

P18: Targeting public services in England: evidence from social care services for older people

Jose-Luis Fernandez and Tom Snell

*PSSRU
London School of Economics
Houghton Street
WC2A 2AE - London*

1. Introduction

The introduction of the 1989 White Paper *Caring for People* and the community care reforms of 1992 brought about very large shifts in key patterns of social care provision in England. Local authority social services departments were handed the responsibility not only of funding care, but also of setting eligibility criteria, carrying out assessments of needs, and of ensuring that appropriate care would be available by acting as enablers of the local mixed economy of care. As a result, and since then, the post-reform era has witnessed significant retargeting of publicly brokered home care support. (Wanless 2006, DH 2000). This paper analyses the recent evolution in the targeting of home care services for older people in England, focusing on:

- the extent and nature of changes in home care allocation at the population level
- factors driving receipt of the service, including the relative influence of need, informal support and income and wealth, and
- the degree of consistency in the allocation of the service.

Pre 1992-reform research had shown a distinct lack of co-ordination in social care allocation process (Davies et al. 1990). Home help service were accessed via a variety in routes, with each of the multiple agencies having their own priorities for the resources that they controlled. The overall

lack of co-ordination had drastic effects on the effectiveness of care packages, to the extent that research exploring the impact of community care packages on the welfare of users failed to find significant evidence of improvements in the wellbeing of service recipients other than in indicators of general satisfaction (Davies et al. 1990). It was therefore a key assumption of the reforms that changes in the targeting of resources, and the concentration of resources on those at greatest risk of institutionalisation, would bring about significant improvements in the productivity of social care inputs.

The 1989 White Paper explicitly included in the definition of the objective the need for targeting resources on 'those people whose need for them is greatest' (para.1.11). In 1987, the Social Service Inspectorate report *From Home Help to Home Care* had also stressed the fact that in order to enable increasing numbers of older people to remain in the community 'either a higher volume of domiciliary services [would] be needed or the currently available resources [would] have to be more specifically targeted on those in most need, and those for whom most can be achieved' (Social Services Inspectorate 1987, p. 26).

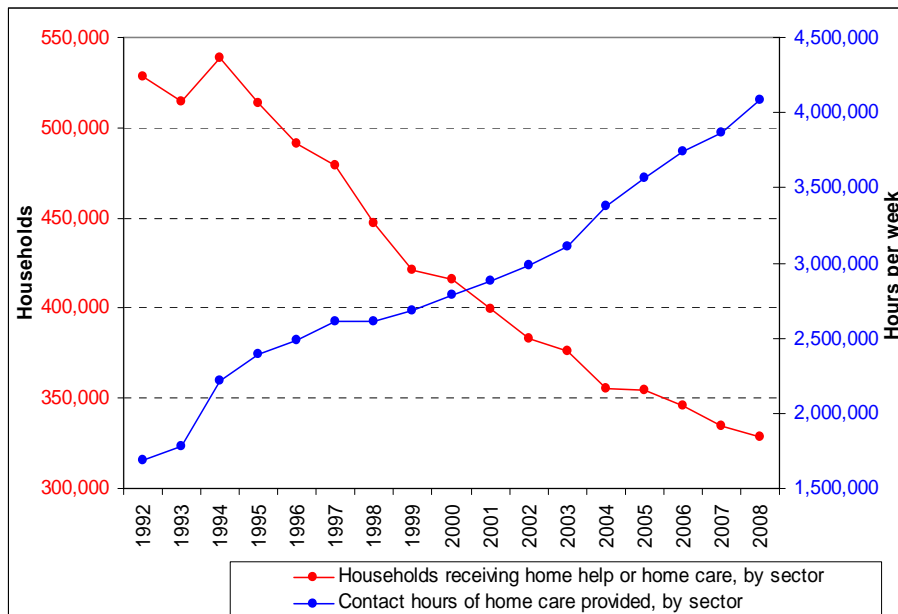
Arguably, the emphasis on targeting resources on the neediest in order to reduce institutionalisation and maximising independence continued after the change of administration. In November 1998, *Modernising Social Services* (Department of Health 1998) was published, which defined the goals and priorities of the new Labour Government. Despite a different lexicon and some changes in emphasis, the new Government shared most of the objectives previously phrased in *Caring for People*. Arguably, the overall efficiency related objectives remained broadly unchanged. The new government placed the need for efficiency improvements within a wider context, however, namely the pursuit of consistency across the system, with significant emphasis placed on the achievement of improvements in the system's horizontal and vertical target efficiency levels. These were to be obtained, it was argued, in ways such as the production of clear eligibility criteria and more coherent charging policies.

Hence, Government introduced in 2003 the FACS criteria, which provide local authorities with the underlying framework for determining eligibility for adult social care. These guidelines classified potential service users into four bands (low, moderate, substantial and critical) based on their level of risk and potential loss of independence.

By the time the new administration took over, changes in targeting had brought about significant reductions in the resources allocated to lower dependency cases and a reduction in the coverage of services among the population (Warburton and McCracken 1999). Hence, the proportion of older people in receipt of home care services has declined steadily, in spite of considerable increases in

the total amount of support provided (see Figure 1). Eligibility criteria have tightened and resources have been concentrated on those with the greatest levels of physical dependency, while the average intensity of home care packages has increased significantly.

Figure 1 Volume of hours of home care and number of households in receipt- England 1992 to 2008



Modernising Social Services expressed concerns about the long-term effects of the new pattern of allocation of resources. For instance, the White Paper stated that

‘some people who would benefit from purposeful interventions at a lower level of service, such as the occasional visit from a home help, or over a shorter period, such as training in mobility and daily living skills to help them cope with visual impairment, are not receiving any support. This increases the risk that they in turn become more likely to need much more complicated levels of support as their independence is compromised. That is good neither for the individual nor, ultimately, for the social services, the NHS and the taxpayer’

(Department of Health 1998).

Significant questions are being asked about the appropriateness of the targeting of social care resources.

Since their introduction, many authorities have increased their thresholds; most currently apply the ‘moderate’ or ‘substantial’ band (Audit Commission 2008). In addition, a CSCI report investigating the effect of Fair Access to Care Services (FACS) bands implemented in 2003 (Audit Commission

2008) found that the proportion of older people in receipt of intensive home care in 2006/7 was broadly comparable across local authorities with differing eligibility thresholds, whereas a significantly higher proportion of older people received non-intensive home care within authorities with a more generous eligibility policy.

The proportion of older people in the community with unmet needs in the wake of tightened eligibility criteria is the subject of numerous reports. The Joseph Rowntree Foundation older people's inquiry *That little bit of help* (JRF 2005) highlights the role of low-level services both as a promoter of quality of life and as a measure to delay the need for more complex support either in the community or a residential care setting, although the preventative efficacy of home care provision is difficult to quantify. It is certainly fair to say that only a small proportion of older people with a given level of dependency will use community care services.

The recent CSCI review of eligibility criteria (CSCI 2008a) highlighted a number of inadequacies in the process of exploring individuals' needs on first contact with the council, a number of respondents having reported that their means were assessed prior to their needs. Most that were not eligible were not advised of alternative sources of help. There is also an apparent degree of demand-led inequity in the form of case-finding failures whereby individuals' ignorance as to the availability of services means that the assessment process is forgone entirely. The report calls for the introduction of 'pro-active ways of identifying people who could benefit from information and support'.

An earlier CSCI report, *Lost to the system? The impact of fair access to care* (CSCI 2008b) reports instances in which private community-based services are procured when individuals would in fact have been eligible for care arranged by their local authority. Whether the same lack of awareness is present across the spectrum of potential care recipients (rather than solely those with an option to self-fund, who may have a lower propensity to consider help from social services) is unclear.

Eligibility for state-supported home care is governed by a means-testing framework, although there is some variation between local authorities in terms of how this is applied (Wanless 2006). Older people with savings above a fixed threshold (the value of peoples' homes are excluded, in contrast to means-testing arrangements for residential care) may be asked to pay the full charges for services, if eligible. In theory, the social care system should be growing increasingly pro-poor given the tightening of means-testing criteria, with resources predominantly concentrated on lower-income groups.

The aim of this paper is to explore changes through time in patterns of local authority-commissioned home care services among older people. Using data from a range of national surveys, we examine horizontal and vertical equity in the allocation of home care by local authorities, the nature of the factors driving receipt of the service, and the degree of income inequality in its distribution.

2. Data Sources

The analysis is based on data from five different national surveys, covering the period from 1980 to 2006. By replicating the analysis on evidence from a range of surveys, we are able to judge better the degree of reliability and consistency of the findings. It is worth noting, however, that some differences in the results are to be expected. While all the datasets used for analysis contain the main indicators relevant to our study, a number of caveats exist regarding their comparability. Issues of comparability include for instance disparities in the wording of survey questions on receipt of service, or in the precise definition of need indicators such as problems with activities of daily living (ADLs). Also, not all surveys drew a clear distinction between local authority- provided and local authority-sourced care¹. In addition, as indicated below, the analysis had to deal with issues of longitudinal inconsistencies in the definition of indicators within each of the surveys used, linked to changes through time in their design and content.

RAP and HH1 Figures

Official data from the annual Referrals, Assessments and Packages of care (RAP) reports provided an estimate of the total number of clients over the age of 65 receiving LA commissioned home care since 2000/01 in England (DH 2005). For earlier years (1994/5 onwards), estimates of the number of households receiving home care based on HH1 annual returns were available from Community Care Statistics publications (DH 2007). The number of individuals receiving care between 1994/5 and 1999/2000 reported in our analysis are estimated on the basis of the client-to-household ratio for years where both figures are available.

The British Household Panel Survey (BHPS)

¹ Our analysis focuses on home care commissioned by local authorities, regardless of whether the care is provided in-house or through the independent sector. Some surveys refer only to “local authority home care”, with the potential result that not all LA-commissioned services are correctly identified as such.

Waves 1-16 of the British Household Panel Survey contain indicators of home care receipt for consecutive years from 1991 to 2006, each wave including around 1,500 people aged 65 and over within its sample. The variables relating to home care services in the BHPS questionnaires are consistent from the first wave: whether home help had been used, whether this help was “from the NHS or social services, or [...] from a private or voluntary agency”, and whether home help was free or paid for by the individual. For the purpose of our analysis, local authority-arranged care was defined as that which users identified as being “from the NHS or social services”.

While measures of service use are consistent across all waves of the BHPS (notwithstanding any changes in the definition of individual services), indicators of dependency are not directly comparable for all years. For this analysis a dependency score of 0-4 was derived on the basis of four ADL indicators. For Waves 9 and 14 (1999 and 2004), a different set of activities was used in the survey, resulting in a significantly higher mean dependency score for both years in comparison to other waves. In order to account for these differences in the coding of dependency across waves, regression analyses on BHPS data included dummies for the 9th and 14th waves in the specification of the models. Measures of income and savings were expressed as sample population quintiles, thus negating the need to apply a price deflator across waves.

After standardising the variables relevant to our analysis, individual-level data from the 16 BHPS were merged into a single dataset. For the purposes of analysing annual levels of receipt, cross-sectional rather than longitudinal weights were applied.

The General Household Survey (GHS)

The General Household Survey is conducted annually but other than a core set of indicators, its content varies year-on-year. Six waves of GHS data from 1980 to 2001 were identified that contained detailed indicators of need and use of health and social care services required for our analysis. As not all waves had sufficient data on personal wealth, however, only three were included in the regression analysis. They relate to years 1991, 1994 and 2001.

Due to the multi-purpose nature of the survey, numerous issues with the comparability of variables across years had to be addressed. While broadly comparable, the content and wording of questions varied significantly such that extensive recoding was necessary to yield a comparable set of indicators. In each of the relevant waves, LA-arrange home care was derived from reported use of home help in the last month (separate indicators existed for the use of private and voluntary helpers and help received from within the household).

A further source of caveats derives from the treatment of data coded as 'not applicable' in each of the GHS waves. Several dependency-related questions were posed only to a proportion of subjects according to their responses in earlier sections of the questionnaires. The algorithms used were generally well documented in reports accompanying the datasets, and tended to adopt a hierarchical structure (indicators of high dependency, for example, would only be investigated in cases where a basic level of dependency had been identified). In such cases, 'not applicable' cases have been recoded according to the most reasonable assumption on the basis of responses to prior questions.

Once data from the relevant survey years had been recoded into standardised variables, these were merged into a single dataset. There was a large quantity of missing data, many variables having been added or dropped during the twenty-one year period of analysis. Rather than using list-wise deletion, whereby a significant proportion of variables would be disregarded, missing values were imputed using multiple imputation software. The multiple imputation process involves the creation of multiple datasets in which missing values are replaced with imputed values based on the correlation between observed values in the dataset. The Imputed values reflect variability in the population, preserving the overall characteristics of the dataset and allowing for more meaningful analysis of the data than other means of substitution. Variation between the imputed datasets reflects the level of uncertainty of the imputed values. Imputation was carried out using the NORM software program (Shafer 1999), in which five imputed datasets were created. Complete-data analysis was carried out on each the imputed datasets and the results of these analyses combined.

The English Longitudinal Study of Ageing (ELSA)

The English Longitudinal Study of Ageing focuses on the health, social participation and economic position of people as they age. Three waves of data were available at the time of the analysis, fieldwork for the third having been completed in 2007. With a focus on issues relating to older people the survey includes detailed information relating to dependency and service use.

ELSA contains no single indicator for the receipt of community care services. Instead, use of local authority-arranged home care has been derived for the purposes of this analysis from a series of questions investigating individuals' sources of help relating to specific ADL and IADL difficulties. Valid responses relating to the source of support include various family members, friends or neighbours, unpaid volunteers, privately paid employees, social or health service workers, and

other. Help from social or health service workers has been used as a proxy for home care receipt, with the caveat that this is likely to include certain non-home care services such as nursing care².

At the time of this research, financial variables for the third wave of ELSA data were not yet available. Consequently, the first and second waves were combined into a single dataset for analysis.

The Health Survey for England (HSE)

The Health Survey for England is an annual survey first conducted in 1991. Each year the survey focuses on different demographic groups; in 2000 and 2005, the focus was on the health of older people. HSE 2005 (13,297 respondents) included a boost sample of older people living in private households. The 2006 survey focused on cardiovascular disease and associated risk factors but was included due to its inclusion of indicators of service use and other key indicators.

All three of the HSE years used for the regression analysis investigated the use and frequency of use of “local authority home help” over the preceding month. The combined-wave sample using data from all three waves contained a sample of 8,815 people aged 65 and above.

3. Methods

In addition to descriptive statistics, the analysis is based on the use of concentration curves and multivariate regression methods.

Concentration Curves

Graphical analysis using concentration curves and generalised concentration curves illustrate shifts in the relationship between relative income and home care receipt over time. More commonly used as a comparative measure of inequity in health outcomes across countries, the concentration curve plots the cumulative share of a service or outcome (in this case home care receipt) on the y axis against the cumulative proportion of the population ranked by level of income on the x axis (O'Donnell et al 2008). An X=Y line would denote perfect equity, home help being equally distributed among all income groups. A curve above this line would be consistent with a concentration of resources on lower income groups (the poorest *n*th quintile of the population would

² It is very rare, however, for health professionals to provide support with ADL activities.

be in receipt of more than the n th quintile of total care packages), while a curve below the $X=Y$ line shows receipt of services to be more concentrated on higher income groups.

Multivariate regression modelling

Regression analyses have been conducted separately for each of the datasets in the study in order to explore the factors driving the allocation of local authority arranged home care. Independent panel Logit models were run using BHPS, GHS, ELSA and HSE data, with receipt of local authority arranged home care as the dependent variable and need-related characteristics and socio-economic indicators available predictors of home care receipt as explanatory variables. A further two Logit models were run using the BHPS data decomposing home care receipt between entirely free home care and privately-purchased home care. Where data relating to the frequency or intensity of receipt were available, a generalised linear model was also run to observe the effects of the explanatory variables on intensity of service receipt.

Alternative specifications of the age variable were tested in all of the models. For every data source, however, a continuous age variable proved more powerful a predictor of receipt than age groups, age^2 , age^3 or \sqrt{age} . Interactions between the explanatory variables were also investigated, although none were statistically significant in any of the models.

Two measures of dependency were used in each of the models: reported limiting longstanding illness (a dichotomous variable) and a count of the number of reported ADL difficulties (a continuous variable). The availability of informal care is also a strong predictor of receipt (FACS guidance, in place since 2003, states that ‘the determination of eligibility in individual cases should take account of the support from carers, family members, friends and neighbours which individuals can access to help them meet presenting needs’). As all datasets indicated whether or not the individual lived alone, a dichotomous indicator for living alone was used as a proxy for likelihood of informal care receipt (those living alone being considered unlikely to receive regular informal care).

Measures of wealth included home ownership (dichotomous), income from savings (continuous) and overall income (continuous). In contrast to the means test for residential care, property value is not taken into account in means testing for home care receipt. Nevertheless, home ownership is a likely indicator of overall wealth and was included in analysis. The total amount held in savings (which are means tested) was not available from most of the data sources, so income from savings was used as a proxy indicator.

In relation to both savings and income, two alternate approaches were attempted to account for changes in costs and inflation over time. Firstly measures of income and savings were divided by the unit cost of home care corresponding to each year. Income as a continuous measure was not significant, however. The second approach, which has been adopted in the final versions of the models, was to aggregate measures of income and wealth into quintiles for each year.

Due to continual changes to the content and design of survey questionnaires, measures of dependency vary to some extent between individual waves of household surveys (such as BHPS and GHS). Dummy year variables have therefore been included wherever such anomalies have been identified. As the BHPS is a panel survey, cross-section procedures (xtlogit and xtgee) have been applied to account for intra-subject correlation across waves.

In order to investigate how closely the findings relating to receipt corresponded to intensity of receipt, two further analyses were carried out. Where indicators of intensity of receipt were available, a generalised linear model (GLM) was used to investigate the predictors of intensity in cases where some local authority provided home care was received. Relevant waves of the General Household Survey included an indicator for frequency of receipt (every day or nearly, two or three times a week, once a week and less than once a week). This was recoded as a continuous variable, with mid-point equivalents of 7, 2.5, 1 and 0.5 weekly visits, respectively. Alternative specifications were explored using an oprobit model for ordered frequency, and a logit model for whether or not services were received on a daily basis. The HSE dataset included hours of care received per week, a more direct measure of intensity, for which a GLM model was used.

As well as intensity of receipt, a further analysis was carried out to identify the probability of continued receipt of home care, in light of the evident decrease in the number of recipients. Using individuals identified as receiving NHS/SSD home care in the BHPS dataset, a random-effects logistic regression model was used to investigate the predictors of home care receipt ceasing the following year.

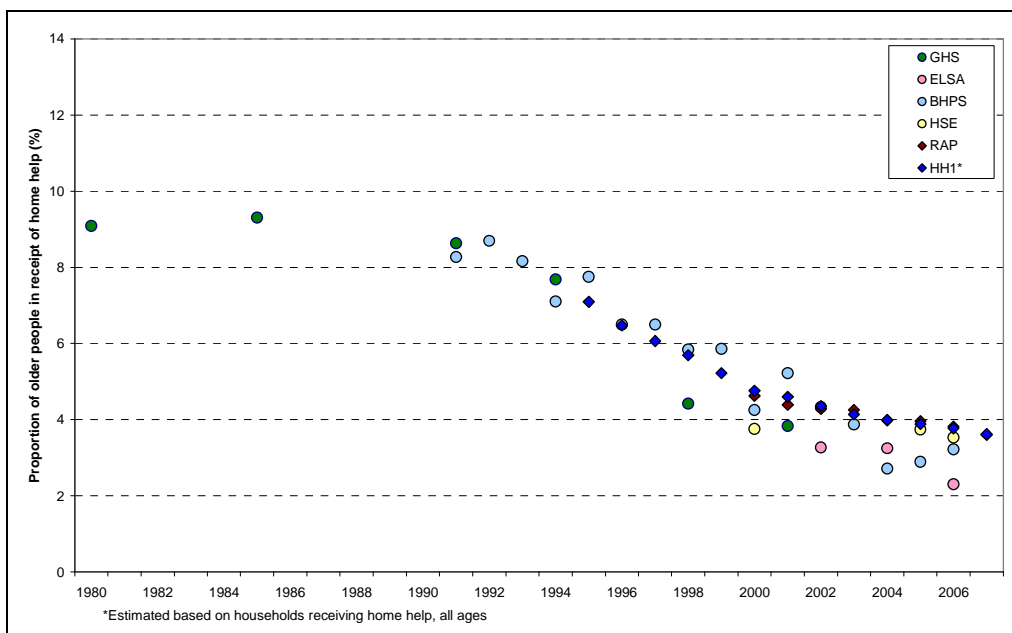
4. Results

Recent aggregate trends in home care receipt

Figure 2 shows that all the data sources examined in the study indicate significant decreases since the early 1990s in the proportion of older people receiving home care. Reassuringly, the rates obtained using the general population surveys were broadly comparable to those indicated by official statistics (RAP and HH1) at the national level. A clear decrease in the overall proportion of

older people receiving services following the community care reforms is evident, with an apparent slow-down in this trend from around 2002 onwards. Based on GHS figures, which provide the sole reflection of levels of receipt much prior to the 1992 reforms, it is evident that the early 1990s saw a dramatic shift in service use.

Figure 2 Proportion of older people receiving home care in England 1980-2007, various sources



Data Sources: GHS, ELSA, BHPS, HSE datasets; Community Care Statistics; ONS Mid-year population estimates.

Coupled with the significant increase in total home care hours indicated in Figure 1, the trends depicted in Figure 2 beg important questions, and in particular the extent to which the concentration of resources on fewer older people is driven by 'defensible', need-related factors.

The analyses below examine this question from two perspectives. First, multivariate regression models are used to explore the relative influence of need, informal support and socio-economic status indicators on the likelihood and intensity of home care receipt. In a second stage, we use concentration curves to explore the distribution of home care services across income groups, and how such relationship has evolved in recent years.

Predictors of receipt and service intensity

Table 1 summarises the results of the models predicting receipt of home care among older people. Of the surveys explored, BHPS covered the broadest time period, with valid data for 16 consecutive waves from 1991 (one year prior to the community care reforms) to 2006. According to the xtlogit model applied, age, limiting longstanding illness, ADL count and living alone (hence reduced probability of informal care) all had a significant positive correlation with receipt of NHS/SSD-arranged home care. Proxy indicators for wealth (interest from savings and home ownership, although the latter is not itself means tested³) both had a significant negative correlation with receipt. These results are consistent with a priori expectations, and suggest the probability of receipt of state support favours those with high levels of dependency and lower wealth.

The continuous year variable in BHPS had a significant negative effect, in keeping with the overall decrease in receipt through time evident in all of our data sources. Controlling for these factors, however, income quintile appears to have a significant positive correlation with home care receipt, in contrast to the negative coefficients apparent with measures of wealth.

Table 1 Factors associated with receipt of home care by survey

	BHPS** N=35,889		GHS*** N=8,023		ELSA** N=10,055		HSE*** N=8,819	
	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z
Age	0.191	0.000	0.084	0.000	0.098	0.000	0.101	0.000
Limited activity	0.494	0.000	-	-	-	-	1.277	0.000
ADL count	0.560	0.000	0.217	0.000	0.360	0.000	-	-
Lives alone	1.549	0.000	1.678	0.000	1.817	0.000	1.093	0.000
Owns home	-0.878	0.000	-0.479	0.000	-0.793	0.000	-0.722	0.000
Investment quintile	-0.170	0.000	-0.158	0.001	-0.273	0.001	-0.238	0.183
Income quintile	0.146	0.000	0.034	0.469	0.374	0.000	-0.044	0.357
Year	-0.093	0.000	-0.126	0.000	-0.153	0.083	-0.020	0.467
Year9 dummy (BHPS)*	-0.599	0.000	-	-	-	-	-	-
Year14 dummy (BHPS)*	-0.812	0.000	-	-	-	-	-	-
Constant	-20.126	0.000	-10.048	0.000	-16.191	0.000	-11.86	0

Notes: Panel Logit estimation; *included to account for heterogeneity in the methodologies used to construct ADL counts for BHPS waves 9 and 14; ** grouped by individual; *** grouped by year

As Table 1 shows, the results using 2002 and 2004 ELSA data are consistent with those from the BHPS in terms of direction and significance of the independent variables (no indicator for limiting

³ Main residences are not counted as a means-tested asset in relation to community-based services. Nevertheless, it has been assumed that there exists a positive correlation between home ownership and overall wealth.

longstanding illness was available) based on a sample of 10,055 older people. Survey year was significant at the five per cent level, although analysis was based on only two waves of data.

Using data from the *1991, 1994 and 2001* datasets, our GHS logit model showed broadly similar correlations to the BHPS sample, with the exception that in this case the income effect was not significant. Similarly, no significant income effect was found using the combined HSE dataset, in spite of a reasonably large sample size of 8,819 individuals over three waves.

Neither survey year nor level of investment income proved to be significant in the HSE sample. As can be seen in Figure 2, however, the level of home care receipt is unexpectedly high in 2000 compared to later HSE years. In light of the clear decline in receipt evident from other data sources, this is most likely due to an inconsistency in the definitions used in the 2000 data wave. The anomalous result for savings may in part be explained by the fact that only a dichotomous indicator for savings was available from the HSE (whether or not any savings were held).

Table 2 Factors associated with receipt of funding support

	Home care N=35,889 provided by NHS/SSD		Entirely N=35,860 free home care		Privately 35,889 purchased home care	
	Coef.	P>z	Coef.	P>z	Coef.	P>z
Age	0.191	0.000	0.154	0.000	0.151	0.000
Limited activity	0.494	0.000	0.552	0.000	0.656	0.000
ADL count	0.560	0.000	0.511	0.000	0.332	0.000
Lives alone	1.549	0.000	1.357	0.000	1.227	0.000
Owns home	-0.878	0.000	-0.772	0.000	0.273	0.067
Investment quintile	-0.170	0.000	-0.200	0.000	0.108	0.004
Income quintile	0.146	0.000	0.118	0.003	0.206	0.000
Year	-0.093	0.000	-0.672	0.000	-0.238	0.127
Year9 dummy (BHPS)*	-0.599	0.000	-0.565	0.000	-0.530	0.002
Year14 dummy (BHPS)*	-0.812	0.000	-0.040	0.001	0.021	0.123
Constant	-20.126	0.000	-17.837	0.000	-20.125	0.000

Panel Logit model; Based on BHPS years 1991-2006

Using in the BHPS model as dependent variable an indicator of home care from any source (rather than NHS/SSD-arranged care) gave similar results (see Table 2), although income proved no longer significant at the 5% level. Running the model with privately-purchased home care as the dependent variable, all income- and wealth-related variables showed a significant positive effect on probability of receipt in addition to indicators of age and dependency. The temporal effect was still negative but not significant at the 5% confidence level.

Table 3 Intensity of home care receipt

	Receipt of intensive (daily) home care*		Hours of home care received per week**	
	GHS Coef.	N=441 P>z	HSE Coef.	N=302 P>z
Age	-0.027	0.213	-0.007	0.917
Limited activity	-	-	1.988	0.070
ADL count	0.189	0.000	-	-
Lives alone	0.513	0.147	-2.091	0.059
Owns home	-0.137	0.654	-0.576	0.555
Investment quintile	-0.024	0.832	0.270	0.844
Income quintile	-0.008	0.939	-0.070	0.833
Year	0.196	0.000	0.064	0.748
Constant	-2.21	0.206	6.436	0.255

Based on GHS years 1991, 1994 and 2001 and HSE years 2000, 2005 and 2006.

*panel logit model

** panel general linear model

As Table 3 shows, socio-economic factors appeared to have far less of an effect in relation to intensity of service receipt among home care recipients than they did in predicting whether or not services were received at all⁴. Based on the GHS and HSE samples, the individual's level of dependency (ADL count in the case of GHS, and limited activity in the HSE dataset) had a positive correlation with service intensity, defined as number of visits per week in GHS and hours per week in HSE (p=0.000 and p=0.075 respectively).

Only one of the three HSE waves used in our analysis included an ADL count, so the indicator could not be used in the model. However, taking this year alone there was a significant correlation between ADL count and hours of receipt (p=0.028). In the HSE model, there was some positive correlation between living alone (reduced probability of receipt of informal care) and hours of home care received (p=0.060). Alternative specifications of the GHS model using ordered probit (ordered frequency of receipt) and logit (whether or not services were received every day) yielded similar results, showing a significant positive correlation between ADL count and frequency of receipt (p=0.000 in both models).

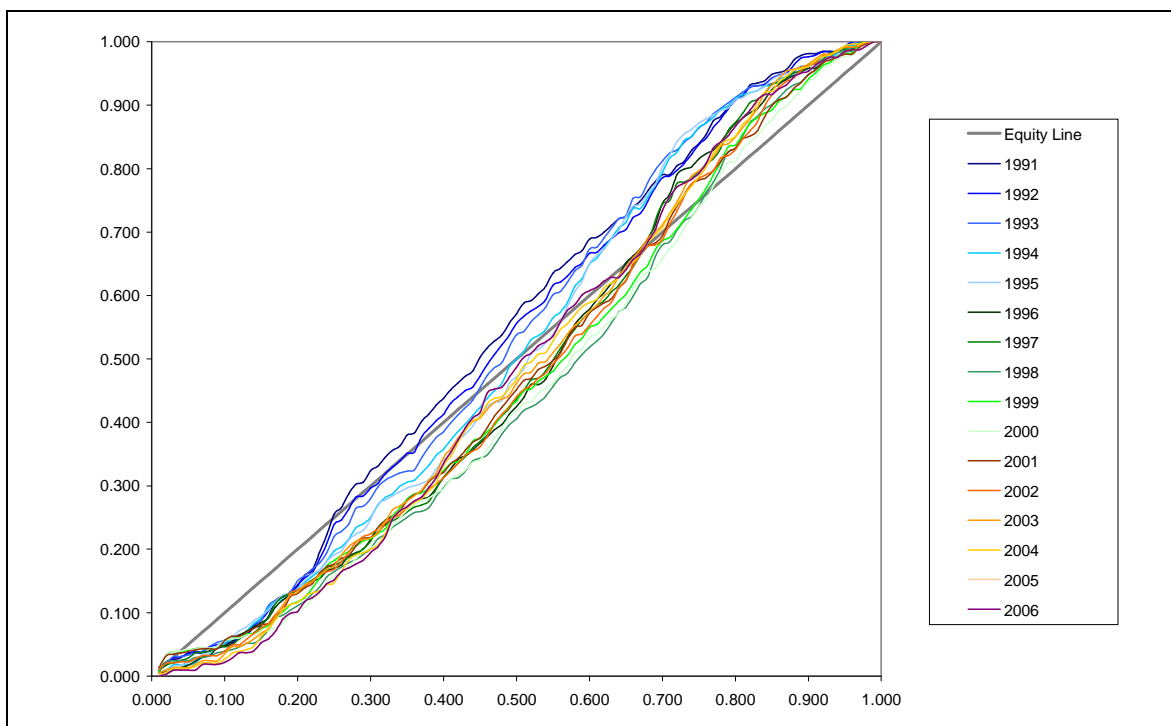
Access to home care services by income groups

Figures 3 and 4 show concentration curves and generalised concentration curves for the 15 waves of BHPS data. Three-year averages (two-year for the first and final waves) have been shown in order

⁴ Similar models could not be estimated on other datasets due to the lack of indicators of intensity of provision.

to smooth out the variations between waves and allow for easier reading of the chart. The concentration curve for NHS/SSD home care receipt against income (Figure 3), is s-shaped in all waves, residing neither entirely above nor below the line of equity. Home care services are equally distributed between the two income groups at either side of the point of intersection with the line of equity. Taking any point to the right of this intersection, resources overall are concentrated on the left hand (lower income) group than those at the higher end of the scale. While the period of time covered by these data do not allow us to observe any discernable shift consistent with the reforms of 1992, the point at which the concentration curve crosses the hypothetical line of equity appears to have shifted further up the income scale over the course of the 1990s.

Figure 3 Concentration curve of income (across) and receipt of NHS/SSD home care (down) 1991-2006 (BHPS) (3-year averages)



A mechanism that concentrated resources on the poorest member of society would be consistent with a curve residing entirely above the $x=y$ axis. That the curve shown in Figure 3 is s-shaped implies that service provision across the BHPS waves from 1991-2006 tends to favour middle-income groups, irrespective of other factors such as dependency which are likely to influence eligibility. The lowest income groups appear to receive less than their share of total resources, in spite of the well-documented negative correlation between income and dependency.

That such inequity is implied seems surprising, given that community care services are in theory pro-poor, both by virtue of means testing and in terms of the underlying negative correlation between income and dependency. However, the s-shaped nature of the curve is in fact more a reflection of the correlation between dependency and income groups than policy governing eligibility criteria. Bivariate analyses of the income and dependency variables show that while the overall correlation between wealth and low dependency is positive, this relationship does not appear to be linear. While the highest income quintile in each wave reported the lowest average number of ADL difficulties (out of a maximum of four), the group with the second lowest mean ADL score was in fact the poorest income quintile group. To what extent the income variable *does govern* receipt ceteris paribus is explored later through multivariate analysis.

Figure 4 Generalised concentration curve of income (across) and receipt of NHS/SSD home care (down) 1991-2006 (BHPS) (3-year averages)

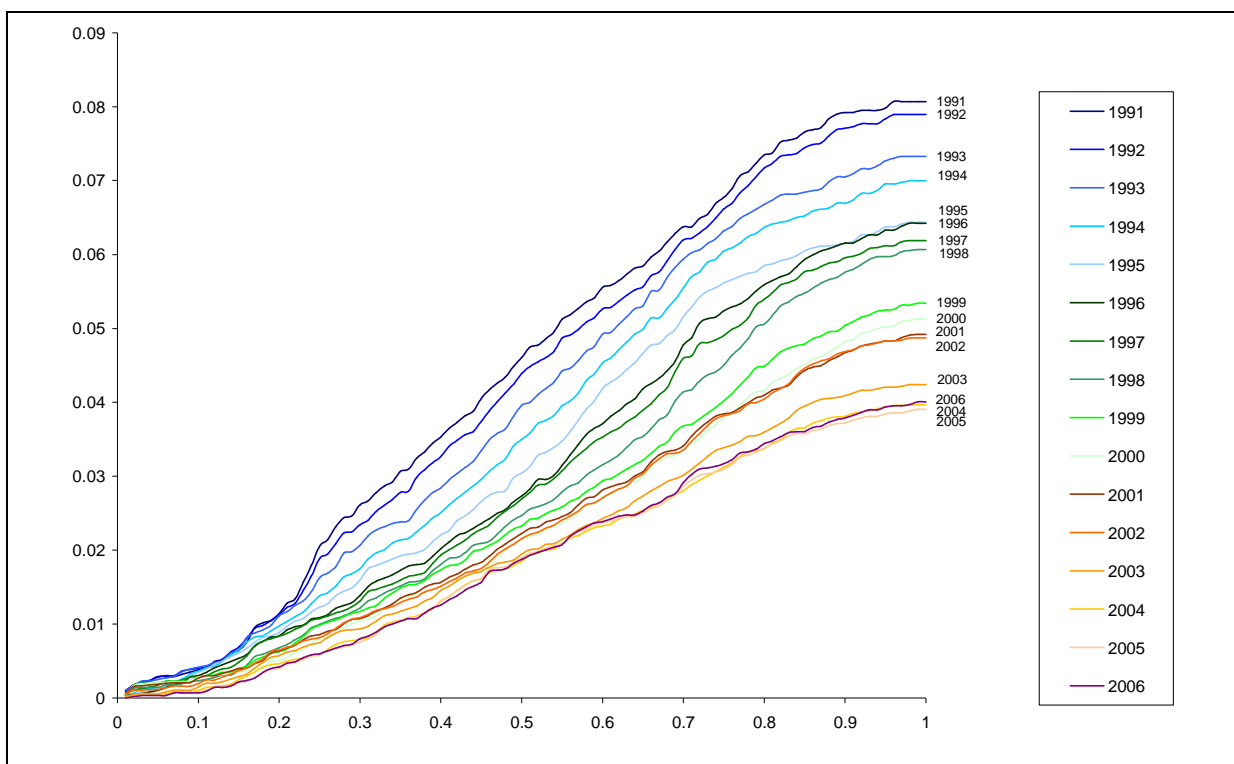


Figure 4 shows the same data as a generalised concentration curve. Achieved by multiplying values of the concentration curve by the total level of receipt for the corresponding wave, this illustrates the cumulative amount as opposed to the cumulative proportion of home care received by each group. This allows for a comparison of both the level of receipt and the level of equity between different waves.

5. Discussion

The aim of this study was to investigate the level of equity in the targeting of home care services among older people in the United Kingdom. The analysis found the receipt of home care to favour individuals with high levels of dependency and low levels of wealth, according to the criteria used by local authorities to govern eligibility. The positive income effect suggested by a number of the analyses implies a certain level of inequity in the targeting of home care services, however. This effect was not replicated in all datasets, although this may in part be attributable to the relatively small sample sizes (most particularly in the case of more recent survey data, whereby a very small proportion of the sample are in receipt of services).

One of the most pertinent elements of our findings is the apparently contrasting effect of income and wealth on the probability of receipt. Clearly a strong positive relationship is likely to exist between the two. However, the opposing effects of these variables could potentially be explained by distinguishing between whether factors are influencing *eligibility* to receive services (from a policy perspective) or *propensity to secure* the receipt of services (from a social perspective).

Primarily, eligibility is governed by physical dependency and means to pay. However, if members of higher income groups are either more likely to seek or more likely to secure services than equally-eligible members of lower income groups then this could be a possible explanation of the positive income effect shown. Ideally, this theory could be more robustly tested by splitting wealth above and below the means-testing threshold, however the level of data available did not allow for such analysis.

The *ceteris paribus* positive correlation between income and home care receipt evident from the analyses of BHPS and ELSA data is potentially indicative of shortfalls in case-finding, whereby higher-income groups are more aware of and/or more likely to seek services than those with lower levels of income. Such theories could be better (and more directly) explained with variables such as social class or level of education for which income has served as a proxy in our analysis.

A further possible explanation of the results is the likely correlation between socio-economic status and the individual's ability to successfully argue a case for eligibility, although from our results this was not supported by the observed relationship between income and likelihood of the subsequent withdrawal of services among users.

Similar results were found in a study of inequality and inequity in the use of GP, inpatient, outpatient and dentist services among older people between 1997 and 2003 using BHPS data ([Allin & Mossialos 2005](#)). This study noted that income appeared to have a greater effect on service use among the older population than users of all ages, commenting that “those in higher socio-economic groups are significantly more likely to express immediate health seeking behaviour.”

6. Conclusion

Although the strongest influences on the allocation of home care services appear to be related to need and the presence of alternative sources of care (i.e. informal care) the study identifies some evidence of inequity in the provision of local authority commissioned home care in England. Holding the likely determinants of eligibility constant, the receipt of home care services appears to favour higher income groups. To what extent such inequity points to failings on the part of local authorities in targeting services cannot be entirely discerned on the basis of the analysis. However the implication is that individuals from higher income groups are either more likely to seek services or more likely to secure receipt. As the number of service users in the older population continues to fall, the question of equity in targeting practices is as pertinent as ever.

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