to 2.5%). The employed full time group mirrors the same pattern of change. For those reporting suffering from long term sickness, there was a reduction in the prevalence of intense care (5.5% to 5.1%). Students are the only group to show an increase in provision of informal care at the lowest intensity.

Caring level	White British		Irish		Other White		Mixed		Indian		Pakistani		Bangladeshi		Black		Chinese and other Asian		Other ethnic group		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No care provided	398,940	89.0	5,368	89.2	12,478	92.6	5,811	94.5	10,593	88.0	6,878	88.3	2,681	88.4	8,375	91.9	4,312	91.4	2,085	93.5	457,521	89.2
1-19 hours per week	33,943	7.6	413	6.9	654	4.9	223	3.6	889	7.4	476	6.1	181	6.0	456	5.0	245	5.2	79	3.5	37,559	7.3
20-49 hours per week	5,072	1.1	77	1.3	120	0.9	51	0.8	254	2.1	185	2.4	61	2.0	140	1.5	80	1.7	29	1.3	6,069	1.2
50+ hours per week	10,280	2.3	158	2.6	222	1.6	63	1.0	300	2.5	254	3.3	109	3.6	147	1.6	82	1.7	38	1.7	11,653	2.3
Total carers	49,295	11.0	648	10.8	996	7.4	337	5.5	1,443	12.0	915	11.7	351	11.6	743	8.1	407	8.6	146	6.5	55,281	10.8
TOTAL	448,235	100	6,016	100	13,474	100	6,148	100	12,036	100	7,793	100	3,032	100	9,118	100	4,719	100	2,231	100	512,802	100

**Table 5:** Number and percentage of informal carers in the ONS LS by caring intensity and ethnic group, 2001

**Source:** Authors own analysis of ONS LS. Excluding edited carer cases from 2001 Census.

Caring level	White British		Irish		Other White		Mixed		Indian		Pakistani		Bangladeshi		Black		Chinese and other Asian		Other ethnic		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No care provided	411,153	88.7	4,772	89.0	25,279	94.2	10,630	93.9	16,801	89.7	12,630	89.0	5,576	89.3	17,709	92.4	12,143	92.9	4,901	91.8	521,594	89.4
1-19 hours per week	33,298	7.2	353	6.6	922	3.4	444	3.9	1,065	5.7	772	5.4	317	5.1	864	4.5	530	4.1	230	4.3	38,795	6.6
20-49 hours per week	6,530	1.4	80	1.5	271	1.0	109	1.0	452	2.4	337	2.4	135	2.2	253	1.3	176	1.3	83	1.6	8,426	1.4
50+ hours per week	12,345	2.7	154	2.9	350	1.3	136	1.2	409	2.2	445	3.1	215	3.4	331	1.7	227	1.7	124	2.3	14,736	2.5
Total carers	52,173	11.3	587	11.0	1,543	5.8	689	6.1	1,926	10.3	1,554	11.0	667	10.7	1,448	7.6	933	7.1	437	8.2	61,957	10.6
TOTAL	463,326	100	5,359	100	26,822	100	11,319	100	18,727	100	14,184	100	6,243	100	19,157	100	13,076	100	5,338	100	583,551	100

**Table 6:** Number and percentage of informal carers in the ONS LS by caring intensity and ethnic group, 2011

**Source:** Authors own analysis of ONS LS.



Caring level	Owned outright		Owns with a mortgage or loan		Shared ownership		Social rented		Private rented		Lives rent free		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<b>No care provided</b>	108,623	84.4	217,327	90.5	2,401	91.7	75,517	89.7	37,664	93.8	7,325	90.7	448,857	89.1
<b>1-19 hours per week</b>	13,688	10.6	17,457	7.3	135	5.2	4,107	4.9	1,584	3.9	416	5.2	37,387	7.4
<b>20-49 hours per week</b>	2,075	1.6	2,121	0.9	28	1.1	1,407	1.7	314	0.8	102	1.3	6,047	1.2
<b>50+ hours per week</b>	4,367	3.4	3,246	1.4	54	2.1	3,150	3.7	577	1.4	230	2.8	11,624	2.3
<b>Total carers</b>	20,130	15.6	22,824	9.5	217	8.3	8,664	10.3	2,475	6.2	748	9.3	55,058	10.9
<b>TOTAL</b>	128,753	100	240,151	100	2,618	100	84,181	100	40,139	100	8,073	100	503,915	100

**Table 7:** Number and percentage of informal carers in the ONS LS by caring intensity and housing tenure, 2001

**Source:** Authors own analysis of ONS LS. Excluding edited carer cases from 2001 Census.

Caring level	Owned outright		Owns with a mortgage or loan		Shared ownership		Social rented		Private rented		Lives rent free		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<b>No care provided</b>	126,510	84.1	209,735	90.7	3,600	91.3	81,358	89.1	84,884	94.1	5,273	90.8	511,360	89.2
<b>1-19 hours per week</b>	15,150	10.1	15,633	6.8	212	5.4	4,164	4.6	3,166	3.5	280	4.8	38,605	6.7
<b>20-49 hours per week</b>	2,937	2.0	2,557	1.1	56	1.4	1,887	2.1	884	1.0	77	1.3	8,398	1.5
<b>50+ hours per week</b>	5,919	3.9	3,394	1.5	76	1.9	3,916	4.3	1,233	1.4	175	3.0	14,713	2.6
<b>Total carers</b>	24,006	15.9	21,584	9.3	344	8.7	9,967	10.9	5,283	5.9	532	9.2	61,716	10.8
<b>TOTAL</b>	150,516	100	231,319	100	3,944	100	91,325	100	90,167	100	5,805	100	573,076	100

**Table 8:** Number and percentage of informal carers in the ONS LS by caring intensity and housing tenure, 2011

**Source:** Authors own analysis of ONS LS.

Caring level	Employed part-time		Employed full-time		Self employed		Seeking work and waiting to start		Retired		Student		Looking after home		Sick		Other		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No care provided	38,104	83.5	136,911	89.2	27,644	86.3	10,677	88.6	43,839	82.4	24,088	95.2	19,609	76.0	17,781	85.8	10,244	89.1	328,897	86.6
1-19 hours per week	5,848	12.8	13,454	8.8	3,582	11.2	971	8.1	5,714	10.7	973	3.8	2,533	9.8	1,376	6.6	699	6.1	35,150	9.3
20-49 hours per week	722	1.6	1,555	1.0	368	1.1	197	1.6	957	1.8	125	0.5	1,035	4.0	422	2.0	192	1.7	5,573	1.5
50+ hours per week	968	2.1	1,503	1.0	455	1.4	205	1.7	2,688	5.1	122	0.5	2,612	10.1	1,144	5.5	364	3.2	10,061	2.6
Total carers	7,538	16.5	16,512	10.8	4,405	13.7	1,373	11.4	9,359	17.6	1,220	4.8	6,180	24.0	2,942	14.2	1,255	10.9	50,784	13.4
TOTAL	45,642	100	153,423	100	32,049	100	12,050	100	53,198	100	25,308	100	25,789	100	20,723	100	11,499	100	379,681	100

**Table 9:** Number and percentage of informal carers in the ONS LS by caring intensity and economic activity, 2001

**Source:** Authors own analysis of ONS LS. Excluding edited carer cases from 2001 Census.

Caring level	Employed part-time		Employed full-time		Self employed		Seeking work and waiting to start		Retired		Student		Looking after home		Sick		Other		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No care provided	51,342	84.5	147,425	89.6	37,483	87.2	16,215	89.0	88,112	84.4	35,024	94.7	15,020	74.6	16,173	87.7	9,357	88.1	416,151	87.2
1-19 hours per week	6,628	10.9	13,234	8.0	4,190	9.7	1,284	7.0	8,157	7.8	1,514	4.1	1,477	7.3	889	4.8	475	4.5	37,848	7.9
20-49 hours per week	1,268	2.1	2,046	1.2	651	1.5	377	2.1	2,066	2.0	234	0.6	993	4.9	439	2.4	262	2.5	8,336	1.7
50+ hours per week	1,529	2.5	1,787	1.1	671	1.6	352	1.9	6,007	5.8	204	0.6	2,632	13.1	950	5.1	522	4.9	14,654	3.1
Total carers	9,425	15.5	17,067	10.4	5,512	12.8	2,013	11.0	16,230	15.6	1,952	5.3	5,102	25.4	2,278	12.3	1,259	11.9	60,838	12.8
TOTAL	60,767	100	164,492	100	42,995	100	18,228	100	104,342	100	36,976	100	20,122	100	18,451	100	10,616	100	476,989	100

**Table 10:** Number and percentage of informal carers in the ONS LS by caring intensity and economic activity, 2011

**Source:** Authors own analysis of ONS LS.

Comparison of caring intensity by health status at 2001 and 2011 is slightly complicated by the change in response options between the two Censuses (five options at 2011 compared to three at 2001). However, patterns of caring status by health are clear, with the bi-variate analysis showing that those in fair health being the most likely to be providing care. High intensity care is more likely to be being provided by those in the ‘not good’ health; in 2001, 5.1% of respondents reporting ‘not good’ health were providing 50 hours or more care per week in contrast to 3.8% for ‘fairly good’ and 1.4% for ‘good’. A similar gradient is evident for the 20-49 hours per week caring group, and most likely reflect differences in the age composition within each health group.

Caring level	Good		Fairly good		Not good		Total	
	N	%	N	%	N	%	N	%
No care provided	318,093	91.2	98,606	84.5	40,963	86.0	457,662	89.2
1-19 hours per week	22,910	6.6	11,426	9.8	3,231	6.8	37,567	7.3
20-49 hours per week	2,935	0.8	2,155	1.8	984	2.1	6,074	1.2
50+ hours per week	4,740	1.4	4,471	3.8	2,452	5.1	11,663	2.3
<b>Total carers</b>	<b>30,585</b>	<b>8.8</b>	<b>18,052</b>	<b>15.5</b>	<b>6,667</b>	<b>14.0</b>	<b>55,304</b>	<b>10.8</b>
<b>TOTAL</b>	<b>348,678</b>	<b>100</b>	<b>116,658</b>	<b>100</b>	<b>47,630</b>	<b>100</b>	<b>512,966</b>	<b>100</b>

**Table 11:** Number and percentage of informal carers in the ONS LS by caring intensity and health status, 2001

**Source:** Authors own analysis of ONS LS. Excluding edited carer cases from 2001 Census.

Caring level	Very good		Good		Fair		Bad		Very bad		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
No care provided	251,532	93.0	174,625	87.1	66,007	83.6	22,687	86.6	6,827	90.4	521,678	89.4
1-19 hours per week	14,013	5.2	16,966	8.5	6,213	7.9	1,389	5.3	215	2.8	38,796	6.6
20-49 hours per week	2,102	0.8	3,503	1.7	2,119	2.7	594	2.3	110	1.5	8,428	1.4
50+ hours per week	2,867	1.1	5,339	2.7	4,587	5.8	1,542	5.9	403	5.3	14,738	2.5
<b>Total carers</b>	<b>18,982</b>	<b>7.0</b>	<b>25,808</b>	<b>12.9</b>	<b>12,919</b>	<b>16.4</b>	<b>3,525</b>	<b>13.4</b>	<b>728</b>	<b>9.6</b>	<b>61,962</b>	<b>10.6</b>
<b>TOTAL</b>	<b>270,514</b>	<b>100</b>	<b>200,433</b>	<b>100</b>	<b>78,926</b>	<b>100</b>	<b>26,212</b>	<b>100</b>	<b>7,555</b>	<b>100</b>	<b>583,640</b>	<b>100</b>

**Table 12:** Number and percentage of informal carers in the ONS LS by caring intensity and health status, 2011

**Source:** Authors own analysis of ONS LS.

### **3.1. MULTI-VARIATE ANALYSIS**

Given the inter-relationship between many of the characteristics, most notably health and age, we now extend the bivariate analyses by using a binary logistic regression of caring at 2001 and 2011. Table 13 shows results for binary logistic regression models for any level of informal caring at 2001 (model 1) and 2011 (model 2). A range of demographic, socio-economic and health predictors have been included which have been highlighted by the literature as being important in accounting for informal caring and which are comparable between 2001 and 2011.

Overall, there is stability in the characteristics associated with informal caring at both 2001 and 2011. The results suggest that after taking other factors into account, men were less likely to care at both 2001 and 2011 (reference is female; OR 0.80 in 2001 and 0.76 in 2011). At both time points, those in the 55-64 years age group (reference category) were most likely to be providing informal care, with the 45-54 years age group also likely to be caring. In the model for caring at 2011 we see that (compared to the married) the separated had higher coefficients for caring (OR 0.82) compared to 2001. This could reflect different household forms and a wider range of living arrangements at 2011. Results by ethnic group show that, after controlling for other factors, at both 2001 and 2011, individuals of Pakistani or Bangladeshi heritage experienced greater odds of informal caring than the White British group (reference category).

Housing tenure is important to consider because it may reflect both the households' ability to pay for care and the role home ownership can have in relation to transitions to formal care (and its funding). At both 2001 and 2011, social renters have the highest odds of providing informal care compared to all other categories. Those who owned their home outright at 2001 were less likely to be caring (OR 0.93) and so too were those owning with a mortgage or loan (OR 0.78). At 2011, we see that those owning their homes outright were still less likely to be providing care (OR 0.87). As with housing tenure, employment categories show stability in their relationship to informal caring at 2001 and 2011. 'Looking after the home' is the reference category for both years. Those employed part time at 2001 are much less likely to be caring (OR 0.56), as are those working full time (OR 0.44). At 2011 the same pattern remains with those working part time less likely to be caring (OR 0.47), and those working full time still less likely (OR 0.36). Education level has been included for both 2001

and 2011<sup>1</sup>. Those with an intermediate level of education have the highest odds of caring at either census. Car access was included as both an indicator of socio-economic situation and household mobility. Those who live in a household with access to a car or van were more likely to be providing informal care at either census with near identical results compared to those without car access (OR 0.81 for no access to a car).

Comparing self-reported health between 2001 and 2011 is complicated by changes in the response options between 2001 and 2011. However, at both time points those who were in the 'fair' health category were most likely to be caring, as was the case in the bi-variate analysis. At 2001 those with 'not good health' were slightly less likely to be caring than those with good health (OR 0.85 compared to 0.74). For 2011 the pattern is slightly different with those with 'very bad' or 'bad' health (OR 0.54 and 0.74) less likely to be caring compared to 'very good' or 'good' health (OR 0.79 and 0.97). Compared to those without a long-term limiting illness (reference category), those who had a limiting long-term illness were more likely to be providing informal care at 2001 and 2011.

Results by region show similar patterning at 2001 and 2011 with those living in the north east, north west and Yorkshire and the Humber having the highest odds of informal caring. The southern regions are distinct with lower odds of caring. Those living in Wales have the highest odds of informal caring at both 2001 and 2011.

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<sup>1</sup> Educational level is categorised as follows: No formal qualifications; Level 1, 1-4 GCSEs or equivalent qualifications; Level 2, 5 GCSEs or equivalent qualifications; Apprenticeships; Level 3, 2 or more A-levels or equivalent qualifications; Level 4 or above, Bachelors degree or equivalent and higher qualifications; Other qualifications including foreign qualifications.

		Model 1 – caring at 2001						Model 2 – caring at 2011					
		N	%	OR	Sig.	95% CI		N	%	OR	Sig.	95% CI	
Sex	Female (ref.)	196,858	51.2	1				217,226	51.3	1			
	Male	187,487	48.8	0.80	0.000	0.79	0.82	206,169	48.7	0.76	0.000	0.74	0.77
Age	55-64 (ref.)	58,783	15.3	1				70,336	16.6	1			
	16-19	23,623	6.1	0.23	0.000	0.21	0.25	25,870	6.1	0.24	0.000	0.22	0.26
	20-34	101,625	26.4	0.31	0.000	0.29	0.32	111,094	26.2	0.32	0.000	0.31	0.33
	35-44	80,325	20.9	0.57	0.000	0.55	0.59	81,874	19.3	0.53	0.000	0.51	0.54
	45-54	73,018	19.0	0.98	0.269	0.95	1.01	82,188	19.4	0.92	0.000	0.89	0.95
	65-74	46,971	12.2	0.66	0.000	0.63	0.68	52,033	12.3	0.71	0.000	0.68	0.73
Marital status	Married or in a registered same-sex civil partnership (ref.)	212,113	55.2	1				212,129	50.1	1			
	Never married and never registered a same-sex civil partnership	113,809	29.6	0.86	0.000	0.83	0.89	147,037	34.7	0.86	0.000	0.84	0.88
	Separated, but still legally married or in a same-sex civil partnership	9,654	2.5	0.69	0.000	0.65	0.74	11,930	2.8	0.82	0.000	0.77	0.86
	Divorced or formerly in a same-sex civil partnership which is now legally dissolved	33,142	8.6	0.74	0.000	0.72	0.77	39,328	9.3	0.76	0.000	0.73	0.78
	Widowed or surviving partner from a same-sex civil partnership	15,627	4.1	0.49	0.000	0.46	0.52	12,971	3.1	0.48	0.000	0.45	0.51
Ethnic group	White British (ref.)	333,992	86.9	1				336,094	79.4	1			
	Irish	5,221	1.4	0.75	0.000	0.69	0.82	4,128	1.0	0.84	0.001	0.77	0.93
	Other white	10,863	2.8	0.67	0.000	0.62	0.72	20,968	5.0	0.66	0.000	0.62	0.70
	Mixed	3,232	0.8	0.86	0.019	0.76	0.98	5,965	1.4	1.01	0.824	0.93	1.10
	Indian	9,966	2.6	1.06	0.084	0.99	1.12	14,776	3.5	0.98	0.419	0.93	1.03
	Pakistani	5,980	1.6	1.16	0.000	1.07	1.25	9,903	2.3	1.18	0.000	1.11	1.26
	Bangladeshi	2,369	0.6	1.20	0.003	1.06	1.36	4,539	1.1	1.15	0.003	1.05	1.26
	Black	7,226	1.9	0.80	0.000	0.74	0.87	13,463	3.2	0.82	0.000	0.78	0.88
	Chinese and other Asian	3,732	1.0	0.81	0.000	0.73	0.90	9,656	2.3	0.74	0.000	0.69	0.80
	Other ethnic group	1,764	0.5	0.62	0.000	0.52	0.74	3,903	0.9	0.84	0.002	0.76	0.94
Tenure	Social rented (ref.)	57,816	15.0	1				61,930	14.6	1			
	Owned outright	103,604	27.0	0.93	0.00	0.90	0.96	111,743	26.4	0.87	0.000	0.84	0.90
	Owns with mortgage or loan	182,953	47.6	0.78	0.00	0.75	0.80	173,665	41.0	0.70	0.000	0.68	0.72
	Shared ownership	1,993	0.5	0.77	0.00	0.66	0.90	3,010	0.7	0.76	0.000	0.67	0.86
	Private rented	32,564	8.5	0.61	0.00	0.58	0.64	69,186	16.3	0.59	0.000	0.57	0.61
	Lives rent free	5,415	1.4	0.84	0.00	0.77	0.92	3,861	0.9	0.69	0.000	0.62	0.76
Employment	Looking after home (ref.)	26,339	6.9	1				19,942	4.7	1			
	Employed PT	46,574	12.1	0.56	0.000	0.54	0.58	59,999	14.2	0.47	0.000	0.45	0.49
	Employed FT	155,521	40.5	0.44	0.000	0.42	0.45	163,267	38.6	0.36	0.000	0.35	0.38
	Self employed	32,730	8.5	0.47	0.000	0.44	0.49	42,236	10.0	0.40	0.000	0.38	0.42
	Seeking work and waiting to start job	12,284	3.2	0.53	0.000	0.50	0.57	18,030	4.3	0.46	0.000	0.43	0.49
	Retired	55,369	14.4	0.54	0.000	0.51	0.56	61,007	14.4	0.44	0.000	0.42	0.47
	Student	23,003	6.0	0.43	0.000	0.40	0.47	32,835	7.8	0.41	0.000	0.39	0.44
	Sick	20,788	5.4	0.38	0.000	0.36	0.41	17,038	4.0	0.32	0.000	0.30	0.34
	Other	11,737	3.1	0.40	0.000	0.37	0.43	9,041	2.1	0.46	0.000	0.43	0.50
Highest educational qualification	Level 2 (ref.)	74,169	19.3	1				80,150	18.9	1			
	No academic or professional qualifications	114,918	29.9	0.70	0.000	0.68	0.72	60,968	14.4	0.69	0.000	0.67	0.71
	Level 1	64,467	16.8	0.94	0.000	0.91	0.97	66,758	15.8	0.91	0.000	0.88	0.94
	Apprenticeship							15,047	3.6	0.92	0.002	0.87	0.97
	Level 3	29,238	7.6	0.98	0.274	0.93	1.02	53,768	12.7	1.05	0.004	1.02	1.09
	Level 4+	74,241	19.3	0.97	0.030	0.93	1.00	120,801	28.5	1.05	0.003	1.02	1.08
	Other qualifications/level unknown	27,312	7.1	0.96	0.035	0.92	1.00	25,903	6.1	0.81	0.000	0.77	0.85
Household car access	Access to car or van (ref.)	323,615	84.2	1				353,986	83.6	1			
	None	60,730	15.8	0.81	0.000	0.79	0.84	69,409	16.4	0.81	0.000	0.78	0.83
Health, 2001	Fairly good (ref.)	94,242	24.5	1									
	Good	253,222	65.9	0.74	0.000	0.73	0.76						
	Not good	36,881	9.6	0.85	0.000	0.82	0.88						
Health, 2011	Fair (ref.)							56,100	13.3	1			
	Very good							179,014	42.3	0.79	0.000	0.77	0.82
	Good							164,761	38.9	0.97	0.058	0.94	1.00
	Bad							18,487	4.4	0.74	0.000	0.70	0.77
	Very bad							5,033	1.2	0.54	0.000	0.49	0.59
Limiting long-term illness	Yes, limited a lot/little (ref.)	67,952	17.7	1				69,491	16.4	1			
	No limiting long-term illness, health problem	316,393	82.3	0.86	0.000	0.83	0.89	353,904	83.6	0.68	0.000	0.66	0.71
Region	North East (ref.)	18,743	4.9	1				19,290	4.6	1			
	North West	49,403	12.9	1.01	0.733	0.96	1.06	53,026	12.5	1.04	0.093	0.99	1.10
	Yorkshire and the Humber	37,417	9.7	0.95	0.040	0.90	1.00	39,683	9.4	0.99	0.780	0.94	1.05
	East Midlands	31,476	8.2	0.91	0.000	0.86	0.96	34,270	8.1	1.02	0.539	0.96	1.07
	West Midlands	39,940	10.4	0.95	0.056	0.90	1.00	42,551	10.0	1.04	0.169	0.98	1.09
	East of England	39,869	10.4	0.84	0.000	0.79	0.88	43,822	10.4	0.96	0.081	0.91	1.01
	London	51,114	13.3	0.87	0.000	0.82	0.91	64,162	15.2	0.95	0.033	0.90	1.00
	South East	59,132	15.4	0.78	0.000	0.74	0.82	64,696	15.3	0.89	0.000	0.85	0.94
	South West	36,278	9.4	0.85	0.000	0.80	0.89	39,625	9.4	0.98	0.415	0.93	1.03
	Wales	20,973	5.5	1.07	0.024	1.01	1.13	22,270	5.3	1.14	0.000	1.08	1.21

**Table 13:** Binary logistic regression of any level informal caring, 2001 and 2011 Censuses

Tables 1 and 2 highlighted that the most significant change over the past decade has been the increase in the prevalence of intense care provision. In an attempt to get a better understanding of the factors associated with such care, Table 14 presents binary logistic regression models for the provision of 50 hours or more care per week conditional on at least some care being provided; the sample is restricted to all carers at 2001 or 2011. The same demographic and socio-economic predictors (and reference categories) as those in the two previous models have been included to allow the identification of characteristics associated with the provision of high intensity informal care (50 hours or more) at 2001 or 2011 among carers.

The results show a reversal in the likelihood of intensive caring between men and women for 2001 although this is not statistically significant. Looking at age, the odds ratios show that the oldest age groups have the highest odds of providing informal care of 50 hours or more at both 2001 and 2011 (OR for 65-74 years 1.42 and 1.44 respectively). Interestingly there are also high odds for those in the 35-44 years age group, which could be related to care for children (with health problems) or for an elderly parent or parent-in-law or another family member – highlighting a potentially vulnerable group caring for both dependent children and frail adults, the so called ‘sandwich generation’. At 2011 the effect for this age group is stronger than at 2001 (1.34 at 2011, 1.14 at 2001). Marital status shows stability between 2001 and 2011 in terms of results and is likely to be reflecting the particular importance of spousal caring arrangements for the 50 hours or more of care per week group. Compared to all other housing tenures, the social rented category is much more important in predicting high intensity informal caring.

As with the previous models for any level of caring at 2001 or 2011, we use health status at each census to reflect the range of response options. For 2001, it is those in the ‘not good’ health category which are most likely to be providing 50 hours of informal care among all the carers. A gradient remains with those in ‘fair’ health (reference category) less likely, and those in ‘fairly good’ health being least likely to be providing 50 hours of care. At 2011 we see a similar profile across the response options, with those in ‘very bad’ health 1.68 times likely to be providing 50 hours of care per week compared to those in ‘fair’ health (reference category). This is very different to the equivalent model for any level informal caring at 2011 presented in

Table 13; highlighting that there is a different relationship between health and intensive care than between health and any level of care.

Results for limiting long-term illness show that at 2001 those LS members with a LLTI were less likely to be providing 50 hours or more informal care, but at 2011 this had changed and those with an LLTI were more likely to be caring for 50 hours or more, but this is only statistically significant at the 90% level. Results by region show a very similar overall gradient with London and the East of England having the lowest odds at both census dates compared to the north east (i.e. the reference group).



		Model 1 – 50 hours or more care at 2001					Model 2 – 50 hours or more care at 2011				
		N	%	OR	Sig.	95% CI	N	%	OR	Sig.	95% CI
<b>Sex</b>	Female (ref.)	29,384	58.1	1			32,658	59.1	1		
	Male	21,204	41.9	1.02	0.368	0.97 to 1.08	22,636	40.9	0.96	0.080	0.91 to 1.01
<b>Age (years at 2001 /2011 Census)</b>	55-64 (ref.)	11,885	23.5	1			14,506	26.2			
	16-19	1,037	2.0	0.48	0.000	0.36 to 0.65	1,205	2.2	0.67	0.001	0.52 to 0.85
	20-34	6,781	13.4	1.01	0.836	0.91 to 1.12	7,243	13.1	1.08	0.118	0.98 to 1.19
	35-44	9,957	19.7	1.14	0.002	1.05 to 1.24	9,103	16.5	1.34	0.000	1.24 to 1.46
	45-54	14,125	27.9	0.92	0.025	0.85 to 0.99	14,804	26.8	0.98	0.634	0.92 to 1.05
	65-74	6,803	13.4	1.42	0.000	1.30 to 1.54	8,433	15.3	1.44	0.000	1.34 to 1.56
<b>Marital status</b>	Married or in a registered same-sex civil partnership	35,231	69.6	1			35,306	63.9	1		
	Never married and never registered a same-sex civil partnership	8,473	16.7	0.71	0.000	0.65 to 0.77	11,641	21.1	0.72	0.000	0.67 to 0.77
	Separated, but still legally married or in a same-sex partnership	1,046	2.1	0.63	0.000	0.53 to 0.75	1,532	2.8	0.63	0.000	0.54 to 0.72
	Divorced or formerly in a same-sex civil partnership	4,262	8.4	0.58	0.000	0.53 to 0.64	5,449	9.9	0.65	0.000	0.60 to 0.71
	Widowed or surviving partner from a same-sex civil partnership	1,576	3.1	0.45	0.000	0.39 to 0.52	1,366	2.5	0.49	0.000	0.42 to 0.57
<b>Ethnic group</b>	White British (ref.)	45,056	89.1	1			46,230	83.6	1		
	Irish	575	1.1	1.22	0.063	0.99 to 1.51	509	0.9	1.05	0.696	0.83 to 1.31
	Other white	898	1.8	1.25	0.013	1.05 to 1.50	1,415	2.6	1.13	0.098	0.98 to 1.31
	Mixed	279	0.6	0.96	0.786	0.69 to 1.33	607	1.1	0.85	0.160	0.68 to 1.07
	Indian	1,372	2.7	1.21	0.010	1.05 to 1.41	1,815	3.3	1.07	0.326	0.94 to 1.22
	Pakistani	874	1.7	1.15	0.095	0.98 to 1.36	1,464	2.6	1.03	0.622	0.90 to 1.18
	Bangladeshi	332	0.7	0.82	0.133	0.63 to 1.06	644	1.2	0.83	0.060	0.68 to 1.01
	Black	684	1.4	1.06	0.578	0.86 to 1.31	1,334	2.4	1.12	0.136	0.96 to 1.30
	Chinese and other Asian	380	0.8	1.25	0.116	0.95 to 1.64	866	1.6	1.14	0.147	0.96 to 1.36
	Other ethnic group	138	0.3	1.37	0.145	0.90 to 2.08	410	0.7	1.13	0.328	0.88 to 1.44
<b>Tenure</b>	Social rented (ref.)	7,759	15.3	1			8,945	16.2	1		
	Owned outright	17,607	34.8	0.52	0.000	0.48 to 0.56	19,895	36.0	0.51	0.000	0.48 to 0.55
	Owns with mortgage or Shared ownership	22,089	43.7	0.56	0.000	0.52 to 0.60	20,763	37.6	0.57	0.000	0.53 to 0.61
	Private rented	204	0.4	0.89	0.509	0.62 to 1.26	311	0.6	0.61	0.001	0.45 to 0.82
	Lives rent free	2,289	4.5	0.79	0.000	0.70 to 0.88	4,958	9.0	0.70	0.000	0.64 to 0.76
		640	1.3	0.84	0.074	0.69 to 1.02	422	0.8	0.77	0.036	0.61 to 0.98
<b>Employment</b>	Looking after home (ref.)	6,177	12.2	1			5,062	9.2	1		
	Employed PT	7,529	14.9	0.27	0.000	0.25 to 0.29	9,344	16.9	0.25	0.000	0.23 to 0.27
	Employed FT	16,485	32.6	0.20	0.000	0.19 to 0.22	16,999	30.7	0.17	0.000	0.16 to 0.19
	Self employed	4,379	8.7	0.22	0.000	0.20 to 0.25	5,408	9.8	0.20	0.000	0.18 to 0.22
	Seeking work and waiting	1,366	2.7	0.28	0.000	0.24 to 0.33	2,001	3.6	0.24	0.000	0.21 to 0.27
	Retired	9,350	18.5	0.52	0.000	0.47 to 0.58	11,265	20.4	0.41	0.000	0.37 to 0.45
	Student	1,142	2.3	0.34	0.000	0.27 to 0.42	1,833	3.3	0.19	0.000	0.16 to 0.23
	Sick	2,933	5.8	0.71	0.000	0.64 to 0.80	2,237	4.0	0.47	0.000	0.42 to 0.53
	Other	1,227	2.4	0.55	0.000	0.48 to 0.63	1,145	2.1	0.64	0.000	0.56 to 0.74
<b>Highest educational qualification</b>	Level 2: 5+O levels, 5+CSEs	9,172	18.1	1			8,683	15.7	1		
	No academic or	15,950	31.5	1.65	0.000	1.53 to 1.78	10,867	19.7	1.74	0.000	1.61 to 1.87
	Level 1: 1+O	8,102	16.0	1.10	0.025	1.01 to 1.21	8,047	14.6	1.09	0.028	1.01 to 1.19
	Apprenticeship						2,149	3.9	1.03	0.622	0.91 to 1.18
	Level 3: 2+ A levels, 4+ AS	3,048	6.0	0.82	0.002	0.71 to 0.93	6,459	11.7	0.94	0.222	0.86 to 1.04
	Level 4/5: First degree, Other qualifications/ level unknown	9,602	19.0	0.78	0.000	0.72 to 0.86	16,051	29.0	0.76	0.000	0.71 to 0.82
		4,714	9.3	1.26	0.000	1.14 to 1.39	3,038	5.5	1.14	0.015	1.03 to 1.27
<b>Household car access</b>	Access to a car or van	44,110	87.2	1			48,362	87.5	1		
	None	6,478	12.8	1.31	0.000	1.22 to 1.40	6,932	12.5	1.25	0.000	1.16 to 1.33
<b>Health, 2001</b>	Fairly good (ref.)	16,225	32.1	1							
	Good	28,628	56.6	0.83	0.000	0.79 to 0.88					
	Not good	5,735	11.3	1.29	0.000	1.19 to 1.40					
<b>Health, 2011</b>	Fair						10,476	18.9	1		
	Very good						17,679	32.0	0.71	0.000	0.66 to 0.77
	Good						23,777	43.0	0.75	0.000	0.71 to 0.80
	Bad						2,809	5.1	1.17	0.001	1.06 to 1.29
	Very bad						553	1.0	1.68	0.000	1.39 to 2.02
<b>Limiting long term illness</b>	Yes, limited a lot / little	11,572	22.9	1			13,090	23.7	1		
	No limiting long-term	39,016	77.1	1.11	0.003	1.04 to 1.19	42,204	76.3	0.94	0.084	0.88 to 1.01

**Table 14:** Binary logistic regression – among all carers, likelihood of providing 50hrs or more care, 2001 and 2011 Censuses

		Model 1 – 50 hours or more care at 2001					Model 2 – 50 hours or more care at 2011				
		N	%	OR	Sig.	95% CI	N	%	OR	Sig.	95% CI
Region	North East	2,709	5.4	1			2,617	4.7	1		
	North West	7,157	14.1	1.04	0.534	0.92 to 1.16	7,334	13.3	0.95	0.382	0.85 to 1.07
	Yorkshire and Humberside	5,110	10.1	0.94	0.313	0.83 to 1.06	5,292	9.6	0.88	0.039	0.78 to 0.99
	East Midlands	4,223	8.3	0.85	0.014	0.75 to 0.97	4,673	8.5	0.86	0.013	0.76 to 0.97
	West Midlands	5,550	11.0	0.93	0.243	0.82 to 1.05	5,917	10.7	0.86	0.014	0.77 to 0.97
	East of England	5,027	9.9	0.85	0.010	0.75 to 0.96	5,741	10.4	0.79	0.000	0.70 to 0.89
	London	5,834	11.5	0.89	0.061	0.78 to 1.01	7,006	12.7	0.78	0.000	0.69 to 0.89
	South East	6,999	13.8	0.82	0.001	0.73 to 0.92	7,934	14.3	0.81	0.000	0.72 to 0.91
	South West	4,714	9.3	0.95	0.449	0.84 to 1.08	5,365	9.7	0.86	0.016	0.76 to 0.97
	Wales	3,265	6.5	1.29	0.000	1.13 to 1.47	3,415	6.2	1.07	0.284	0.94 to 1.22

**Table 14 (continued):** Binary logistic regression – among all carers, likelihood of providing 50hrs or more care, 2001 and 2011 Censuses

## 4. CONCLUSIONS

Important national and social policy relevant information on informal caring for both 2001 and 2011 has been collected by the inclusion of a question in the census on provision of informal care. Using data from the ONS LS, this paper has compared the profile of informal carers at 2001 and 2011 cross-sectionally and identified characteristics associated with any level of informal caring and among carers identified characteristics associated with provision of 50 hours or more informal care at 2001 and 2011.

This analysis has shown that informal caring provision as recorded in the ONS LS at the 2001 and 2011 Censuses is comparable with the aggregate census results for England and Wales. Subsequent bivariate analyses highlighted the changes across in decade in the provision of informal care by intensity, age and gender. In particular, for men over the age of 75 years there has been a notable increase in the percentages providing 50 hours or more care per week between 2001 and 2011. This reflects increasing male life expectancy and the resulting longer durations in spousal caring roles at older ages, which can be of a higher intensity. Among women it is possible that the more consistent provision of a medium intensity of care across all ages may be related to longer spells of caring and past labour market transitions (Dini, 2010).

The multivariate analyses presented here are the first to compare characteristics associated with informal caring at both 2001 and 2011. Using the same variables from 2001 and 2011 it was identified that there has been stability in characteristics associated with informal caring at both 2001 and at 2011. The results are consistent with and extend previous analyses. Dahlberg et al. (2007) identified that

the highest prevalence of caring is in the mid-life, but recognised that elderly people spent a greater amount of time caregiving than younger people. This is also shown in the analysis here – a large proportion of care at younger ages is of a low intensity, but the statistical analyses show that when we control for a full range of characteristics associated with informal caring, those aged 55-64 years at 2001 and 2011 are most likely to be caring. Looking at high intensity care, there was a clear relationship with poorer health at 2001 and 2011. From this analysis we also see a strengthening of the marital status effects identified from the any level of caring regression models. A rapidly ageing population and longer life expectancies mean that the need for care and support from informal carers will continue to grow. Recognising and supporting informal carers, particularly those providing the highest levels of support will assume even greater importance. Understanding who these carers are and how caring may impact upon their health and well-being and their ability to combine work and other family responsibilities will be essential to ensure appropriate policies and packages of care are in place. It is hoped that this research makes a contribution to this debate. Repeat inclusion of the existing questions on caring in the 2021 Census will provide much needed evidence on how patterns of care continue to change over the decade. Inclusion of new questions on ‘who do you provide care for?’ and ‘how long have you provided this care?’ would further enhance the evidence base in this area, allowing greater insight into the intensity and duration of caring and understanding the relationship between those who provide and those who receive such care.

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