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Who Cares? Exploring the Socio-Economic Dynamics of Informal Caregiving Trajectories in England

Abstract

Informal care is a core component of England's long-term care system, yet demographic shifts and austerity threaten its sustainability. This study examines socio-demographic and structural factors shaping informal care trajectories, leveraging newly linked data from the ONS Longitudinal Study 2001-2021 and local-level datasets on adult social care expenditure, care home availability, and area-level deprivation. Guided by the Informal Care Model, we use logistic regression and Fairlie decomposition to analyse transitions into caregiving (n=550,644) and repeated care (n=85,500), focusing on care intensity, gender-specific patterns and temporal changes. Results showed that caregiving trajectories were primarily shaped by individual-level factors and barriers to care. Predictors of entering caregiving differed from those associated with intensive and sustained caregiving. Poorer health, lower educational attainment and non-homeownership showed limited associations with caregiving entry overall but were more strongly associated with intensive caregiving among those who became carers. Repeated caregiving was associated with poorer health and non-homeownership, while employment constrained both caregiving intensity and repeated caregiving. Gendered patterns diverged by 2011–2021; employment and poor health increasingly constrained women's transitions into caregiving, whereas poor health remained a positive predictor for men. While women initiated high-intensity care, men were more likely to report it at consecutive censuses. Decomposition analysis showed that shifts in health and formal care infrastructure drove transitions, though much of the overall decline remained unexplained by observed characteristics. The findings highlight a growing inequality, as systemic constraints and demographic pressures concentrate intensive caregiving among the most vulnerable populations.

1. Introduction

Informal caregiving—unpaid support provided to people due to long-term illness, disability or older age by family, friends, or neighbours—is a central element of long-term care systems worldwide (Humphries, 2022). In England alone, millions undertake this vital role, contributing care valued at £151 billion annually, comparable in scale to the NHS budget and significantly exceeding publicly funded long-term care expenditures (Petrillo and Bennett, 2023). Evidence consistently shows that the support carers provide often has significant implications for their financial well-being, health and relationships (Brimblecombe and Cartagena-Farias, 2022; Petrillo et al., 2024). Given the care system’s dependence on informal carers—often at great personal cost (Keating et al., 2014) —there is mounting concern about future pressures.

The need for informal care is expected to increase for two main reasons in England. First, with rapid population ageing, the number of people living with disabilities and long-term illnesses, including dementia, is projected to rise substantially over the coming decades (Hu et al., 2020).

Second, England’s Adult Social Care (ASC) system—the principal mechanism through which long-term care is publicly funded and delivered—has increasingly shifted from a state-led model toward a familiarist system (Leitner, 2003). Access to publicly funded care is regulated through strict needs- and means-tested eligibility criteria, restricting support to those with the most acute needs (Bancalari and Zaranko, 2024). Since 2010, austerity policies have further constrained formal provision and produced service gaps that families are expected to fill (House of Commons, 2017).

Although a growing body of literature examines the predictors of informal caregiving, there is limited research on geographical variation in caregiving responsibilities. This gap is particularly salient in England, where ASC is highly decentralised and local authorities are responsible for funding and regulating the social care system.

Guided by the Informal Care Model (ICM) proposed by Broese van Groenou and de Boer (2016), this analysis uses newly linked data from the ONS Longitudinal Study (ONS-LS 2001, 2011, 2021), supplemented with local-level data from: 1) ASC Finance Return and Short- and Long-Term Collection and Personal Social Care Expenditure and Unit Cost datasets; 2) Care Quality Commission (CQC) records of care home provision; and 3) Index of Multiple Deprivation (IMD). The study investigates how socio-demographic and structural factors shape informal caregiving trajectories in England over the past two decades. It examines the individual characteristics and contextual conditions associated with becoming a carer, being observed providing care at successive census points, and changes in care intensity, and explores how these patterns vary by gender and across periods. Finally, a decomposition analysis is employed to identify which individual and structural forces explain differing trends between 2001–2011 and 2011–2021, offering insight into how demographic change, socioeconomic inequalities, and evolving policy environments have shaped caregiving trajectories.

1.1 Conceptual framework

The ICM posits that the decision to provide informal care depends on dispositional factors at the individual level. These individual-level determinants are then embedded within broader structural contexts – the environment in which the decision of caregiving provision is made

(e.g. deprivation, policy environment)—that can either facilitate or restrict the capacity and willingness to provide care. This framework positions informal caregiving as a dynamic, multi-actor phenomenon, emphasising interactions among the recipient, the caregivers, and the socio-environmental contexts.

Previous research using the ICM model (Pomeroy and Fiori, 2025; Raiber et al., 2022; de Klerk et al., 2021; Kaschowitz and Brandt, 2017) has largely focused on individual determinants of informal caregiving, exploring how demographic and socioeconomic factors shape who provides care. Carers are more often women and middle-aged adults (Vlachantoni et al., 2019; Patterson and Margolis, 2019; Petrillo et al., 2026), and individuals in disadvantaged circumstances (Cartagena-Farias and Brimblecombe, 2025; Petrillo et al., 2026). Ethnicity is also an important dimension of caregiving inequalities: evidence suggests that individuals from South Asian communities often provide higher intensities of care, reflecting stronger cultural expectations surrounding family care, limited access to culturally appropriate formal services, and higher rates of multi-generational cohabitation (Victor et al., 2019; Wells et al., 2025).

Household composition, health and socioeconomic factors significantly shape caregiving trajectories by either facilitating or constraining caregiving opportunities. Living with older relatives or within multigenerational households may increase both opportunities and expectations to provide care, while also potentially offering additional support to caregivers and simultaneously generating competing care demand (Broese van Groenou & De Boer, 2016; Henz, 2006). The role of partnership status is complex and depends largely on the care recipient. Being married or partnered may increase exposure to spousal care, due to shared

household arrangements and legal or emotional obligations (Carmichael et al., 2010). However, this pattern often reverses in the context of parental care and care for other relatives. Research suggests that unmarried adult children—particularly never-married daughters residing with parents—often provide more intensive parental care than their married counterparts, as they may face fewer competing domestic responsibilities and are frequently perceived as more available for caregiving roles (Henz, 2006; Leopold et al., 2014). These patterns are also shaped by both the intensity of care provided and the caregiver's age (Henz, 2023).

Health status may also shape selection into caregiving. Some scholars describe a “healthy caregiver” selection effect, whereby individuals in better physical health are more likely to take on caregiving roles as people in poor health may be physically unable to take on the role (Igel & Szydlik, 2011; O’Reilly et al., 2008; Ramsay et al., 2013). More recently, Zueras et al. (2024) argue that health selection into caregiving differs by caregiving intensity. Individuals eligible to become caregivers, such as those with a living parent, were generally healthier at baseline than those without living parents. However, among future caregivers, those who later became light caregivers were healthier than non-caregivers before caregiving began, whereas those who later became intensive caregivers were already in poorer health prior to entering the caregiving role.

Economic activity influences both the time availability and financial capacity to provide informal care, although the relationship between employment and caregiving is complex and likely operates in both directions (Heitmuller, 2007). Individuals outside the labour market, including retirees or those economically inactive, may have more flexibility to undertake caregiving responsibilities. At the same time, economic inactivity may also reflect

unemployment, financial insecurity, or poor health, which can limit the ability to provide and sustain care over time. For those in paid employment, caregiving may compete with work-related responsibilities, particularly in contexts characterised by insecure or inflexible jobs, potentially constraining the capacity or willingness to provide care (Carmichael et al., 2010). However, the extent of caregiving demand is also important. Lower levels of care are often manageable alongside employment, whereas more intensive care may require significant changes to working patterns, including adjustment at the intensive and extensive margin (Maestas et al., 2024). Against the increasing female labour force participation, these dynamics raise important questions about the extent to which the nexus of gender, caregiving and employment may change over time.

Evidence regarding the educational profile of carers is less consistent. Some studies find that higher educational attainment is associated with an increased likelihood of caregiving, potentially reflecting greater awareness of support needs or stronger family involvement (Abramowska-Kmon et al., 2015; Robards et al, 2015). In contrast, other research suggests that caregiving is disproportionately concentrated among individuals with lower educational attainment and fewer socioeconomic resources (Verbakel et al, 2018).

Homeownership is often associated with greater residential stability, larger living space, and stronger financial security, potentially facilitating co-residential or nearby caregiving arrangements. In contrast, individuals living in rented or insecure housing may experience greater residential mobility, overcrowding, or financial strain, factors which can limit their capacity to sustain caregiving responsibilities over time (Bauer & Sousa-Poza, 2015).

While this body of research has advanced understanding of the individual characteristics associated with informal care provision, it has paid far less attention to the contextual

conditions under which caregiving takes place (Zigante et al., 2021; Zhang et al., 2021), despite these being central to the ICM. Evidence suggests that state expenditure on long-term care may influence the demand for informal care (Muramatsu and Campbell, 2002) and that the decisions to provide care appear to be responsive to the availability of publicly funded services, with carers adjusting their involvement when formal support is accessible, affordable, or preferred by care recipients (Zigante et al., 2021; Saloniki et al., 2019).

England's distinctive health and social care funding arrangements make it a valuable context for extending the ICM empirically. Within England, funding pressures in ASC are especially pronounced at the local level, where demand, costs, and revenue-raising capacity vary widely. LA spending on ASC shapes the structural context of informal caregiving, since public expenditure determines the availability and quality of formal care services, which may substitute or complement informal provision (Zigante et al., 2021). With ASC managed across 153 LAs—funded through central grants and locally raised revenues and subject to local discretion—substantial variation exists in the generosity and accessibility of formal care (Bancalari and Zaranko, 2024). These local disparities are reinforced by the way funding allocations operate in practice: although historically designed to compensate for differences in local spending needs and revenue-raising capacity, these assessments are now outdated, meaning poorer LAs typically receive less than their assessed need while richer areas receive more (Bancalari and Zaranko, 2024; Phillips et al., 2022).

Beyond spending levels, the availability of residential and nursing care constitutes an additional structural constraint within the social care system that becomes salient primarily at the intensive end of the care spectrum. Care home supply is unevenly distributed across

England and largely determined by private providers operating within LA funding frameworks, making it sensitive to broader spatial inequalities in local market conditions and funding levels (Bancalari & Zaranko, 2024). When this capacity is restricted—or costs become prohibitive—the formal system loses its ability to absorb high-intensity needs, increasing reliance on informal carers (McCann et al., 2011). Consistent with this, Pickard (2012) noted that declining care home availability directly correlates with an increase in high-intensity co-resident care provided by adult children, while Zhang et al. (2026) found that older adults living in a LA with fewer care home beds were less likely to be admitted to a care home, suggesting that constrained supply may limit access for those with high care needs. In this context, care home availability can be understood as an indicator of local care system capacity at the higher end of need. Where such capacity is limited, informal caregiving may become more prolonged and intensive, shaping both the duration and nature of care provision over time.

These structural constraints intersect closely with broader socioeconomic and geographic inequalities. More deprived areas typically face higher levels of care need, more complex health profiles, and simultaneously weaker fiscal capacity (ONS, 2022; Laxton et al., 2024; Bancalari and Zaranko, 2024). LAs' ability to raise revenue via council tax — a major source of social care funding — varies substantially across councils, and more deprived areas are typically less able to generate revenues locally (Bancalari and Zaranko, 2024). This implies that even if need is high, deprived areas may face underfunded social care systems, resulting in restricted formal care services. These geographic inequalities are reflected in caregiving patterns: residents of more deprived LADs are substantially more likely to provide informal care, especially intensive care (Petrillo et al., 2026). This association persists after accounting for a range of caregiver demographic and socioeconomic characteristics, including

age/cohort, disability, employment, education, and relationship status. This pattern may also reflect higher underlying levels of health need and disability among populations living in more deprived areas. Descriptive evidence from the ONS shows that 4.0% of individuals in the most deprived areas provide more than 50 hours of care per week, compared with 1.9% in the least deprived areas (ONS, 2023). However, existing research has largely examined deprivation in relation to the prevalence of caregiving and gender inequalities in care provision, without investigating how area-level disadvantage shapes transitions into caregiving, the concentration of intensive caregiving roles, or how deprivation-related inequalities have shifted across two decades of austerity and welfare reform in England.

1.2 The contribution

This study makes several key contributions to the literature on informal caregiving. First, by leveraging newly linked 2001–2021 ONS-LS data, it provides the most comprehensive longitudinal, population-level evidence on the predictors of becoming a carer, repeated caregiving, and changes in care intensity over the last twenty years in England, examining how these patterns vary by gender and have shifted across two decades of labour market and policy change.

Second, and most importantly, it integrates for the first time individual-level caregiving trajectories with multiple structural indicators of local care system capacity — in particular CQC-recorded care home provision, LA-level ASC expenditure, and area-level deprivation — offering a multi-layered perspective on how local policy environments shape informal care patterns. While recent research has highlighted the importance of geographic inequalities and area deprivation in shaping caregiving patterns (Young et al., 2005; Petrillo et al., 2026;

ONS, 2023), less is known about how the availability of formal care resources influences caregiving trajectories over time. The present study addresses this gap by linking individual caregiving outcomes to measures of local care-system capacity. In doing so, it builds on evidence that changes in formal care provision are associated with informal caregiving patterns and carers' experiences and wellbeing (Zigante et al., 2021; Zhang et al., 2021) and responds directly to Di Gessa and Deindl's (2024) call for research linking caregiving trajectories to formal care availability.

Third, by applying Fairlie decomposition analysis across the two inter-census periods, it identifies the relative contributions of individual and structural factors to observed period-level change — an approach that reveals how changes in care system capacity translate into population-level caregiving patterns in ways that cross-sectional regression alone cannot capture.

2. Methods

We first estimated a series of logistic regression models to examine the provision of informal care across two decade-long periods: 2001–2011 and 2011–2021. For each period, baseline individual characteristics were measured at the beginning of the period (t_0 : 2001 for the group 2001-2011 and 2011 for the group 2011-2021) were used to predict two binary outcomes at the end of the period (t_1 : 2011 for the group 2001-2011 and 2021 for the group 2011-2021): (i) the likelihood of providing informal care at t_1 among individuals who were not providing care at t_0 , and (ii) the likelihood of providing informal care at t_1 , having also been providing care at t_0 .

For efficiency, we refer to these outcomes throughout the paper as “transitioning into caregiving” and “repeated caregiving”, respectively. However, both outcomes are observed at two discrete time points separated by ten years. Caregiving behaviour during the two time points is unobserved — individuals could have started caring, stopped, and started again without this being captured. Similarly, repeated caregiving reflects caregiving reported at two census points and does not imply uninterrupted provision over the intervening decade. All models include a set of individual-level covariates measured at t_0 , alongside contextual-level variables measured at time t_1 and derived from LAs-level data from the corresponding Census year.

To investigate the drivers of changes in transitions into informal caregiving and repeated caregiving provision between the two periods considered (2001-2011 and 2011-2021), we applied the Fairlie decomposition method (Fairlie, 2005), which extends the Blinder–Oaxaca decomposition framework (Blinder, 1973; Oaxaca, 1973) to binary outcomes. Separate decomposition analyses were conducted for each outcome. The Fairlie method decomposes differences in the probability of transitioning into caregiving or engaging in repeated caregiving between two time points into (i) a component attributable to changes in observed characteristics (the composition effect) and (ii) an unexplained component reflecting changes in coefficients due to changes in the associations between informal care provision and those characteristics (coefficient effect). Unlike the Blinder–Oaxaca decomposition method, the Fairlie approach decomposes differences in average predicted probabilities rather than differences in mean outcomes. It uses estimates from logit regression models, which provide more interpretable and accurate results when the outcome variable is binary (See methodological details in the Supplementary Information).

To account for potential correlation among individuals residing in the same LA, standard errors were clustered at the LA-level. As robustness checks, we replicated the decomposition using the nonlinear decomposition approach proposed by Yun (2004), as well as the standard Blinder–Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973).

3. Data

To capture the individual-level component of the ICM, we draw on data from the ONS-LS for the years 2001, 2011, and 2021. The ONS-LS links Census records with life events data (births, deaths, and cancer registrations) for approximately 1.3 million members, selected on the basis of four confidential birthdates. This sampling design yields a representative one per cent sample of the population of England and Wales. Data on LA ASC expenditure were drawn from the Personal Social Care Expenditure and Unit Costs (PSSEX1, 2003/04–2015/16) and, for more recent years, the ASC Finance Return and Short- and Long-Term Collection (2016/17–2021/22). Data on care home capacity were obtained from the Department of Health & Social Care’s Palliative and End of Life Care Profile (Office for Health Improvement and Disparities, 2025), which aggregates CQC provider-level records by LA. Finally, area-level deprivation was captured using the IMD (Department for Communities and Local Government, 2011; Ministry of Housing, Communities and Local Government, 2015, 2019).

Our analytic sample comprises individuals who were usual residents in England at the time of the 2001, 2011 and 2021 Censuses and aged between 16 and 75 (t_0). This age restriction was applied to focus the analysis on life-course transitions into and out of caregiving. Individuals aged over 75 at baseline represent a distinct population group, both in terms of caregiving dynamics and broader socio-economic characteristics. At older ages, caregiving is more likely to involve spousal or end-of-life care and is shaped by higher levels of labour market inactivity

and more pronounced health limitations (Zhang and Bennett, 2024). In addition, key covariates used in this analysis, particularly educational attainment and economic activity, were not collected consistently for individuals aged over 75 in Census 2001, limiting comparability across waves. As a result, these variables may operate differently in shaping caregiving behaviour in this group and cannot be harmonised reliably across periods.

Individuals were followed longitudinally to the subsequent Census wave (t_1), where caregiving outcomes were observed. Consequently, respondents aged 66–75 at baseline could be aged 76–85 at follow-up, provided they survived and remained in the study population. A detailed breakdown of caring status across census waves is provided in Tables S.4 and S.5.

To examine transitions into informal caregiving, we restrict the sample to individuals who were not providing informal care at time t_0 , enabling an analysis of whether individuals were providing care at t_1 having not been doing so at t_0 . After excluding ineligible observations and cases with missing values on key variables, the final analytical sample consisted of 293,336 individuals for the 2011–2021 period and 257,308 individuals for the 2001–2011 period.

To examine repeated informal caregiving provision, we restrict the sample to individuals who were already providing informal care at time t_0 . This resulted in analytical samples of 40,023 individuals for the 2001–2011 period and 45,477 individuals for the 2011–2021 period. Full details of the sample construction and selection process are provided in Tables S.1 and S.2.

3.1 Outcome variable: Caregiving status

The dependent variable is a binary indicator of informal caregiving, defined as whether an individual provides informal care or special assistance to sick, disabled, or older individuals, either within or outside their own household.

Note that comparisons across Census waves should be interpreted with caution because the care-related question changed in Census 2021. While the concept of unpaid caregiving remained similar, the wording and response categories differed from previous censuses, including more detailed categories for hours of care. This may have influenced respondents' propensity to identify themselves as carers, while the Covid-19 pandemic may have altered understandings of care and hence carer identification (ONS, 2023a). We therefore interpret changes over time as changes in Census-measured caregiving rather than as unambiguous changes in underlying care behaviour.

3.2 Individual-level factors

All individual-level characteristics are measured at baseline (t_0), prior to the observation of caregiving outcomes. These variables are grouped into two broad domains: sociodemographic characteristics and barriers/enablers to care (more details in Table S.3).

Sociodemographic characteristics include age, sex and ethnicity (White, White Other, South Asian, Black, Mixed, and Other).

Barriers/Enablers to care include household composition (not partnered, living with partner only, living with partner and children, living with children only, other household type), marital status (not married vs. married/civil partnership), economic activity (economically inactive, employed full-time [31 hours and more per week], employed part-time [30 hours or less per week], student, looking for a job/waiting to start a job/ other), housing tenure (owned

outright, partly owned, not owned), health status (“Good”, “Fair” and “Bad”) and educational attainment, measured using the highest qualification achieved (No qualifications, Level 1 [lower secondary education, e.g., GCSE grades D-G], Level 2 [higher secondary education, e.g., 5+ GCSEs at grades A*-C], Level 3 [upper secondary or further education, e.g., A-levels], Level 4 [tertiary education, including undergraduate and postgraduate degrees], and Other/Apprenticeship).

3.3 Contextual factors

Local Authority Social Care Expenditure

For consistency across time, we focus on total current gross expenditure (CGE) on ASC at the LA-level. Missing values for some LA were imputed using information from adjacent years in the full expenditure series. All spending figures were converted to real terms using the Consumer Price Index (ONS, 2026) and expressed on a per-capita basis.

Care home beds

We constructed measures of the number of care home beds per capita at the LA level, measuring care resources available for residents.

Meso-level deprivation

To capture contextual inequalities, we include the IMD as a measure of area-level socioeconomic disadvantage. The IMD is a composite indicator derived from population-weighted scores across Lower Layer Super Output Areas, encompassing domains such as income, employment, health, education, housing, and crime.

In line with our analytical framework, all three contextual factors are measured at time t_1 rather than at baseline, as this better captures the formal care environment and level of area deprivation at the point when caregiving responsibilities are observed. This approach recognises that informal caregiving may arise not only from individual or family preferences, but also from constraints in the availability and accessibility of formal care services.

3.4 Descriptive statistics

Figures 1 and 2 show that both entry into and repeated informal caregiving declined between 2001–2011 and 2011–2021 across most age groups and for both genders. Transitioning into caregiving rates (Figure 1) peaked in mid-life (ages 36–55) in both periods, but were consistently lower in 2011–2021, with the largest reductions observed among women at peak caring ages. Gender differences narrowed slightly in the later period, particularly at older ages. Among repeated carers (Figure 2), caregiving rates were substantially higher than for entry into care but also declined over time, again most noticeably for women. Overall, the figures indicate a broad reduction in both entry and repeated caregiving over time, with declines concentrated in mid-life.

Examining care intensity suggests that the observed decline in Census-measured caregiving was primarily concentrated among low-intensity caregiving, the category most likely to be sensitive to changes in Census question wording (Figures S.1 and S.2). Among those becoming carers, the sharpest reduction occurred in low-intensity roles during mid-life, whereas high-intensity entry remained relatively stable and peaked later in life, particularly among those aged 66–75. A similar pattern emerges for repeated carers.

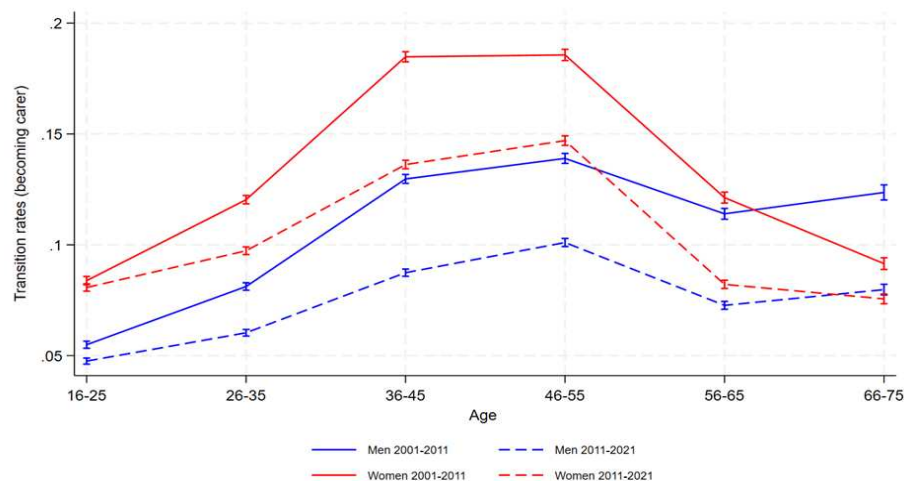


Figure 1: Transition rates into informal caregiving by gender, age groups and years.

Data source: ONS LS

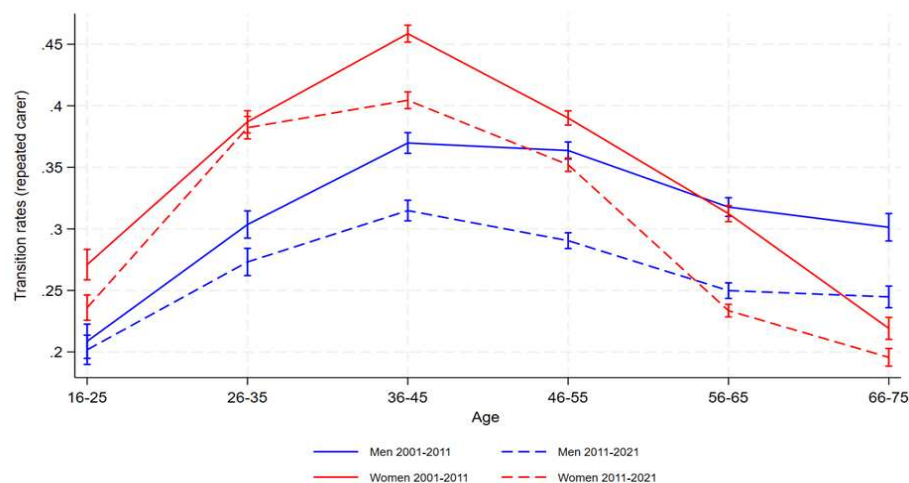


Figure 2: Transition rates into repeated informal caregiving by gender, age groups and years

Data source: ONS LS

Tables S.6 and S.7 show that transitions into caregiving declined from 12.2% in 2001–2011 to 9.2% in 2011–2021. Compared with non-carers, those who transitioned into caregiving were more often women, concentrated in mid-life, married, and living in a couple or family

households. New carers were also more likely to be in fair health and less likely to be students, while differences by education, tenure and deprivation were comparatively modest. Across periods, new carers became slightly older, more ethnically diverse, more highly educated, and more likely to live in rented housing.

Individuals providing care across consecutive censuses represented a more selective group, with repeated caregiving declining from 35.3% to 29.5%. Compared with those who stopped caring, repeated carers were more often women, concentrated in mid-life, married, living with a spouse and children, and in fair or poor health. They were also slightly more likely to live in rented housing and deprived areas, particularly in 2011–2021, and showed weaker labour market attachment than new carers.

Both new carers and repeated carers tend to live in areas with declining care home availability alongside rising care expenditure. These trends likely reflect growing pressures within the ASC system, where rising expenditure has not necessarily translated into greater residential care capacity. Increasing demand, rising provider and staffing costs, and constraints within local care markets may therefore coexist with declining care home supply, potentially increasing reliance on informal carers.

4. Results

4.1 Transition into caregiving

Figure 3 presents logistic regression models predicting transitions into informal caring between 2001–2011 and 2011–2021 (see Table S.8 for more details. See Table S.18 for a sensitivity test on the health variable used). While the main patterns of caregiving remained broadly stable across periods, the magnitude of several associations changed over time.

Transitions into caregiving were strongly patterned by gender and age. Women were significantly more likely than men to become carers, with odds 31.1% higher in 2001–2011 and 44% higher in 2011–2021. Caregiving entry consistently peaked in mid-life (ages 46–55), although these effects weakened by 2011–2021. By contrast, the likelihood of entering caregiving in later life (ages 66–75) declined and became only marginally significant in the later period. Ethnic differences also sharpened over time, with most minority ethnic groups—particularly White Other and South Asian individuals—showing lower odds of caregiving entry relative to the White British population in the second decade.

Individual-level barriers/enablers also shaped caregiving entry. Living with children, especially in lone-parent households or in complex households, was associated with substantially higher odds of becoming a carer. Marriage remained positively associated with caregiving entry. Employment patterns changed over time. Compared to economically inactive individuals, part-time workers were slightly more likely to provide care in 2001–2011, but slightly less likely in 2011–2021. In contrast, full-time employment and student status were consistently associated with a lower likelihood of caregiving across both periods. Housing tenure effects weakened over time, with non-owners no longer significantly less likely to provide care compared with outright owners in the later period. Compared with individuals in good health, those in fair health had consistently higher odds of caregiving entry in both periods; whereas the positive association between poor health and caregiving entry observed in 2001–2011 disappeared by 2011–2021. Having no qualifications was associated with lower odds of caregiving entry, while intermediate education levels differed little from Level 4 qualifications.

Among contextual factors, local deprivation was the main significant predictor of becoming a carer, while care home availability and local economic resources did not appear to influence care transitions.

Although we are unable to obtain information on care recipients and the caregiver-recipient relationship, caregiving dyads are likely to vary across the lifecourse (Zhang and Bennett, 2024). For example, people in their middle age are more likely to care for their parents and people of older age tend to care for their spouse. We therefore conducted additional analysis testing the interaction effects between age and some of the predictors. (Table S.20)

The interaction analysis shows that the association between health and caregiving weakens with age. Similarly, the negative relationship between employment and caregiving is less pronounced among middle-aged and older groups than among younger people, reflecting higher labour market exit in later life. Overall, the association between barriers/enabling factors and caregiving may vary across the life course.

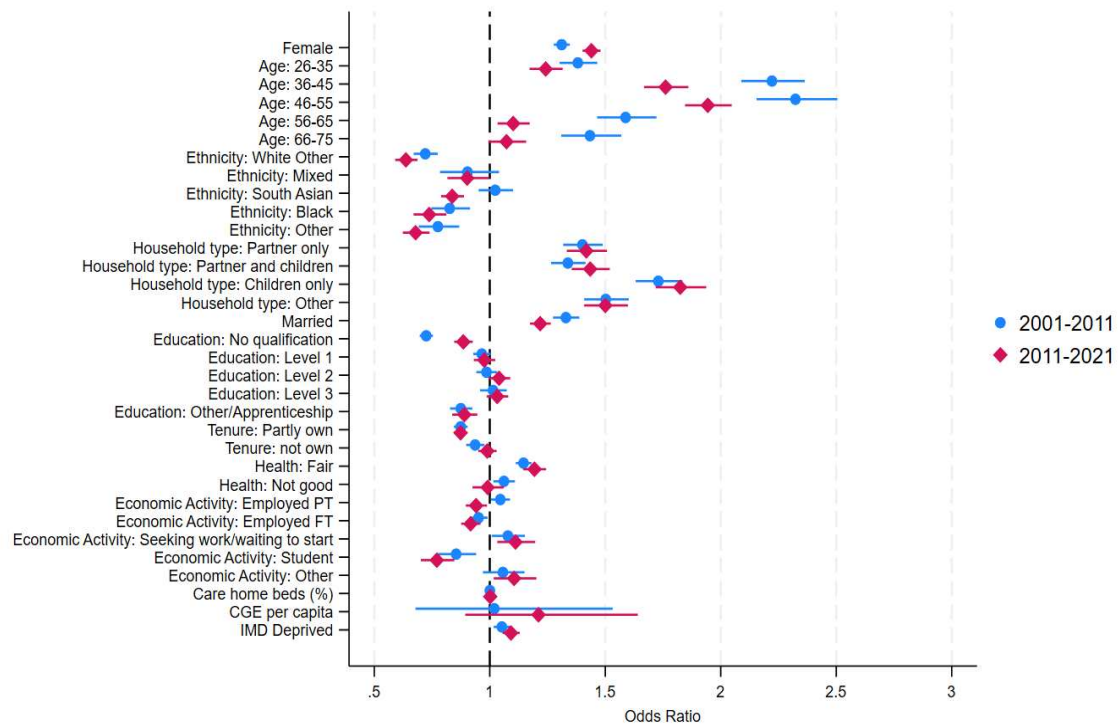


Figure 3: Logistic regression of transitioning into informal caregiving by year

Note: Odds ratios are shown relative to reference categories: male, 16–25 (age), White British (ethnicity), not partnered (household type), not married, Level 4 (education), owned outright (tenure), good health, economically inactive (economic activity), and non-deprived areas (IMD). Contextual variables (care home beds and current gross expenditure (CGE) on ASC per capita) are continuous and expressed per unit increase. *Data source: ONS LS, CQC, ASC Expenditure, IMD.*

Gender differences in caregiving transitions became particularly pronounced at older ages (Table S.9). While men above age 25 consistently displayed higher odds of entering caregiving than those aged 16–25 across both decades, older women experienced a marked decline in caregiving entry. By 2011–2021, women aged 56–75 were less likely than the youngest age group to become carers. Labour market participation emerged as a gendered constraint; by the second decade, being a student or being employed significantly reduced women’s

likelihood of caregiving entry, whereas employment constraints appeared less pronounced for men and older adults. Similarly, poor health increased men's likelihood of entering caregiving in both periods but became a negative predictor for women in 2011–2021.

Finally, analysis by caregiving intensity revealed a polarisation effect whereby factors that deter caregiving entry overall often increase the risk of that care being high-intensity (See Table S.10). Specifically, individuals aged 66–75, women, and those from South Asian and other ethnic groups were more likely to transition into high-intensity care rather than low-intensity care compared with their respective reference groups. Although poorer health, lower education and non-homeownership showed limited associations with becoming a carer overall, they were associated with a greater concentration of intensive caregiving responsibilities among those who did provide care. By contrast, labour market participation primarily constrained caregiving intensity: part-time and full-time employment, as well as student status, consistently reduced the likelihood of entering medium- or high-intensity caregiving relative to low-intensity caregiving across both periods.

4.2 Repeated informal care

Analysis of repeated informal caregiving across the two decades (See Figure 4 and for more details Table S.11; See Table S.19 for sensitivity test on the health variable used and S.21 for the interaction model) revealed several differences from the patterns observed for caregiving entry. While transitions into caregiving peaked in mid-life (46–55), repeated caregiving peaked slightly earlier (36–45), and older adults (66–75) were less likely to repeat caregiving over time. Both fair and poor health were associated with higher odds of repeated caregiving. Employment effects were also stronger for repeated care, with part-time employment reducing the likelihood of repeated care across both decades. Having no qualifications

reduced repeated care in 2001–2011, but the effect disappeared by 2011–2021. Finally, people who did not own their homes were more likely to repeat caregiving, whereas housing tenure had little effect on caregiving entry in the later period.

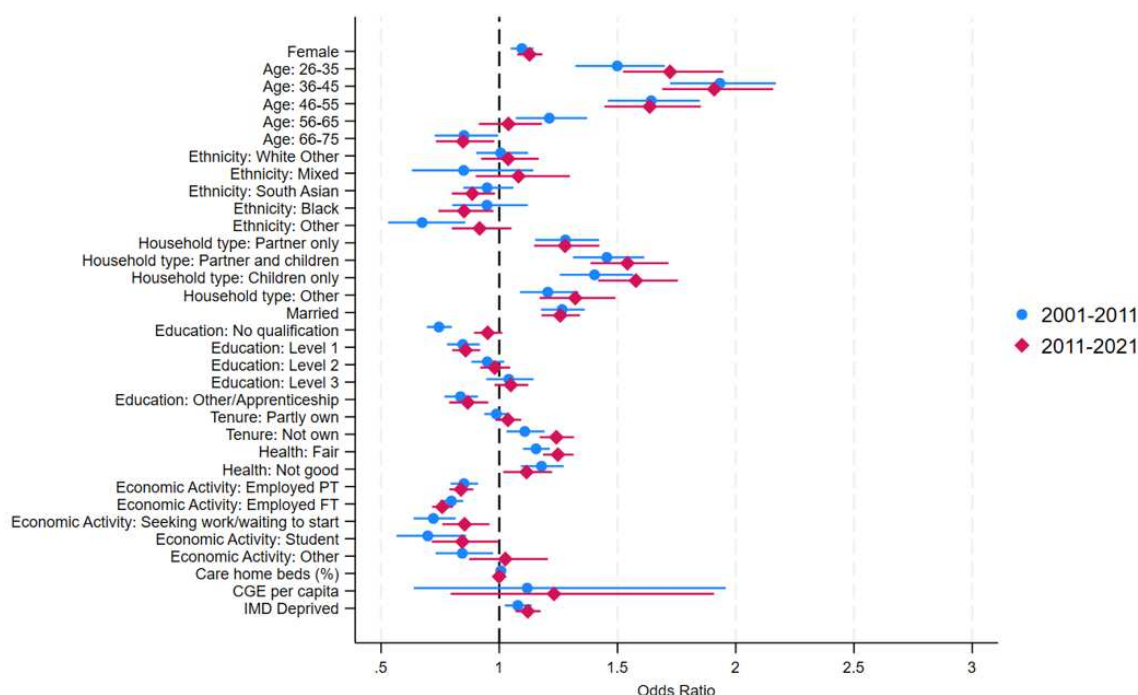


Figure 4: Logistic regression of repeated informal caregiving by year

Note: Odds ratios are shown relative to reference categories: male, 16–25 (age), White British (ethnicity), not partnered (household type), not married, Level 4 (education), owned outright (tenure), good health, economically inactive (economic activity), and non-deprived areas (IMD). Contextual variables (care home beds and current gross expenditure (CGE) on ASC per capita) are continuous and expressed per unit increase. *Data source: ONS LS, CQC, ASC Expenditure, IMD.*

These patterns, however, mask important differences between men and women (see Table S.12). Older women (66–75) were less likely to repeat caregiving, a pattern less pronounced for men. A significant distinction between the caregiving entry and repeated caregiving was

the shifting role of employment among men. While full-time employment was not a significant deterrent to men entering caregiving (Table S.8), it was a highly significant constraint to repeated caregiving. Interaction models further suggest that the negative association between employment and repeated caregiving weakened at older ages (See Tables S.21). Among contextual factors, local deprivation was positively associated with caregiving for women in both periods, while for men it was only significant in 2011–2021 and marginally significant in 2001–2011. CGE per capita showed no significant effect for men in either period, but was marginally significant for women in 2011–2021.

Differences also emerged when examining caregiving by intensity (See Table S.13). Repeated high-intensity caregiving is increasingly concentrated among older adults, with individuals aged 56–75 showing the highest relative risk. Gender differences also shifted across stages: women were more likely than men to enter high-intensity caregiving roles, but less likely than men to report repeated high-intensity caregiving across census waves. Ethnic differences were generally weaker for repeated caregiving, whereas lower education, non-homeownership, and employment constraints exerted stronger effects at higher levels of caregiving intensity.

4.3 Decomposition

To better understand the drivers of observed changes in Census-measured informal caregiving over time, we applied a Fairlie decomposition to distinguish between explained differences due to observed characteristics and unexplained differences potentially reflecting unmeasured factors, structural change, or differences in reporting across Census waves. Table 1 presents the decomposition results for transitioning into caregiving and repeated caregiving roles, respectively (see Table S.14-S.17 for robustness checks).

Between 2011 and 2021, the observed probability of entering caregiving declined slightly (difference = 0.031). The decomposition indicates that the majority of this change (75.5%) was unexplained. Only 24.5% of the decline was explained by changes in observed characteristics. Among the measured characteristics, health status and care home availability contributed most to the explained portion, with contributions of 10.8% and 11.1%, respectively. This suggests that improvements in health and changes in formal care infrastructure were associated with a lower likelihood of recorded caregiving transitions. Importantly, although care home availability showed limited direct associations in the logistic regression models, it emerges here as one of the main contributors to observed period change. Age and education contributed in the opposite direction to the overall trend, partially offsetting the decline in caregiving transitions. This suggests that population ageing and rising educational attainment increased the likelihood of entering caregiving between 2011 and 2021.

For individuals already providing care, the overall probability of continuing caregiving also declined between 2011 and 2021 (difference = 0.058), but the pattern differs markedly from entry. Here, 61.1% of the change was unexplained, leaving 38.9% attributable to observed characteristics. Within the explained component, health status (15.6%) and care home availability (10.7%) again made the largest contributions. Age also contributed positively (9.2%), indicating that shifts in the age composition of existing carers partly explain declines in repeated care. Marital status (6.5%) and economic activity (2.7%) provide smaller positive contributions, while education (-7.8%) and tenure (-1.8%) exert negative effects.

Table 1: Fairlie Decomposition- transitioning into caregiving

Terms of decomposition	Transition into caregiving		Repeated caregiving	
	Coef	%	Coef	%
2011	0.1224		0.3528	
2021	0.0918		0.295	
Difference	0.0307	100	0.0578	100
Explained	0.0075***	24.5	0.0225***	38.9
Unexplained	0.0232***	75.5	0.0353***	61.1
Contribution to the explained difference				
Age	-0.0020***	-6.5	0.0053***	9.2
Sex	0.0004***	1.4	-0.0001***	-0.2
Ethnicity	0.0017***	5.5	0.0013***	2.2
Household type	0.0001	0.4	0.0007*	1.2
Married	0.0018***	5.7	0.0037***	6.5
Education	-0.0014***	-4.7	-0.0045***	-7.8
Tenure	-0.0001	-0.3	-0.0011***	-1.8
Health	0.0033***	10.8	0.0090***	15.6
Economic activity	0.0002**	0.7	0.0016***	2.7
Care home beds (%)	0.0034***	11.1	0.0062***	10.7
CGE	0.0001	0.4	0.0002	0.4
IMD deprived	-0.00002***	-0.1	0.00006***	0.1
Observations	550,644		85,500	

Note: CGE = gross current expenditure on adult social care per capita; IMD = Index of Multiple Deprivation. SE clustered at the LA level. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$

Data source: ONS LS, CQC, ASC Expenditure, IMD

5. Discussion

Using newly linked data from the 2001, 2011, and 2021 ONS-LS, combined with local-level data on ASC expenditure, care home provision, and IMD, this study examines for the first time how individual- and contextual-level factors shape transitions into and repeated informal caregiving over time in England.

By doing so, it advances the literature beyond prior studies that largely focused on individual determinants (Pomeroy and Fiori, 2025; Raiber et al., 2022; de Klerk et al., 2021; Robards et al., 2015). Importantly, the findings demonstrate that caregiving entry, repeated caregiving, and high-intensity caregiving follow partially distinct trajectories across the life course, highlighting the importance of distinguishing between different forms and durations of caregiving involvement rather than treating caregiving as a single transition.

The findings demonstrate that informal caregiving trajectories remain strongly patterned by gender and life-course stage. Consistent with prior research, women were substantially more likely than men to enter caregiving, particularly during midlife (Petrillo et al., 2026; Patterson and Margolis, 2019). This likely reflects the continued gendered organisation of unpaid care within families, especially during ages associated with intergenerational responsibilities and “sandwich generation” responsibilities (Vlachantoni et al., 2019; Patterson and Margolis, 2019). Although men were less likely than women to enter caregiving overall, they were more likely to enter caregiving at older ages and to report repeated high-intensity caregiving across

census waves. The interaction models further showed that women aged 56–75 had significantly lower odds of entering and sustaining caregiving than men of the same age. These patterns likely reflect shifts in caregiving relationships across the life course and gender dynamics, with older men more often caring for a spouse rather than other family members compared to their female counterparts (Neal et al., 1997). As they get older, they are more likely to sustain caregiving for their spouse in response to the increasing care needs. (Kahn et al., 2011; Zhang and Bennett, 2024).

Ethnic differences varied by caregiving outcome. Several minority ethnic groups showed lower odds of entering caregiving, particularly in 2011–2021, potentially reflecting compositional changes within the UK ethnic minority population. Over recent decades, ethnic minority populations have grown substantially and are, on average, younger than the White British population (ONS, 2023b). Many recent migrants arrive without older parents (Ansari-Thomas, 2024), reducing immediate demand for informal care. However, among those who did become carers, South Asian and Other ethnic groups were more likely to provide medium- or high-intensity care, consistent with previous research (Victor et al., 2019; Wells et al., 2025)

The findings also point to a growing polarisation of caregiving trajectories across the life course. Employment emerged as a particularly important structural constraint on caregiving trajectories. By 2011–2021, labour market participation had become a stronger constraint on women’s transitions into caregiving, suggesting that the compatibility between paid work and unpaid care has weakened over time. Interaction models further suggest that these employment constraints varied across the life course, with employment remaining negatively associated with caregiving overall but becoming less restrictive at older ages, when caregiving may increasingly reflect retirement transitions and spousal care. These patterns likely reflect

broader cohort and labour market changes across the study period. Female labour force participation increased substantially between 2001 and 2021, while delayed retirement and pension reforms extended working lives, potentially reducing the flexibility previously available for unpaid caregiving responsibilities (Henz, 2010; Rodrigues and Ilinca, 2021). Results also indicate growing tensions between labour market participation and repeated caregiving across census waves, especially for men. While men may initially accommodate new caregiving responsibilities alongside paid work, employment became a significant barrier to being observed providing care at consecutive census points, suggesting that maintaining caregiving over time becomes increasingly difficult to combine with sustained labour market attachment, particularly when caregiving becomes intensive (Razavi, 2007).

Health patterns further suggest both selection and accumulation processes. In line with Zueras et al. (2024), while individuals in poorer health were not consistently more likely to enter caregiving in the last decade, they were substantially more likely to provide a higher level of care intensity and repeated caregiving. This may reflect both the concentration of intensive caregiving among already disadvantaged individuals and the cumulative health consequences of repeated and high-intensity caregiving itself, which previous research has linked to worsening physical and mental health outcomes (O'Reilly et al., 2008; Pinquart and Sorensen, 2003).

Similarly, individuals with lower educational attainment and fewer housing resources were less likely to become carers overall, but disproportionately concentrated in repeated and high-intensity caregiving roles once caregiving occurred.

At the contextual level, local deprivation consistently predicted both transitions into caregiving and repeated caregiving, reinforcing evidence that caregiving is disproportionately

concentrated within disadvantaged communities (Petrillo et al., 2026l; Zhang et al. 2021). By contrast, care home availability and ASC expenditure showed relatively limited direct associations with individual caregiving transitions in the regression models— though as discussed below, their contribution to period-level change emerges more clearly in the decomposition analysis .

The decomposition analysis further highlights the importance of structural and temporal change. While a substantial unexplained component remained – likely reflecting broader policy, demographic, and measurement-related changes occurring between 2001 and 2021 – health status and care home availability contributed most strongly to observed changes across both outcomes. Importantly, although care home availability showed limited direct associations with individual caregiving transitions in the logistic regression models, it emerged as one of the strongest contributors to explained period change. This discrepancy reflects the fact that the two analytical approaches address fundamentally different questions. The logistic regression models estimate associations between individual caregiving outcomes and local care home availability at a given point in time; whereas the decomposition analysis examines how changes in the overall distribution of care home availability contributed to observed differences in caregiving outcomes between the two periods. A variable can therefore contribute meaningfully to period-level change in the decomposition even if its within-period association is small and statistically insignificant in the regression. In the present case, there is a small positive association between care home availability and caregiving, though not statistically significant in the regression models. The sustained national decline in care home beds between 2011 and 2021 therefore partly explained the decline in caregiving in the decomposition analysis. However, this pattern may also reflect shared

underlying causes rather than a direct substitution relationship. Both the decline in care home beds and the decline in Census-measured caregiving may partly reflect reduced demand for care associated with improvements in population health and the selective mortality of frailer older adults during the COVID-19 pandemic (Bach-Mortensen et al., 2024; Glasby et al., 2019). Decomposition analysis does not imply causality, and these findings should be interpreted as descriptive of parallel trends rather than evidence of a direct causal mechanism.

This study has several important **limitations** that must be considered when interpreting the results.

First, despite the large sample size afforded by the ONS-LS, the data do not directly identify the relationship between caregiver and care recipient. Consequently, we cannot distinguish whether care was directed towards parents, spouses, children, or others, or whether care occurred within or outside the household. The data also lacks specific information on the care recipient's clinical diagnosis, the wider carers' social network of potential alternative carers, and the exact kinship relationship between the carer and the recipient. The omissions limit our ability to fully interpret life-course caregiving dynamics and the mechanisms underlying repeated or high-intensity caregiving.

Second, despite the breadth of the ONS-LS, it contains a limited set of socioeconomic variables. In particular, the absence of income and wealth data prevents a detailed examination of economic gradients in caregiving and limits our ability to assess how financial resources shape the substitution between informal and formal care (Pierre-Carl et al., 2010). The decision to opt out of direct provision is often impacted by the financial resources of both the carer and the care recipient; without income data, we cannot fully evaluate how opportunity costs (Carmichael et al, 2010; Koreshi and Alpass, 2023) or family power

dynamics —as suggested by relative resources theory—influence the division of care work (Bracke et al., 2008).

Third, the decennial structure of the data limits analysis of caregiving trajectories over time. Shorter caregiving episodes that begin and end between census waves remain unobserved. As a result, repeated caregiving in this study reflects individuals reporting caregiving at two census time points, rather than uninterrupted care over the intervening period. More broadly, the observed patterns likely reflect a combination of age, period, and cohort processes that cannot be fully disentangled within the present design. Some patterns appear strongly associated with the life-course stage, particularly the concentration of caregiving entry in mid-life and repeated caregiving at older ages, while others likely reflect broader period changes linked to labour market restructuring, demographic ageing, pension reforms, and changes in Adult Social Care provision between 2001 and 2021.

Fourth, our analysis captures only selected structural and supply-side aspects of formal care provision. We are unable to capture the quality or adequacy of formal care services, which may shape whether carers substitute formal care for informal care or continue providing support alongside it (Brimblecombe, 2023; Suanet et al., 2012)

Finally, comparisons involving the Census 2021 should be interpreted cautiously. The COVID-19 pandemic likely altered both care needs and caregiving arrangements through increased mortality, disruptions to formal care provision, and restrictions on household mixing. These dynamics introduce the possibility of survival bias, whereby the remaining population in 2021 may appear healthier and have lower care needs than would otherwise have been expected. These issues are compounded by the limited granularity of Census health measures and by

changes to the unpaid-care question in Census 2021, which may have affected respondents' likelihood of identifying themselves as carers. Consequently, comparisons between the 2001–2011 and 2011–2021 periods should be interpreted as changes in Census-measured caregiving rather than as definitive evidence of changes in underlying caregiving behaviour.

This paper shows that while caregiving can affect people from all walks of life, the likelihood of becoming a caregiver—and of taking on repeated caregiving responsibilities—is disproportionately concentrated among women, mid-life adults, individuals living with children or in complex households, and those with lower educational attainment, poorer health, or greater exposure to local deprivation. Identifying these high-risk populations supports a preventative policy approach: targeted measures such as expanded paid Carer's Leave, flexible working arrangements, and pension credits can be introduced proactively to ensure that support is directed where it is most needed.

More broadly, the findings challenge assumptions that informal care can expand indefinitely in response to pressures on the formal care system. The concentration of repeated and intensive caregiving among socioeconomically disadvantaged groups suggests that informal care itself is a finite and unequally distributed resource. Policies that rely on families to absorb growing care needs may therefore risk exacerbating existing social and health inequalities unless accompanied by adequate investment in formal care services and support for carers.

The notable geographic inequalities, captured by the IMD, indicate that a uniform, nationwide approach to social care is unlikely to meet the needs of the communities most affected. Our results support the adoption of place-based policies that treat care provision as a fundamental part of local economic infrastructure. The evidence strengthens the case for substantial reform of local government funding mechanisms. Existing allocations often fail to

account for the limited fiscal capacity of poorer councils (Phillips et al., 2022), highlighting the need for future reforms—such as a potential Fair Funding Review 2.0—to move beyond reliance on basic demographic indicators like age. Introducing a “Deprivation Care Premium” could help direct resources toward LAs where informal care demands are highest and formal service provision is most inadequate.

Reference

- Abramowska-Kmon, A., Kotowska, I. E., & Latkowski, W. (2015). The organisation of caring responsibilities both up and down family lines. *Families and Societies deliverable 7.3*.
- Ansari-Thomas, Z. (2024). Immigration and Intergenerational Co-Residency Among Working-Aged Adults in the United Kingdom. *Journal of family issues*, 45(3), 744-769.
- Bancalari, A., & Zaranko, B. (2024). *Adult social care in England: What next?* (No. R338). IFS Report.
- Bach-Mortensen, A., Goodair, B., & Degli Esposti, M. (2024). Involuntary closures of for-profit care homes in England by the Care Quality Commission. *The Lancet Healthy Longevity*, 5(4), e297-e302.
- Bauer, J. M., & Sousa-Poza, A. (2015). Impacts of informal caregiving on caregiver employment, health, and family. *Journal of population Ageing*, 8(3), 113-145.
- Blinder, A. S. (1973). Wage discrimination: reduced form and structural estimates. *Journal of Human resources*, 436-455.
- Bracke, P., Christiaens, W., & Wauterickx, N. (2008). The pivotal role of women in informal care. *Journal of Family Issues*, 29(10), 1348-1378.
- Brimblecombe, N. and Cartagena Farias, J., 2022. Inequalities in unpaid carer's health, employment status and social isolation. *Health & Social Care in the Community*, 30(6), pp.e6564-e6576.
- Brimblecombe, N. (2023). The consequences for unpaid carers of unmet need for long-term care services in England. *International Journal of Care and Caring*, 7(1), 114-130.

- Broese van Groenou, M. I., & De Boer, A. (2016). Providing informal care in a changing society. *European journal of ageing*, 13(3), 271-279.
- Carmichael, F., Charles, S., & Hulme, C. (2010). Who will care? Employment participation and willingness to supply informal care. *Journal of health economics*, 29(1), 182-190.
- Cartagena-Farias, J., & Brimblecombe, N. (2025). Understanding the characteristics of unpaid carers living in financial hardship: risks and vulnerabilities. *International Journal of Care and Caring*, 1-19.
- de Klerk, M., de Boer, A., & Plaisier, I. (2021). Determinants of informal care-giving in various social relationships in the Netherlands. *Health & social care in the community*, 29(6), 1779-1788.
- Department for Communities and Local Government. (2011). *The English indices of deprivation 2010*. UK Government. <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2010>
- Fairlie, R. W. (2005). An extension of the Blinder-Oaxaca decomposition technique to logit and probit models. *Journal of economic and social measurement*, 30(4), 305-316.
- Glasby, J., Allen, K., & Robinson, S. (2019). "A game of two halves?" Understanding the process and outcomes of English care home closures: Qualitative and quantitative perspectives. *Social Policy & Administration*, 53(1), 78-98.
- Heitmueller, A. (2007). The chicken or the egg?: Endogeneity in labour market participation of informal carers in England. *Journal of health economics*, 26(3), 536-559.
- Henz, U. (2023). The ageing of parent carers: classed and gendered care-giving patterns at higher ages. *Ageing & Society*, 43(4), 790-813.
- Henz, U. (2006). Informal caregiving at working age: Effects of job characteristics and family configuration. *Journal of marriage and family*, 68(2), 411-429.
- Henz, U. (2010). Parent care as unpaid family labor: How do spouses share?. *Journal of Marriage and Family*, 72(1), 148-164.
- House of Commons. (2017). *Community and local government funding and finance: CM 1103* [Report]. <https://publications.parliament.uk/pa/cm201617/cmselect/cmcomloc/1103/110303.htm>

- Hu, B., Hancock, R., & Wittenberg, R. (2020). Projections of adult social care demand and expenditure 2018 to 2038. *Care Policy and Evaluation Centre: London, UK*.
- Humphries, R. (2022). *Ending the social care crisis: A new road to reform*. Policy Press.
- Igel, C., & Szydlik, M. (2011). Grandchild care and welfare state arrangements in Europe. *Journal of European Social Policy*, 21(3), 210-224.
- Kaschowitz, J., & Brandt, M. (2017). Health effects of informal caregiving across Europe: A longitudinal approach. *Social science & medicine*, 173, 72-80.
- Keating, N. C., Fast, J. E., Lero, D. S., Lucas, S. J., & Eales, J. (2014). A taxonomy of the economic costs of family care to adults. *The Journal of the Economics of Ageing*, 3, 11-20.
- Kahn, J. R., McGill, B. S., & Bianchi, S. M. (2011). Help to family and friends: Are there gender differences at older ages?. *Journal of Marriage and Family*, 73(1), 77-92.
- Koreshi, S. Y., & Alpass, F. (2023). Becoming an informal care-giver: the role of work status incongruence. *Ageing & Society*, 43(12), 2912-2929.
- Laxton, S., Moriarty, C., Sapiets, S. J., Hastings, R. P., & Totsika, V. (2024). Neighbourhood deprivation and access to early intervention and support for families of children with intellectual and developmental disabilities. *Journal of Policy and Practice in Intellectual Disabilities*, 21(2), e12486.
- Leitner, S. (2003). Varieties of familialism: The caring function of the family in comparative perspective. *European societies*, 5(4), 353-375.
- Leopold, T., Raab, M., & Engelhardt, H. (2014). The transition to parent care: Costs, commitments, and caregiver selection among children. *Journal of Marriage and Family*, 76(2), 300-318.
- Maestas, N., Messel, M., & Truskinovsky, Y. (2024). Caregiving and labor supply: New evidence from administrative data. *Journal of Labor Economics*, 42(S1), S183-S218.
- McCann, M., Donnelly, M., & O'Reilly, D. (2011). Living arrangements, relationship to people in the household and admission to care homes for older people. *Age and ageing*, 40(3), 358-363.

Ministry of Housing, Communities and Local Government. (2015). *The English indices of deprivation 2015*. UK Government. <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

Ministry of Housing, Communities and Local Government. (2019). *The English indices of deprivation 2019 (IoD2019)*. UK Government. <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>

Muramatsu, N., & Campbell, R. T. (2002). State expenditures on home and community based services and use of formal and informal personal assistance: a multilevel analysis. *Journal of Health & Social Behavior*, 43(1).

Neal, M. B., Ingersoll-Dayton, B., & Starrels, M. E. (1997). Gender and relationship differences in caregiving patterns and consequences among employed caregivers. *The Gerontologist*, 37(6), 804-816.

O'Reilly, D., Connolly, S., Rosato, M., & Patterson, C. (2008). Is caring associated with an increased risk of mortality? A longitudinal study. *Social science & medicine*, 67(8), 1282-1290.

Oaxaca, R. (1973). Male-female wage differentials in urban labor markets. *International economic review*, 693-709.

Office for Health Improvement and Disparities (2025) *Palliative and end of life care profiles*. Office for Health Improvement and Disparities. <https://fingertips.phe.org.uk/profile/end-of-life/data#page/4/gid/1938133060/ati/402/iid/92490/age/162/sex/4/cat/-1/ctp/-1/yr/1/cid/4/tbm/1>

ONS (2022). *Health state life expectancies by Index of Multiple Deprivation (IMD): 2018 to 2020*. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthinequalities/bulletins/healthstatelifeexpectanciesbyindexofmultipledeprivationimd/2018to2020>

ONS (2023). *Unpaid care by age, sex and deprivation, England and Wales: Census 2021*. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/socialcare/articles/unpaidcarebyagesexanddeprivationenglandandwales/census2021>

ONS (2023a) *Unpaid care, England and Wales: Census 2021*. Office for National Statistics.

ONS (2003b). *Analysis of social characteristics of international migrants living in England and Wales: Census 2021.*

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/analysisofsocialcharacteristicsofinternationalmigrantslivinginenglandandwales/latest>

ONS. (2026). *CPIH Index 00: All items 2015 = 100 (L522)* [Data set]. Consumer price inflation time series (MM23). <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l522/mm23>

Patterson, S. E., & Margolis, R. (2019). The demography of multigenerational caregiving: A critical aspect of the gendered life course. *Socius*, 5, 2378023119862737.

Petrillo, M., & Bennett, M. R. (2023). *Valuing Carers 2021: England and Wales.*

Petrillo, M., Valdenegro, D., Rahal, C., Zhang, Y., Pryce, G., & Bennett, M. R. (2024). Estimating the cost of informal care with a novel two-stage approach to individual synthetic control. *arXiv preprint arXiv:2411.10314*.

Petrillo, M., Rodrigues, R., Bennett, M., & Pryce, G. (2026). The gendered landscape of informal caregiving: cohort effects and socioeconomic inequalities in England. *Social science & Medicine*.

Pezzin, L. E., & Schone, B. S. (1999). Intergenerational household formation, female labor supply and informal caregiving: A bargaining approach. *Journal of Human Resources*, 475-503.

Phillips, D., Sibieta, L., Warner, M., & Zaranko, B. (2022). *Does funding follow need? An analysis of the geographic distribution of public spending in England* (IFS Report No. R224). Institute for Fiscal Studies. <https://hdl.handle.net/10419/273004>

Pickard, L. (2012). Substitution between formal and informal care: a 'natural experiment' in social policy in Britain between 1985 and 2000. *Ageing & Society*, 32(7), 1147-1175.

Pierre-Carl, M., Heitmueller, A., & Nazarov, Z. (2010). "A dynamic analysis of informal care and employment in England." *Labour Economics* 17, no. 3 (2010): 455-465.

Pinquart, M., & Sörensen, S. (2003). Differences between caregivers and noncaregivers in psychological health and physical health: a meta-analysis. *Psychology and aging*, 18(2), 250.

- Pomeroy, E., & Fiori, F. (2025). Competing demands on adult children: How do they shape their provision of informal care?. *SSM-Population Health*, 29, 101754.
- Raiber, K., Verbakel, E., & de Boer, A. (2022). Testing the informal care model: intrapersonal change in care provision intensity during the first lockdown of the COVID-19 pandemic. *European journal of ageing*, 19(4), 1287-1300.
- Ramsay, S., Grundy, E., & O'Reilly, D. (2013). The relationship between informal caregiving and mortality: an analysis using the ONS Longitudinal Study of England and Wales. *J Epidemiol Community Health*, 67(8), 655-660.
- Razavi, S. (2007). The political and social economy of care in a development context: Conceptual issues, research questions and policy options. *Trabajo y empleo*.
- Robards, J., Vlachantoni, A., Evandrou, M., & Falkingham, J. (2015). Informal caring in England and Wales—stability and transition between 2001 and 2011. *Advances in Life Course Research*, 24, 21-33.
- Rodrigues, R., & Ilinca, S. (2021). How does she do it all? Effects of education on reconciliation of employment and informal caregiving among Austrian women. *Social Policy & Administration*, 55(7), 1162-1180.
- Saloniki, E. C., Nizalova, O., Malisauskaite, G., & Forder, J. E. (2019). The impact of formal care on informal care for people over 75 in England.
- Suanet, B., Van Groenou, M. B., & Van Tilburg, T. (2012). Informal and formal home-care use among older adults in Europe: can cross-national differences be explained by societal context and composition?. *Ageing & Society*, 32(3), 491-515.
- Verbakel, E. (2018). How to understand informal caregiving patterns in Europe? The role of formal long-term care provisions and family care norms. *Scandinavian journal of public health*, 46(4), 436-447.
- Victor, C. R., Dobbs, C., Gilhooly, K., & Burholt, V. (2019). Exploring intergenerational, intra-generational and transnational patterns of family caring in minority ethnic communities: the example of England and Wales. *International Journal of Care and Caring*, 3(1), 75-96.
- Vlachantoni, A., Wang, N., Feng, Z., & Falkingham, J. (2019). Informal caring in mid-life and its economic consequences. *Ageing & Society*, 39(3), 574–596.

- Wells, W., Xue, B., Lacey, R., & McMunn, A. (2025). Differences by ethnicity in the association between unpaid caring and health trajectories over 10 years in the UK Household Longitudinal Study. *J Epidemiol Community Health*, 79(2), 94-101.
- Young, H., Grundy, E., & Kalogirou, S. (2005). Who cares? Geographic variation in unpaid caregiving in England and Wales: evidence from the 2001 Census. *Population trends*, 120, 23-34.
- Yun, M. S. (2004). Decomposing differences in the first moment. *Economics letters*, 82(2), 275-280.
- Zhang, J., Petrillo, M., Bennett, M. R., & Pryce, G. (2026). Declining demands or constraining supply? Explaining the trend of care home entry in England 2001-2021. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, gbag104.
- Zhang, Y., Bennett, M. R., & Yeandle, S. (2021). Longitudinal analysis of local government spending on adult social care and carers' subjective well-being in England. *BMJ open*, 11(12), e049652.
- Zhang, Y., & Bennett, M. R. (2024). Insights into informal caregivers' well-being: a longitudinal analysis of care intensity, care location, and care relationship. *The Journals of Gerontology: Series B*, 79(2), gbad166.
- Zigante, V., Fernandez, J. L., & Mazzotta, F. (2021). Changes in the balance between formal and informal care supply in England between 2001 and 2011: evidence from census data. *Health Economics, Policy and Law*, 16(2), 232-249.
- Zueras, P., & Grundy, E. (2024). Assessing the impact of caregiving for older parents on caregivers' health: Initial health status and trajectories of physical and mental health among midlife caregivers for parents and parents-in-law in Britain. *Social Science & Medicine*, 342, 116537.

Supplementary Information

Methodological Details

The Fairlie method decomposes differences in the probability of transitioning into caregiving or engaging in repeated caregiving between two time points into (i) a component attributable to changes in observed characteristics (the composition effect) and (ii) an unexplained component reflecting changes in coefficients due to changes in the associations between informal care provision and those characteristics (coefficient effect). Unlike the Blinder–Oaxaca decomposition method, the Fairlie approach decomposes differences in average predicted probabilities rather than differences in mean outcomes. It uses estimates from logit regression models, which provide more interpretable and accurate results when the outcome variable is binary.

Formally, the differences in the average likelihood of informal care provision in 2011 ($i = B$) and in 2021 ($i = A$) can be expressed as follows:

$$\bar{Y}_A - \bar{Y}_B = \left[\frac{1}{N_A} \sum_{i=1}^{N_A} F(X_{i,A} \hat{\beta}_B) - \frac{1}{N_B} \sum_{i=1}^{N_B} F(X_{i,B} \hat{\beta}_B) \right] + \left[\frac{1}{N_A} \sum_{i=1}^{N_A} F(X_{i,A} \hat{\beta}_A) - \frac{1}{N_A} \sum_{i=1}^{N_A} F(X_{i,A} \hat{\beta}_B) \right]$$

where Y denotes the probability of entering into informal caregiving/ being a repeated carer, F is the cumulative distribution function of the non-linear model, X_i is a vector of observed characteristics, $\hat{\beta}_i$ is a vector of estimated coefficients, and N denotes the sample size. The first term on the right-hand side is the composition component that measures the difference in the outcome due to changes in the observed characteristics (X_i) between the two periods (2001-2011 versus 2011-2021), holding the effect of those characteristics ($\hat{\beta}_i$) constant. The second term on the right-hand side is the coefficient effect measuring the difference in the outcome due to changes in the estimated coefficient ($\hat{\beta}_i$), holding the characteristics (X_i) constant.

Table S.1: Sample selection process- transitioning into informal caregiving

	2011-2021	2001-2011
Exclusion reason	N (after exclusion)	N (after exclusion)
(Original sample size)		
Present in both censuses and usual residents	466,898	419,660
Live in England	441,731	395,809
Not providing care at t0	393,570	353,545
Aged 16-75	296,737	262,095
No missing values	293,336	257,308
Final sample size	293,336	257,308

Note: t1 is the start of the period; t2 is the end of the period. Because the ONS-LS is Census-based, its coverage reflects Census participation rates, which were high across all waves, with response rates of approximately 94% in 2001 and 2011 and 97% in 2021 in England and Wales (ONS, 2023).

Data source: ONS LS

Table S.2: Sample selection process- repeated informal caregiving

	2011-2021	2001-2011
Exclusion reason	N (after exclusion)	N (after exclusion)
(Original sample size)		
Present in both censuses and usual residents	466,898	419,660
Live in England	441,731	395,809
providing care at t0	48,161	42,260
Aged 16-75	45,602	40,400
No missing values	45,477	40,023

Final sample size

45,477

40,023

Note: t1 is the start of the period; t2 is the end of the period. Because the ONS-LS is Census-based, its coverage reflects Census participation rates, which were high across all waves, with response rates of approximately 94% in 2001 and 2011 and 97% in 2021 in England and Wales (ONS, 2023).

Data source: ONS LS

Table S.3: Variable definitions

Variable	Definition	Source
Care status	Provision of informal care: 1 = Not a carer 2 = 1-19 hours a week 3 = 20-49 hours a week 4 = 50 or more hours a week	help11, help0
Age	Biological age. If there are inconsistencies across years, the information of the more recent year was used.	agep21 agep11 agep0
Sex	1= men; 2=women	sex
Ethnicity	Ethnicity 1 "White" 2 "Other White" 3 "Mixed" 4 "South Asian" 5 "Black" 6 "Other"	ethgrp11, ethgrp0

Household type	Household composition: 1 "not partnered" = one-person household 2 "with spouse" = all aged 66 and over, married/civil partnership/cohabiting couple without children 3 "with spouse and children" = married/civil partnership/cohabiting couple with children 4 "with children" = lone parent with children 5 " Other household type " = multiple-family household and other family composition	hhch11, hhch0
Health status	Self-reported general health in 2011 and 2001. In 2011, the variable is a 5-point Likert scale yet in 2001, it is a 3-point Likert scale. To ensure comparability, we convert the variable from 2011 into 3 levels by combining very good and good into good, and combining very bad and bad into bad: 1 = good 2 = fair 3 = not good	heap11, heap0
Education	Highest level of qualification. 0 = No academic or professional qualifications 1 = Level 1 (O levels/ CSE/ GCSEs/ Entry level) 2 = Level 2 (5 O level/ CSES -Grade 1/ gcsesS- gRADE A*-C) 3= Level 3 (2+A Level / VCEs/ 4+ AS level/ Higher School) 4= Level 4 (Degree- BA, BSc/ Higher Degree - MA, PhD, PGCE/ NVQ/ level 4-5) 5= Apprenticeship/other	hlqp11, hlqp21
Marital status change	1 = partnered (married/same-sex civil partnership) 0 = not partnered (never married; separated; divorced; widowed; same-sex civil partnership dissolved or a surviving partner)	mstp11, mstp0

Tenure	<p>Housing tenure:</p> <p>1 = owns outright</p> <p>2= partly own (owns with a mortgage or loan/ shared ownership)</p> <p>3 = not own (social/private rented/ lives rent free)</p>	tenh11, tenh0
Care home beds %	crude rate of care bed per 100 people aged 75+ in 2021 and 2011	crude_rate_2011, crude_rate_2021
Economic Activity	<p>=0 employed FT</p> <p>=1 employed PT</p> <p>=2 seeking work</p> <p>=3 Economically inactive</p> <p>=4 Student</p> <p>=5 Other</p>	ECOP0 ECOP11 ECOP21
Current Gross Expenditure	Current gross expenditure in adult social care per capita inflation adjected (CPI)	<p>CGE_2011 CGE_2021</p> <p>CGEpc21 CGEpc11</p> <p>CGEpcreal_21</p> <p>CGEpcreal_11 cpi_2011</p> <p>cpi_2021</p>
IMD-Deprived	A population average of the combined scores for the Lower Layer Super Output Areas in larger area. The average score summery measure is calculated by averaging the LSOA in scores in each larger area after they have been population weighted	IMD_11 IMD_21 deprived11 deprived21

Data source: ONS LS, CQC, ASC, Department for Levelling Up Housing and Communities.

Table S.4: Number and percentage of individuals by caring status in 2001, 2011 and 2021.

Description	2001	2011	2021	N	perc
a) Caring at 2001, 2011 and 2021					
	No	No	No	154322	69.1
	No	No	Yes	17488	7.8
	No	Yes	No	17778	8.0
	No	Yes	Yes	7119	3.2
	Yes	No	No	14221	6.4
	Yes	No	Yes	2208	1.0
	Yes	Yes	No	6345	2.8
	Yes	Yes	Yes	3906	1.7
b) Caring in 2011 and 2021					
	No	No		168543	75.4
	No	Yes		19696	8.8
	Yes	No		24123	10.8
	Yes	Yes		11025	4.9

c) Caring in 2001 and 2011	No	No	171810	76.9
	No	Yes	24897	11.1
	Yes	No	16429	7.4
	Yes	Yes	10251	4.6
d) Caring in 2001 and 2021	No	No	172100	77.0
	No	Yes	24607	11.0
	Yes	No	20566	9.2
	Yes	Yes	6114	2.7

Data source: ONS LS

Table S.5: Number and percentage of informal care in 2001, 2011 and 2021 by care intensity

Description	2001	2011	2021	N	perc
a) Caring at 2001, 2011 and 2021					
	Low	Low	Low	937	24.0
	Low	Low	Medium	239	6.1
	Low	Low	High	228	5.8
	Low	Medium	Low	79	2.0
	Low	Medium	Medium	108	2.8
	Low	Medium	High	120	3.1
	Low	High	Low	47	1.2

	Low	High	Medium	73	1.9
	Low	High	High	241	6.2
	Medium	Low	Low	88	2.3
	Medium	Low	Medium	42	1.1
	Medium	Low	High	42	1.1
	Medium	Medium	Low	34	0.9
	Medium	Medium	Medium	75	1.9
	Medium	Medium	High	67	1.7
	Medium	High	Low	26	0.7
	Medium	High	Medium	43	1.1
	Medium	High	High	148	3.8
	High	Low	Low	78	2.0
	High	Low	Medium	31	0.8
	High	Low	High	53	1.4
	High	Medium	Low	37	0.9
	High	Medium	Medium	64	1.6
	High	Medium	High	90	2.3
	High	High	Low	78	2.0
	High	High	Medium	115	2.9
	High	High	High	723	18.5
Total caring at 2001, 2011 and 2021				3906	

b) Caring in 2011 and 2021		Low	Low	3932	35.7
		Low	Medium	1024	9.3
		Low	High	1109	10.1
		Medium	Low	449	4.1
		Medium	Medium	568	5.2
		Medium	High	672	6.1
		High	Low	382	3.5
		High	Medium	571	5.2
		High	High	2318	21.0
Total caring at 2011 and 2021				11025	
c) Caring in 2001 and 2011		Low	Low	5105	49.8
		Low	Medium	828	8.1
		Low	High	770	7.5
		Medium	Low	433	4.2
		Medium	Medium	335	3.3
		Medium	High	409	4.0
		High	Low	372	3.6
		High	Medium	1509	14.7
		High	High	490	4.8
Total caring at 2001 and 2011				10251	
d) Caring in 2001 and 2021		Low	Low	2062	33.7

	Low	Medium	696	11.4
	Low	High	990	16.2
	Medium	Low	235	3.8
	Medium	Medium	223	3.6
	Medium	High	342	5.6
	High	Low	286	4.7
	High	Medium	273	4.5
	High	High	1007	16.5
Total caring at 2001 and 2021			6114	

Data source: ONS LS

Table S.6: Descriptive statistics - transitioning into informal caregiving

	year 2001-2011			year 2011-2021			Total		
	Transition into care			Transition into care			Transition into care		
	No	Yes	Total	No	Yes	Total	No	Yes	Total
Observations	225,806	31,502	257,308	266,417	26,919	293,336	492,223	58,421	550,644
Gender									
Male	49.30%	42.10%	48.40%	49.20%	39.70%	48.40%	49.20%	41.00%	48.40%
	111,260	13,273	124,533	131,151	10,694	141,845	242,411	23,967	266,378
Female	50.70%	57.90%	51.60%	50.80%	60.30%	51.60%	50.80%	59.00%	51.60%
	114,546	18,229	132,775	135,266	16,225	151,491	249,812	34,454	284,266
Age									
16-25	17.30%	9.30%	16.30%	18.00%	12.40%	17.50%	17.70%	10.70%	17.00%
	39,100	2,945	42,045	48,015	3,334	51,349	87,115	6,279	93,394
26-35	22.10%	17.90%	21.60%	18.90%	16.30%	18.60%	20.30%	17.20%	20.00%
	49,822	5,646	55,468	50,292	4,376	54,668	100,114	10,022	110,136
36-45	21.20%	28.40%	22.10%	20.60%	25.80%	21.10%	20.90%	27.20%	21.60%
	47,859	8,960	56,819	54,897	6,952	61,849	102,756	15,912	118,668
46-55	17.50%	24.20%	18.30%	18.00%	25.10%	18.60%	17.70%	24.60%	18.50%
	39,439	7,630	47,069	47,881	6,769	54,650	87,320	14,399	101,719
56-65	13.50%	12.90%	13.40%	15.10%	12.50%	14.80%	14.30%	12.70%	14.20%

	30,434	4,059	34,493	40,158	3,372	43,530	70,592	7,431	78,023
66-75	8.50%	7.20%	8.30%	9.40%	7.90%	9.30%	9.00%	7.50%	8.80%
	19,152	2,262	21,414	25,174	2,116	27,290	44,326	4,378	48,704
Ethnicity									
White British	87.70%	88.70%	87.80%	80.40%	83.60%	80.70%	83.80%	86.40%	84.00%
	198,073	27,955	226,028	214,197	22,516	236,713	412,270	50,471	462,741
White Other	3.50%	2.70%	3.40%	5.00%	3.40%	4.90%	4.30%	3.00%	4.20%
	7,922	848	8,770	13,362	928	14,290	21,284	1,776	23,060
Mixed	0.80%	0.70%	0.80%	1.40%	1.30%	1.40%	1.10%	1.00%	1.10%
	1,871	217	2,088	3,721	343	4,064	5,592	560	6,152
South Asian	4.80%	5.10%	4.80%	7.00%	6.60%	7.00%	6.00%	5.80%	6.00%
	10,776	1,621	12,397	18,635	1,773	20,408	29,411	3,394	32,805
Black	1.80%	1.60%	1.80%	3.20%	2.70%	3.10%	2.60%	2.10%	2.50%
	4,160	504	4,664	8,437	736	9,173	12,597	1,240	13,837
Other	1.30%	1.10%	1.30%	3.00%	2.30%	3.00%	2.20%	1.70%	2.20%
	3,004	357	3,361	8,065	623	8,688	11,069	980	12,049
Household type									
Not partnered	12.30%	7.80%	11.70%	12.60%	8.50%	12.20%	12.50%	8.10%	12.00%
	27,715	2,470	30,185	33,602	2,277	35,879	61,317	4,747	66,064
With spouse	26.90%	29.40%	27.20%	25.50%	25.90%	25.60%	26.20%	27.80%	26.30%
	60,775	9,246	70,021	68,036	6,969	75,005	128,811	16,215	145,026
With spouse and children	43.70%	45.70%	44.00%	41.00%	43.40%	41.20%	42.20%	44.60%	42.50%
	98,700	14,390	113,090	109,199	11,690	120,889	207,899	26,080	233,979

with children	8.00%	8.80%	8.10%	9.40%	11.90%	9.60%	8.70%	10.20%	8.90%
	18,000	2,760	20,760	25,019	3,193	28,212	43,019	5,953	48,972
Other	9.10%	8.40%	9.00%	11.50%	10.40%	11.40%	10.40%	9.30%	10.30%
	20,616	2,636	23,252	30,561	2,790	33,351	51,177	5,426	56,603
Marital status									
Not married	47.20%	35.30%	45.80%	51.10%	43.90%	50.40%	49.30%	39.30%	48.30%
	106,670	11,109	117,779	136,125	11,822	147,947	242,795	22,931	265,726
Married	52.80%	64.70%	54.20%	48.90%	56.10%	49.60%	50.70%	60.70%	51.70%
	119,136	20,393	139,529	130,292	15,097	145,389	249,428	35,490	284,918
Education									
No qualification	27.80%	24.70%	27.40%	17.30%	16.30%	17.20%	22.10%	20.80%	22.00%
	62,663	7,783	70,446	46,182	4,384	50,566	108,845	12,167	121,012
Level 1	17.70%	19.10%	17.90%	14.70%	15.70%	14.80%	16.10%	17.60%	16.20%
	40,054	6,027	46,081	39,085	4,231	43,316	79,139	10,258	89,397
Level 2	20.30%	20.40%	20.30%	16.40%	17.60%	16.50%	18.20%	19.10%	18.30%
	45,865	6,412	52,277	43,629	4,728	48,357	89,494	11,140	100,634
Level 3	8.10%	7.50%	8.00%	13.50%	13.40%	13.50%	11.00%	10.20%	10.90%
	18,293	2,368	20,661	35,898	3,607	39,505	54,191	5,975	60,166
Level 4	19.50%	21.20%	19.70%	29.10%	29.40%	29.10%	24.70%	25.00%	24.70%
	44,023	6,685	50,708	77,559	7,920	85,479	121,582	14,605	136,187
Other/Apprenticeship	6.60%	7.10%	6.70%	9.00%	7.60%	8.90%	7.90%	7.30%	7.90%
	14,908	2,227	17,135	24,064	2,049	26,113	38,972	4,276	43,248
Tenure									

own outright	24.80%	26.70%	25.00%	25.20%	25.50%	25.20%	25.00%	26.10%	25.10%
	55,965	8,407	64,372	67,017	6,852	73,869	122,982	15,259	138,241
partly own	51.70%	52.40%	51.80%	44.90%	45.30%	44.90%	48.00%	49.10%	48.10%
	116,785	16,499	133,284	119,653	12,185	131,838	236,438	28,684	265,122
not own	23.50%	20.90%	23.20%	29.90%	29.30%	29.90%	27.00%	24.80%	26.70%
	53,056	6,596	59,652	79,747	7,882	87,629	132,803	14,478	147,281
Health									
Good	70.10%	67.10%	69.70%	84.40%	82.60%	84.20%	77.80%	74.20%	77.40%
	158,184	21,123	179,307	224,836	22,225	247,061	383,020	43,348	426,368
Fair	22.40%	25.20%	22.80%	11.50%	13.30%	11.60%	16.50%	19.70%	16.80%
	50,651	7,926	58,577	30,508	3,578	34,086	81,159	11,504	92,663
Not good	7.50%	7.80%	7.50%	4.20%	4.10%	4.20%	5.70%	6.10%	5.70%
	16,971	2,453	19,424	11,073	1,116	12,189	28,044	3,569	31,613
Economic Activity									
Employed PT	16.10%	19.70%	16.50%	19.50%	22.10%	19.70%	17.90%	20.80%	18.20%
	36,261	6,198	42,459	51,926	5,953	57,879	88,187	12,151	100,338
Employed FT	51.40%	49.30%	51.10%	49.10%	47.40%	49.00%	50.20%	48.40%	50.00%
	116,054	15,535	131,589	130,929	12,752	143,681	246,983	28,287	275,270
Seeking work/waiting to start	3.30%	3.10%	3.30%	4.80%	5.10%	4.80%	4.10%	4.00%	4.10%
	7,445	967	8,412	12,696	1,380	14,076	20,141	2,347	22,488
Economically inactive	22.40%	23.00%	22.50%	19.90%	20.40%	20.00%	21.10%	21.80%	21.10%
	50,614	7,248	57,862	53,088	5,479	58,567	103,702	12,727	116,429
Student	4.00%	2.10%	3.80%	4.80%	2.90%	4.60%	4.50%	2.40%	4.20%

	9,104	652	9,756	12,813	779	13,592	21,917	1,431	23,348
Other	2.80%	2.90%	2.80%	1.90%	2.10%	1.90%	2.30%	2.50%	2.30%
	6,328	902	7,230	4,965	576	5,541	11,293	1,478	12,771
Care home beds (%) (mean)	10.707	10.733	10.710	9.371	9.416	9.375	9.984	10.126	9.999
	1.905	1.897	1.904	1.839	1.780	1.834	1.985	1.957	1.982
GCE per capita (mean)	0.346	0.345	0.346	0.350	0.352	0.350	0.348	0.348	0.348
	0.041	0.040	0.041	0.050	0.051	0.050	0.046	0.045	0.046
IMD-deprived									
Not deprived	53.20%	53.30%	53.30%	52.40%	50.80%	52.20%	52.80%	52.10%	52.70%
Deprived	46.80%	46.70%	46.70%	47.60%	49.20%	47.80%	47.20%	47.90%	47.30%

Note: SD= standard deviation. Percentages with frequencies in parentheses are reported for all variables except care home beds and GCE per capita, for which means and SD are reported. To compare the differences in variable distribution across two periods, t-tests and Chi-squared tests were conducted for continuous variables and categorical variables, respectively. The resulting P-values are reported in the last column.

Data source: ONS LS, CQC, ASC Expenditure, IMD.

Table S.7: Descriptive statistics - repeated informal caregiving

	Transition into care			Transition into care			Transition into care		
	No	Yes	Total	No	Yes	Total	No	Yes	Total
	25,903	14,120	40,023	32,062	13,415	45,477	57,965	27,535	85,500
Gender									
Male	41.80%	38.30%	40.50%	40.90%	36.30%	39.60%	41.30%	37.30%	40.00%
	10,816	5,402	16,218	13,121	4,871	17,992	23,937	10,273	34,210
Female	58.20%	61.70%	59.50%	59.10%	63.70%	60.40%	58.70%	62.70%	60.00%
	15,087	8,718	23,805	18,941	8,544	27,485	34,028	17,262	51,290

Age									
16-25	6.20%	3.70%	5.30%	6.90%	4.70%	6.20%	6.60%	4.20%	5.80%
	1,614	527	2,141	2,208	631	2,839	3,822	1,158	4,980
26-35	11.60%	11.70%	11.60%	9.10%	11.40%	9.80%	10.20%	11.60%	10.70%
	2,998	1,658	4,656	2,931	1,527	4,458	5,929	3,185	9,114
36-45	19.00%	25.60%	21.30%	16.20%	22.90%	18.20%	17.50%	24.30%	19.70%
	4,917	3,619	8,536	5,210	3,074	8,284	10,127	6,693	16,820
46-55	28.60%	32.10%	29.90%	26.90%	31.40%	28.30%	27.70%	31.80%	29.00%
	7,418	4,536	11,954	8,636	4,215	12,851	16,054	8,751	24,805
56-65	23.50%	19.80%	22.20%	27.40%	20.70%	25.40%	25.70%	20.30%	23.90%
	6,093	2,798	8,891	8,793	2,780	11,573	14,886	5,578	20,464
66-75	11.10%	7.00%	9.60%	13.40%	8.90%	12.00%	12.30%	7.90%	10.90%
	2,863	982	3,845	4,284	1,188	5,472	7,147	2,170	9,317
Ethnicity									
White British	89.20%	89.50%	89.30%	84.20%	83.10%	83.80%	86.40%	86.30%	86.40%
	23,101	12,632	35,733	26,987	11,144	38,131	50,088	23,776	73,864
White Other	2.70%	2.80%	2.70%	3.10%	3.30%	3.10%	2.90%	3.00%	2.90%
	695	392	1,087	982	441	1,423	1,677	833	2,510
Mixed	0.60%	0.50%	0.50%	1.00%	1.20%	1.00%	0.80%	0.80%	0.80%
	143	66	209	319	156	475	462	222	684
South Asian	5.30%	5.30%	5.30%	7.30%	7.70%	7.40%	6.40%	6.50%	6.40%
	1,370	749	2,119	2,328	1,039	3,367	3,698	1,788	5,486
Black	1.20%	1.20%	1.20%	2.30%	2.30%	2.30%	1.80%	1.70%	1.80%
	316	167	483	723	309	1,032	1,039	476	1,515
Other	1.10%	0.80%	1.00%	2.30%	2.40%	2.30%	1.70%	1.60%	1.70%
	278	114	392	723	326	1,049	1,001	440	1,441

Household type									
Not partnered	9.20%	6.00%	8.00%	10.10%	6.40%	9.00%	9.70%	6.20%	8.60%
	2,380	841	3,221	3,238	859	4,097	5,618	1,700	7,318
With spouse	35.10%	32.20%	34.00%	33.90%	28.40%	32.30%	34.40%	30.30%	33.10%
	9,081	4,543	13,624	10,867	3,812	14,679	19,948	8,355	28,303
With spouse and children	36.80%	44.40%	39.50%	34.60%	42.90%	37.10%	35.60%	43.70%	38.20%
	9,531	6,273	15,804	11,106	5,757	16,863	20,637	12,030	32,667
with children	8.10%	8.10%	8.10%	9.90%	11.50%	10.40%	9.10%	9.70%	9.30%
	2,105	1,137	3,242	3,183	1,538	4,721	5,288	2,675	7,963
Other	10.80%	9.40%	10.30%	11.40%	10.80%	11.30%	11.20%	10.10%	10.80%
	2,806	1,326	4,132	3,668	1,449	5,117	6,474	2,775	9,249
Marital status									
Not married	31.80%	25.70%	29.60%	36.60%	32.90%	35.50%	34.40%	29.20%	32.80%
	8,228	3,629	11,857	11,731	4,414	16,145	19,959	8,043	28,002
Married	68.20%	74.30%	70.40%	63.40%	67.10%	64.50%	65.60%	70.80%	67.20%
	17,675	10,491	28,166	20,331	9,001	29,332	38,006	19,492	57,498
Education									
No qualification	31.20%	27.40%	29.80%	17.90%	18.40%	18.10%	23.90%	23.00%	23.60%
	8,079	3,867	11,946	5,752	2,472	8,224	13,831	6,339	20,170
Level 1	16.40%	17.00%	16.60%	15.00%	14.70%	14.90%	15.60%	15.90%	15.70%
	4,260	2,399	6,659	4,799	1,966	6,765	9,059	4,365	13,424
Level 2	18.10%	19.50%	18.60%	15.80%	16.70%	16.00%	16.80%	18.10%	17.20%
	4,676	2,755	7,431	5,061	2,238	7,299	9,737	4,993	14,730
Level 3	6.00%	6.50%	6.20%	11.90%	12.80%	12.10%	9.20%	9.60%	9.30%
	1,547	917	2,464	3,807	1,714	5,521	5,354	2,631	7,985

Level 4	18.90%	20.70%	19.50%	30.00%	29.50%	29.80%	25.00%	25.00%	25.00%
	4,894	2,921	7,815	9,606	3,955	13,561	14,500	6,876	21,376
Other/Apprenticeship	9.40%	8.90%	9.30%	9.50%	8.00%	9.00%	9.50%	8.50%	9.10%
	2,447	1,261	3,708	3,037	1,070	4,107	5,484	2,331	7,815
Tenure									
own outright	35.60%	31.80%	34.20%	38.20%	31.30%	36.20%	37.00%	31.50%	35.30%
	9,211	4,484	13,695	12,242	4,202	16,444	21,453	8,686	30,139
partly own	44.90%	47.70%	45.90%	39.00%	40.50%	39.40%	41.60%	44.20%	42.50%
	11,639	6,729	18,368	12,494	5,438	17,932	24,133	12,167	36,300
not own	19.50%	20.60%	19.90%	22.80%	28.10%	24.40%	21.40%	24.30%	22.30%
	5,053	2,907	7,960	7,326	3,775	11,101	12,379	6,682	19,061
Health									
Good	59.60%	56.90%	58.60%	77.90%	74.50%	76.90%	69.70%	65.40%	68.30%
	15,431	8,028	23,459	24,984	9,991	34,975	40,415	18,019	58,434
Fair	31.00%	32.80%	31.60%	17.30%	20.10%	18.10%	23.40%	26.60%	24.40%
	8,036	4,627	12,663	5,543	2,694	8,237	13,579	7,321	20,900
Not good	9.40%	10.40%	9.70%	4.80%	5.40%	5.00%	6.90%	8.00%	7.20%
	2,436	1,465	3,901	1,535	730	2,265	3,971	2,195	6,166
Economic Activity									
Employed PT	18.70%	20.40%	19.30%	21.80%	23.00%	22.20%	20.40%	21.70%	20.80%
	4,842	2,885	7,727	6,995	3,089	10,084	11,837	5,974	17,811
Employed FT	40.60%	39.80%	40.30%	39.00%	36.50%	38.30%	39.70%	38.20%	39.20%
	10,520	5,614	16,134	12,509	4,895	17,404	23,029	10,509	33,538
Seeking work/waiting to start	2.90%	2.40%	2.70%	3.70%	3.80%	3.70%	3.30%	3.10%	3.30%
	759	339	1,098	1,178	512	1,690	1,937	851	2,788

Economically inactive	34.00%	34.30%	34.10%	31.90%	32.80%	32.10%	32.80%	33.60%	33.10%
	8,814	4,842	13,656	10,213	4,399	14,612	19,027	9,241	28,268
Student	1.40%	0.90%	1.20%	1.80%	1.60%	1.80%	1.60%	1.20%	1.50%
	368	126	494	588	211	799	956	337	1,293
Other	2.30%	2.20%	2.30%	1.80%	2.30%	2.00%	2.00%	2.30%	2.10%
	600	314	914	579	309	888	1,179	623	1,802
Care home beds (%) (mean)	10.739	10.779	10.753	9.407	9.412	9.408	10.002	10.113	10.038
	1.869	1.879	1.873	1.794	1.812	1.800	1.945	1.969	1.953
CGE per capita (mean)	0.346	0.347	0.346	0.352	0.352	0.352	0.349	0.350	0.349
	0.040	0.040	0.040	0.051	0.052	0.051	0.046	0.046	0.046
IMD-deprived									
Not deprived	52.10%	50.10%	51.40%	52.20%	48.40%	51.10%	52.10%	49.30%	51.20%
Deprived	47.90%	49.90%	48.60%	47.80%	51.60%	48.90%	47.90%	50.70%	48.80%

Note: SD= standard deviation. Percentages with frequencies in parentheses are reported for all variables except care home beds and GCE per capita, for which means and SD are reported. To compare the differences in variable distribution across two periods, t-tests and Chi-squared tests were conducted for continuous variables and categorical variables, respectively. The resulting P-values are reported in the last column.
Data source: ONS LS, CQC, ASC Expenditure, IMD.

Table S.8: Logistic regression of informal care provision by year, 2001-2011 / 2011-2021 – transitioning into informal caregiving

	2001-2011	2011-2021
VARIABLES	odds ratio	odds ratio
Sex (ref= Male)	1.311***	1.440***
	(0.018)	(0.020)
Age (ref 16-25)		
26-35	1.381***	1.242***
	(0.042)	(0.037)

36-45	2.222***	1.761***
	(0.070)	(0.049)
46-55	2.323***	1.944***
	(0.089)	(0.052)
56-65	1.588***	1.101**
	(0.065)	(0.035)
66-75	1.433***	1.072+
	(0.066)	(0.042)
Ethnicity (ref British White)		
White other	0.721***	0.637***
	(0.027)	(0.025)
Mixed	0.903	0.902*
	(0.065)	(0.046)
South Asian	1.024	0.837***
	(0.038)	(0.025)
Black	0.826***	0.738***
	(0.043)	(0.036)
Other	0.775***	0.679***
	(0.045)	(0.030)
Household (ref no partnered)		
Live with partner only	1.401***	1.418***
	(0.044)	(0.044)

Live with both partner and children	1.338*** (0.038)	1.435*** (0.042)
Live with children only	1.730*** (0.052)	1.825*** (0.056)
Other household type	1.502*** (0.049)	1.500*** (0.048)
Married	1.329*** (0.029)	1.218*** (0.023)
Education (ref Level 4)		
No qualification	0.725*** (0.015)	0.885*** (0.020)
Level 1	0.966+ (0.019)	0.976 (0.024)
Level 2	0.986 (0.023)	1.040+ (0.024)
Level 3	1.014 (0.029)	1.032 (0.024)
Other/Apprenticeship	0.875*** (0.025)	0.890*** (0.028)
Tenure (ref Own outright)		
Partly own	0.874*** (0.015)	0.873*** (0.015)

Not own	0.937**	0.989
	(0.020)	(0.020)
Health (ref: Good)		
Fair	1.146***	1.193***
	(0.017)	(0.025)
Not good	1.061**	0.991
	(0.024)	(0.034)
Economic Activity (ref: inactive)		
Employed PT	1.046*	0.941*
	(0.021)	(0.023)
Employed FT	0.951*	0.917***
	(0.020)	(0.021)
Seeking work/waiting to start	1.078*	1.111**
	(0.037)	(0.042)
Student	0.854**	0.771***
	(0.042)	(0.037)
Other	1.057	1.105*
	(0.046)	(0.047)
Care home beds (%)		
	1.000	1.002
	(0.004)	(0.005)
CGE per capita (real)		
	1.019	1.211
	(0.212)	(0.188)

IMD-deprived LAD	1.052**	1.092***
	(0.018)	(0.019)
Constant	0.051***	0.039***
	(0.005)	(0.003)
Observations	257,308	293,336

Note: Odds ratios are presented with standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Data source: ONS LS, CQC, ASC Expenditure, IMD.

Table S.9: Logistic regression of informal care provision by gender and year, 2001-2011 / 2011-2021- transitioning into informal caregiving

	Male (2001-2011)	Male (2011-2021)	Female (2001-2011)	Female (2011-2021)
VARIABLES	odds ratio	odds ratio	odds ratio	odds ratio
Age (ref 16-25)				
26-35	1.513***	1.397***	1.316***	1.167***
	(0.070)	(0.069)	(0.049)	(0.041)
36-45	2.493***	2.082***	2.117***	1.629***
	(0.109)	(0.084)	(0.085)	(0.060)

46-55	2.676***	2.362***	2.187***	1.767***
	(0.143)	(0.108)	(0.105)	(0.060)
56-65	2.079***	1.560***	1.366***	0.893*
	(0.112)	(0.081)	(0.072)	(0.040)
66-75	2.289***	1.745***	1.076	0.817***
	(0.146)	(0.108)	(0.071)	(0.041)
Ethnicity (ref British White)				
White other	0.743***	0.714***	0.705***	0.603***
	(0.044)	(0.040)	(0.035)	(0.029)
Mixed	0.862	0.955	0.928	0.876*
	(0.116)	(0.082)	(0.083)	(0.057)
South Asian	1.118*	0.900*	0.953	0.803***
	(0.052)	(0.039)	(0.047)	(0.034)
Black	0.808**	0.726***	0.836**	0.751***
	(0.064)	(0.050)	(0.050)	(0.048)
Other	0.837+	0.771***	0.730***	0.632***
	(0.080)	(0.059)	(0.059)	(0.035)
Household (ref no partnered)				
Live with partner only	1.343***	1.435***	1.401***	1.388***
	(0.057)	(0.067)	(0.056)	(0.055)
Live with both partner and children	1.314***	1.453***	1.329***	1.407***
	(0.052)	(0.065)	(0.052)	(0.057)

Live with children only	2.022***	1.928***	1.621***	1.778***
	(0.106)	(0.105)	(0.062)	(0.066)
Other household type	1.440***	1.482***	1.519***	1.505***
	(0.067)	(0.070)	(0.065)	(0.064)
Married	1.219***	1.106***	1.386***	1.278***
	(0.036)	(0.030)	(0.040)	(0.033)
Education (ref Level 4)				
No qualification	0.777***	0.902**	0.696***	0.895***
	(0.020)	(0.029)	(0.019)	(0.030)
Level 1	0.983	0.968	0.956+	0.995
	(0.028)	(0.033)	(0.026)	(0.030)
Level 2	1.000	1.000	0.972	1.076*
	(0.029)	(0.032)	(0.030)	(0.032)
Level 3	1.015	1.012	1.009	1.047
	(0.044)	(0.035)	(0.039)	(0.030)
Other/Apprenticeship	0.857***	0.916*	0.905*	0.833***
	(0.032)	(0.038)	(0.037)	(0.039)
Tenure (ref Own outright)				
Partly own	0.817***	0.819***	0.922***	0.914***
	(0.018)	(0.020)	(0.022)	(0.021)
Not own	0.892***	0.906***	0.978	1.043
	(0.026)	(0.025)	(0.028)	(0.029)

Health (ref: Good)

Fair	1.122***	1.264***	1.163***	1.148***
	(0.025)	(0.039)	(0.026)	(0.033)
Not good	1.149***	1.203***	1.011	0.885*
	(0.040)	(0.058)	(0.032)	(0.043)

Economic Activity (ref: inactive)

Employed PT	1.090+	1.095+	1.003	0.876***
	(0.051)	(0.052)	(0.022)	(0.024)
Employed FT	1.047	1.078+	0.935**	0.880***
	(0.042)	(0.045)	(0.024)	(0.023)
Seeking work/waiting to start	1.152**	1.517***	1.048	0.916+
	(0.061)	(0.085)	(0.054)	(0.042)
Student	0.940	1.060	0.826**	0.669***
	(0.069)	(0.088)	(0.052)	(0.041)
Other	1.066	1.196*	1.072	1.074
	(0.080)	(0.095)	(0.053)	(0.061)

Care home beds (%)

1.001	0.998	1.000	1.004
(0.005)	(0.008)	(0.005)	(0.006)

CGE per capita (real)

1.061	1.523+	0.997	1.035
(0.268)	(0.343)	(0.258)	(0.187)

IMD-deprived LAD

1.061**	1.107***	1.045*	1.078***
(0.023)	(0.026)	(0.021)	(0.021)

Constant	0.044*** (0.005)	0.028*** (0.003)	0.072*** (0.008)	0.066*** (0.006)
Observations	124,533	141,845	132,775	151,491

Note: Odds ratios are presented with standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Data source: ONS LS, CQC, ASC Expenditure, IMD.

Table S.10: Multinomial logistic regression of informal care provision intensity (ref= Low intensity) and by year, 2001-2011 / 2011-2021 - Transitioning into informal caregiving

	Medium intensity 2011-2021	High Intensity 2011-2021	Medium Intensity 2001-2011	High Intensity 2001-2011
Sex	0.987 (0.039)	1.165*** (0.042)	1.014 (0.038)	1.077* (0.035)
Age (ref 16-25)				
26-35	1.118 (0.082)	0.945 (0.067)	1.018 (0.067)	1.041 (0.064)
36-45	0.926 (0.076)	0.567*** (0.041)	0.726*** (0.048)	0.610*** (0.038)
46-55	0.900 (0.083)	0.709*** (0.056)	0.712*** (0.045)	0.588*** (0.039)
56-65	1.071	1.249* (0.056)	0.743** (0.045)	1.178+ (0.039)

	(0.111)	(0.113)	(0.068)	(0.101)
66-75	1.460**	2.192***	0.859	1.829***
	(0.186)	(0.219)	(0.094)	(0.192)
Ethnicity (ref British White)				
White other	1.234*	1.015	1.483***	1.307**
	(0.117)	(0.099)	(0.135)	(0.106)
Mixed	1.008	0.662*	1.234	0.920
	(0.219)	(0.130)	(0.164)	(0.138)
South Asian	1.991***	1.305***	1.842***	1.002
	(0.182)	(0.102)	(0.134)	(0.079)
Black	1.218	0.965	1.880***	0.959
	(0.171)	(0.126)	(0.176)	(0.100)
Other	2.049***	1.458**	1.793***	1.096
	(0.293)	(0.180)	(0.201)	(0.122)
Household (ref no partnered)				
Live with partner only	1.595***	2.956***	1.136	2.295***
	(0.129)	(0.246)	(0.088)	(0.185)
Live with both partner and children	1.682***	2.562***	1.242*	1.941***
	(0.143)	(0.234)	(0.106)	(0.157)
Live with children only	1.953***	2.816***	1.310***	1.936***
	(0.171)	(0.235)	(0.093)	(0.140)
Other household type	1.879***	3.138***	1.245**	2.170***

	(0.179)	(0.287)	(0.106)	(0.181)
Married	0.907+	1.034	0.965	1.066
	(0.048)	(0.055)	(0.050)	(0.055)
Education (ref Level 4)				
No qualification	2.549***	2.868***	2.992***	3.005***
	(0.149)	(0.132)	(0.163)	(0.144)
Level 1	1.696***	1.648***	1.894***	1.767***
	(0.111)	(0.086)	(0.096)	(0.083)
Level 2	1.499***	1.349***	1.622***	1.494***
	(0.100)	(0.066)	(0.073)	(0.061)
Level 3	1.152+	1.123	1.257***	1.263***
	(0.093)	(0.086)	(0.066)	(0.072)
Other/Apprenticeship	1.941***	1.903***	2.022***	1.902***
	(0.164)	(0.132)	(0.131)	(0.115)
Tenure (ref Own outright)				
Partly own	0.899*	0.939	1.046	0.909*
	(0.044)	(0.041)	(0.056)	(0.041)
Not own	1.498***	1.848***	1.747***	1.729***
	(0.084)	(0.100)	(0.094)	(0.092)
Health (ref: Good)				
Fair	1.253***	1.315***	1.308***	1.344***
	(0.054)	(0.042)	(0.065)	(0.054)

Not good	1.309***	1.673***	1.339**	1.384***
	(0.089)	(0.091)	(0.128)	(0.122)
Economic Activity (ref: inactive)				
Employed PT	0.728***	0.570***	0.789***	0.577***
	(0.043)	(0.032)	(0.046)	(0.028)
Employed FT	0.755***	0.594***	0.761***	0.519***
	(0.040)	(0.026)	(0.041)	(0.025)
Seeking work/waiting to start	1.173+	0.906	1.059	0.884
	(0.108)	(0.071)	(0.085)	(0.067)
Student	0.698*	0.387***	0.780*	0.370***
	(0.099)	(0.054)	(0.083)	(0.042)
Other	1.134	0.980	1.231+	1.240*
	(0.112)	(0.087)	(0.141)	(0.132)
Care home beds (%)	0.988	1.010	1.018+	1.015
	(0.009)	(0.009)	(0.010)	(0.012)
CGE per capita (real)	1.341	1.425	1.520	1.249
	(0.631)	(0.632)	(0.452)	(0.454)
IMD-deprived LAD	1.237***	1.287***	1.267***	1.220***
	(0.055)	(0.048)	(0.047)	(0.045)
Constant	0.069***	0.057***	0.135***	0.174***
	(0.016)	(0.012)	(0.025)	(0.035)

Observations	31,502	31,502	26,919	26,919
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Note: Relative risk ratios are presented with standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Data source: ONS LS, CQC, ASC Expenditure, IMD.

Table S.11: Logistic regression by year, 2001-2011/ 2011-2021 - repeated informal caregiving provision

	2001-2011	2011-2021
VARIABLES	odds ratio	odds ratio
Sex	1.095***	1.128***
	(0.025)	(0.027)
Age (ref 16-25)		
26-35	1.499***	1.722***
	(0.096)	(0.108)
36-45	1.933***	1.909***
	(0.114)	(0.119)
46-55	1.642***	1.636***
	(0.099)	(0.104)
56-65	1.211**	1.039
	(0.077)	(0.068)
66-75	0.850*	0.847*
	(0.068)	(0.063)

Ethnicity (ref British White)

White other	1.006 (0.056)	1.038 (0.062)
Mixed	0.849 (0.129)	1.081 (0.101)
South Asian	0.948 (0.054)	0.886* (0.047)
Black	0.948 (0.081)	0.851* (0.059)
Other	0.674** (0.083)	0.917 (0.064)

Household (ref no partnered)

Live with partner only	1.279*** (0.069)	1.278*** (0.070)
Live with both partner and children	1.455*** (0.077)	1.542*** (0.084)
Live with children only	1.403*** (0.079)	1.578*** (0.086)
Other household type	1.205*** (0.063)	1.321*** (0.082)
Married	1.265*** (0.047)	1.258*** (0.041)

Education (ref Level 4)

No qualification	0.744*** (0.027)	0.951 (0.030)
Level 1	0.845*** (0.035)	0.858*** (0.030)
Level 2	0.949 (0.035)	0.981 (0.032)
Level 3	1.040 (0.051)	1.049 (0.036)
Other/Apprenticeship	0.836*** (0.036)	0.867** (0.042)

Tenure (ref Own outright)

Partly own	0.988 (0.027)	1.037 (0.028)
Not own	1.108** (0.041)	1.241*** (0.037)

Health (ref: Good)

Fair	1.155*** (0.029)	1.248*** (0.033)
Not good	1.178*** (0.046)	1.115* (0.053)

Economic Activity (ref: inactive)

Employed PT	0.850*** (0.030)	0.838*** (0.026)
Employed FT	0.797*** (0.025)	0.759*** (0.023)
Seeking work/waiting to start	0.721*** (0.045)	0.853** (0.051)
Student	0.697*** (0.074)	0.844* (0.072)
Other	0.843* (0.062)	1.026 (0.084)
Care home beds (%)	1.007 (0.008)	1.000 (0.007)
CGE per capita (real)	1.118 (0.320)	1.231 (0.275)
IMD-deprived LAD	1.078** (0.029)	1.120*** (0.027)
Constant	0.241*** (0.032)	0.170*** (0.021)
Observations	40,023	45,477

Note: Odds ratios are presented with standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Data source: ONS LS, CQC, ASC Expenditure, IMD

Table S.12: Logistic regression by gender and year, 2001-2011/ 2011-2021 - repeated informal caregiving

	Male 2001-2011	Male 2011-2021	Female 2001-2011	Female 2011-2021
VARIABLES	odds ratio	odds ratio	odds ratio	odds ratio
Age (ref 16-25)				
26-35	1.545*** (0.160)	1.478*** (0.158)	1.468*** (0.106)	1.861*** (0.142)
36-45	1.976*** (0.194)	1.723*** (0.179)	1.929*** (0.133)	2.008*** (0.152)
46-55	1.896*** (0.206)	1.521*** (0.164)	1.519*** (0.104)	1.702*** (0.136)
56-65	1.472*** (0.164)	1.133 (0.127)	1.076 (0.080)	0.969 (0.080)
66-75	1.218 (0.169)	0.963 (0.122)	0.645*** (0.062)	0.736*** (0.064)
Ethnicity (ref British White)				
White other	1.085 (0.104)	0.973 (0.096)	0.965 (0.084)	1.092 (0.076)
Mixed	0.900 (0.236)	1.162 (0.192)	0.823 (0.152)	1.045 (0.109)

South Asian	1.044	0.886	0.883+	0.906+
	(0.095)	(0.080)	(0.060)	(0.052)
Black	1.076	0.685**	0.871	0.932
	(0.160)	(0.096)	(0.100)	(0.078)
Other	0.836	0.914	0.573***	0.928
	(0.159)	(0.115)	(0.081)	(0.088)
Household (ref no partnered)				
Live with partner only	1.267**	1.439***	1.259**	1.160*
	(0.101)	(0.118)	(0.092)	(0.085)
Live with both partner and children	1.386***	1.558***	1.478***	1.496***
	(0.110)	(0.128)	(0.103)	(0.108)
Live with children only	1.242*	1.529***	1.423***	1.509***
	(0.114)	(0.139)	(0.103)	(0.101)
Other household type	1.148	1.278*	1.217**	1.310***
	(0.103)	(0.127)	(0.085)	(0.094)
Married	1.277***	1.343***	1.243***	1.201***
	(0.074)	(0.076)	(0.054)	(0.053)
Education (ref Level 4)				
No qualification	0.785***	1.055	0.738***	0.923+
	(0.038)	(0.051)	(0.035)	(0.042)
Level 1	0.839**	0.914	0.858**	0.841***
	(0.051)	(0.053)	(0.044)	(0.036)

Level 2	1.023	1.068	0.908*	0.952
	(0.063)	(0.060)	(0.038)	(0.039)
Level 3	1.009	1.081	1.068	1.029
	(0.075)	(0.065)	(0.072)	(0.045)
Other/Apprenticeship	0.842**	0.979	0.841**	0.739***
	(0.049)	(0.060)	(0.053)	(0.058)
Tenure (ref: Own outright)				
Partly own	0.998	1.006	0.967	1.038
	(0.038)	(0.042)	(0.036)	(0.036)
Not own	1.083	1.353***	1.101*	1.157***
	(0.058)	(0.063)	(0.053)	(0.047)
Health (ref: Good)				
Fair	1.186***	1.287***	1.137***	1.223***
	(0.048)	(0.060)	(0.038)	(0.040)
Not good	1.239***	1.145*	1.134*	1.088
	(0.069)	(0.079)	(0.058)	(0.066)
Economic Activity (ref: inactive)				
Employed PT	0.855+	0.866*	0.836***	0.809***
	(0.071)	(0.062)	(0.032)	(0.028)
Employed FT	0.800***	0.789***	0.834***	0.758***
	(0.043)	(0.042)	(0.034)	(0.025)
Seeking work/waiting to start	0.749**	0.768**	0.708***	0.946

	(0.077)	(0.067)	(0.065)	(0.072)
Student	0.934	1.041	0.605***	0.754**
	(0.179)	(0.149)	(0.074)	(0.074)
Other	0.914	0.976	0.821*	1.054
	(0.122)	(0.123)	(0.072)	(0.116)
Care home beds (%)	1.014	0.999	1.001	0.999
	(0.010)	(0.012)	(0.009)	(0.008)
CGE per capita (real)	1.497	0.832	0.946	1.554+
	(0.737)	(0.316)	(0.314)	(0.391)
IMD-deprived LAD	1.071+	1.137**	1.081*	1.108***
	(0.039)	(0.047)	(0.035)	(0.028)
Constant	0.173***	0.168***	0.331***	0.202***
	(0.041)	(0.034)	(0.049)	(0.031)
Observations	16,218	17,992	23,805	27,485

Note: Odds ratios are presented with standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Data source: ONS LS, CQC, ASC Expenditure, IMD

Table S.13: Multinomial logistic regression of informal care provision by year, 2001-2011 / 2011-2021 - repeated informal caregiving

	Medium intensity 2011-2021	High Intensity 2011-2021	Medium Intensity 2001-2011	High Intensity 2001-2011
Sex	1.039	0.906*	0.922	0.842***
	(0.066)	(0.042)	(0.052)	(0.041)
Age (ref 16-25)				
26-35	1.357*	1.798***	1.360*	2.044***
	(0.208)	(0.232)	(0.173)	(0.234)
36-45	1.126	1.548***	1.315*	2.255***
	(0.163)	(0.203)	(0.154)	(0.274)
46-55	1.066	1.548***	1.324*	2.039***
	(0.149)	(0.198)	(0.167)	(0.250)
56-65	1.035	1.971***	1.004	2.765***
	(0.168)	(0.274)	(0.140)	(0.335)
66-75	1.014	2.607***	0.995	2.503***
	(0.174)	(0.344)	(0.145)	(0.388)
Ethnicity (ref British White)				
White other	1.160	1.274+	1.035	0.823
	(0.182)	(0.173)	(0.132)	(0.103)
Mixed	0.947	0.911	1.015	0.798
	(0.391)	(0.313)	(0.237)	(0.177)
South Asian	1.688***	1.184+	1.672***	0.968
	(0.177)	(0.109)	(0.158)	(0.100)

Black	0.900	0.983	1.529**	0.783
	(0.193)	(0.216)	(0.205)	(0.133)
Other	1.706*	0.957	1.319+	0.875
	(0.441)	(0.211)	(0.203)	(0.125)
Household (ref no partnered)				
Live with partner only	1.408*	3.558***	1.293*	3.247***
	(0.202)	(0.549)	(0.169)	(0.445)
Live with both partner and children	1.694***	4.801***	1.444**	4.176***
	(0.245)	(0.751)	(0.177)	(0.597)
Live with children only	1.611***	5.015***	1.711***	4.918***
	(0.232)	(0.754)	(0.208)	(0.709)
Other household type	2.029***	6.162***	1.621***	5.451***
	(0.312)	(1.049)	(0.212)	(0.807)
Married	1.145+	1.199**	1.035	1.163*
	(0.093)	(0.083)	(0.076)	(0.078)
Education (ref Level 4)				
No qualification	2.093***	3.235***	2.612***	2.931***
	(0.175)	(0.223)	(0.206)	(0.176)
Level 1	1.260**	1.663***	1.435***	1.610***
	(0.106)	(0.127)	(0.109)	(0.106)
Level 2	1.206*	1.455***	1.394***	1.359***

	(0.096)	(0.104)	(0.113)	(0.095)
Level 3	0.991	1.186+	1.299**	1.317***
	(0.112)	(0.114)	(0.107)	(0.106)
Other/Apprenticeship	1.707***	2.129***	1.994***	1.942***
	(0.161)	(0.156)	(0.213)	(0.149)
Tenure (ref Own outright)				
Partly own	0.897+	1.073	1.045	0.989
	(0.056)	(0.068)	(0.072)	(0.054)
Not own	1.779***	2.215***	1.674***	1.987***
	(0.137)	(0.149)	(0.121)	(0.123)
Health (ref: Good)				
Fair	1.291***	1.210***	1.385***	1.297***
	(0.078)	(0.058)	(0.082)	(0.073)
Not good	1.584***	1.367***	1.630***	1.534***
	(0.141)	(0.106)	(0.190)	(0.182)
Economic Activity (ref: inactive)				
Employed PT	0.684***	0.412***	0.672***	0.422***
	(0.052)	(0.027)	(0.055)	(0.027)
Employed FT	0.648***	0.353***	0.574***	0.348***
	(0.045)	(0.024)	(0.046)	(0.023)
Seeking work/waiting to start	0.984	0.481***	0.780+	0.511***

	(0.156)	(0.069)	(0.104)	(0.055)
Student	0.550*	0.497**	1.055	0.769
	(0.144)	(0.119)	(0.215)	(0.130)
Other	0.855	0.871	1.574**	1.157
	(0.152)	(0.115)	(0.268)	(0.174)
Care home beds (%)	1.024	1.012	0.981	0.997
	(0.015)	(0.013)	(0.016)	(0.011)
CGE per capita (real)	1.031	1.444	1.615	1.991
	(0.671)	(0.929)	(0.847)	(0.871)
IMD-deprived LAD	1.185**	1.339***	1.328***	1.336***
	(0.069)	(0.068)	(0.071)	(0.062)
Constant	0.073***	0.034***	0.189***	0.078***
	(0.024)	(0.010)	(0.054)	(0.020)
Observations	14,120	14,120	13,415	13,415

Note: Relative risk ratios (ref= low intensity) presented with standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Data source: ONS LS, CQC, ASC Expenditure, IMD

Table S.14: Yun's method Decomposition- transitioning into caregiving

VARIABLES	Composition Effects		Coefficient Effects	
	Coef.	%	Coef	%
2011	0.122***			
2021	0.092***			

Difference	0.031***			
Explained	0.002**	6.5%	0.029***	93.5%
Age	0.001***	2.0%	-0.001***	-4.3%
Sex	-0.000	0.0%	-0.000***	-0.5%
Ethnicity	0.002***	5.8%	-0.007***	-23.0%
Household	-0.000***	-1.3%	-0.001	-3.4%
Married	0.001***	3.8%	0.000*	0.5%
Education	-0.002***	-7.6%	-0.001*	-2.8%
Tenure	-0.001***	-2.3%	0.000	1.2%
Health	0.002***	6.2%	-0.001	-3.8%
Eco Activity	-0.000	-0.2%	0.001	3.7%
Care home bed(%)	0.000	0.5%	-0.002	-5.3%
CGE pc real	-0.000	-0.1%	-0.006	-18.8%
IMD-deprived	-0.000	-0.2%	0.000	0.3%
Constant			0.046***	149.6%
Observations	550,644			

Note: Robust ci in parentheses; SE clustered at the local-authority level; *** p<0.001, **
Data source: ONS LS, CQC, ASC Expenditure, IMD

Table S.15: Yun's method Decomposition- repeated informal caregiving

VARIABLES	Composition Effects		Coefficient Effects	
	Coef.	%	Coef	%
2011	0.353***			
2021	0.295***			
Difference	0.058***			
Explained	0.014***	23.5%	0.044***	76.5%
Age	0.008***	14.2	0.004+	7.0%
Sex	-0.000**	-0.4%	-0.001	-1.0%
Ethnicity	0.001**	1.8%	0.014	23.8%
Household	0.001*	1.0%	0.002	3.8%
Married	0.003***	5.1%	0.000	0.5%
Education	-0.006***	-10.3%	-0.003*	-5.1%
Tenure	-0.001***	-2.6%	0.002+	3.0%
Health	0.007***	11.5%	-0.001	-2.5%
Eco Activity	0.001**	1.1%	0.019**	32.6%
Care home bed(%)	0.001	2.1%	0.015	25.3%
CGE pc real	-0.000	-0.1%	-0.007	12.2%
IMD-deprived	-0.000	-0.1%	0.000	0.2%
Constant			0.001	1.2%
Observations	85,500			

Note: Robust ci in parentheses; SE clustered at the local-authority level; *** p<0.001, **
Data source: ONS LS, CQC, ASC Expenditure, IMD

Table S.16: Oxaca Decomposition- transitioning into caregiving

VARIABLES	Composition Effects		Coefficient Effects	
	Coef.	%	Coef	%
2011	0.122***			
2021	0.092***			
Difference	0.031***			
Explained	0.002***	6.0%	0.029***	94.0%
Age	0.001***	1.7%	-0.000	-1.2%
Sex	-0.000	0.0%	-0.000	-0.1%
Ethnicity	0.001***	4.8%	-0.003	-9.8%
Household	-0.000***	-1.1%	-0.001	-2.5%
Married	0.001***	3.4%	0.000**	0.8%
Education	-0.002***	-6.5%	-0.001*	-2.8%
Tenure	-0.001***	-2.0%	-0.000	-0.1%
Health	0.002***	6.0%	-0.002	-5.6%
Eco Activity	-0.000*	-0.5%	0.000	1.1%
Care home bed(%)	0.000	0.6%	-0.001	-4.2%
CGE pc real	-0.000	-0.1%	-0.005	-16.0%
IMD-deprived	-0.000	-0.2%	0.000	0.2%

Constant	0.041***	134.1%
Observations	550,644	

Note: Robust ci in parentheses; SE clustered at the local-authority level; *** p<0.001, **
Data source: ONS LS, CQC, ASC Expenditure, IMD

Table S.17: Oxaca Decomposition- repeated informal caregiving

VARIABLES	Composition Effects		Coefficient Effects	
	Coef.	%	Coef	%
2011	0.353***			
2021	0.295***			
Difference	0.058***			
Explained	0.013***	20%	0.045***	80%
Age	0.008***	13.6%	0.005**	8.7%
Sex	-0.000**	-0.4%	-0.000	-0.7%
Ethnicity	0.001**	1.8%	0.015+	25.4%
Household	0.001*	0.9%	0.003	5.8%
Married	0.003***	5.0%	0.001	1.9%
Education	-0.006***	-9.8%	-0.003*	-5.4%
Tenure	-0.001***	-2.5%	0.002	2.9%
Health	0.007***	11.2%	-0.003	-4.6%

Eco Activity	0.001**	1.1%	0.019**	33.0%
Care home bed(%)	0.001	2.1%	0.016	28.1%
CGE pc real	-0.000	-0.1%	-0.006	-11.2%
IMD-deprived	-0.000	-0.1%	0.000	0.1%
Constant			-0.004	-6.6%
Observations	85,500	85,500		

Note: Robust ci in parentheses; SE clustered at the local-authority level; *** p<0.001, **
Data source: ONS LS, CQC, ASC Expenditure, IMD

**Table S.18: Logistic regression of informal care provision by year, 2001-2011 / 2011-2021 (health at time t1)-
transitioning into informal caregiving**

	2001-2011	2011-2021
VARIABLES	odds ratio	odds ratio
Sex	1.316***	1.446***
	(0.018)	(0.020)
Age (ref 16-25)		
26-35	1.363***	1.211***
	(0.041)	(0.036)
36-45	2.157***	1.679***
	(0.069)	(0.046)

46-55	2.213***	1.821***
	(0.086)	(0.049)
56-65	1.486***	1.007
	(0.062)	(0.032)
66-75	1.321***	0.964
	(0.060)	(0.037)
Ethnicity (ref British White)		
White other	0.722***	0.644***
	(0.027)	(0.025)
Mixed	0.899	0.898*
	(0.065)	(0.046)
South Asian	1.004	0.823***
	(0.037)	(0.024)
Black	0.826***	0.752***
	(0.043)	(0.037)
Other	0.759***	0.674***
	(0.044)	(0.029)
Household (ref no partnered)		
Live with partner only	1.404***	1.421***
	(0.044)	(0.044)
Live with both partner and children	1.340***	1.441***
	(0.038)	(0.042)

Live with children only	1.718*** (0.051)	1.813*** (0.055)
Other household type	1.505*** (0.049)	1.500*** (0.048)
Married	1.329*** (0.029)	1.229*** (0.023)
Education (ref Level 4)		
No qualification	0.704*** (0.014)	0.849*** (0.019)
Level 1	0.943** (0.019)	0.943* (0.023)
Level 2	0.970 (0.022)	1.012 (0.024)
Level 3	1.005 (0.029)	1.013 (0.023)
Other/Apprenticeship	0.852*** (0.024)	0.862*** (0.027)
Tenure (ref Own outright)		
Partly own	0.879*** (0.015)	0.874*** (0.015)
Not own	0.935** (0.020)	0.969 (0.020)

Health (ref: Good)

Good	1.237***	1.298***
	(0.019)	(0.020)
Fair	1.428***	1.617***
	(0.028)	(0.031)
Bad	1.164***	1.322***
	(0.037)	(0.045)
Very bad	0.798***	0.968
	(0.052)	(0.058)

Economic Activity (ref: inactive)

Employed PT	1.042*	0.957+
	(0.021)	(0.024)
Employed FT	0.948**	0.936**
	(0.019)	(0.022)
Seeking work/waiting to start	1.065+	1.110**
	(0.036)	(0.042)
Student	0.859**	0.795***
	(0.042)	(0.038)
Other	1.048	1.110*
	(0.046)	(0.047)

Care home beds (%)

1.000	1.001
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CGE per capita (real)	(0.004)	(0.005)
	1.044	1.238
IMD-deprived LAD	(0.215)	(0.190)
1.deprivedn	1.048**	1.082***
	(0.018)	(0.018)
Constant	0.048***	0.035***
	(0.004)	(0.003)
Observations	257,308	293,336

Data source: ONS LS, CQC, ASC, Department for Levelling Up Housing and Communities

Table S.19: Logistic regression of informal care provision by year, 2001-2011 / 2011-2021 (health measurement at time t1)- repeated informal caregiving

	2001-2011	2011-2021
VARIABLES	odds ratio	odds ratio
Sex	1.095***	1.132***
	(0.025)	(0.027)
Age (ref 16-25)		
26-35	1.500***	1.695***
	(0.096)	(0.106)
36-45	1.927***	1.872***
	(0.115)	(0.116)
46-55	1.626***	1.609***
	(0.100)	(0.101)
56-65	1.182**	1.005

	(0.076)	(0.064)
66-75	0.823*	0.809**
	(0.066)	(0.059)
Ethnicity (ref British White)		
White other	1.012	1.052
	(0.057)	(0.063)
Mixed	0.852	1.086
	(0.128)	(0.103)
South Asian	0.951	0.882*
	(0.054)	(0.046)
Black	0.940	0.863*
	(0.082)	(0.061)
Other	0.669***	0.917
	(0.081)	(0.064)
Household (ref no partnered)		
Live with partner only	1.275***	1.280***
	(0.069)	(0.071)
Live with both partner and children	1.450***	1.541***
	(0.077)	(0.084)
Live with children only	1.402***	1.571***
	(0.079)	(0.086)
Other household type	1.197***	1.313***

	(0.063)	(0.081)
Married	1.266***	1.257***
	(0.047)	(0.042)
Education (ref Level 4)		
No qualification	0.744***	0.943+
	(0.027)	(0.030)
Level 1	0.837***	0.843***
	(0.035)	(0.030)
Level 2	0.948	0.967
	(0.036)	(0.032)
Level 3	1.036	1.038
	(0.051)	(0.036)
Other/Apprenticeship	0.832***	0.853***
	(0.036)	(0.041)
Tenure (ref Own outright)		
Partly own	1.001	1.039
	(0.027)	(0.028)
Not own	1.134***	1.244***
	(0.043)	(0.037)
Health (ref: Good)		
Good	1.117***	1.216***
	(0.027)	(0.032)

Fair	1.361***	1.478***
	(0.040)	(0.044)
Bad	0.946	1.188***
	(0.047)	(0.049)
Very bad	0.647***	0.840+
	(0.058)	(0.075)
Economic Activity (ref: inactive)		
Employed PT	0.827***	0.828***
	(0.028)	(0.025)
Employed FT	0.775***	0.751***
	(0.024)	(0.022)
Seeking work/waiting to start	0.707***	0.835**
	(0.044)	(0.049)
Student	0.677***	0.840*
	(0.071)	(0.073)
Other	0.837*	1.019
	(0.062)	(0.084)
Care home beds (%)		
	1.007	1.000
	(0.007)	(0.007)
CGE per capita (real)		
	1.150	1.249
	(0.332)	(0.280)

IMD-deprived LAD	1.078**	1.118***
	(0.029)	(0.028)
Constant	0.233***	0.154***
	(0.031)	(0.019)
Observations	40,023	45,477

Data source: ONS LS, CQC, ASC, Department for Levelling Up Housing and Communities

Table S.20: Logistic regression models with age interactions predicting transitions into informal caregiving, 2001–2011 and 2011–2021

VARIABLES	(1) odds ratio	(2) odds ratio
Age (ref 16-35)		
Age 36-55	1.310*** (0.069)	0.994 (0.053)
Age 56-75	1.109* (0.055)	0.682*** (0.036)
Sex (ref=Male)	1.338*** (0.033)	1.544*** (0.039)
Age#Sex		
36-55#Female	1.087** (0.034)	1.003 (0.033)
56-75#Female	0.761*** (0.029)	0.727*** (0.028)
Health		
Fair	1.474***	1.519***

	(0.041)	(0.077)
Not Good	1.481***	1.070
	(0.076)	(0.093)
Age#Health		
36-55#Fair	0.732***	0.776***
	(0.026)	(0.042)
36-55#Not Good	0.656***	0.895
	(0.040)	(0.083)
56-75#Fair	0.696***	0.750***
	(0.025)	(0.050)
56-75#Not Good	0.723***	1.039
	(0.044)	(0.108)
Economic Activity (ref: inactive)		
Employed PT	0.812***	0.588***
	(0.034)	(0.025)
Employed FT	0.666***	0.540***
	(0.028)	(0.021)
Seeking work/waiting to start	0.881*	0.774***
	(0.050)	(0.045)
Student	0.569***	0.457***
	(0.034)	(0.023)
Other	0.935	0.966
	(0.060)	(0.065)
Age#Economic Activity		
36-55#Employed PT	1.345***	1.719***
	(0.068)	(0.084)
36-55#Employed FT	1.613***	1.908***
	(0.078)	(0.099)
36-55#Seeking work/waiting to start	1.186*	1.372***
	(0.095)	(0.110)
36-55#Student	1.642***	1.911***
	(0.236)	(0.284)
36-55#Other	1.104	0.902
	(0.097)	(0.084)
56-75#Employed PT	1.337***	1.825***
	(0.073)	(0.093)

56-75#Employed FT	1.653*** (0.093)	2.088*** (0.112)
56-75#Seeking work/waiting to start	1.172 (0.162)	1.468** (0.181)
56-75#Student	1.114 (0.503)	1.993 (0.953)
56-75#Other	1.101 (0.110)	1.157 (0.148)
Ethnicity (ref=British White)		
White Other	0.728*** (0.027)	0.649*** (0.024)
Mixed	0.884+ (0.064)	0.894* (0.046)
South Asian	1.009 (0.037)	0.834*** (0.025)
Black	0.831*** (0.043)	0.743*** (0.037)
Other	0.773*** (0.044)	0.678*** (0.030)
Household (ref= no partnered)		
Living with partner only	1.337*** (0.041)	1.396*** (0.043)
Living with both partner and children	1.234*** (0.033)	1.353*** (0.039)
Living with children only	1.583*** (0.046)	1.690*** (0.052)
Other household type	1.404*** (0.045)	1.445*** (0.046)
Married	1.376*** (0.027)	1.229*** (0.023)
Education (ref= Level 4)		
No qualification	0.729*** (0.015)	0.893*** (0.021)
Level 1	0.955* (0.019)	0.959+ (0.023)

Level 2	0.962+	1.026
	(0.022)	(0.024)
Level 3	0.981	1.019
	(0.029)	(0.023)
Other/ Apprenticeship	0.866***	0.874***
	(0.024)	(0.028)
Tenure (ref= Own outright)		
Partly own	0.870***	0.857***
	(0.014)	(0.015)
Not own	0.913***	0.954*
	(0.019)	(0.019)
Care home beds (%)		
	1.000	1.001
	(0.004)	(0.005)
CGE per capita		
	1.030	1.223
	(0.215)	(0.189)
IMD Deprived LAD		
	1.051**	1.090***
	(0.018)	(0.019)
Constant	0.084***	0.070***
	(0.008)	(0.006)
Observations	257,308	293,336

Data source: ONS LS, CQC, ASC, Department for Levelling Up Housing and Communities

Note: Odds ratios are presented with standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Table S.21:- Logistic regression models with age interactions predicting repeated informal caregiving, 2001–2011 and 2011–2021

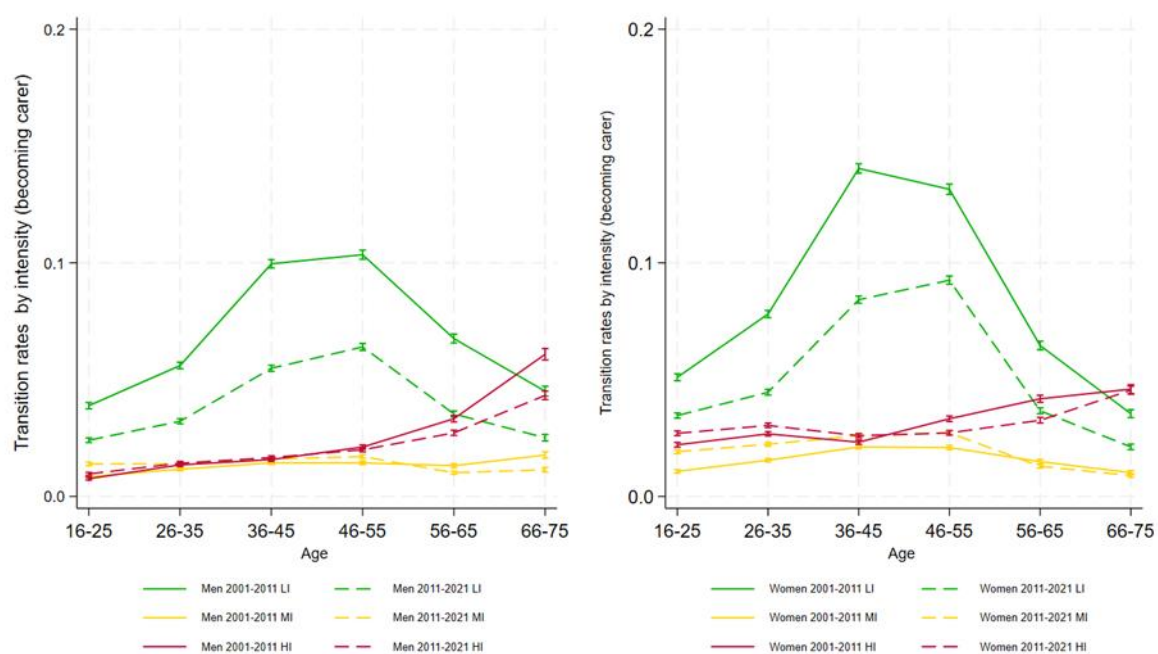
VARIABLES	(1) odds ratio	(2) odds ratio
Age (ref 16-35)	.	.
Age 36-55	1.172+ (0.109)	1.034 (0.089)
Age 56-75	0.718** (0.077)	0.555*** (0.052)
Sex (ref=Male)	1.214** (0.075)	1.286*** (0.071)
Age#Sex		
36-55#Female	0.984 (0.070)	1.001 (0.065)
56-75#Female	0.767*** (0.058)	0.690*** (0.046)
Health		
Fair	1.253** (0.094)	1.391*** (0.098)
Not Good	1.325** (0.141)	1.459* (0.215)
Age#Health		
36-55#Fair	0.889 (0.077)	0.794** (0.065)
36-55#Not Good	0.802+ (0.094)	0.642** (0.102)
56-75#Fair	0.932 (0.082)	0.996 (0.079)
56-75#Not Good	0.992 (0.127)	0.868 (0.152)
Economic Activity (ref: inactive)		
Employed PT	0.670*** (0.052)	0.568*** (0.045)
Employed FT	0.610*** (0.044)	0.522*** (0.038)

Seeking work/waiting to start	0.471*** (0.052)	0.682*** (0.069)
Student	0.417*** (0.052)	0.454*** (0.047)
Other	0.647* (0.110)	0.765 (0.139)
Age#Economic Activity		
36-55#Employed PT	1.168+ (0.105)	1.291** (0.120)
36-55#Employed FT	1.253** (0.103)	1.308** (0.110)
36-55#Seeking work/waiting to start	1.558** (0.259)	1.058 (0.132)
36-55#Student	2.230*** (0.511)	2.226*** (0.432)
36-55#Other	1.342 (0.246)	1.284 (0.254)
56-75#Employed PT	1.618*** (0.154)	1.868*** (0.171)
56-75#Employed FT	1.769*** (0.166)	1.954*** (0.168)
56-75#Seeking work/waiting to start	2.274*** (0.465)	1.254 (0.245)
56-75#Student	1.681 (1.099)	2.628* (1.176)
56-75#Other	1.400 (0.337)	1.439 (0.340)
Ethnicity (ref=British White)		
White Other	1.013 (0.056)	1.057 (0.063)
Mixed	0.866 (0.130)	1.073 (0.100)
South Asian	0.944 (0.055)	0.907+ (0.047)
Black	0.975 (0.082)	0.858* (0.060)

Other	0.673** (0.083)	0.930 (0.065)
Household (ref= no partnered)		
Living with partner only	1.240*** (0.067)	1.230*** (0.067)
Living with both partner and children	1.440*** (0.075)	1.475*** (0.079)
Living with children only	1.369*** (0.077)	1.499*** (0.082)
Other household type	1.173** (0.061)	1.261*** (0.077)
Married	1.269*** (0.047)	1.273*** (0.040)
Education (ref= Level 4)		
No qualification	0.731*** (0.026)	0.937* (0.029)
Level 1	0.857*** (0.035)	0.847*** (0.030)
Level 2	0.945 (0.035)	0.974 (0.032)
Level 3	1.020 (0.049)	1.033 (0.035)
Other/ Apprenticeship	0.820*** (0.036)	0.837*** (0.041)
Tenure (ref= Own outright)		
Partly own	1.006 (0.027)	1.043 (0.028)
Not own	1.107** (0.041)	1.244*** (0.038)
Care home beds (%)	1.007 (0.008)	0.999 (0.007)
CGE per capita	1.116 (0.319)	1.248 (0.282)
IMD Deprived LAD	1.080** (0.029)	1.122*** (0.028)
Constant	0.368***	0.307***

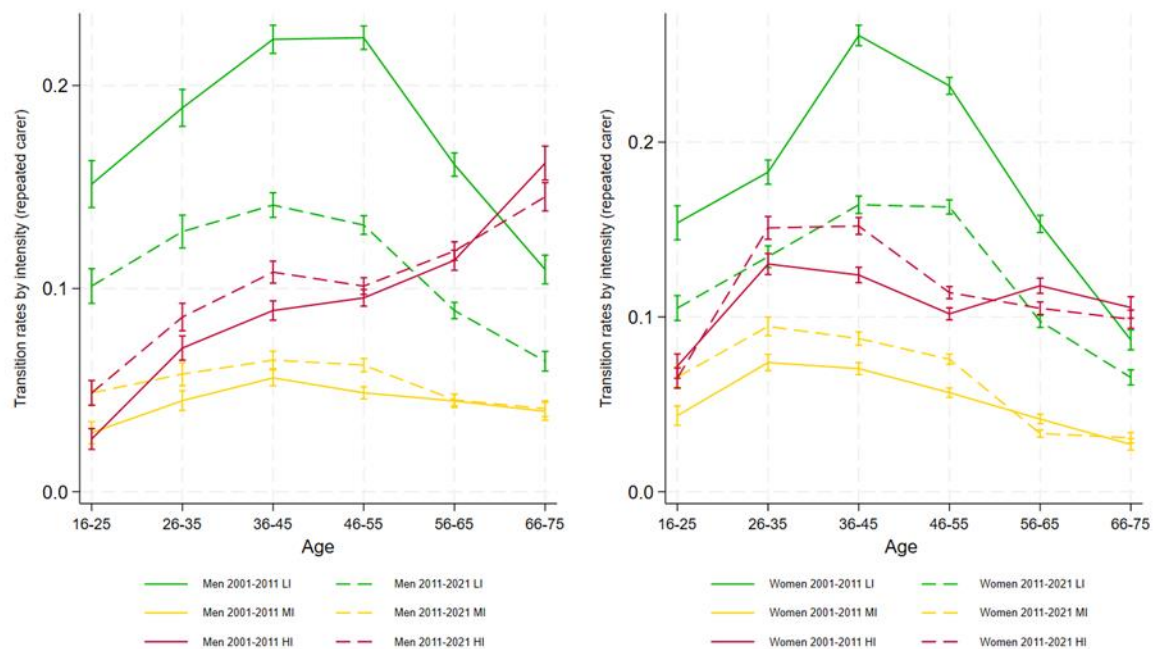
	(0.057)	(0.041)
Observations	40,023	45,477
<i>Data source: ONS LS, CQC, ASC, Department for Levelling Up Housing and Communities</i>		
Note: Odds ratios are presented with standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1		

Figure S.1: Transition rates into informal caregiving by gender, age groups, care intensity and years



Data source: ONS LS

Figure S.2: Transition rates for repeated informal caregiving by gender, age groups care intensity and years (repeated carer)



Data source: ONS LS

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