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Paying for Long-Term Care for Older People in the UK: Modelling the Costs and Incidence of a Range of Options

I. Introduction and policy context

Around one in two women and one in three men who turn 65 will require intensive long-term care in their late old age (Glennerster, 1996). How this care is to be funded is an important issue, which continues to provoke lively debate. The essence of the debate is about how far people should fund their own care and how far they should be publicly funded. A particular issue has been the role of means-testing in determining how much people pay towards their care, with evidence of 'widespread dissatisfaction with the current means-tested funding arrangements' (Wanless, 2006: xxv). Underlying the debate are concerns both about the future affordability of long-term care and about the fairness of the current funding system.

One of the explanations for the debate on long-term care funding is the projected continuing growth in the numbers of older people. The Government Actuary's Department (GAD) projections of the number of people in the UK aged 65 and over, which have recently been revised upwards, now show that the number of people in the UK aged 65 and over will rise from 9.4 million in 2002 to 17.6 million in 2051, an increase of 87 per cent (Wittenberg et al., 2004; GAD, 2005). The number of very elderly people (aged 85 and over) will rise even more rapidly, from around 1.1 million today to around 4.2 million in fifty years' time. This is particularly important because the need for long-term care is greatest among very elderly people.

Concerns about the fairness of the current funding system have several dimensions (Hirsch, 2005; Wanless, 2006). One issue relates to differences between care which is available without charge under the National Health Service (NHS) and care which is subject to means-tested user charges. The NHS embodies a definition of fairness which provides health care on the basis of health needs rather than ability (or lack of ability) to pay. In contrast, access to publicly-funded social care for older people takes account of both care needs and ability to pay. These differences lead to so-called diagnostic inequities. People suffering from illnesses for which health care treatments exist (for example cancer) receive their personal care

without charge as a by-product of their medical care. Those with conditions which are not amenable to health care treatments (such as Alzheimer's disease) do not. A specific issue arises in relation to the funding of residential care. While the majority of care home residents are eligible only for means tested social services funding, a minority are eligible for full NHS funding without a means test. Variations in the eligibility criteria for fully-funded NHS care are another source of perceived unfairness (Hirsch, 2005). If ability to pay is taken into account, a separate issue is whether the specific form of the means test results in a fair distribution of public expenditure on social care for older people.

The Government considered the issue of long-term care funding sufficiently important and complex to warrant the first Royal Commission for many years. The purpose of the Royal Commission on Long Term Care was to review the financing of long-term care and to make recommendations about future financing. Its key recommendation was that the nursing and personal care components of the fees of care homes and home-based personal care should be met by the state, without a means test, and financed out of general taxation (Royal Commission on Long Term Care, 1999). Means-testing would remain for the accommodation and ordinary living costs ('hotel' costs) covered by residential fees and for help with domestic tasks.

The Government accepted many of the Royal Commission's recommendations but only removed the means test for nursing care in nursing homes (Secretary of State for Health, 2000). Similar decisions were adopted by the National Assembly for Wales and the Northern Ireland Assembly. However, the Scottish Executive decided that it would make personal care free of charge as well (Care Development Group, 2001).[1]

Pressure to make personal care free of charge throughout the UK, initiated by the Royal Commission's recommendations, remains. The Institute for Public Policy Research (IPPR), for example, advocated that personal care should be made free to all (Brooks et al., 2002). The Joseph Rowntree Foundation (JRF) has conducted a major three-year programme on paying for long-term care in the UK and argued strongly for better funding arrangements, describing the policy of free personal care in Scotland as 'promising', 'popular' and 'perceived as fair' (Joseph Rowntree Foundation, 2006: 2).

There are, however, other ways in which the system for funding long-term care could be reformed. The JRF, though stressing the need for fundamental reform of the long-term care system, has also suggested a number of ways in which the present system could be improved without incurring excessive costs (Joseph Rowntree Foundation, 2006; Hirsch, 2005). On the other hand, the recent report of the Wanless Review team has proposed a non-means-tested entitlement to social care, with government meeting two-thirds of the cost of the care package, and the remainder of the costs being met half by the user and half by the government, that is, with government meeting five-sixths of the costs if the user agrees to meet one-sixth (Wanless, 2006). Proposals for reform in the UK by JRF and the Wanless Social Care Review are both based on analyses of long-term care systems internationally (Glendinning et al., 2004; Poole, 2006), with an awareness that "other countries have taken major steps to secure sustainable and stable funding systems" (Joseph Rowntree Foundation, 2006: 2).

The present paper examines a range of options for paying for long-term care in the UK. It presents projections of the possible future costs of long-term care under the current funding arrangements and under a number of options involving changes to the funding arrangements. The paper builds on previous work by the authors (Wittenberg et al., 2002; Hancock et al., 2003; Wittenberg et al., 2004) not only by presenting updated projections using the latest official figures and through methodological improvements to the modelling (particularly the extension of the modelling of funding options to include home care as well as residential care), but in a number of other key respects. First, the paper looks, not just at funding options around free personal care, but also at funding options around reform of the current means-tested system, both in residential and non-residential care settings. Second, the paper builds on the experience of introducing free personal care in Scotland by examining a number of different versions of a policy of free personal care. Third, the paper examines the distributional impact of the different funding options, but now also does so in conjunction with an examination of the distributional consequences of revenue-raising options. By comparing the effects of a policy of free personal care with changes to the means test the paper addresses both dimensions of fairness discussed above.

The paper draws on two simulation models that are designed to explore the expenditure implications over time of different policy options for financing long-term care. The Personal Social Services Research Unit (PSSRU) has developed a macrosimulation model to make

projections of demand for long-term care and associated expenditure, under clearly specified assumptions (Wittenberg et al., 2006). The CARESIM model, previously known as the NCCSU model, is a microsimulation model to simulate long-term care charges under different charging regimes (Hancock et al., 2003). The CARESIM model simulates the incomes and assets of future cohorts of older people and their ability to contribute towards care home fees or the costs of home-based care, should such care be needed. The projections presented here have been produced through an innovative linkage between the PSSRU and CARESIM models. This linkage was initially developed in order to make projections for the Institute for Public Policy Research (IPPR) (Wittenberg et al., 2002), but has since been improved and extended through a new programme of work funded by the Nuffield Foundation, as well as through work commissioned by the Wanless Social Care Review (Malley et al., 2006).

II. Long-term care financing in the UK

In the UK, long-term care is usually taken to mean help with domestic tasks, such as shopping and preparing meals, assistance with personal care tasks, such as dressing and bathing, and nursing care (Comas-Herrera et al., 2004). Most long-term care for older people living at home is currently provided by informal carers (Pickard et al., 2000). Formal services are provided by a range of agencies including local authority social services, community health services (under the NHS) and independent sector residential and nursing homes and home care services (Comas-Herrera et al., 2004). Much of the care arranged and paid for through local authorities is supplied by independent sector providers. Older people may also arrange and pay privately for their own residential or home care without involving a local authority.

Around 4 per cent of people aged 65 and over in the UK, and 12 per cent of those aged 80 or more, live in residential, nursing home or long-stay hospital care (the majority are in residential or nursing homes). Another 20 per cent of those living at home receive domiciliary services, including home care, day care, meals, community nursing and private domestic help. Those over age 85 are more likely to receive all formal services than the ‘younger’ old, and this is particularly true of residential care (Table 1). Recipients of

residential care are also more likely to have lived alone prior to admission to care and are less likely to have owned their own homes (Hancock et al., 2002).

Table 1: Key characteristics of recipients of domiciliary and residential care, compared to the general population of older people, Great Britain, 2002

Percentages	All older people (aged 65 and over) %	Recipients of community services* %	Recipients of residential care %
Aged 85 and over	12	26	52
Female	58	66	76
Living alone**	38	65	68
Owner-occupier**	68	73	43

Source: PSSRU model estimates, using ONS population estimates and analyses of 2001/2 GHS, Department of Health and PSSRU residential care survey data.
* covering home care and private domestic help services.
** for people in care homes, household type and housing tenure are prior to admission.

The systems of means-tested charges for long-term care, as already noted, vary across the constituent countries of the UK. In this paper, the English system, as if applied to the whole of the UK, is used as the basis for comparison with reform options. The current charging regime for residential and nursing home care in England takes into account the income and assets (in most cases including any housing wealth) of residents. Those with assets over an upper limit, currently set at £21,000 in England from April 2006 (approximately €30,600), are not eligible for local authority support.[2] Those with assets below this level are required to pay some of the costs of their care, the amount depending mainly on their income. Local authorities have discretion over how they charge for home care services, although there are national guidelines which set out common principles to which local authorities must adhere in determining how much to charge users (Department of Health, 2003a). Expenditure on long-term care for older people currently amounts to around £15.5 billion in the UK, and represents approximately 1.5 per cent of Gross Domestic Product (GDP). Around one third of this expenditure is met privately by older people and around two thirds is met publicly by the NHS and social services.

Two social security benefits are also relevant to the long-term care funding system. Older people needing care may be entitled to Attendance Allowance (or equivalently the care component of Disability Living Allowance[3]) if they need help with personal care or supervision because of illness or disability. The second relevant social security benefit is Pension Credit, a means-tested income maintenance benefit which includes an addition (the

Severe Disability Premium) for those with care needs. (These social security benefits are described more fully in Appendix Three.)

III. Methods: the PSSRU and CARESIM models

The PSSRU Model

The PSSRU model is a cell-based or macrosimulation model that has been developed to make projections of likely demand for long-term care for older people under different scenarios. The core PSSRU model designed for the Department of Health makes projections for England to 2041. A full account of the model, and of the data and assumptions used, can be found in Wittenberg et al. (2006). For the purposes of the analysis discussed in this paper, the model was adapted to make projections for the UK to 2051.

The PSSRU model makes projections of four key variables (Figure 1). These are future numbers of disabled older people, future levels of long-term care services and disability benefits, future public and private expenditure on long-term care and future social care workforce. The projected levels of expenditure are broken down between public expenditure by the NHS and local authority social services and private expenditure by older people themselves. Public expenditure also includes a separate estimation of expenditure by the Department for Work and Pensions (DWP) on disability benefits that are used to fund care (see Appendix Three). Projected levels of public and private expenditure are compared with projected economic output, Gross Domestic Product (GDP). This means that the model can be used to make projections both of the future balance between public and private expenditure on long-term care and of the future proportion of GDP spent on long-term care.

The PSSRU model does not make forecasts about the future. It makes projections on the basis of specific assumptions about future trends. The approach involves simulating the impact on demand of specified changes in demand drivers, such as demographic pressures, or specified changes in policy, such as the introduction of free personal care. It does not involve forecasting future policies or future patterns of care.

Further details of the PSSRU model are contained in Appendix Two.

CARESIM

CARESIM uses data from the British Family Resources Survey (FRS) to simulate what each older participant in the survey would have to pay towards care home fees or the cost of care provided to them in their own home, should he or she need such care. The model performs simulations for single people currently aged 65 and over, and for the older partner in couples where at least one partner is aged 65 years or more. The simulations are performed for a base year and for future years. Simulations for future years involve: ageing the sample of those currently aged 65 and over, allowing for deaths and the consequent effects of widowhood; modelling the evolution of their incomes and capital under certain assumptions; and making assumptions about future costs of care and the care charging, social security benefit and income tax regimes which will be in place for the year of interest. It is assumed that state benefits for pensioners are uprated in line with recent practice. However, the Government has recently published proposals which, if implemented, would change these practices (Secretary of State for Work and Pensions, 2006). In the model it is assumed that state pensions are uprated with prices but the proposals would link the basic state pensions to earnings growth from 2012. Also, under current uprating policies the proportion of pensioners entitled to Pension Credit is projected to grow from 45 per cent to around 70 per cent by 2050 (Secretary of State for Work and Pensions, 2006). The Government projects that its proposals would reduce the proportion of people eligible for Pension Credit to around a third by 2050, mainly as a result of a change in uprating policy.

Because it is more difficult to predict the future incomes of people who are not yet retired than it is for those who are already drawing pensions, the base year sample is not ‘refreshed’ as it is aged. This restricts the years and age ranges for which the model can produce projections. For the base year (2002) simulations are performed for people aged 65 and over. By 2022 the simulations are representative only of people aged 85 and over. However, it is at these oldest ages that the need for care is highest and institutionalisation rates rise sharply, so this restriction is not as limiting as it might seem. Details of how the sample is aged and how the evolution of income and capital is modelled can be found in Hancock (2000)..

In the analysis reported here the model uses data from the 1999/2000, 2000/01 and 2001/02 FRS with money values uprated to the price levels prevailing in 2002. In the base year simulations are performed for 21,334 older people.

Separate simulations are performed for three different types of care homes – independent sector residential homes, local authority residential homes and independent sector nursing homes – and receipt of three packages of home care corresponding to low, medium and high intensity care. The model starts by simulating what each older person would have to pay, per week, on starting to receive care in each of these six categories. Most of those having to meet the full costs of residential care will need to draw on their capital so that over time their capital will fall. Once capital has fallen to the upper capital limit, they may be eligible for local authority help with the fees and, if in an independent sector home, also for the lower fee rate that local authorities are able to negotiate for residents receiving local authority support. Each older person is randomly assigned an uncompleted length of stay in each type of care home (see Appendix Three for details). Their contribution to care costs is calculated for that point. In this respect the model can be thought of as mimicking a cross-sectional survey of care home residents. Home care clients may also have to draw on their capital to meet charges although this is less likely under the base charging regime than for residents in care homes. Since there are no data on uncompleted periods of receipt of home care we assume that the mean length of time for which recipients of home care have been receiving services is 18 months and their contributions to home charges calculated for that length of time. Since there is no national system for means-testing home care (as observed earlier), a stylised home care means test (described in Appendix Three) has been assumed.

Further details of CARESIM are contained in Appendix Three.

Linkages between the PSSRU model and CARESIM

The CARESIM microsimulation model is used to provide projections of four variables for incorporation in the PSSRU model:

- the proportion of care home residents and home care clients eligible for local authority support under the current or an alternative charging regime;

- for care home residents, the proportion of gross costs of care met by disability benefits in the case of those not eligible for local authority support;
- the proportion of gross costs met by users, in the case of those eligible for local authority support; and
- the proportion of gross costs of home care met by disability benefits, for those eligible for local authority supported home care.

As already explained, CARESIM calculates what each person in a representative sample of older people would be required to contribute to the costs of residential or home care. However, the PSSRU model shows that, controlling for age, service users are not a random subset of the older population. Home care users are disproportionately likely to live alone and care home residents are disproportionately likely to have lived alone and to have rented rather than owned their homes. Housing tenure and whether previously living alone are both characteristics which affect liability for care home charges. This bias among home care clients toward those living alone and among care home residents towards renters and those previously living alone therefore needs to be taken into account. This is achieved within CARESIM by re-weighting the model's results according to projection year, housing tenure (owned or rented), marital status (married/cohabiting or single, widowed or divorced) and gender within each five-year age group for which CARESIM produces output. The weights are based on the PSSRU model projections of the (previous) housing tenure and household type of service users, by age and gender. The weights differ between the different types of care home and different packages of home care. The outputs from CARESIM are predictions for each five year age group of the four variables outlined above. These are produced separately for each type of care home and package of home care, for the years 2002, 2007, 2012, 2017 and 2022.

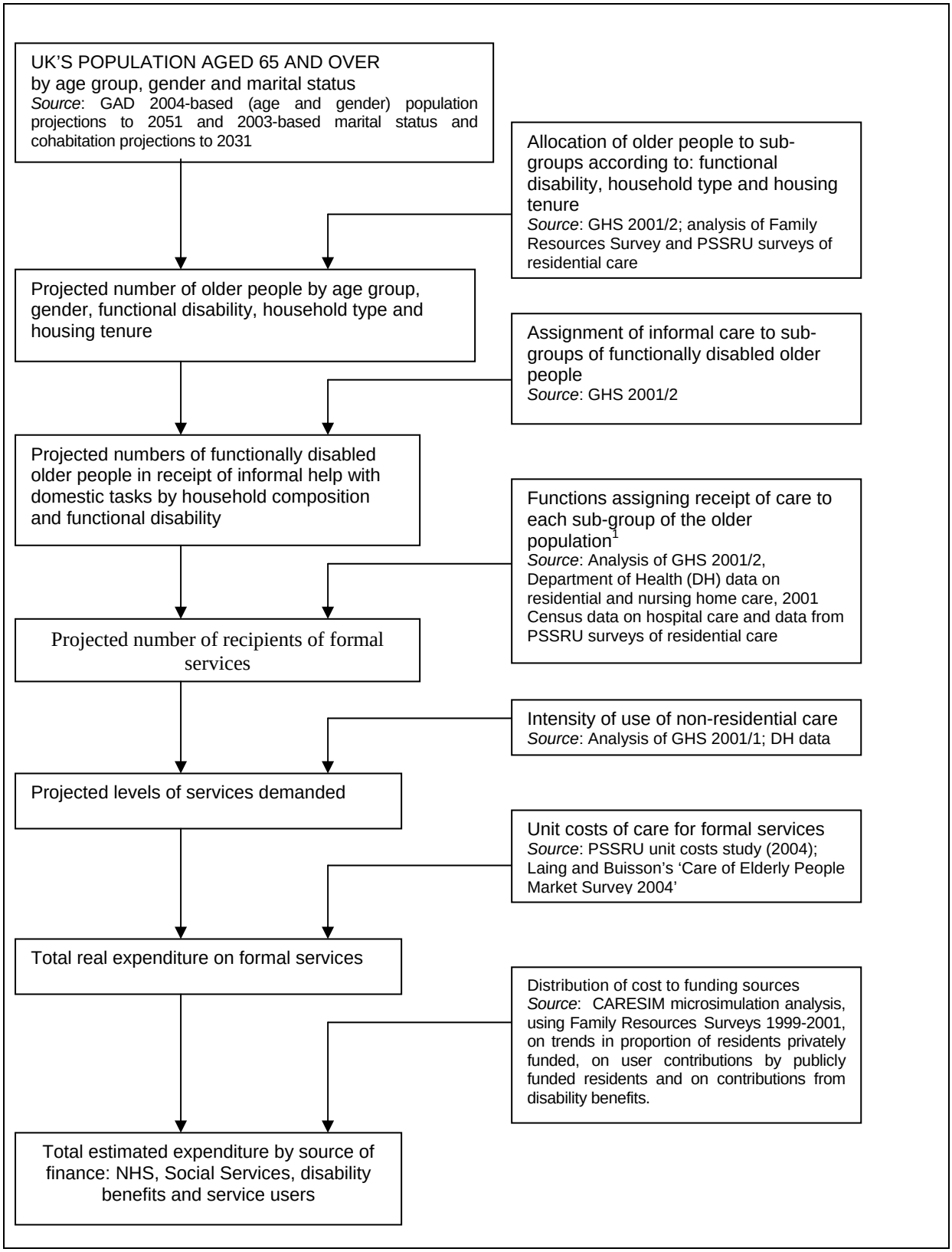
The outputs from CARESIM were used in the PSSRU model in the following way. For each projection year to 2012, the proportion of care recipients aged 75 and over who were eligible for local authority support was used. For 2017, data for the oldest two age groups were used and for 2022, data for the oldest age group.[4] The trend over time in this proportion was then applied to the base year proportion eligible for local authority funding assumed in the PSSRU model. It should be noted that the proportion eligible for public funding estimated by CARESIM was not used directly. It differed from the proportion suggested by external data

(for which sources are shown in Appendix Two, section 4), possibly because the weighting of the FRS data could not control fully for economic variables.

Average shares of costs met by service users and by disability benefits for the same age groups were used directly. The data for 2022 were applied to 2031, 2041 and 2051. In other words, no change was assumed beyond 2022 in the proportion of residents eligible for local authority support, the proportion of care costs met by service users or the proportion of care costs met through disability benefits. As the rise in home ownership rates among older people is expected to have plateaued by 2022, this assumption seems reasonable.

An overview of the PSSRU model is given in Figure 1 indicating where outputs from the microsimulation model are used.

Figure 1: Structure of the PSSRU Model



1. Functions assigning receipt of care:
   (a) Residential care is treated as a function of age group, gender, household type and housing tenure;
   (b) Non-residential care is treated as a function of age group, gender, functional disability, household type/informal care and housing tenure.

Measuring the distributional effects of alternative funding regimes

The services covered in the distributional analysis are restricted to residential and nursing home care and Local Authority care provided to people in their own homes, as these are the services to which the means tests apply.

To assess the distributional effects of alternative long-term care funding regimes we analyse the average contributions to total care costs made by recipients of care and by the state according to the income level and housing tenure.

Where individuals are classified by income level, the measure of income used for the purpose of the classification is the net income (before housing costs) of the family unit (single older person or older couple) that they would receive when living in their own homes without any care needs. That is, it excludes Attendance Allowance and the Pension Credit Severe Disability Premium. Individuals are classified according to the quintile (fifth) of the relevant income distribution in which their income falls. For most of the analysis, the relevant distribution is specific to age group (65-69, 70-74. 75-79, 85 and over). Thus if someone has an income in the lowest quintile, this means they have an income which is low for someone of their age group. Alternative approaches would have been to classify income relative to the general population or to the total older (65 and over) population. Compared with these approaches, our chosen method ensures equal numbers (and hence adequate sample sizes) in each quintile for every age group which we use. This is particularly important for the 85+ age group who tend to be concentrated in the lower parts of the general or older population income distributions while also making up a disproportionate share of the population who receive care. In analysing the distributional effects of alternative funding regimes combined with revenue raising options, individuals are classified according to the general population income distribution since these options affect both older and younger people. Income is adjusted for family size using an equivalence scale of 1 for the first adult, 0.6 for each subsequent person aged at least 14 years and 0.4 for each child aged under 14. The ranges of income covered by each quintile in 2002 and 2022 are shown in Table 2 below.

Table 2: Thresholds for income quintiles, £s per year, April 2002 prices

	Quintile 1 (lowest)	Q2	Q3	Q4	Quintile 5 (highest)
			2002		
aged 65-69	up to 6,650	8,000	9,170	12,170	above 12,170
aged 70-74	up to 6,560	7,860	8,700	11,190	above 11,190
aged 75-79	up to 6,490	7,870	8,640	10,350	above 10,350
aged 80-84	up to 6,550	7,880	8,580	9,680	above 9,680
aged 85+	up to 7,740	7,840	8,390	9,180	above 9,180
Total population	up to 4,970	7,750	10,420	15,510	above 15,510
			2022		
aged 85+	up to 9,490	11,500	12,460	14,000	above 14,000

Note: Income is equivalent net benefit unit income, before housing costs, equivalised to a single person - see text for details.

In classifying people by their housing tenure we distinguish owner-occupiers from other housing tenures. Older people and their partners who are householders and live in owner-occupied housing are classed as owner-occupiers. Older people who live in other forms of tenure or are not householders are classed as non owner-occupier. This latter category therefore includes older people who live in housing owned by their children or other relatives. Care home residents are classified according to their housing tenure before entering residential care.

Five sources of contributions to care charges are distinguished:

- the NHS (applies to care home residents only and corresponds to the NHS contribution towards nursing care in nursing homes)
- a Local Authority (LA)
- Attendance Allowance (AA) and Disability Living Allowance (care component)
- Pension Credit (PC)
- the user's other resources, such as basic state pension and private pensions.

The first and second are commonly treated as the state contribution to long-term residential and home care costs. However, there is growing interest in the role of Attendance Allowance and Disability Living Allowance in the debate on long-term care funding (Joseph Rowntree Foundation, 2006; Wanless, 2006). Entitlement to Pension Credit also partly depends on care needs, through the Severe Disability Premium so its role in financing user contributions to care is also of interest.

Assumptions underlying the apportionment of user charges to each of the last three of these sources are set out in Box 1 in Appendix Three. The contribution of Attendance Allowance can be viewed as the maximum contribution that it could make towards care costs.

Analyses of the distributional effects of reform options also consider the distribution of gains to care recipients. These gains are calculated as:

a. the change in user contribution (including that met from Attendance Allowance or Pension Credit)
   plus
b. the change in entitlement to Attendance Allowance
   plus
c. change in entitlement to means-tested benefits
   less
d. change in income tax liability

The purpose is to reflect the change in the service user's disposable income after care costs or charges. There may also be changes in the user's wealth if capital is depleted at different rates under the reform options. This is not taken into account explicitly but is mentioned for scenarios where it is significant. For most of the options examined *a*. is negative or zero. Entitlement to Attendance Allowance can change for care home residents if the reform changes them from being self-funders to receiving Local Authority support (or vice versa). This also has an effect on means-tested benefits through the Severe Disability Premium. Pension Credit and, for those receiving care at home (or no care). Housing and Council Tax Benefit are included in the means-tested benefits at *c*. Entitlement to these benefits can also change if the option affects the rate at which care recipients deplete their capital. This effect is generally very small for the options examined. Tax liability (*d*.) changes only in revenue-raising options.

For each reform, average gains within income quintile or tenure category are expressed as a percentage of the overall average gain to facilitate comparison across reforms which are of substantially different scale. A figure of 100 for every income quintile would indicate that average gains were the same for all income groups. A figure of 200 for the lowest quintile

and 50 for the highest would indicate that the gains in the lowest income group were on average twice that of the overall average, but only half in the top quintile.

Distributional results for the base year are compared with those for 2022 to see how the pattern is projected to change over time. For this purpose we restrict attention to people aged 85 and over since it is only for this age group that results are available for all years up to 2022.

IV Projections under the current funding regime

Base case assumptions and projections

The PSSRU and CARESIM models produce projections on the basis of specific assumptions about future trends in the key drivers of demand for long-term care. A central base case projection takes account of expected changes in factors exogenous to long-term care policy, such as demographic trends and trends in housing tenure. It holds constant factors endogenous to long-term care policy, such as patterns of care and the funding system. The main assumptions used in the central base case are summarised in Box 1 below. The central base case is used as a point of comparison when the assumptions of the model are subsequently varied in alternative scenarios.

BOX 1

KEY ASSUMPTIONS OF THE CENTRAL BASE CASE

- The number of people by age and gender changes in line with the Government Actuary's Department 2004-based population projections for the UK (GAD, 2005).
- Marital status changes in line with GAD 2003-based marital status and cohabitation projections for England and Wales (ONS, 2005): as these projections run to 2032, the 2031 marital status rates are applied to 2041 and 2051.
- There is a constant ratio of single people living alone to single people living with their children or with others and of married people living with partner only to married people living with partner and others.
- Prevalence rates of disability by age and gender remain unchanged, as reported in the 2001/2 General Household Survey (GHS) for Great Britain.
- Home-ownership rates, as reported in the 2001/2 Family Resources Survey (FRS), change in line with projections produced by the CARESIM model.
- The proportions of older people receiving informal care, formal community care services, residential care services and disability benefits remain constant for each sub-group by age, disability and other needs-related characteristics.
- The funding system remains unchanged as the current system for England which is applied for the whole of the UK.
- Health and social care unit costs rise by 2% per year in real terms (but non-staff revenue costs remain constant in real terms). Real Gross Domestic Product rises in line with HM Treasury assumptions (HM Treasury, 2005).
- The supply of formal care will adjust to match demand* and demand will be no more constrained by supply in the future than in the base year.

* The model effectively assumes that the assumed real rise in care costs will be sufficient to ensure that supply will rise to meet projected demand.

We examined the effects on the central base case projection of alternative assumptions on three different sets of factors that are taken to be exogenous to long-term care policy: life expectancy, disability and unit costs. These three factors seem the most important exogenous drivers of demand for and expenditure on long-term care. Earlier analyses found that expenditure on long-tem care is sensitive to assumptions about future trends in these three factors (Wittenberg *et al* 2001, Wittenberg *et al* 2006). They were considered before

investigation of the effect of possible changes to the funding system, since they will have an impact under existing or changed policy.

A selection of potential alternative assumptions on life expectancy, disability and unit costs were combined into two future scenarios. These provide a low and a high variant to the central base case. The low and high variant base cases are not intended to cover the most extreme assumptions possible, but instead span the range of the more plausible assumptions on the three exogenous variables considered. They assume that future numbers of older people will be within the range of the official Government Actuary's Department variant population projections, that disability rates will either remain constant over time or fall gradually, and that the unit costs of care will rise in real terms either in line with average earnings or somewhat more rapidly. The assumptions used in these three future scenarios are summarised in Table 3. Note that changing expectations of older people are not considered.

Table 3: Assumptions for the three future scenarios: low, central and high base cases

Scenario	Life expectancy assumptions	Disability assumptions	Real unit costs assumptions
Low expenditure scenario (Low base case)	Official principal population projections*	Disability rates fall in the line with a 'Brookings' scenario+	Unit costs of care rise by 2% per year, in line with average earnings (except that non-staff revenue costs remain constant).
Central scenario (Central base case)	Official principal population projections	Current age- and gender-specific disability rates #	Unit costs of care rise by 2% per year, in line with average earnings (except that non-staff revenue costs remain constant).
High expenditure scenario (High base case)	High life expectancy variant to the official projections*	Current age- and gender-specific disability rates #	Unit costs of care rise by 2.5% per year, faster than average earnings (except that non-staff revenue costs remain constant).

* GAD 2005

+Age- and gender-specific disability rates are assumed to decline so that by 2051 they match the 2001/2 rates for someone aged three years younger, similar to a scenario developed by Wiener *et al* (1994) at the Brookings Institution.

#As estimated from the 2001/2 General Household Survey (Wittenberg *et al* 2006)

The GAD 2004-based principal population projections for the UK project that between 2002 and 2051 the numbers of people aged 65 or over will rise by 86%. The numbers of those aged 85 or more are projected to rise faster during this period, by over 275%. The GAD high life expectancy population projections project that the numbers of people aged 65 and over will rise by 108% between 2002 and 2051 and the numbers aged 85 and over by 390%.

The numbers of disabled older people, defined as those unable to perform at least one Instrumental Activity of Daily Living (IADL) such as shopping, or having problems with at least one Activity of Daily Living (ADL) such as bathing or dressing, would grow between 2002 and 2051:

- by 53% under the low base case;
- by 118% under the central base case; and
- by 155% under the high base case.

The number of older people with moderate or severe disability, that is, needing help with one or more ADL tasks, would increase:

- by 36% under the low base case;
- by 137% under the central base case; and
- by 183% under the high base case.

These projections are set out in more detail in Table 4, which shows projections for total numbers of older people, numbers of disabled older people and numbers of severely disabled older people under the three base cases.

Table 4: Projected numbers of older people and disabled older people (thousands), under the three base case sets of assumptions, 2002 to 2051

	2002	2012	2022	2031	2041	2051	% growth 2002 to 2051
Number of older people age 65 or more							
Central scenario (base case)	9,440	10,830	12,950	15,340	16,890	17,610	86
Low expenditure scenario	9,440	10,830	12,950	15,340	16,890	17,610	86
High expenditure scenario	9,440	10,900	13,200	15,940	18,150	19,640	108
Number of older people age 85 or more							
Central scenario (base case)	1,130	1,440	1,880	2,540	3,310	4,240	276
Low expenditure scenario	1,130	1,440	1,880	2,540	3,310	4,240	276
High expenditure scenario	1,130	1,470	1,990	2,850	4,020	5,550	393
Number of older people disabled							
Central scenario (base case)	2,790	3,190	3,920	4,790	5,550	6,100	118
Low expenditure scenario	2,790	3,000	3,460	3,950	4,240	4,260	53
High expenditure scenario	2,790	3,220	4,030	5,050	6,150	7,120	155
Number of older people severely disabled							
Central scenario (base case)	1,110	1,270	1,570	1,960	2,320	2,630	137
Low expenditure scenario	1,110	1,170	1,310	1,470	1,550	1,500	36
High expenditure scenario	1,110	1,290	1,620	2,080	2,600	3,130	183

Source: PSSRU/CARESIM model estimates
For definitions of disability and severe disability, see text

The numbers of disabled older people in households receiving informal care are projected under the central base case to increase by around 110%, from approximately 2.0 million in 2002 to 4.3 million in 2051 (Table 5). They are projected to increase by around 55% under the low base case and around 145% under the high base, over the same period. The numbers of disabled older people receiving care from a spouse or partner are projected to increase faster than the numbers receiving care from a child, under base case assumptions, although demand for informal care from the children of older people is also projected to more than double over the next fifty years.

The numbers of users of local authority home care services would need to rise under the central base case by 135%, from 440,000 to slightly over 1,000,000, to keep pace with demographic pressures. The numbers of users of private home care services would also need to rise by 120%, from 970,000 to 2,125,000. The numbers of older people in care homes would need to rise by 155%, from 400,000 to just over 1,000,000. The projected numbers of recipients of key services under the three base cases are shown in Table 5.

Table 5: Projected numbers of service recipients (thousands) under the three base cases, 2002 to 2051

	2002	2012	2022	2031	2041	2051	% growth 2002 to 2051
Low base case							
Informal care	2,040	2,215	2,560	2,920	3,135	3,150	54%
LA home care*	440	475	550	660	725	770	75%
Private home care	970	1,120	1,375	1,705	1,920	2,080	114%
Care homes	400	415	460	520	550	545	35%
Central base case							
Informal care	2,040	2,345	2,875	3,470	3,980	4,300	111%
LA home care*	440	495	610	770	905	1,030	135%
Private home care	970	1,115	1,365	1,680	1,930	2,125	119%
Care homes	400	455	560	715	870	1,030	156%
High base case							
Informal care	2,040	2,360	2,945	3,650	4,370	4,965	143%
LA home care*	440	505	630	820	1,015	1,230	179%
Private home care	970	1,125	1,400	1,770	2,120	2,455	152%
Care homes	400	460	580	770	1,000	1,260	213%

Source: PSSRU/CARESIM model estimates
* LA refers to Local Authority

Care home residents were divided between those in local authority homes, independent residential care homes and nursing homes. Home care recipients were divided into three intensity groups, low, medium and high intensity (see Appendix Two). (Non-disabled users of private home care were excluded from this breakdown on the basis that they would be unlikely to meet the care-related eligibility criteria for publicly funded home care.) This breakdown was essential to facilitate the microsimulation analyses of the proportion of home care recipients eligible for public funding, since weekly care costs differ between intensities of home care and types of care homes. Table 6 sets out the breakdown of home care and care home users by intensity of home care/type of care home and by source of funding in 2002. The table includes among publicly funded residents, for completeness, an estimated 15,000 NHS funded residents in care homes, although this group are not affected by changes to the funding system.

Table 6: Number of home care and care home service users (thousands), by source of funding, 2002

Services	Number publicly funded	Number privately funded	Total	Percentage publicly funded (%)
Low intensity home care	135	200	335	40
Medium intensity home care	135	90	225	60
High intensity home care	170	30	200	85
Non-disabled home care	0	650	650	0
Total home care	440	970	1,410	31
Nursing home *	100	51	151	66
LA care home *	32	4	35	90
Independent residential care home *	147	69	216	68
Total care home *	278	124	402	69

Source: PSSRU/CARESIM model estimates
* Includes respite care

Total expenditure on long-term care services is projected to rise by almost 500%, from £15.7 billion in 2002 to over £94 billion in 2051. If Gross Domestic Product rose in line with HM Treasury assumptions**,** long-term care expenditure would grow from 1.49% of GDP in 2002 to 3.14% in 2051. The models estimate that around £550 million of disability benefits – attendance allowance and disability living allowance (care component) – are used to purchase care privately or to meet user charges for care. When this is included, projected public expenditure on long-term care would rise by around 470%, from £10.2 billion in 2002 to almost £58.5 billion in 2051. These figures relate to public expenditure on long-term health services, social services and disability benefits used to fund care. If Gross Domestic Product rose in line with HM Treasury assumptions**,** public expenditure on long-term care would rise from 0.96% of GDP in 2002 to 1.94% in 2051.

Table 7 shows these projections in greater detail for all three base cases. Total long-term care expenditure is projected to increase from approximately 1.5% of GDP in 2002 to 2.00% in 2051 under the low base case and 4.75% under the high base case, compared to 3.14% in 2051 under the central base case. Public expenditure on long-term care, including disability benefits used to fund care, is projected to increase from around 1.0% of GDP in 2002 to 1.27% under the low base case and around 3.00% under the high base case, compared to 1.94% in 2051 under the central base case.

Table 7: Projected public and private expenditure on long-term care for three alternative future scenarios as a percentage of GDP, 2002-2051, UK

	2002	2012	2022	2031	2041	2051
Low base case assumptions						
Public expenditure	0.96	0.93	1.02	1.17	1.25	1.27
Private expenditure	0.52	0.52	0.59	0.69	0.73	0.73
All long-term care expenditure	1.49	1.45	1.61	1.86	1.98	2.00
Central base case assumptions						
Public expenditure	0.96	0.99	1.16	1.45	1.71	1.94
Private expenditure	0.52	0.56	0.70	0.87	1.03	1.20
All long-term care expenditure	1.49	1.56	1.86	2.32	2.74	3.14
High base case assumptions						
Public expenditure	0.96	1.06	1.34	1.80	2.36	2.99
Private expenditure	0.52	0.58	0. 77	1.04	1.37	1.76
All long-term care expenditure	1.49	1.65	2.11	2.84	3.73	4.75

Source: PSSRU/CARESIM model estimates

Distributional incidence of costs under the central base case

Distributional incidence of costs under the central base case in 2002

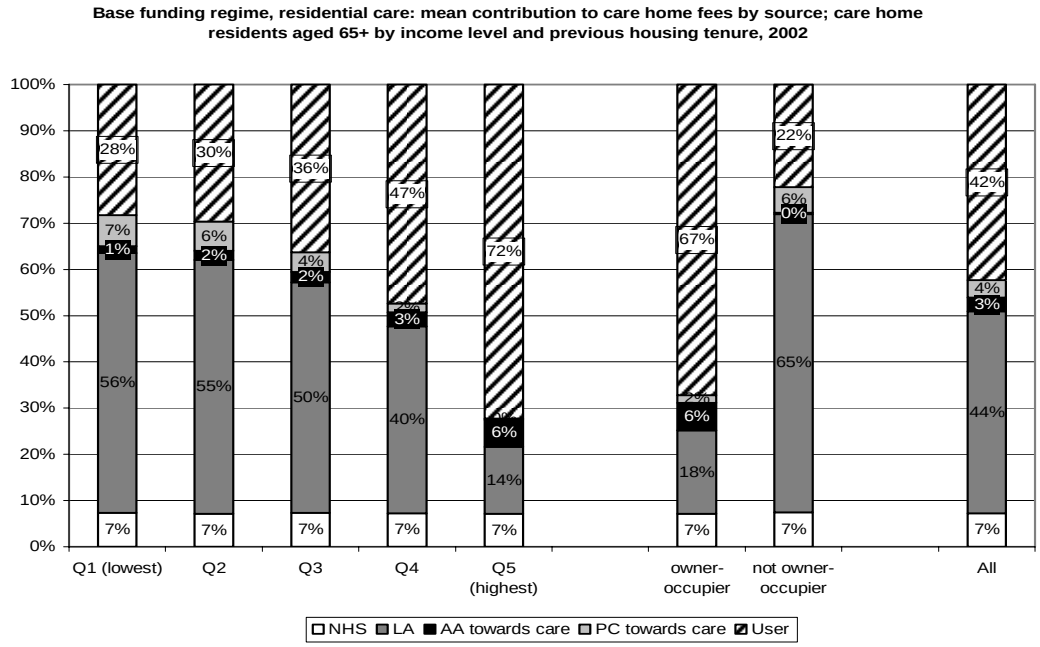
Figures 2 to 4 present the mean contributions to care charges from different sources according to income level and (previous) housing tenure. The charts relate to recipients of residential care, home care and both types of care respectively and are for 2002.

Under the assumptions underlying the apportionment of user charges all of any Attendance Allowance received by care home residents is implicitly assumed to be put towards care home fees. On average all but a few pence of any Pension Credit is also absorbed by fees. Figure 2 shows that the NHS contributes on average 7% to the costs of residential care and this hardly varies by income level or housing tenure. This is what would be expected given that NHS-funded nursing care is not means-tested. In contrast, the average Local Authority contribution ranges from 56% and 55% in the lowest two income quintiles to just 14% in the highest income quintile. The decline in Local Authority contribution as income rises is partially offset by the greater contribution of Attendance Allowance to the care home fees of those on higher incomes – a consequence of the fact that residents who receive Local Authority help with their fees cease to be eligible for Attendance Allowance. However, the combined Local Authority and Attendance Allowance contribution still falls markedly as income rises. Pension Credit contributes an average of about 6% to the care home fees of residents in the lowest two income quintiles, and lower amounts for those on higher incomes.

The contribution made by users from their other resources rises from 28% in the lowest income group to 72% in the highest.

The comparison by previous housing tenure shows the importance of housing wealth in the means-test for residential care. The average Local Authority contribution for residents who were owner-occupiers is just 18% compared with 65% for non owner-occupiers (Figure 2). Again, adding in the contribution of Attendance Allowance narrows the gap but only slightly. Pension Credit contributes much more to the care home costs of non owners. On average owner-occupiers contribute 67% of the costs from their other resources compared with just 22% for non owners.

Figure 2



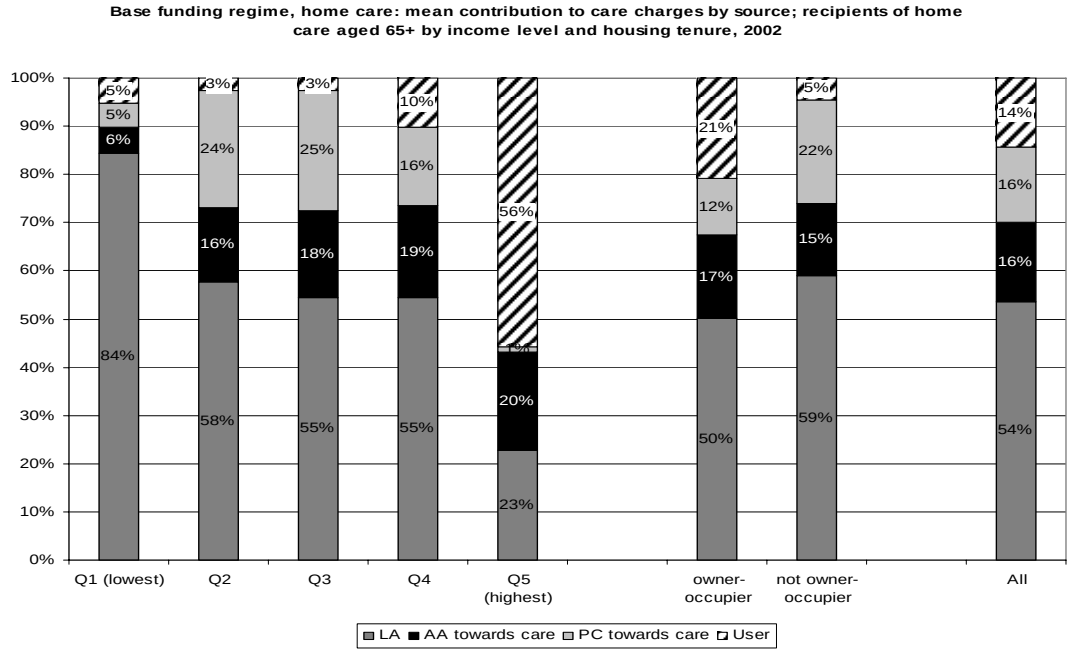
Source: CARESIM model estimates

Figure 3 presents similar information for recipients of home care. Note that the proportion of home care recipients receiving low, medium and high intensity packages of care varies by housing tenure and thus, by implication, according to income level. This means that the average cost of home care varies by housing tenure and income level.

As with residential care, there is a clear decline in Local Authority contributions to home care costs as income rises. For those on the lowest incomes, Local Authorities contribute 84% of home care costs compared with 23% for care home recipients in the top quintile of the

income distribution. Unlike care home residents, home care recipients are eligible for Attendance Allowance even if they receive Local Authority help with their care costs. Even so, Attendance Allowance contributes more of the costs of home care for those on higher incomes, mainly because Local Authorities contribute so much more for lower income service users. The contribution made by users from their non Attendance Allowance and Pension Credit resources, rises steeply between the fourth and fifth income quintiles. Those in the fifth quintile contribute an average 56% compared with 10% for people in the fourth quintile and much lower amounts for those on lower incomes.

Figure 3



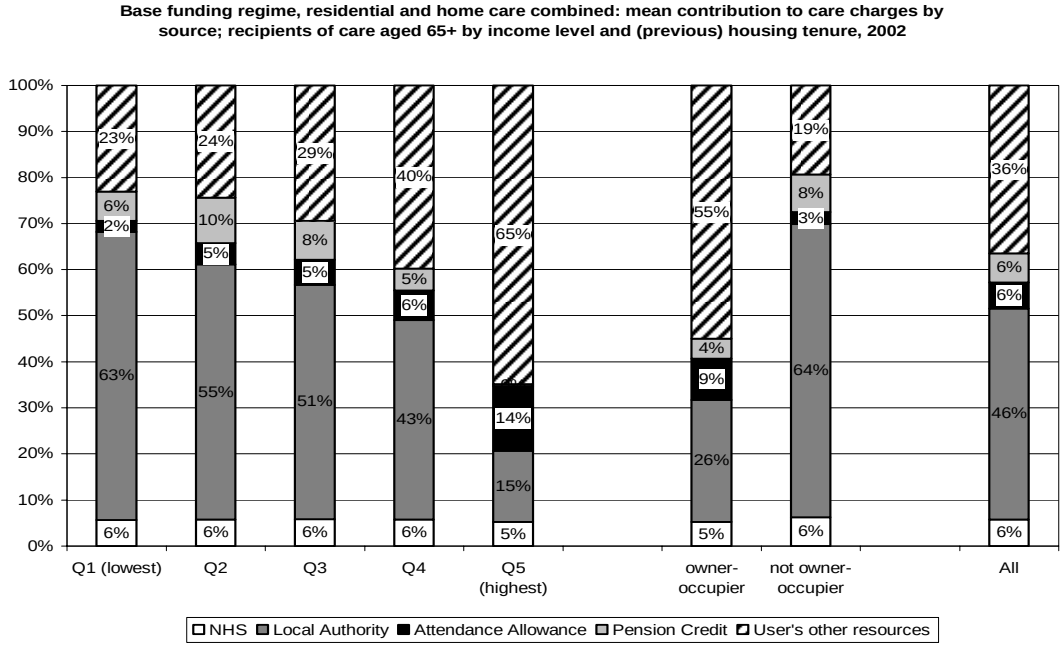
Source: CARESIM model estimates

In Figure 4, the mean contributions to care costs are combined for residential and home care. Taking both forms of care together the targeted nature of Local Authority support for long-term care is evident. There is a clear downward gradient in the relationship between Local Authority support and income and a clear upward gradient for user contributions. However, the rules of the system result in Attendance Allowance contributing more to the care costs of those on higher incomes.

Note also that the balance between residential care and home care varies between owner-occupiers (who if they receive any care are more likely to receive home care) and non

owners. Because those on lower incomes are less likely to be owner-occupiers, this means that care recipients on lower incomes are more likely to receive residential than home care.

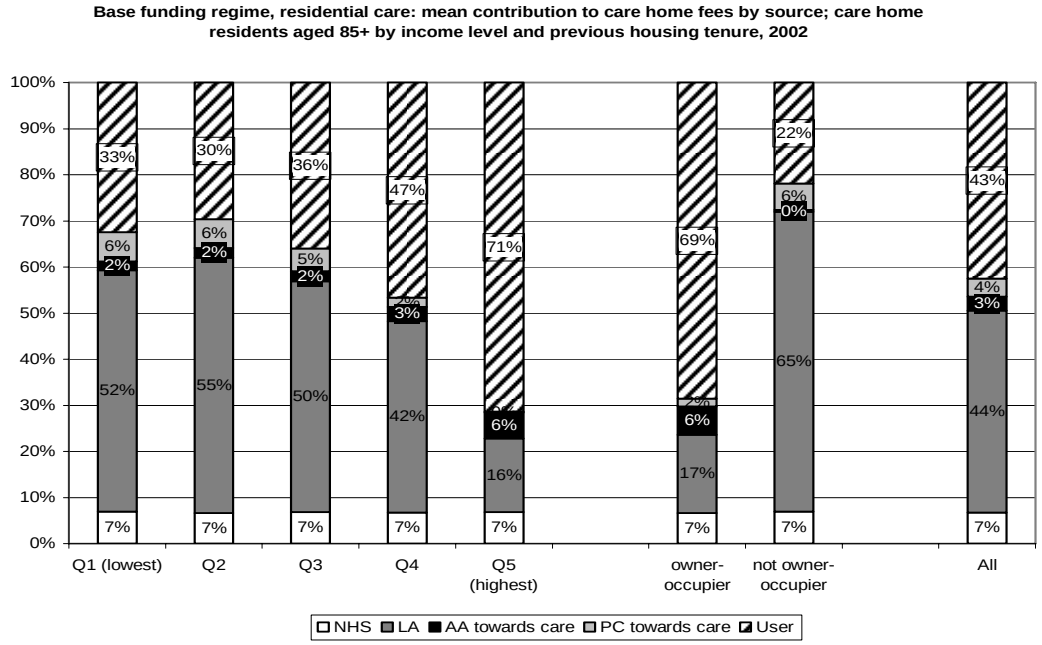
Figure 4



Source: CARESIM model estimates

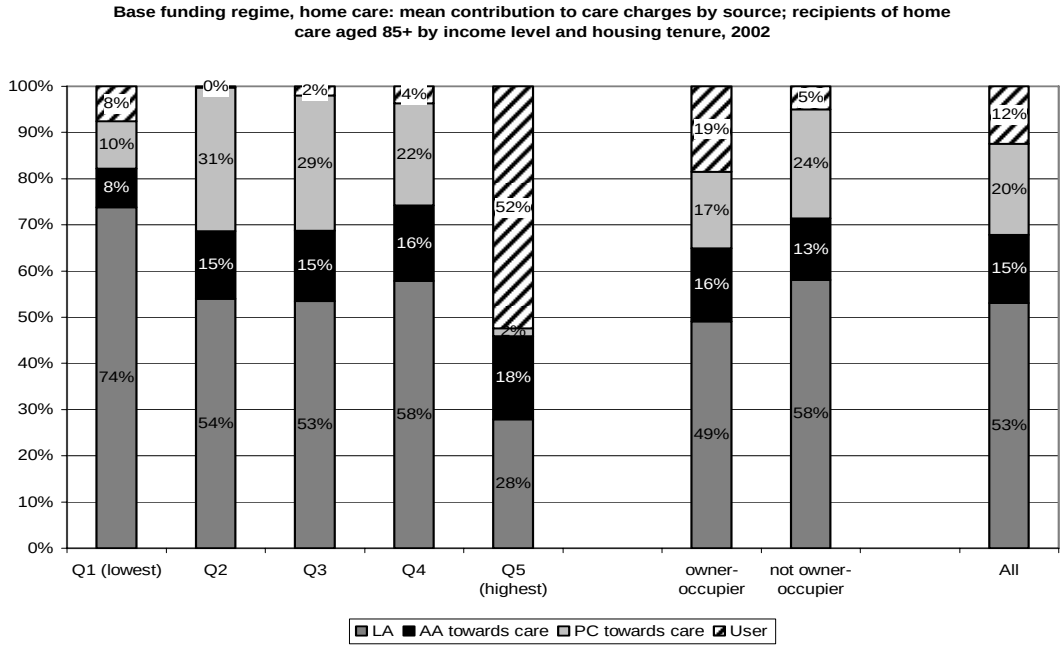
Figures 5-7 correspond to the previous three figures but with the analysis restricted to those aged 85+. The general picture is similar to the analysis for care recipients aged 65+. One small difference is that for those receiving residential care, the mean Local Authority contribution is a little higher in the second quintile than in the first. This serves to emphasise the fact that the means test takes account of capital as well as income. Housing wealth is more likely to be taken into account in the means test among the older group since they are less likely to have a living partner still living in the family home.

Figure 5



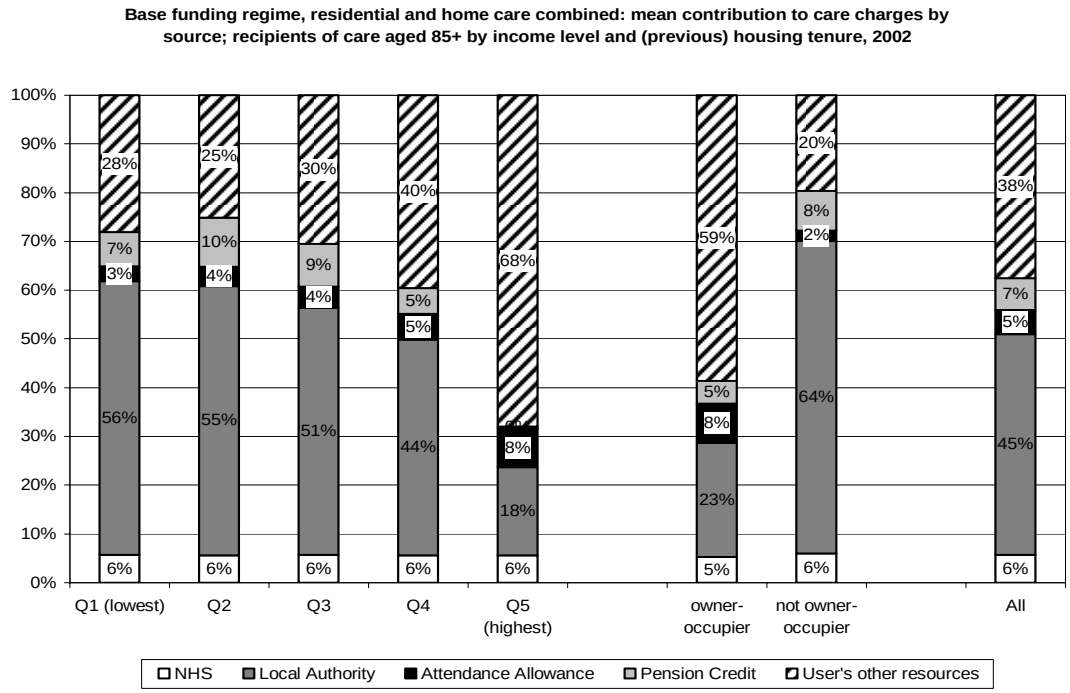
Source: CARESIM model estimates

Figure 6



Source: CARESIM model estimates

Figure 7



Source: CARESIM model estimates

Distributional incidence of costs under the central base case in 2022

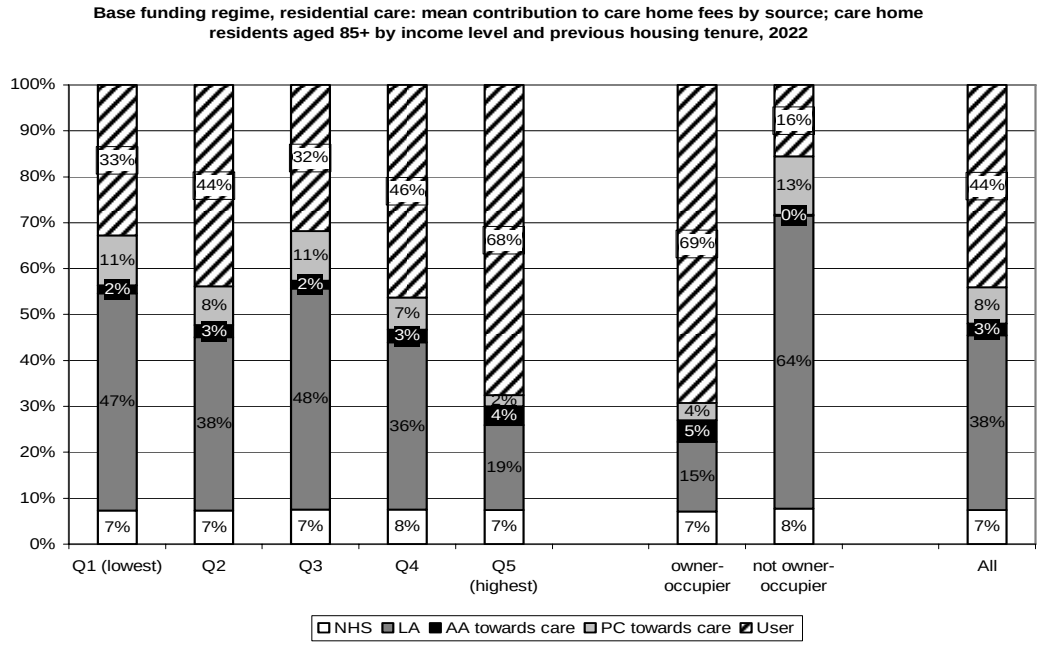
Figures 8-10 show the projected mean contribution of each source of funding for care costs in 2022, for people aged 85+. For residential care, there is a projected marginal increase, from 43% to 44% in the proportion of costs met from users' resources (figure 8 compared with figure 5). Increases in owner occupation are part of the explanation for this growth. The proportion of people aged 85+ who own their homes is projected to increase from 59% to 73% over the period 2002 to 2022 (see Appendix Five). Among those who do not own their homes, the contribution from users' resources is projected to be lower in 2022 compared with 2002 (16% compared with 22%). It is interesting that within the top income quintile, the projected contribution from user resources is also a little lower in 2022 than in 2002 (68% compared with 71%). The growth in Pension Credit entitlement, assuming current uprating policies, appears to be a factor here.

The projected increase in home-ownership does not have a direct effect on user contributions to home care because housing wealth is disregarded in the means tests for home care. By

2022, the Local Authority contribution to home care costs is projected to be 61% on average, an increase from 53%. Under the assumptions used, contributions from other sources grow less than the cost of care. However, the overall effect is that in 2022 Local Authority contributions are even more concentrated on the lower income groups than in 2002. In 2022, Local Authorities are projected to meet 93% and 77% of the costs of home care for users in the lowest two income quintiles, compared with 74% and 54% respectively in 2002.

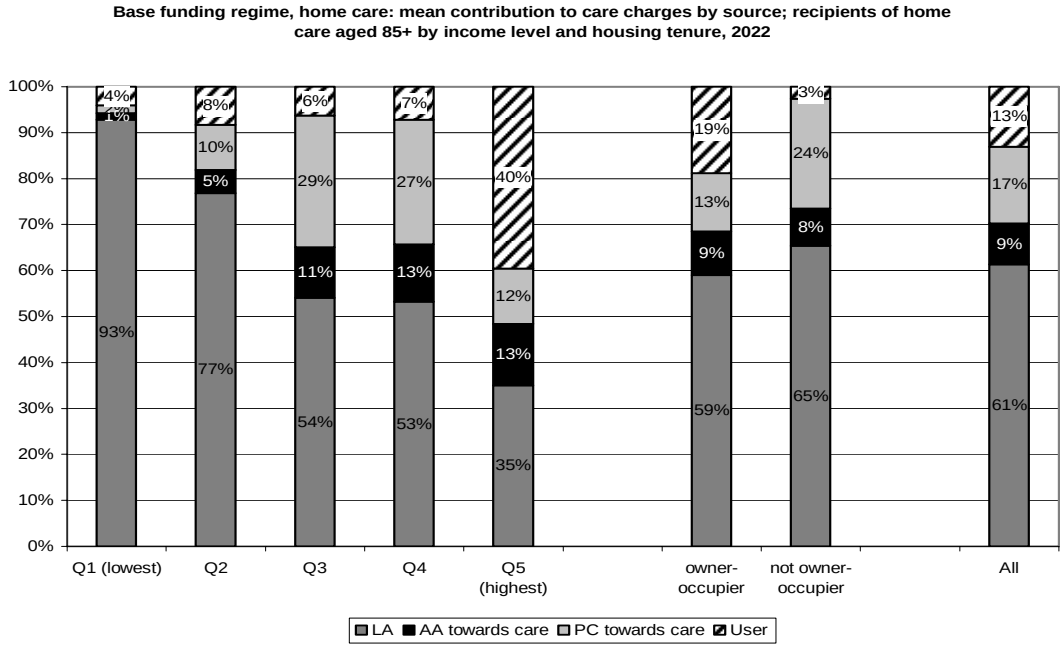
Combining residential and home care, the overall pattern is not projected to be substantially different in 2022 from the picture for 2002. Local Authority contributions to care costs are projected to remain greatest for those on lower incomes and those who do not own their own homes.

Figure 8



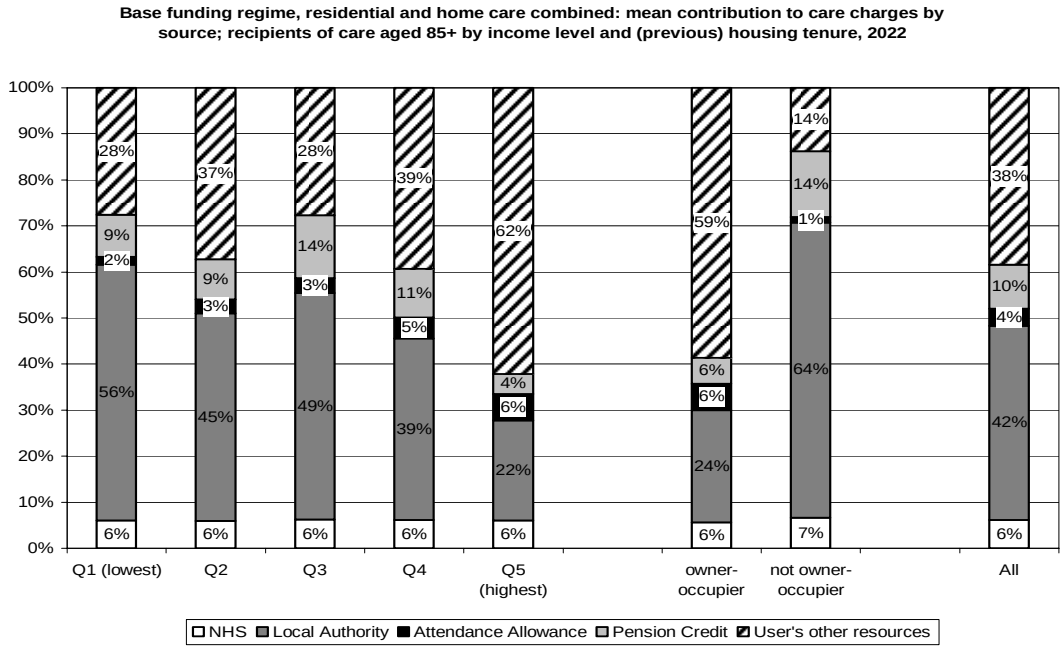
Source: CARESIM model estimates

Figure 9



Source: CARESIM model estimates

Figure 10



Source: CARESIM model estimates

V Projections under reform of the means-tested system

There is a school of thought that change to the long-term care system in this country is more likely to take the form of incremental reforms to the existing system, rather than more fundamental changes to the system. It was, after all, with incremental changes that the government in England responded to the recommendations of the Royal Commission on Long Term Care (Secretary of State for Health 2000).

This part of the report examines eight different scenarios around the reform of the means-tested system. Four of the scenarios relate to reform of the means test of the assets of older people, who might be receiving care either in residential settings or at home; two of the scenarios relate to the means test for people receiving residential care; and two relate to the means test for people receiving home-based care. Changes to the means-tested system are likely to affect the balance between public and private expenditure on long-term care, and so the results reported here focus on the impact of changes to the means test on public and private long-term care expenditure. Some of the scenarios considered here were considered by the Royal Commission on Long Term Care (1999: 58-62). However, although the Royal Commission examined the financial consequences for public expenditure of some potential changes to the means test, the Commission did not look at the impact of changes to the means test on *future* public expenditure nor at their distributional consequences. The sections below, therefore, examine the future impact on long-term care expenditure of a range of potential changes to the current means-tested system and their distributional consequences.

Reform of the means test of the assets of older people in receipt of long-term care

Outline of scenarios around reform of means test of capital assets

Under the current system, as indicated earlier, people in care homes in England who have capital of their own above £21,000 are generally required to pay their own care costs (less the contribution that the NHS might make towards the cost of care provided by a registered nurse in a nursing home).[2] Those whose capital is between £12,750 and £21,000 are assumed to obtain a 'tariff' income from their capital, which is taken into account in the means tests for

incomes. The current tariff is that, for every £250 (or part of £250) between £12,750 and £21,000, it is assumed that income increases by £1 per week. Local authorities have discretion about the treatment of capital in the means-test for home care but the capital limit for public support must be no lower than £21,000. In care homes, means-tested capital assets include both housing[6] and other forms of assets, such as savings, while for people living in their own homes, means-tested capital assets exclude housing assets. The value of an older person's home is not, however, included in capital for the first 12 weeks after entry to a care home.

One of the key controversies surrounding the current system of funding long-term care in England is the use of means-testing to determine eligibility for publicly-funded help (Royal Commission on Long Term Care 1999, Wanless 2006). The fact that the means test for care homes includes housing assets has, according to a number of reports, particularly contributed to a sense of unfairness among older people about long-term care funding. As the Royal Commission on Long Term Care put it: "At a key point in people's lives they find that they are expected to pay for themselves out of assets they have accumulated over a lifetime for care they had previously expected would be free" (Royal Commission on Long Term Care 1999: 41). The recent Wanless Social Care Review makes a similar point, arguing that "savers and people with even modest assets are penalised, having to (at least initially) cover most of their care costs without state support" (Wanless 2006: xxv).

There are a number of ways in which the means test for capital assets for people in receipt of long-term care could be changed. The Royal Commission on Long Term Care considered a range of options, including increases in the upper limit (including its abolition); increases in the lower limit; more generous tariff rates; and abolishing the assets element of the means test altogether (Royal Commission on Long Term Care 1999: 58-62). More recently, the JRF report on paying for long-term care considered an option of doubling the upper capital limit (JRF 2006: 12).

The four options relating to the reform of the capital assets element of the means test for people receiving long-term care considered here are as follows:

- an option in which the upper capital limit is raised;
- an option in which both the upper and lower capital limits are raised;

- an option in which the upper capital limit is abolished with a lower 'tariff' rate; and
- an option in which there is a full and permanent disregard of housing assets in care homes.

The first three scenarios make changes to the means test of assets of older people in both residential settings and those living at home, while the fourth scenario would bring the means test of assets of people in residential homes in line with those living in their own homes by excluding housing assets in both settings. The sections below briefly describe each option, and then the results of the four options are presented together.

Raising the upper capital limit

The current means test for capital assets was increased by the government in April 2001 in response to the Royal Commission on Long Term Care, from the figure of £16,000 (set in 1996) to £18,000 and has since been increased further to £21,000. The aim in raising the upper limit in 2001 had been to restore the "real terms value of these capital limits" (Secretary of State for Health 2000 # 2.20). The Department of Health increases the capital limits annually in line with general inflation. However, since the capital owned by most older people is in the form of housing assets, it could be argued that the basis on which the limits should be uplifted should be linked to changes in average house prices.

The Royal Commission recommended a radical restructuring of, rather than an adjustment to, the means-tested system, but did make some recommendations if an adjustment was to be made. The Royal Commission recommended that the Government should raise the upper capital limit to £60,000, while leaving the lower limit and the income tariff unchanged, and that the figure should be reviewed every three years in advance of the Comprehensive Spending Review (1999: 61). The Royal Commission based its recommendation for the value of the upper capital limit on the average value of the assets (including housing) of single people aged 75 and over in private households, using the 1995/6 FRS. More recently, Hirsch considered an option in which house prices in general should be used as the basis for calculation of the upper capital limit, with an upper capital limit of fifty percent of average home-sales values (currently amounting to approximately £100,000) (Hirsch 2005: 28).

The option tested here is one in which the upper capital limit would be raised to £150,000 in April 2002 prices. Based on the FRS, CARESIM estimates the average 2002 value of properties owned by people aged 65+ to be £157,000. Rounding this down to £150,000 recognises that care recipients tend to be older and property values at older ages tend to be lower (Appendix Five). This figure is similar to an updating, based primarily on the increase in the values of house prices owned by older people, of the option for raising the upper capital limit suggested by the Royal Commission on Long Term Care.

Raising the upper and lower capital limits

The second option explored here is one in which both the upper and lower capital limits would be raised. The effects of raising the upper and lower capital limits are likely to be rather different. As the Royal Commission reported, the effect of raising the *upper* capital limit would be to widen the band within which people receive some public support for their care costs. Raising the *lower* capital limit by £1,000, for example, would benefit all those with capital between the two limits by (up to) £4 per week.

Raising the lower limit is an option that has been suggested in the recent literature on paying for long-term care (for example by Hirsch 2005), although no specific figures have been mentioned. It should be noted in the present context that the lower capital limit in Wales is currently (2006/07) higher than in England, with the limit in Wales set at £16,000, compared to £12,750 in England) (Age Concern Cymru 2006).

The scenario considered here in which both the upper and lower capital limits are raised allows for the upper capital limit to be raised to £150,000, as in the first option, and allows the lower capital limit to be raised to £50,000. The raising of the upper capital limit to a level substantially higher than its current level anywhere in the UK is in keeping with the magnitude of the increase in the upper capital limit explored in this scenario.

Abolishing the upper capital limit, with a lower' tariff' rate

Abolition of the upper capital limit is a variant of the first scenario considered here, which increases the upper capital limit substantially. Indeed, if the upper capital limit is raised substantially, as suggested in the first scenario, then abolishing the upper capital limit altogether

may not have a great additional impact on the numbers of older people entitled to some state support with their care costs (c.f. Royal Commission on Long Term Care 1999: 61).[7]

Abolition of the upper capital limit is, therefore, here examined with the additional change of lowering the 'tariff' rate. As indicated earlier, the tariff rate refers to an amount of money that is assumed to be received as income from capital, with the assumed income being £1 per week for every £250 of capital between the lower and higher capital limits. The assumed tariff at present is therefore £4 per £1000. In the scenario examined here, the tariff is more generous and assumes a lower income from capital. The assumption is made that the tariff rate is reduced to £2 per £1000.

The assumption of no upper capital limit, together with a tariff rate of £2 a week per £1000, would bring the means test for people entering care homes more in line with the means test for Pension Credit. Under Pension Credit rules, the tariff rate for capital assets is currently £1 a week for every £500 (or £2 a week for every £1000) and there is no upper capital limit.[8]

Full permanent disregard of housing assets

The final option relating to the reform of the capital assets means test explores the consequences if there was a full permanent disregard of all housing assets, including the housing assets of older people in care homes. The Royal Commission on Long Term Care considered the option of introducing a solely income-based means test, which implies a disregard of all capital assets, including housing assets (Royal Commission on Long Term Care 1999: 62). The Commission cited the system in the United States, where there is a means-test with a low-income limit, but the value of the house is not taken into account. The option considered here is somewhat different from that explored by the Royal Commission in that it looks at the effects of disregarding not all capital assets but housing assets only. A disregard of housing assets for people in care homes would align the treatment of housing assets in both residential and non-residential care settings since, at present, housing assets are taken into account for older people entering residential care, but not for older people receiving services at home. This difference tends to act as an incentive for Local Authorities to place people in residential care. A disregard of housing assets for people in care homes would benefit *all* those with housing assets, including the very wealthy, although this issue could be addressed through reform of revenue-raising mechanisms. In the option considered

here, savings other than housing assets would continue to be means-tested, and this could result in an incentive to save in housing rather than other forms, and a disincentive to releasing equity through downsizing or equity release mechanisms.

The four funding options for reform of the means test for assets in care homes are summarised in Box Two.

Box Two

Funding options for reform of the means test of capital assets

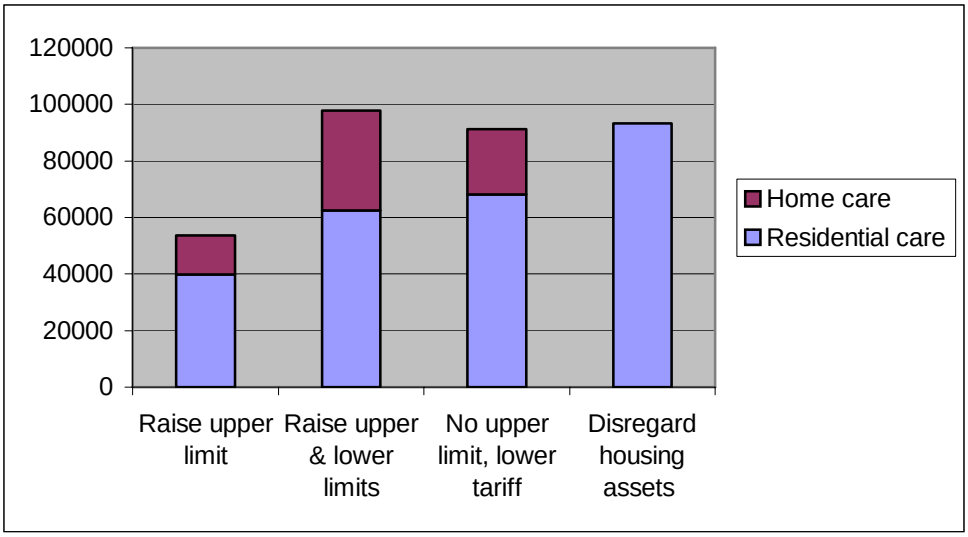
1. Raise the upper limit to £150k
2. Raise the upper capital limit to £150k and the lower capital limit to £50k
3. Abolish the upper capital limit and introduce a lower tariff rate of £2 per £1000
4. Introduce a full and permanent disregard of housing assets for people living in care homes

Results of scenarios around reform of means test of capital assets

Impact of scenarios around reform of means test of capital assets on long-term care expenditure

The options considered here around reform of the means test of capital assets would all increase the numbers of older people who receive some public funding (Figure 11). Raising the upper limit on its own would affect the fewest people, increasing the number of people receiving some public funding by around 55,000, while the other three scenarios would each increase the number receiving some public funding by nearly double this amount (by between 90,000 and 100,000 people) (Figure 12).[9]

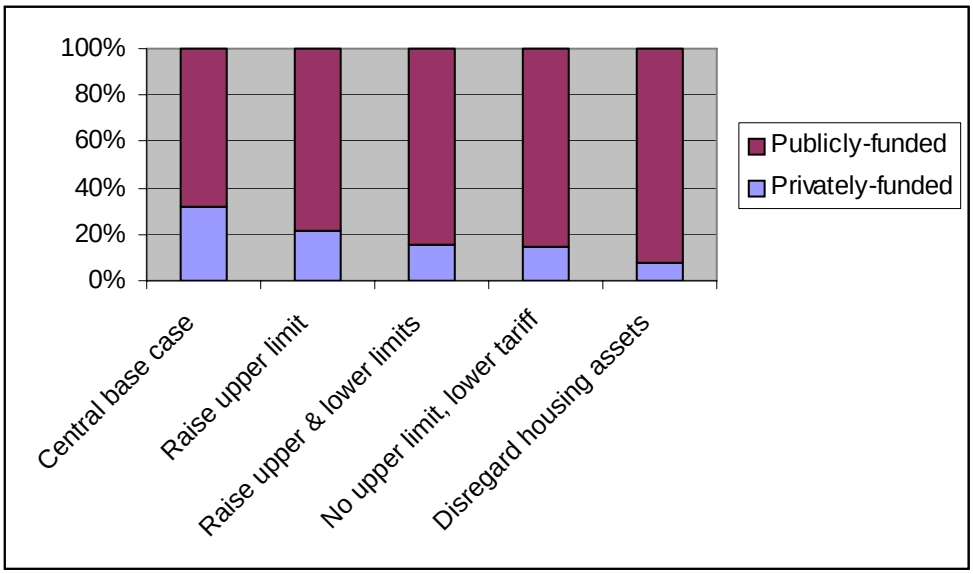
Figure 11: Numbers of additional older people receiving some public funding for long-term care, under funding options for reform of the means test of assets, 2002, UK



Source: PSSRU/CARESIM model estimates
Note: The numbers shown are those who would receive publicly-funded care under the different options *additional* to those who would receive publicly-funded care under England's funding regime in 2002.

The majority of those who would become publicly-funded under the options considered here would be in residential care settings rather than living at home (Figure 11). The reason for this is that the capital assets of most older people take the form of housing assets, which are not taken into account in the means test for older people living at home. All the reforms to the means test of the assets of older people receiving long-term care considered here would lead to an immediate increase in the numbers of care home residents who receive some public funding and a decrease in the numbers who are solely privately-funded (Figure 12). Under the current funding regime, around two-thirds (68 percent) of all older people in residential and nursing homes receive some public funding.[10] However, as Figure 12 shows, the proportion of care home residents receiving some public funding would be 78 percent if the capital limit was raised to £150,000; 84 percent if both the upper and lower capital limits were raised; 86 percent if the upper limit was abolished and the rate of tariff income halved; and 92 percent if housing assets were disregarded. The number of care home residents benefiting from reform to the means test for assets would range from between 40,000, if the upper limit was raised, to nearly 100,000 if housing assets were disregarded. If housing assets were disregarded in the means test for care homes, almost all care home residents would receive some local authority funding.

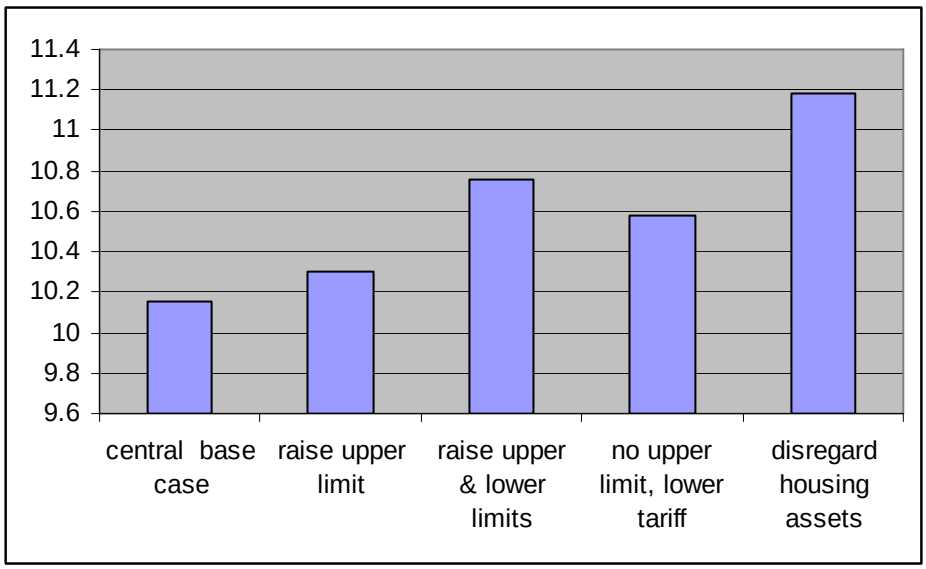
Figure 12: Percentage of older people in residential care and nursing homes who are publicly-and privately-funded under the current (England) funding regime (central base case) and under funding options for reform of the means test for assets, 2002, UK



Source: PSSRU/CARESIM model estimates
Notes: NHS-funded nursing home residents are excluded since their numbers are not affected by these scenarios. 'Publicly-funded' individuals include all those who receive some Local Authority funding, while 'privately-funded' individuals are those who receive no Local Authority funding.

Partly because the reforms to the means test of the assets of those receiving long-term care increase the numbers of older people who receive some public funding, they all also lead to immediate increases in public expenditure on long-term care (Figure 13). The increase in public expenditure, compared to the current (England) funding regime, would be between one hundred and fifty million pounds and a billion pounds in 2002 prices. The least expensive option would be an increase in the upper capital limit to £150,000, which would increase public expenditure on long-term care immediately from its current figure of just under £10.2 billion to a figure of around £10.3 billion. The most costly of the options affecting capital assets considered here would be the permanent disregard of housing assets, which would increase current public expenditure on long-term care to approximately £11.2 billion. The option of increasing both the upper and lower capital limits would raise public spending on long-term care to nearly £10.8 billion, while the the option of removing the upper capital limit and introducing a lower tariff rate would increase public spending on long-term care to around £10.6 billion.

Figure 13: Public expenditure (in billions of pounds) on long-term care under the current (England) funding regime (central base case) and under funding options for reform of the means test for assets, 2002, UK



Source: PSSRU/CARESIM model estimates

Estimated total public expenditure under the options for reforming the capital assets means test, expressed as a percentage of GDP, is shown in Table 8 Public expenditure would immediately increase from its current level of 0.96 percent of GDP under the base case to, at most, 1.06 percent of GDP under the option of disregarding all housing assets. In other words, at most, reforming the assets means test would add 0.1 percent of GDP to current public expenditure.

Estimated public expenditure on long-term care expressed as a percentage of GDP by 2051 under the base cases and under options for the reform of the assets means test in care homes is also shown in Table 8. The results show that, by 2051, the public expenditure cost of a system which has an upper capital limit of £150, 000 would be 2.01 percent of GDP; of a system in which both upper and lower capital limits were raised would be 2.12 percent of GDP; of a system in which the upper limit was removed and a lower tariff rate introduced would be 2.08 percent of GDP; and of a system in which housing assets were disregarded would be 2.23 percent of GDP. These figures are all greater than the estimated public expenditure cost of 1.94 percent of GDP in 2051 under England's existing funding regime. Reforming the assets means test under the options considered here would, therefore, add between 0.07 and 0.28 percent of GDP to current public expenditure by 2051.

Table 8: Estimated public expenditure on long-term care, expressed as a percentage of GDP, under funding options for reform of the assets means test, 2002-2051, UK

	2002	2012	2022	2031	2041	2051
Central base case						
Public expenditure	0.96	0.99	1.16	1.45	1.71	1.94
Private expenditure	0.52	0.56	0.70	0.87	1.03	1.20
Total expenditure	1.49	1.56	1.86	2.32	2.74	3.14
Raise upper limit						
Public expenditure	0.97	1.01	1.20	1.50	1.76	2.01
Private expenditure	0.51	0.54	0.66	0.83	0.98	1.13
Total expenditure	1.48	1.55	1.86	2.32	2.74	3.14
Raise upper/lower limits						
Public expenditure	1.02	1.06	1.26	1.57	1.86	2.12
Private expenditure	0.47	0.49	0.60	0.75	0.89	1.02
Total expenditure	1.48	1.55	1.86	2.32	2.74	3.14
No upper limit						
Public expenditure	1.00	1.04	1.24	1.55	1.83	2.08
Private expenditure	0.48	0.51	0.62	0.77	0.91	1.05
Total expenditure	1.48	1.55	1.86	2.32	2.74	3.13
Disregard housing assets						
Public expenditure	1.06	1.11	1.32	1.65	1.95	2.23
Private expenditure	0.42	0.44	0.52	0.65	0.77	0.88
Total expenditure	1.48	1.54	1.84	2.30	2.72	3.11

Source: PSSRU/CARESIM model estimates

Distributional effects of scenarios around reform of means test of capital assets

Table 9 presents the average gains from more generous treatment of capital assets in the means test according to income group (Table 9a) and housing tenure (Table 9b). The analysis focuses on care recipients aged 85 and over. Gains are expressed as a percentage of the average overall gain and figures for 2002 are compared with projected gains in 2022.

The gains from these reforms are much larger for owner-occupiers than for other tenure due to the importance of housing wealth in total assets. The reforms generally benefit those in the top income quintile less than those on lower incomes and this is the case in both years. However, disregarding all housing assets benefits the lowest income least in 2002, while also delivering below average gains in the top income group. The lowest income group is where owner-occupation rates are lowest while the people in the highest income group tend to have incomes which are high enough for them to be required to make significant contributions to their care costs even if housing wealth is disregarded. By 2022, the spread of owner-occupation is projected to increase the benefits from this option for those in the lowest

income group. In 2022, the average gain to the lowest income group from disregarding housing wealth is only just below the overall average.

Table 9: Mean gains from reforms to treatment of capital assets in the means tests by income level and housing tenure, overall mean gain=100; care home residents and recipients of home care aged 85+

Table 9a By income level

	Income quintile									
	1 (lowest)		2		3		4		5	
	2002	2022	2002	2022	2002	2022	2002	2022	2002	2022
Upper capital limit raised to £150,000	136	99	89	122	114	95	109	109	55	75
Upper capital limit raised to £150,000, lower limit raised to £50,000	118	91	85	118	111	91	111	115	76	83
No upper limit, tariff income £1/£500	121	99	89	123	113	94	113	111	66	74
Disregard all housing assets	66	97	103	114	114	88	127	118	80	82

Table 9b By housing tenure

	Housing tenure			
	owners		non-owners	
	2002	2022	2002	2022
Upper capital limit raised to £150,000	171	153	21	17
Upper capital limit raised to £150,000, lower limit raised to £50,000	170	151	23	20
No upper limit, tariff income £1/£500	173	154	20	15
Disregard all housing assets	191	162	0	0

Source: CARESIM model estimates

Summary: reform of the means test of capital assets

The options for reform of the means test of capital assets considered here would all increase the numbers of care home residents and, to a lesser extent, the number of home care users receiving some public funding. Raising the upper capital limit on its own would increase the number of people receiving some public funding by around 55,000, while the other three scenarios would increase the number receiving some public funding by between 90,000 and 100,000 people. The gains under any of these options would be heavily concentrated among home owners. The reforms would however generally benefit those in the top income quintile less than those on lower incomes. The reforms would increase public expenditure in 2002 by between one hundred and fifty million pounds and a billion pounds. In 2051, while public

expenditure is projected to reach 1.94% of GDP under the current system, it would reach between an estimated 2.01% and 2.23% of GDP under these options.

Reform of the means test in care homes

Changing the means test of the assets of those receiving long-term care primarily affects those in care homes, even though in three of the options considered so far it also affects people living at home. However, there are a number of other options for reform of the means test for older people in care homes. Two different options are considered here. The first considers the option of a lifetime maximum payment for long-term care and the second looks at the option of a reform of the treatment of the incomes of older people in care homes.

A lifetime maximum payment for long-term care

Outline of scenario allowing for a lifetime maximum payment for long-term care

The idea of a lifetime maximum payment for long-term care has been suggested in a number of different policy contexts recently. The Royal Commission on Long Term Care considered an option that would have limited the liability of older people in care homes to pay for four years, which, given residential care home fees at the time, would have meant a maximum payment of around £80,000 (Royal Commission on Long Term Care 1999: 62). The Royal Commission did not support this option because it felt it would mainly benefit people who had higher assets and happened to live longer. It felt that the main justification for the scheme would be that it would help the insurance industry. One of the authors of the Note of Dissent to the Royal Commission report did, however advocate a lifetime maximum payment for personal care in care homes (Royal Commission on Long Term Care 1999: 125). The Conservative Party Policy Unit in 2004 proposed a scheme under which those who bought private insurance covering three years of care costs would be eligible for public funding after the three year period. The idea was that, if such insurance were arranged and the three-year claim period had run its course, then all subsequent care would be funded by the State (Johnstone 2005). A scheme along these lines exists in New York State, the New York State Partnership for Long-Term Care, in which private long-term care insurance and Medicaid are combined to help older people prepare for the possibility of needing nursing home or home

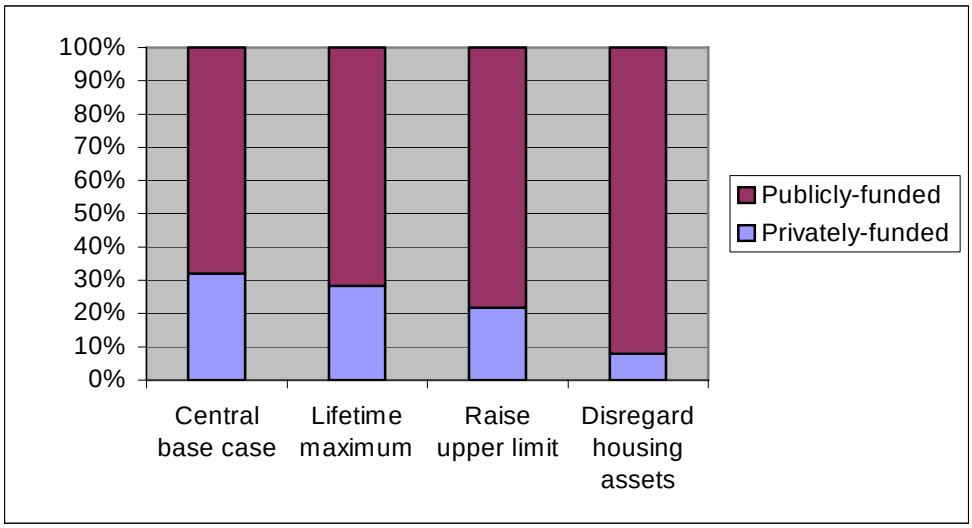
care. In the partnership, insurers offer packages that include coverage of at least three years of nursing home care or six years of home care or a combination of the two (where two home care days equal one nursing home day) (NYSPLTC 2006)

The lifetime maximum payment option, examined here, considers a scenario based on the option explored by the Royal Commission on Long Term Care (1999) in which liability to pay for long-term care is limited to the equivalent of four years in a residential care/nursing home. Given current nursing home fees for self-funders, this would imply a maximum payment of around £100,000. The option considered here is, therefore, one in which there would be a lifetime maximum payment of £100,000. For reasons associated with the modelling, the option of a lifetime maximum payment is here considered in relation to residential care, but a lifetime maximum payment scenario could potentially also apply to home care, along the lines adopted by the New York State scheme.

Impact of scenario allowing for a lifetime maximum payment for long-term care on long-term care expenditure

A lifetime maximum payment for long-term care, applied to people in residential care and nursing homes, would increase the numbers of residents who receive some public funding, but by a relatively small number (Figure 14). Under the lifetime maximum payment scenario, the proportion of care home residents who receive some public funding would increase to around 72 percent, from the current proportion of approximately 68 percent (Figure 14). The increase in the proportion of publicly-funded residents is lower under the lifetime maximum scenario than under any of the other scenarios, which would affect the balance of publicly- and privately-funded care home residents, examined so far (Figure 14). The lifetime maximum payment scenario would immediately benefit approximately 15,000 care home residents, compared to, for example, the policy of raising the upper capital limit, which would benefit nearly three times as many people in care homes.

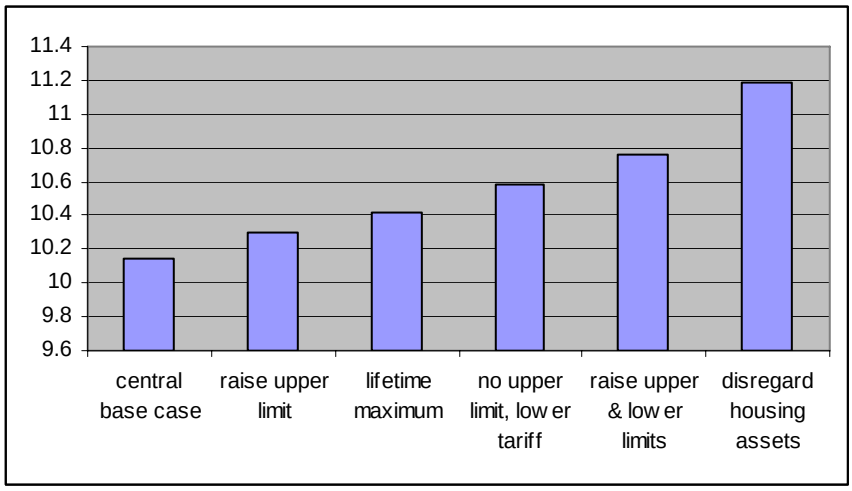
Figure 14: Percentage of older people in residential care and nursing homes who are publicly-and privately-funded under the current (England) funding regime (central base case), under a lifetime maximum payment for long-term care and under some funding options for reform of the means test for assets in care homes, 2002, UK



Source: PSSRU/CARESIM model estimates
Note: 'Publicly-funded' individuals include all those who receive some Local Authority funding, while 'privately-funded' individuals are those who receive no Local Authority funding.

The impact of the lifetime maximum payment scenario on public expenditure would not be very great. The maximum lifetime payment scenario would increase public expenditure to £10.4 billion in 2002, an increase of approximately £0.2 billion compared to the current funding regime (Figure 15). The lifetime maximum payment scenario would increase public expenditure by a similar amount as the scenario raising the upper capital limit, even though the latter scenario would benefit nearly three times as many care home residents (Figures 14 and 15). The lifetime maximum payment scenario would lead to an increase of 0.03 percent in public expenditure on long term care expressed as a percentage of GDP in 2002 (Table 10, in section below). By 2051, public expenditure under the lifetime maximum payment scenario would be 2.04 percent of GDP, compared to 1.94 percent if the funding regime remained unchanged (Table 10).

Figure 15: Public expenditure (in billions of pounds) on long-term care under the current (England) funding regime (central base case), under a lifetime maximum payment for long-term care and under funding options for reform of the means test for assets in care homes, 2002, UK



Source: PSSRU/CARESIM model estimates

The underlying reason why the lifetime maximum payment for long-term care scenario does not increase public expenditure on long-term care by very much is primarily because the value of the lifetime payment considered here is based on an assumption that older people with some means will become eligible for state support only after four years in a nursing home, whereas the average completed length of stay of older people in care homes is in fact around 30 months (Bebbington *et al* 2000).[11]

Substantial rise in the Personal Expense Allowance (PEA)

Outline of scenario allowing for substantial rise in the PEA

Although most concern regarding the effects of the current means test on people in care homes has focused on the necessity for large numbers of older people to sell their homes in order to finance their care, there have been some proposals recently regarding the treatment of the *income* of older people in care homes. The issue particularly concerns the Personal Expenses Allowance (PEA) permitted to older people in care homes, which is currently £19.60 a week. The concern over the level of the PEA was summarised in a recent report, as follows: "At present the personal expense (sic) allowance …… represent(s) the total money available for personal expenditure to those living in care homes. Such individuals have most of the essentials of life covered (food, shelter, fuel – but not clothing). Yet being

able to spend on oneself less than a quarter the value of the state pension and a sixth of the Guarantee Credit (the minimum income for a single person claiming Pension Credit) threatens the personal dignity of people who have earned their pensions and now have high care needs" (Hirsch 2005: 29). Hirsch goes on to suggest scenarios in which the PEA is either increased by £10 a week or is doubled. The JRF report on paying for long-term care suggests a doubling of the personal expenses allowance (JRF 2006).

A scenario has been developed here in which the Personal Expenses Allowance for older people in care homes is increased by a very substantial amount. The scenario assumes that the allowance is increased to £73.10 a week. The very large increase in the PEA examined in this scenario is intended to produce results that are comparable with a scenario allowing for free personal care (examined later in this report).

Impact of a scenario allowing for a substantial rise in the PEA on long-term care expenditure

The effect of increasing the Personal Expenses Allowance from its current level to £73.10 would be to increase public expenditure on long-term care. The increase in public expenditure would come about by reducing the charges paid by older people in care homes, many of whom are already receiving some public support. The amount currently paid in user charges would reduce from £2.3 billion under the current means-tested regime to £1.6 billion under the scenario allowing for a substantial rise in the PEA in care homes, a reduction in user charges of nearly a billion pounds. By 2051, the amount collected in user charges under this scenario is projected to be approximately £7.9 billion, compared to approximately £11.7 billion if the current regime were to remain unchanged.

The impact of a substantial rise in the PEA on public long-term care expenditure is shown in Table 10. Public expenditure on long-term care would increase from 0.96% of GDP under the current funding regime to 1.03% of GDP under the scenario allowing for a substantial increase in the PEA in care homes. By 2051, public expenditure on long-term care would increase to 2.10% of GDP under the scenario allowing for a substantial rise in the PEA in care homes, compared to 1.94% of GDP if the current funding regime remained unchanged.

Table 10: Estimated public expenditure on long-term care, expressed as a percentage of GDP, under the low, central and high base cases and under scenarios for reform of the means test in care homes, 2002-2051, UK

	2002	2012	2022	2031	2041	2051
Central base case						
Public expenditure	0.96	0.99	1.16	1.45	1.71	1.94
Private expenditure	0.52	0.56	0.70	0.87	1.03	1.20
Total expenditure	1.49	1.56	1.86	2.32	2.74	3.14
Lifetime maximum						
Public expenditure	0.99	1.03	1.22	1.52	1.79	2.04
Private expenditure	0.50	0.53	0.64	0.80	0.95	1.10
Total expenditure	1.48	1.55	1.86	2.32	2.74	3.14
Higher PEA[1]						
Public expenditure	1.03	1.07	1.25	1.56	1.84	2.10
Private expenditure	0.45	0.48	0.61	0.76	0.90	1.04
Total expenditure	1.48	1.55	1.86	2.32	2.74	3.14

Source: PSSRU/CARESIM model estimates
Note: The 'higher PEA' scenario allows for the Personal Expenses Allowance (PEA) of older people in care homes to rise from £19.60 to £73.10 (see text below for further details)

As later sections show, the increase in public expenditure on long-term care arising from the scenario in which PEA in care homes rises substantially is broadly comparable to the cost of free personal care in residential care/nursing homes. By design, the 'higher PEA' scenario and one type of free personal care scenario (the 'fixed care costs' version) have similar net costs to social services in 2002 with respect to older people in residential care/nursing homes.

Distributional effects of scenarios around reform of means test in care homes

The distributional effects of reforms of the means tests which are specific to care homes are presented in Table 11 below. In 2002, above average gains from the lifetime limit on user contributions to care home fees are restricted to the highest income quintile (Table 11a) and to owner-occupiers (Table 11b). Gains in the highest income quintile are 183% higher than average and among owner-occupiers they are 127% more than average. In contrast, amongst non owners, mean gains are just 5% of average. In 2022 the picture is very similar although the extent to which high income groups and owner-occupiers gain more than average is reduced.

The pattern is almost the exact opposite for the increase in the Personal Expenses Allowance. Only the highest income group and owner-occupiers would experience below average gains from this reform. Their gains would be around 60% of average in both 2002 and 2022.

Table 11: Mean gains from reforms to the means tests for residential care by income level and housing tenure, overall mean gain=100, care home residents aged 85+

Table 11a: By income level

	Income quintile									
	1 (lowest)		2		3		4		5	
	2002	2022	2002	2022	2002	2022	2002	2022	2002	2022
Lifetime maximum contribution to care home fees of £100,000	93	62	37	110	59	64	73	101	283	173
Personal expenses allowance increased to £73.10	110	113	110	101	113	114	100	105	60	62

Table 11b By housing tenure

	(previous) housing tenure			
	owners		non-owners	
	2002	2022	2002	2022
Lifetime maximum contribution to care home fees of £100,000	227	190	5	5
Personal expenses allowance increased to £73.10	62	61	128	141

Source: CARESIM model estimates

Summary: reform of means test in care homes

A policy in which there was a lifetime maximum payment of £100,000 for residential care would benefit a relatively small number of care home residents, around 15,000 in 2002. They would mostly be home owners, with gains concentrated in the highest income group. Public expenditure under this option would rise to 2.04% of GDP in 2051, as against 1.94% of GDP under the current funding system. In contrast, under a policy in which the Personal Expenses Allowance was increased substantially, those in the highest income group and owner-occupiers would experience below average gains. Public expenditure would rise to 2.10% of GDP in 2051 under this option.

Reform of the means test for people living at home

The final two options for reform of the means test affect older people receiving long-term care while living in their own homes. The two options considered here are likely to have very different implications for public expenditure. The first option examines the consequences if housing assets were to be taken into account in means-testing older people receiving home care services. The second option examines the consequences if disability benefits are disregarded in means-testing older people receiving home care services.

Housing assets taken into account in means test for home care

Outline of scenario allowing for housing assets to be taken into account in means test for home care

At present, the means tests for domiciliary services exclude the value of the users' main residence. One way in which housing assets could be taken into account in domiciliary settings would be through deferred payments or equity release schemes. In such a scheme, the older person would be able to pay privately (or meet local authority user charges) for domiciliary care out of his or her housing assets. Use of deferred payments/equity release schemes for domiciliary care would be a way of aligning the treatment of housing assets in both residential and non-residential settings.

Deferred payments schemes run by Local Authorities are currently available for residential but not domiciliary care. The schemes are available to people who do not have enough money to pay their care home fees, but own housing assets which are not being disregarded and which they do not wish, or are unable, to sell (Age Concern England 2006). No interest is charged while the deferred payment agreement lasts. The agreement lasts until 56 days after the death of the person entering into it and interest only becomes chargeable at that time. Deferred payments would normally be settled by the sale of housing assets after the death of the older person.

An option to utilise housing equity to fund domiciliary care was recently discussed in the JRF report on paying for long-term care (JRF 2006). Under the title, 'A national Home Equity Scheme to defer domiciliary care charges', the report describes a voluntary scheme to enable people to defer care costs until their homes are sold, with loans secured on housing equity. The

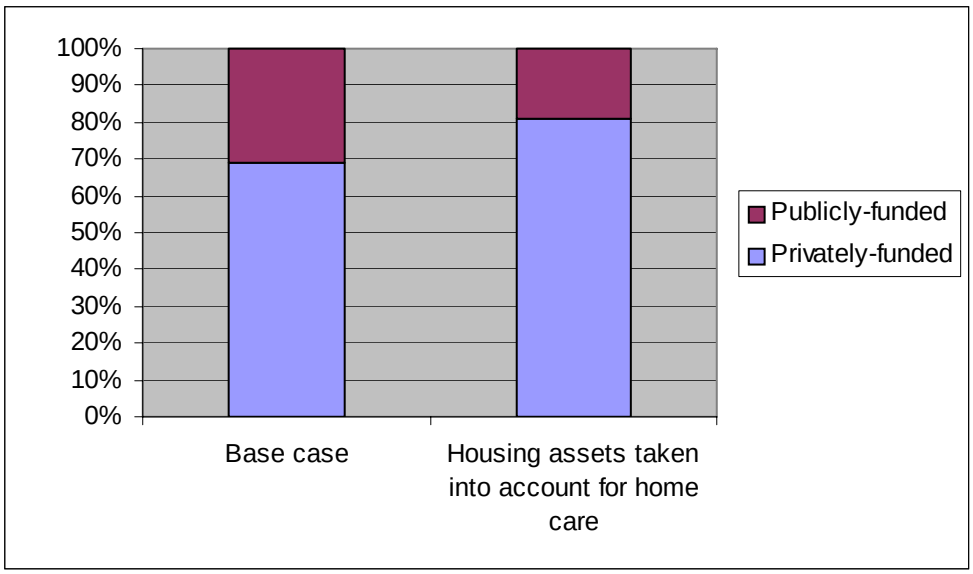
scheme would differ from the existing deferred payments system for people not wanting to sell their homes after moving into residential care, in that it would offer a wider set of options, in particular that of staying in one's own home and being able to afford co-payments or private payments for domiciliary services. It should be noted that the Royal Commission on Long Term Care considered use of deferred loans to prevent house sales for older people in need of long-term care with assets above the means test, but did not recommend this option (Royal Commission on Long Term Care, 1999: 58). The private insurance industry is currently showing some interest in equity release products for people who wish to fund long-term care at home (Actuarial Profession 2005: 19).

The scenario considered here examines the option of assuming that, in the means test for long-term care, the housing assets of older people in receipt of home care are treated in the same way as the housing assets of older people in residential care. In other words, in this scenario, housing assets would be compulsorily included in the means test, under the rules for assets set out earlier in the report. Clearly, the use of housing assets in the means test for home care would require the extension of deferred payments to home care and/or more extensive use of equity release products. For the purposes of modelling the scenario, it is assumed that housing assets would be taken into account for home care in *all* cases, although in residential care they are disregarded when the home is occupied by the person's spouse (or another older or disabled relative).

Impact of a scenario allowing housing assets taken into account in means test for home care on long-term care expenditure

If the housing assets of older people in receipt of home care were included in the means test for home care, then the effect would be to increase the numbers of older people paying privately for home care and reduce the numbers who are publicly-funded. Under the current (England) funding regime, approximately 70 percent of older people already pay privately for home care. Under the option of allowing housing assets to be taken into account in the means test for home care, the proportion of older people paying privately for home care would increase to 80 percent (Figure 16). There would be an additional 175,000 older people paying privately for home care under this option, with a corresponding reduction in numbers publicly-funded.

Figure 16: Percentage of older people receiving home care who are publicly-and privately-funded under the current (England) funding regime (central base case), and under option of taking housing assets into account in means test for home care, 2002, UK



Source: PSSRU/CARESIM model estimates
Note: 'Publicly-funded' individuals include all those who receive some Local Authority funding, while 'privately-funded' individuals are those who receive no Local Authority funding.

As a consequence, under the option of requiring housing assets to be taken into account in the means test for home care, public expenditure on long-term care would fall from the current level of just under £10.2 billion to £9.4 billion, a fall of approximately three-quarters of a billion pounds. Because this option could not realistically be implemented without a scheme similar to the existing deferrals arrangement for residential care, under which the local authority meets the costs initially and subsequently recovers the monies when the person's home is sold, the realised savings would accrue over time and would not reach £750 million for a few years. Public expenditure as a percentage of GDP would fall from 0.96 percent of GDP to 0.89 percent of GDP (Table 12, in section below). By 2051, public expenditure would be 1.73 percent of GDP under this option, compared to 1.94 percent if the current (England) funding regime remained unchanged.[12]

The option of requiring housing assets to be included in the means test for home care therefore shifts the burden of expenditure further onto older people as individuals and reduces the burden on the public purse. It is the only option considered here that has this effect. It might be argued, however, that the saving in public expenditure under this option could be used to fund other options.

Disability benefits disregarded in means-test for home care

One of the major sources of dissatisfaction with the current means-tested funding arrangements is "the 'post code' lottery for domiciliary care charges, which results in large, and seemingly inequitable differences, in the level of charges imposed by different councils for similar care packages" (Wanless 2006: xxv). An important component of this variability in charging is the way in which disability-related expenditure is treated by different councils.

Currently, councils are allowed to take disability-related benefits into account in the means test for domiciliary services, although guidance from the Department of Health makes clear that they must assess the service users' disability-related expenditure if they take these benefits into account (Department of Health 2003a). However, there are currently no national levels of disability-related costs. Indeed, a recent Age Concern study looking at the implementation of the Department of Health guidance on charging for home care, found large variations in the extent to which disability-related expenditure is currently taken into account by local authorities and that these variations have a marked effect on final charges (Thompson and Mathew 2004). The Age Concern study reports that, in a case study applied to 65 different councils, disability related expenditure was variously estimated at between around £5 and £70 per week.

Councils are not obliged to take disability benefits into account in their charging regimes. Much disability-related expenditure, it could be argued, is likely to be incurred by older people without carers and older people on higher incomes. Taking disability-related expenditure into account may, therefore, differentially benefit these groups, rather than older people with carers and older people on lower incomes. The Age Concern study, referred to above, stated that "less well off older people have few eligible expenses because they adapt their lifestyles and 'do without'" (Thompson and Mathew 2004). Disregarding all disability benefits in the means test for home care could therefore be more equitable.

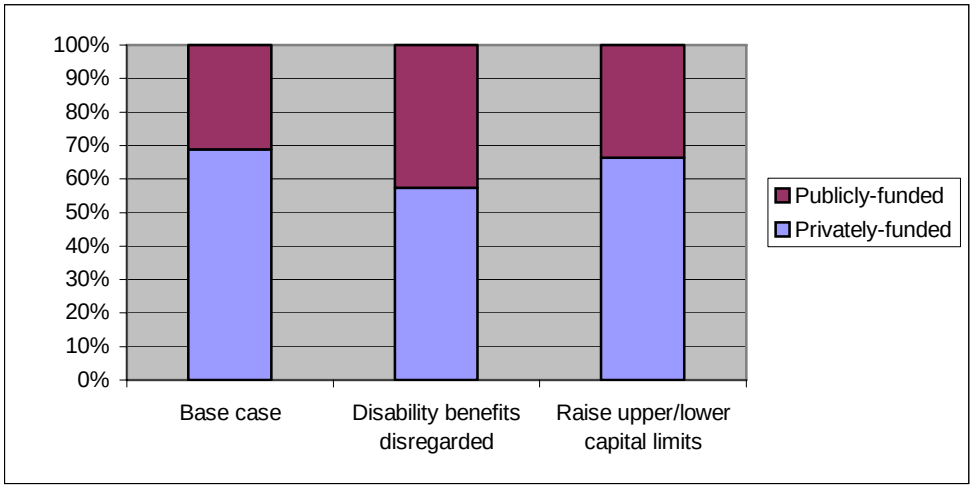
The scenario considered here, therefore, allows for disability benefits to be excluded from the means-test for home care. The scenario assumes, in effect, that disability-related expenditure equals disability benefits, an assumption already made in some local authorities (Thompson and Mathew 2004). The scenario differs from the base case of the model, which assumes that local authorities take into account disability benefits and that disability-related expenditure varies with degree of disability on a fixed scale.[13]

Impact of scenario allowing for disability benefits to be disregarded in means-test for home care on long-term care expenditure

If disability benefits were excluded from the means test for home care, then the immediate effect would be that the number of people receiving some public funding of home care would increase. Publicly-funded recipients of home care would increase from around 440,000, under the current (England) funding regime, to around 600,000, under the option of excluding disability benefits from the means test. The proportion of older people receiving home care who are publicly-funded would increase from around 30 percent under the current regime to over 40 percent under this scenario (Figure 17).

The impact of the scenario allowing for disability benefits to be disregarded in the means test for home care can be evaluated by comparison with the impact of scenarios allowing for reform of the treatment of assets in the means test, examined earlier (Figure 17). The option of raising both upper and lower capital limits has a greater impact on the number of publicly-funded home care recipients than any other scenario affecting capital assets, but this option has less impact than the scenario allowing for a disregard of disability benefits in the means test (Figure 17). This is partly because there are so many more privately funded home care than residential care recipients.

Figure 17: Percentage of older people receiving home care who are publicly-and privately-funded under the current (England) funding regime (central base case), under the option of disregarding disability benefits in the means test and under an option for changing capital assets, 2002, UK



Source: PSSRU/CARESIM model estimates
Note: 'Publicly-funded' individuals include all those who receive some Local Authority funding, while 'privately-funded' individuals are those who receive no Local Authority funding.

Although the scenario to disregard disability benefits from the means test would potentially benefit large numbers of older people, the impact on public expenditure does not, however, seem very great. Public expenditure would increase to £10.6 billion in 2002, compared to just under £10.2 billion under the current (England) funding regime. The effect of disregarding disability benefits would be to increase public expenditure in 2002 to 1.00 percent of GDP, compared to 0.96 percent under the current (England) funding regime (Table 12). It is important to recognise that these estimates are affected by the stylised base case assumption that local authorities do currently take disability benefits into account in part and disregard part of them as disability-related expenditure.

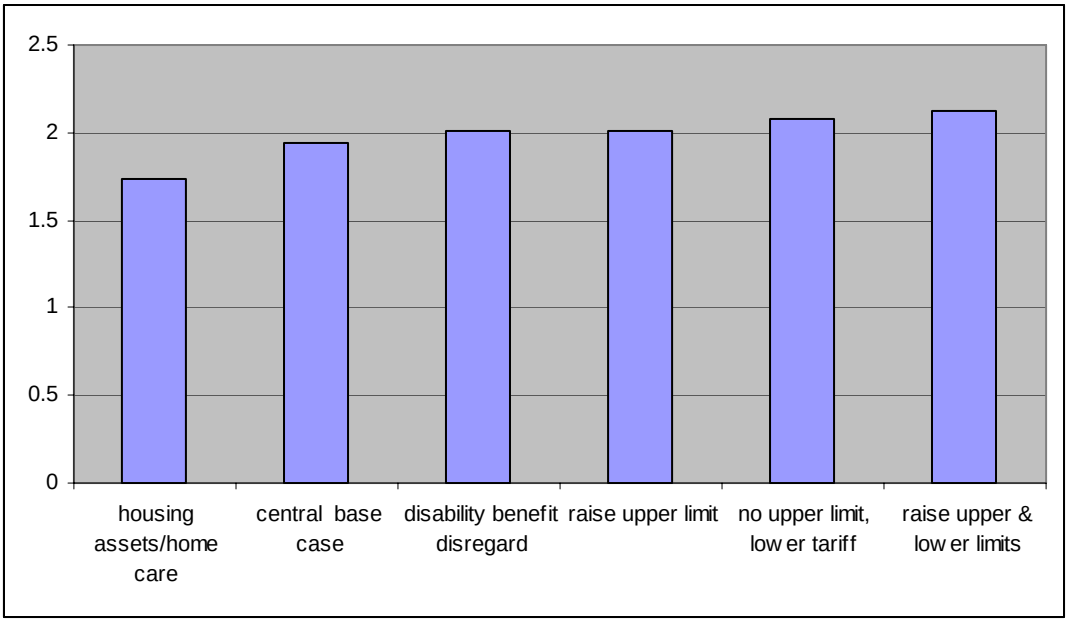
Table 12: Estimated public expenditure on long-term care, expressed as a percentage of GDP, under the central base case and under scenarios for reform of the means test in care homes, 2002-2051, UK

	2002	2012	2022	2031	2041	2051
Central base case						
Public expenditure	0.96	0.99	1.16	1.45	1.71	1.94
Private expenditure	0.52	0.56	0.70	0.87	1.03	1.20
Total expenditure	1.49	1.56	1.86	2.32	2.74	3.14
Housing assets taken into account for home care						
Public expenditure	0.89	0.90	1.04	1.29	1.52	1.73
Private expenditure	0.57	0.62	0.78	0.97	1.16	1.33
Total expenditure	1.46	1.52	1.82	2.27	2.68	3.07
Disregard of disability benefits in means test for home care						
Public expenditure	1.00	1.03	1.20	1.50	1.77	2.01
Private expenditure	0.50	0.54	0.67	0.84	0.99	1.15
Total expenditure	1.50	1.57	1.87	2.34	2.76	3.16

Source: PSSRU/CARESIM model estimates

By 2051, public expenditure on long-term care would rise to 2.01 percent under the option of disregarding disability benefits in the means test for home care, compared to 1.94 percent if the current (England) regime remained unchanged (Table 12). In the long-term, the option of disregarding disability benefits in the means test would have a low impact on public long-term care expenditure, compared to other scenarios examined so far that are more generous to the older person living at home (Figure 18).

Figure 18: Estimated public expenditure on long-term care, expressed as a percentage of GDP, under options affecting older people receiving home-based care, 2051, UK



Source: PSSRU/CARESIM model estimates

Distributional effects of scenarios around reform of the means test for people living at home

The distribution of gains and losses from reforms specific to home care are presented in Table 13 below. By definition, taking housing assets into account does not affect what non owners pay towards their home care and losses for owner-occupiers are above average. The extent to which they are above average falls a little between 2002 and 2022 (from 65% to 43%) as a result of growth in owner-occupation rates. Under the scenario taking housing assets into account for home care, losses are greatest in the lowest income quintile in 2002 and in the lowest two income quintiles in 2022. Disregarding all disability benefits tends to benefit middle income groups and non-owner occupiers.[14]

Table 13
Mean gains/losses from reforms to the means tests for home care by income level and housing tenure, overall mean gain=100, home care recipients aged 85+

Table 13a By income level

	Income quintile									
	1 (lowest)		2		3		4		5	
	2002	2022	2002	2022	2002	2022	2002	2022	2002	2022
Housing assets taken into account in means test (losses)	124	151	90	152	107	67	126	84	57	61
Disability benefits disregarded	51	2	164	47	150	189	118	173	10	66

Table 13b By housing tenure

	(previous) housing tenure			
	owners		non-owners	
	2002	2022	2002	2022
Housing assets taken into account in means test (losses)	165	143	0	0
Disability benefits disregarded	79	64	133	181

Source: CARESIM model estimates

Summary: reform of the means test for people living at home

If the value of the house was taken into account for home care, around 175,000 home care users, all of them home owners, would lose public funding. The savings to public funds would, over a few years, be around £750 million. Public expenditure would be 1.73% of GDP in 2051 under this option as against 1.94% of GDP under the current funding system. The losers would be home care users who are home owners with modest savings and low incomes.

If disability benefits were fully disregarded, a further 160,000 home care users would become eligible for publicly funded home care. The cost of this option would be around £435 million. Public expenditure would rise to over 2.0% of GDP in 2051 under this option as against 1.94% of GDP under the current funding system. Gains would be above average in the middle three income groups, lowest in the highest income group but also below average in the lowest income quintile.

VI Projections under free personal care

A policy of 'free' personal care was, as already noted, originally proposed for the UK by the Royal Commission on Long Term Care. The central recommendation of the Royal Commission on Long Term Care, published in March 1999, was that "Personal care should be available after assessment according to need and paid for from general taxation" (Royal Commission on Long-Term Care 1999: xvii). The recommendation in effect was that personal care should be free to the user. Personal care was distinguished from other costs of care, in particular, living and housing costs. These 'hotel' costs, the Report argued, should be met by older people themselves, subject to a means test in residential settings if help was

required (1999: 64). The Royal Commission recommended that personal care, as well as nursing care, should be exempted from means testing in both residential and domiciliary settings.

Although the recommendation of the Royal Commission to introduce free personal care was not accepted by the government in England, a policy of free personal care has now been implemented in Scotland, and a policy of free nursing care throughout the UK. The introduction of free personal care in Scotland has provided a form of social experiment, allowing for an assessment of the impact of introducing this policy within the social care system in the UK. A major report on the introduction of free personal care in Scotland was commissioned by the JRF (Bell & Bowes 2006) and two studies have been prepared for the Wanless Social Care Review (Dickinson and Glasby 2006, McNamee 2006).

The report by the Royal Commission on Long Term Care made it clear that there are a number of different ways in which a policy of free personal care could be implemented (Royal Commission on Long Term Care 1999: 66) and this has been further made clear by the experience in Scotland. Different versions of the policy are likely to have different results for the different interest groups involved: the public sector, the providers of care (many of whom are private enterprises) and older people themselves. Three different versions of the policy of free personal care have been explored here. One we describe as the 'fixed hotel costs scenario'. It is the version of free personal care that we modelled in our earlier work (Wittenberg *et al* 2002: 99,119, Hancock *et al* 2003: 423-4). Another we describe as the 'Scotland free personal care scenario' because it seems to represent the way in which the policy was introduced in Scotland. The third version we describe as the 'fixed care costs scenario'. It adheres in some ways to the version introduced in Scotland, but also has features similar to the manner in which free nursing care was introduced elsewhere in the UK.

The costs of these three versions of the free personal care scenario are initially estimated on the basis of central base case assumptions about trends in life expectancy, disability rates and unit costs and on the assumption that the introduction of free personal care would not affect overall demand for services. Four alternative costings of a policy of free personal care are explored here. Two of the additional costings explore the implications if demand for personal care, specifically home care, were to increase as a result of the introduction of a

policy of free personal care. The remaining two costings examine the implications for long-term care expenditure if a policy of free personal care were accompanied by the low and high base cases described earlier. Finally, this part considers the distributional impact of a free personal care policy and the implications if free personal care was to be combined with an increase in taxation. The distributional analysis uses the central base case and assumes no change in demand in response to the policy of free personal care.

Three versions of free personal care

Three versions of free personal care: description of scenarios

The way in which the three versions of free personal care differ relates to a substantive policy issue concerning the way in which costs in residential care homes are assumed to be divided between 'hotel' costs and care costs.[15] This division of costs is important because it is assumed in all three free personal care scenarios that hotel costs are costs to which the disabled older person is required to contribute (subject to the means test) while care costs are borne by the public sector irrespective of the person's income and wealth. The three versions do not vary in their calculation of free personal care for people living in their own homes, which is described in Appendix Three.

In the 'fixed hotel costs' version of free personal care, a UK-wide amount is attributed to *living and housing* costs, based on current pension and benefit levels, to be met by individuals as their hotel costs, that is, the costs that are to be paid by the disabled older person and which remain subject to a means test. The state would then meet the balance of actual charges made in care homes, which would represent personal care costs. In terms of the values assumed in this report, 'hotel' costs have been calculated to be approximately £152 a week (see Appendix Three) in April 2002 prices. These hotel costs have been deducted from the average (Local Authority supported) fees of £328 a week in independent residential homes, giving a value of approximately £176 a week for personal care in residential care homes. In nursing homes, where the average (Local Authority supported) fees are £453 a week, the value of the personal and nursing care component is approximately £301 a week, less the NHS contribution to nursing care of approximately £84 a week, giving a personal care component of approximately £217 a week in nursing homes. An important feature of

this approach is that the exact amounts allowed for personal care costs vary with the total care home fee levels, so that personal care costs are assumed to be higher in nursing homes than in residential care homes. This was one of the versions of free personal care described in the report by the Royal Commission on Long Term Care (1999: 66, #6.40)..

The remaining two versions of free personal care, the 'Scotland' version and the 'fixed care costs' version are both variations of a different method of calculation. In this method of calculation, the amount of residential charge to be attributed to *personal care* is determined each year. This sum would be met by the state.[16] This method of calculation was also described in the Royal Commission report, where it was envisaged that the personal care allowance would be a standard UK figure, determined by Government and applied by all local authorities (Royal Commission on Long Term Care 1999: 66 #6.39). The sum allowed for personal care costs would be deducted from the actual charges made in individual residential homes, leaving the balance representing living and housing costs. People would be personally responsible for these amounts, which could be described as 'co-payments'. There would be means-testing of ability to pay for hotel costs, entitling people with little means to help with the charges for living and housing. An important feature of this approach is that the amount allowed for personal care is assumed to be a fixed allowance or voucher, applicable in any care home, with the implication that the exact amount allowed for hotel costs would vary across care home types. In effect, this means that hotel costs would be higher in nursing homes than residential care homes.[17]

In summary, a key difference between the 'fixed hotel costs' version of free personal care, on the one hand, and the 'Scotland' and 'fixed care costs' versions of free personal care, on the other, is that:

- Under the 'fixed hotel costs' free personal care scenario, the means-tested part of care home costs (representing the hotel costs) would be determined as a matter of policy, and the non-means tested part of the care home cost would comprise the difference between the care home fee and the means-tested element;
- Under the 'Scotland' and 'fixed care costs' free personal care scenarios, the non-means tested part (representing the personal care costs) would be determined as a matter of policy, and the means tested part of the care home cost would comprise the difference between the care home fee and the non-means tested element.

The effect of this difference is that the costs of higher than anticipated rises in care home fees would fall to the public sector under the 'fixed hotel costs' free personal care scenario and to service users under the other two free personal care scenarios.

The difference between the 'Scotland' and 'fixed care costs' versions of free personal care lies in the way in which the personal care component is uprated. In the Scotland version of the scenario, there is no uprating for inflation and the nominal value of the personal care component remains at its 2002-level in future years. In the scenario presented here, it is assumed that this means a decline in real terms of 2.5% per year. This reflects the situation that has occurred to date in Scotland, where the value of the personal care component has been set at £145 a week since the policy of free personal care was introduced in July 2002. Although it seems unlikely that the nominal value of the personal care component could remain at £145 for fifty years, there are other examples internationally where nominal values of long-term care benefits have been unchanged for long periods, notably the German Long Term Care Insurance system where nominal values have been unchanged since the mid-1990s (Rothgang 2002). The implication of a personal care allowance set at a level of £145 a week is that the hotel costs (attributable to the older person) in the base year are assumed to amount to £183 a week in residential care homes and £224 a week in nursing homes.

In the 'fixed care costs' version of free personal care the personal care component in care homes stays constant in real terms. The 'fixed care costs' version of free personal care initially uses the same value for the free personal care component as the fixed hotel costs version for residential care homes, that is, £176 a week. The implication of a personal care allowance set at a level of £176 a week is that hotel costs in the base year are assumed to amount to £152 a week in residential care homes and £193 a week in nursing homes.

The exact amounts allowed for hotel costs, personal care costs and nursing costs for the three different versions of free personal care in 2002, 2022 and 2051 are shown in Appendix Four. Table 1 in Appendix Four shows that, in 2002, in nursing homes, for example, the personal care costs borne by the public sector are highest in the 'fixed hotel costs' version, lower in the 'fixed care costs' version and lowest in the 'Scotland' version. As a corollary, the hotel costs borne by the disabled older person are lowest in the 'fixed hotel costs' version, higher in the 'fixed care costs' version and highest in the 'Scotland' version. Table 2 in Appendix

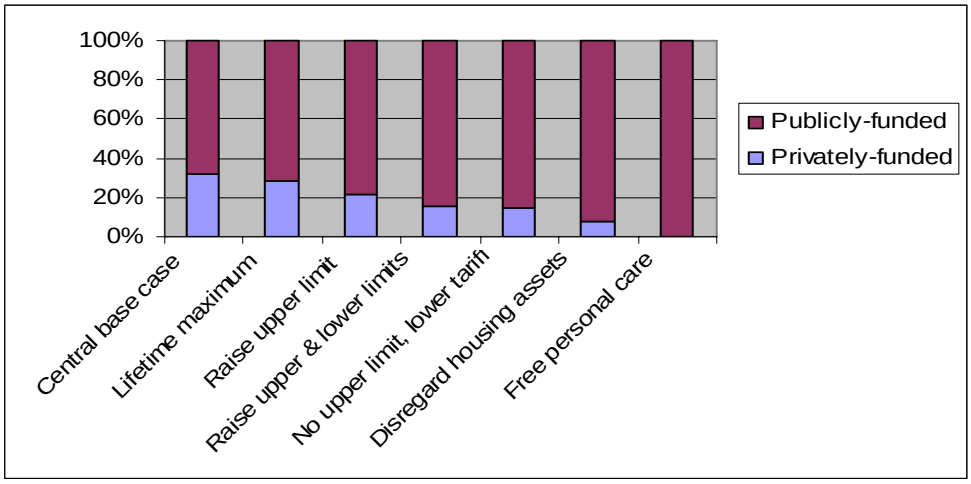
Four shows that, by 2022, when nursing home fees are assumed to have risen by approximately 40 percent, personal care costs under the 'fixed hotel costs' version are assumed to have risen by approximately the same percentage, but to have remained unchanged under the 'fixed care costs' version and to have fallen by approximately 40 percent in real terms under the 'Scotland' version. As a corollary, in twenty years time, the hotel costs attributable to the older person in the 'fixed care costs' and 'Scotland' versions are assumed to have risen very greatly indeed, representing over half the total value of the fees in nursing homes under the 'fixed care costs' version and over two-thirds under the 'Scotland' version, compared to only one third in the 'fixed hotel costs' version. For the disabled older person, then, the different versions of a free personal care policy make a considerable amount of difference to the amounts that they may be liable to pay as hotel costs in 2002 and, even more so, in future years.

Three versions of free personal care: results of modelling

The effect of free personal care on the numbers of older people who are publicly- and privately-funded is, by definition, the same in all three versions of free personal care examined here.

In care homes, where all residents are assumed to have personal care needs, all residents now receive some public funding (Figure 19). The numbers of older care home residents who receive public funding increases from around a quarter of a million to nearly 400,000 in the base year, an increase of around 125,000. The effect of the free personal care scenarios on the numbers of care home residents who receive public funding is greater than under any of the scenarios around the reform of the means-tested system in care homes examined in this paper so far.

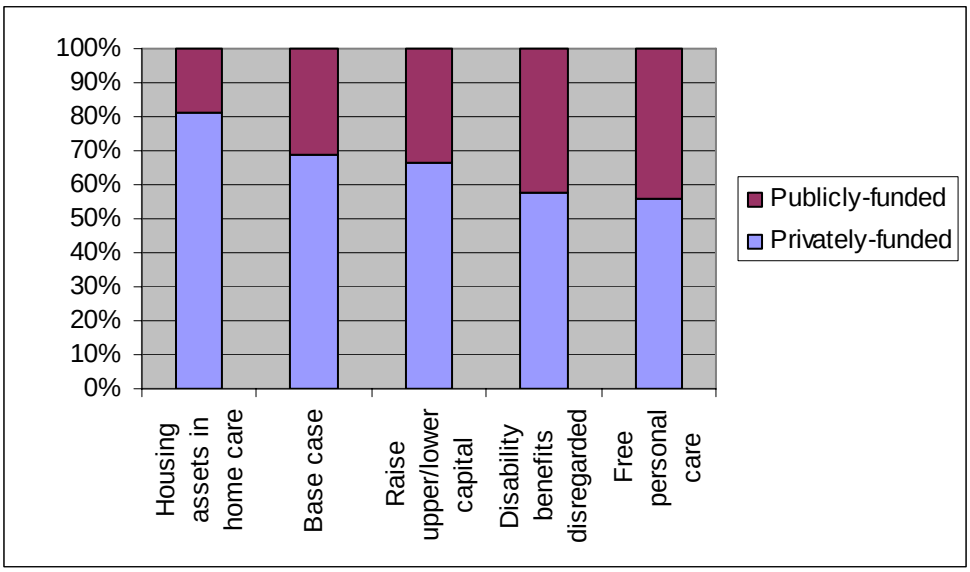
Figure 19: Numbers of older people in residential care and nursing homes who are publicly-funded and privately-funded* under the current (England) funding regime (central base case), under free personal care scenarios and under scenarios around reform of the means test in care homes, 2002, UK



Source: PSSRU/CARESIM model estimates
Note: 'Publicly-funded' individuals include all those who receive some Local Authority funding, while 'privately-funded' individuals are those who receive no Local Authority funding.

Equally, free personal care would have a large impact on numbers of publicly-funded recipients of home care. Numbers of publicly-funded recipients of home care would increase from 440,000 under the current (England) funding regime to around 625,000 under a policy of free personal care (Figure 20). The proportion of older people receiving publicly-funded home care would increase from around a third to nearly half. Although free personal care would increase the proportion of home care clients receiving some public-funding, it would not lead all home care clients to receive some public-funding. This is partly because people who purchase private home care, but are not disabled, are assumed not to be eligible on care grounds for publicly-funded care, since they would not meet local authority eligibility criteria. In addition, people who purchase private care and are unable to perform domestic care tasks (IADLs) but can perform personal care tasks (ADLs) without difficulty are assumed to be receiving help with domestic tasks only, but not to qualify for personal care.[18] Nevertheless, although not all home care clients would receive some public funding, a policy of free personal care would increase the number of publicly-funded home care clients more than any of the scenarios around the reform of the means-tested system in the community examined so far (Figure 20).

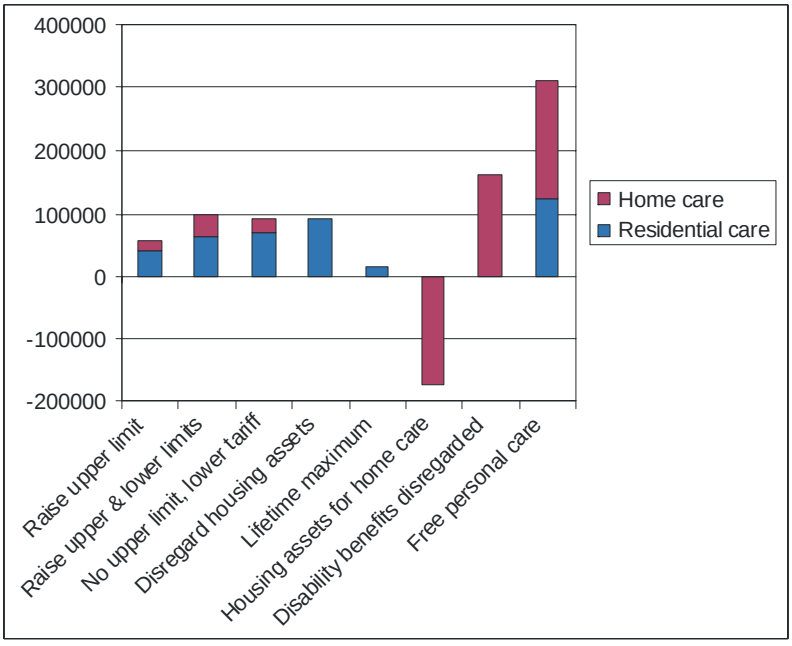
Figure 20: Numbers of older people receiving home care who are publicly-funded and privately-funded* under the central base case, free personal care scenarios and scenarios around reform of the means test for home care, 2002, UK.



Source: PSSRU/CARESIM model estimates
* 'Publicly-funded' individuals include all those who receive some Local Authority funding, while 'privately-funded' individuals are those who receive no Local Authority funding.

Overall, under free personal care, there would be nearly a third of a million more older people in both care homes and at home receiving some public support (Figure 21). The effect of a policy of free personal care is far greater than the effect of any other scenario examined in this paper.

Figure 21: Difference with central base case in numbers of older people receiving residential care and home care, who would receive some public funding, under free personal care and under scenarios around reform of the means test in residential care and living in their own homes, 2002, UK



Source: PSSRU/CARESIM model estimates

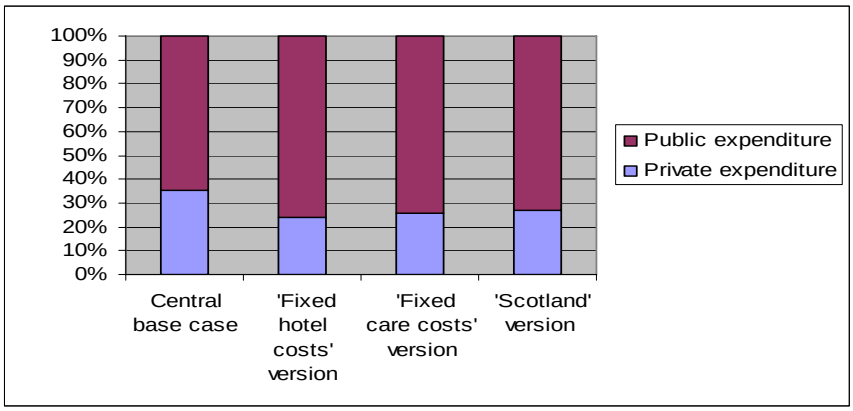
The three different versions of free personal care differ, however, in their impact on the division of long-term care costs between public and private expenditure. The scenario that would have the greatest impact would be the 'fixed hotel costs' version of free personal care, which would increase public expenditure on long-term care in 2002 from an estimated £10.2 billion to approximately £12 billion, or by about 18 percent (Table 14). Private expenditure would fall from about a third to a quarter of all long-term care expenditure in 2002 (Figure 22). Of the three free personal care scenarios, the version that would have the least impact would be the 'Scotland' version, which would nevertheless increase public expenditure on long-term care in 2002 by about 14 percent. The impact of the 'fixed care costs' version of free personal care in 2002 would be intermediate between the 'fixed hotel costs' version and the Scotland version, increasing public expenditure by 16 percent in 2002.

Table 14: Public and private long-term care expenditure (in billions of pounds) under the current (England) funding regime (central base case) and under three versions of free personal care, 2002, 2022 and 2051, UK

	2002	**2022**	**2051**
Central base case			
Public	10.150	19.665	58.308
Private	5.570	11.800	35.907
Total	15.720	31.450	94.210
'Fixed hotel costs' version of free personal care			
Public	11.975	23.833	71.274
Private	3.800	7.612	22.751
Total	15.775	31.445	94.025
'Fixed care costs' version of free personal care			
Public	11.745	22.513	67.484
Private	4.030	8.932	26.541
Total	15.775	31.445	94.025
'Scotland' version of free personal care			
Public	11.535	21.598	64.614
Private	4.240	9.847	29.411
Total	15.775	31.445	94.025

Source: PSSRU/CARESIM model estimates

Figure 22: Public and private long-term care expenditure under the current (England) funding regime (central base case) and under three versions of free personal care, 2002, UK (percentages)



Source: PSSRU/CARESIM model estimates

The difference between the ' fixed hotel costs' and the other two versions of free personal care increases over time. Public expenditure is projected to rise to approximately £58 billion in 2051 (in 2002 prices) under the current (England) funding system (Table 14). The 'fixed hotel costs' version of free personal care is simulated to increase to £71 billion, while the 'fixed care costs' version would increase public spending to £67 billion and the 'Scotland' version to £65 billion.[19] In 2051, public spending under the 'Scotland' version of free personal care would be 11 percent higher than under the central base case. Public spending would be 16 percent higher than the central base case under the 'fixed care costs' version, but it would be 22 percent higher under the 'fixed hotel costs' version. Table 15 and Figure 23 show projected public and private expenditure on long-term care, as percentages of GDP, under the current (England) funding regime and under the three different versions of free personal care.

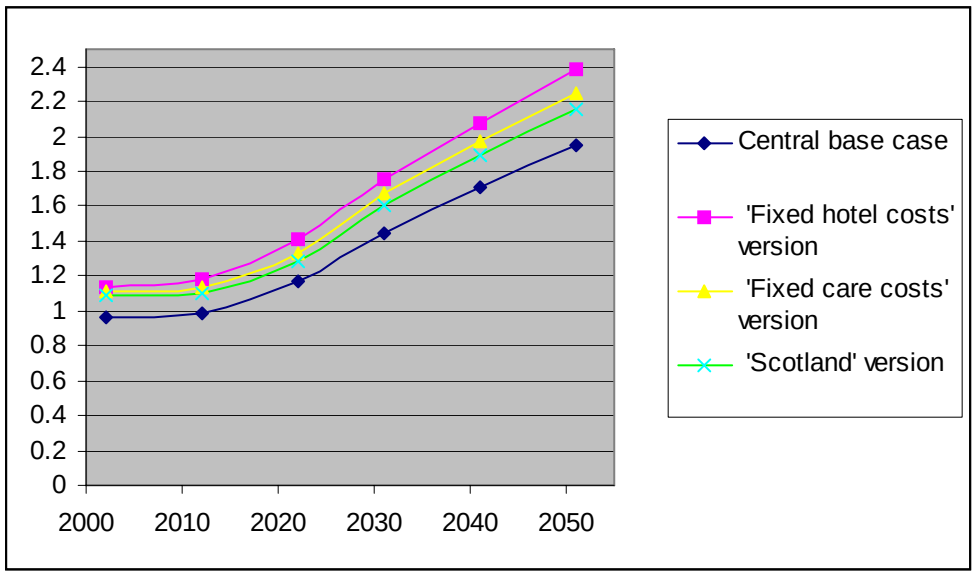
Table 15: Projected public and private expenditure on long-term care under central base case and under three versions of free personal care, 2002-2051, UK

Percent of GDP

	2002	2012	2022	2031	2041	2051
Central base case						
Public expenditure	0.96	0.99	1.16	1.45	1.71	1.94
Private expenditure	0.52	0.56	0.70	0.87	1.03	1.20
All long-term care expenditure	1.49	1.57	1.86	2.32	2.74	3.14
'Fixed hotel costs' version of free personal care						
Public expenditure	1.13	1.18	1.41	1.76	2.08	2.38
Private expenditure	0.36	0.38	0.45	0.56	0.66	0.76
All long-term care expenditure	1.49	1.56	1.86	2.32	2.74	3.13
'Fixed care costs' version of free personal care						
Public expenditure	1.11	1.14	1.33	1.67	1.97	2.25
Private expenditure	0.38	0.42	0.53	0.66	0.77	0.88
All long-term care expenditure	1.49	1.56	1.86	2.32	2.74	3.13
'Scotland' version of free personal care						
Public expenditure	1.09	1.10	1.28	1.60	1.89	2.15
Private expenditure	0.40	0.46	0.58	0.72	0.85	0.98
All long-term care expenditure	1.49	1.56	1.86	2.32	2.74	3.13

Source: PSSRU/CARESIM model estimates

Figure 23: Public expenditure on long-term care as a percentage of GDP under current (England) funding regime and under three versions of free personal care, 2002-2051, UK



Source: PSSRU/CARESIM model estimates

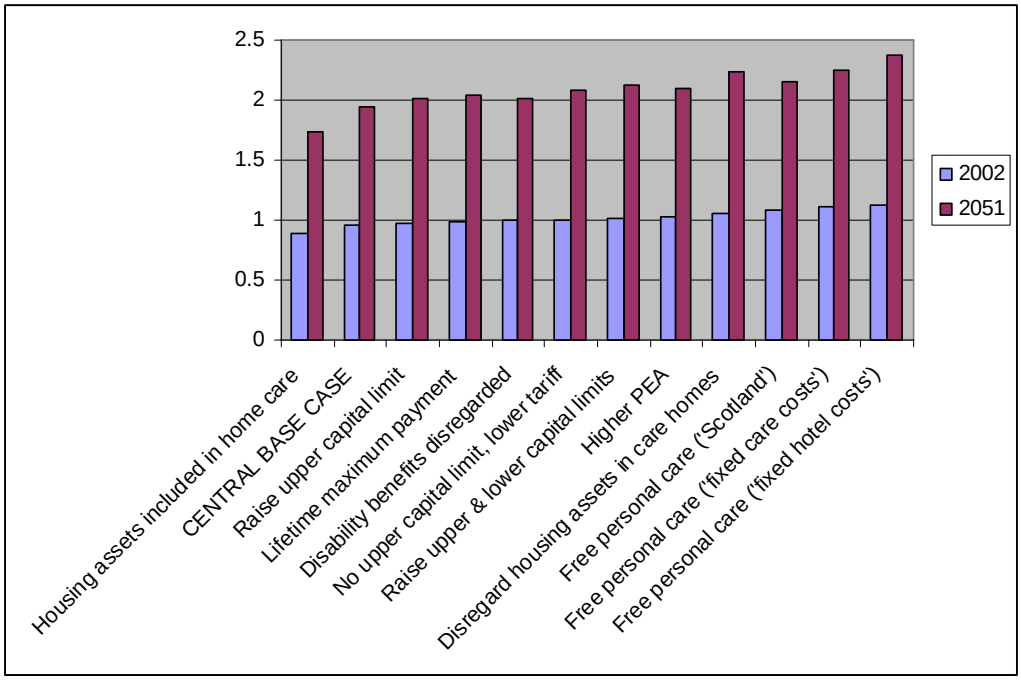
The difference between the 'fixed hotel costs' version and the other two versions of free personal care increases over time because of differences in the way care home fees are divided between public and private sources in the different versions of free personal care. As already

noted, as real care home fees increase in the 'fixed hotel costs' version, so public spending increases, but under the other two versions, as real care home fees increase, so do the costs to disabled older residents.

The difference between the 'fixed hotel costs' and the other two versions of free personal care would be even greater if care home fees increased by more than has been allowed for here. The assumption that has been made here is that care home fees would increase by approximately 2 percent a year in real terms (for precise figures, see Appendix One). No allowance has been made for a one-off step increase in care homes fees following the introduction of free personal care. Yet, after the introduction of free personal care in Scotland, there was a step increase in care home fees. Between 2002 and 2004, independent care home fees increased by 38 percent in Scotland, although not all of this increase was attributable to the change in policy (Bell & Bowes 2006: 65). Under the 'fixed care costs' and 'Scotland' versions of free personal care, any such substantial increase in fees would fall to the older person rather than to the public sector. Indeed, the experience in Scotland has led some analysts to argue that independent care home owners may have captured some of the benefits of the introduction of free personal care in residential homes, at the expense of disabled older residents themselves (Bell & Bowes 2006: xii, 64). Under the 'fixed hotel costs' version of free personal care, on the other hand, any such increases in fees would fall to the public sector, and in particular to local authorities. It is unlikely that local authorities would be in a position to agree substantial increases in fees charged by independent sector care homes.[20]

The public expenditure effects of the free personal care scenarios may also be compared over time with the effects of the scenarios for reform of the means test. As Figure 24 shows, initially, all the free personal care scenarios are more costly than any of the scenarios for reform of the means test. However, over time, this changes. One of the reform options is projected to have similar implications for public expenditure in 2051 as the 'Scotland' version of free personal care, while another option has similar implications as the 'fixed care costs' version of free personal care (Figure 24).

Figure 24: Estimated public expenditure as a proportion of GDP, in 2002 and 2051, under different charging systems, UK



Source: PSSRU/CARESIM model estimates

Free personal care and possible demand response

Possible demand response: background and description of scenarios

The three versions of free personal care presented so far all assume that the introduction of free personal care would not affect the volume of care provided, or the balance between institutional and domiciliary care. However, as we considered in our earlier work, there could be a possible demand response in association with the introduction of free personal care (Wittenberg *et al* 2002, Hancock *et al* 2003). On the one hand, as the dissenting members of the Royal Commission on Long Term Care argued, if personal care were free to users, there could be an increase in demand for formal care, since a fall in the price of a good is generally associated with an increase in demand. On the other hand, where the good is required as a necessity in certain circumstances, rather than regarded as intrinsically desirable, the responsiveness of demand to changes in price may be limited – that is, demand may be inelastic.

There are a priori reasons to anticipate that, if there was a demand response as a result of a policy of free personal care, this could take the form of either an increase in demand for formal

residential care or an increase in demand for formal home care or both (Hancock *et al* 2003, McNamee 2006). The authors of the note of dissent argued that a policy of free personal care would lead to "a substantial increase in demand for residential care" arising from a shift from informal to formal care (Royal Commission on Long Term Care: 119 #30-31). However, as we argued in our earlier work, whether an increase in demand for residential care is more or less likely than an increase in demand for domiciliary care is a moot point (Hancock *et al* 2003). Older people generally prefer to remain in their own homes rather than enter residential care (Tinker *et al* 1999), suggesting that demand for residential care may be less likely than demand for domiciliary care to be responsive to price changes (Hancock *et al* 2003).

Since the introduction of free personal care in Scotland, there has been considerable interest in whether the change in policy has affected demand for personal care (Bell & Bowes 2006, Dickinson and Glasby 2006, McNamee 2006). The results of research on this are somewhat tentative because of the short period of time that the policy has been in place and because of a lack of monitoring and evaluation of the new policy in Scotland (Dickinson and Glasby 2006: 22). Nevertheless, the results suggest a number of conclusions.

The research suggests that, following the introduction of free personal care in Scotland, the number of people receiving free personal care in domiciliary settings has increased more than the number receiving free personal care in residential settings. Scottish Community Care Statistics show that, between 1 July 2002 and 30 June 2004, the number of people receiving free personal care at home increased by 74 percent, whereas the number receiving free personal care in a care home increased by 15 percent (Dickinson & Glasby 2006: 16-17, McNamee 2006: 13-14). The effect has been a significant shift in social care resources from residential care to home and community services (Bell and Bowes 2006: 66). The comparatively small impact of free personal care in care homes in Scotland may have arisen because the fixed care costs version of free personal care, combined with an increase in care home fees and the loss of disability benefits on receipt of local authority funding,[21] may have meant that the overall financial effect of free personal care for those entering care homes was "broadly neutral" (McNamee 2006: 17).

It is not, however, clear that an increase in numbers receiving free personal care would necessarily be associated with an increase in the total numbers receiving Local Authority care. An increase in *free* personal care does not necessarily imply an increase in the numbers receiving Local Authority care, since it might represent a shift from partly subsidised personal

care subject to Local Authority user charges to fully free personal care. The evidence for domiciliary services in Scotland suggests, however, that the overall volume of Local Authority personal care services did increase following the introduction of free personal care. Bell & Bowes (2006) cite statistics from Audit Scotland Performance Indicators showing that the number of people receiving personal care increased by 19 percent between 2000/01 and 2002/03, and subsequent data from the same source shows that there has been a further 3 percent increase to 2004/05. The number of older people aged 65 and over receiving a Local Authority community care service increased by 20 percent between 2000/01 and 2003/04 (Bell & Bowes 2006: 67). Again, however, it is not clear that an increase in *Local Authority* services necessarily indicates an increase in the *overall volume* of care provided, since it would be expected that a policy of free personal care would result in a shift from privately-purchased care to publicly-funded care.

Indeed, the evidence regarding the impact of free personal care on the total volume of care, particularly domiciliary care, provided is tentative. McNamee's analysis of the Scottish Household Survey and Scottish Community Care Statistics concluded that "implementation of the policy [of free personal care] was associated with no statistically significant change in the use of informal or formal care at home, together with no major change in the care home sector", although McNamee did also identify "some evidence of small changes in informal and formal care use" (McNamee 2006:16). With regard to care homes in Scotland, there was evidence of a small reduction in the level of support offered, with the number of residents in care homes falling by 2.3 percent from 34,382 to 33,589 between March 2001 and March 2005 (McNamee 2006: 12).

In summary, the evidence from the introduction of free personal care in Scotland suggests that the introduction of a 'fixed care costs' version of free personal care was associated with a greater increase in the numbers receiving free personal care at home than in residential settings, resulting in a significant shift in the balance of public expenditure resources from institutional to domiciliary forms of care. The evidence regarding the impact of free personal care on the overall volume of care provided is, however, less clear.

The scenarios examining a potential demand response to the introduction of free personal care in the UK, explored here, build on the experience in Scotland. They examine the impact of an increase in demand for *domiciliary services* following the introduction of free personal care.

The version of free personal care on which this increase in demand is tested is the *'fixed care costs'* version, which corresponds to the form of free personal care introduced in Scotland, but allows for the real value of the personal care allowance to be maintained over time. Two scenarios are tested, in which domiciliary care increases by 25 percent and by 50 percent. A lower estimate of a possible demand effect (an increase in demand of 12 percent) was tested in earlier research and was found to have little impact (Wittenberg *et al* 2002, Hancock *et al* 2003) and has not been repeated here. In the scenarios allowing for an increased demand effect, examined here, it is assumed that the numbers receiving free personal care in their own homes would be 25% and 50% higher than under the scenarios without a demand effect. The increased numbers arise not from a shift from privately- to publicly-funded care, which is taken into account in scenarios without a demand effect, but in an overall increase in demand for home care. This could arise from people who rely on informal care seeking free personal care, perhaps in addition to informal care, or from people who have unmet needs under current arrangements now seeking personal care services because they will no longer have to undergo a means test (Care Development Group 2001, McNamee 2006).

Possible demand response: results of modelling

Before looking at possible demand effects, it is important to emphasise that, even without any possible demand effects, a policy of free personal care would lead to a substantial increase in the number of older people receiving some publicly-funded home care. This is because, under a policy of free personal care, there would be a shift from private- to public-funding. As already noted, the PSSRU/CARESIM models suggest that the number of older people in the UK receiving some publicly-funded home care would, in the base year, increase from around 440,000 under the current (England) funding regime to around 625,000 under a policy of free personal care (Table 16). A policy of free personal care would therefore, without any demand effects, increase the number of people receiving some publicly-funded home care by approximately 40 percent (Figure 25). The results also suggest that a policy of free personal care would, without any demand effects, also increase the numbers of older people receiving some publicly-funded residential/nursing home care by nearly 50 percent, from around 265,000 under the current funding regime to nearly 400,000 under free personal care (Table 16).

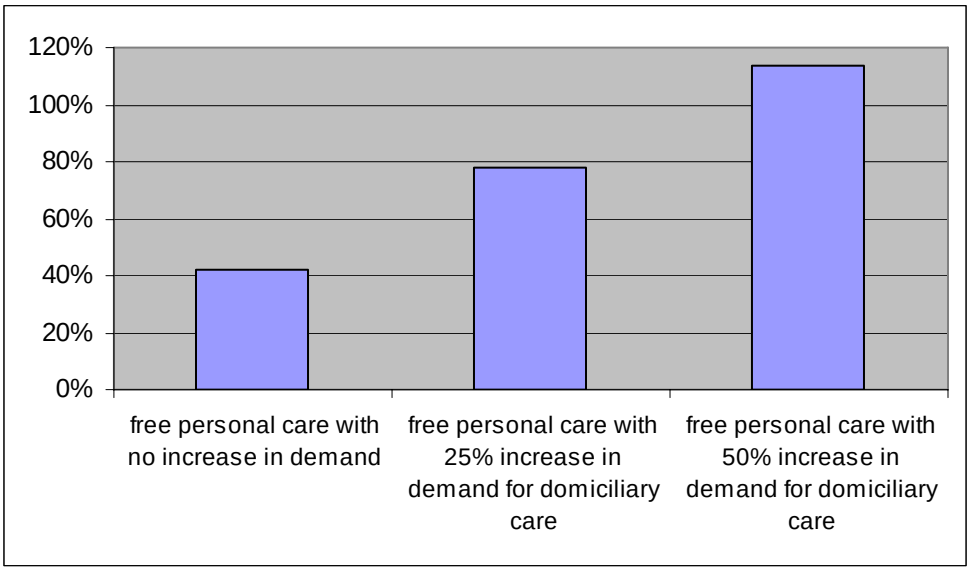
Table 16: Numbers receiving publicly-funded and privately-funded* long-term care services, under the current (England) funding system, free personal care ('fixed care costs' version) with different demand assumptions, 2002, UK

	Publicly-funded	Privately-funded	All
Home care			
Current (England) funding system	440	970	1410
Free personal care	625	785	1410
Free personal care with 25% increase in demand for domiciliary care	780	785	1565
Free personal care with 50% increase in demand for domiciliary care	940	785	1725
Care homes			
Current (England) funding system	265	125	390
Free personal care	390	0	390
Free personal care with 25% increase in demand for domiciliary care	390	0	390
Free personal care with 50% increase in demand for domiciliary care	390	0	390

Source: PSSRU/CARESIM model estimates
* 'Publicly-funded' individuals include all those who receive some public-funding, while 'privately-funded' individuals are those who receive only private funding.

Figure 25:

Percentage increase, compared to current (England) funding system, in numbers receiving publicly-funded home care under free personal care ('fixed care costs' version) with different demand assumptions, 2002, UK



Source: PSSRU/CARESIM model estimates

If demand for domiciliary care increased as a result of a policy of free personal care, then the numbers receiving some publicly-funded home care would be greater. A 25 percent increase in demand for domiciliary care, following the introduction of free personal care, would mean that

the number of older people receiving some publicly-funded home care would increase to approximately 780,000 in the base year, compared to 440,000 if the current (England) funding system continued (Table 16). If there was a 50 percent increase in demand for domiciliary care, following the introduction of free personal care, the number of older people receiving some publicly-funded home care would increase to approximately 940,000 in the base year (Table 16). Under a 25 percent increase in demand, the numbers of older people receiving some publicly-funded home care would, therefore, increase by approximately 75 percent in the base year, compared to the current (England) funding system, while under a 50 percent increase in demand, the numbers would increase by approximately 115 percent (Figure 25).

An increase in demand for domiciliary care as a result of a policy of free personal care would result in greater public expenditure on long-term care. A 25 percent increase in demand for domiciliary care, following the introduction of free personal care, would mean that public expenditure would increase to nearly £12.5 billion in 2002 and a 50 percent increase in demand would mean that public expenditure would increase to around £13 billion in 2002, compared to around £12 billion if there was no increase in demand and £10 billion under the current funding system (Table 17). A 25 percent increase in domiciliary care demand is projected to lead to public spending of around £72 billion in 2051, and a 50 percent increase in demand to public spending of approximately £76 billion in 2051, compared to £67.5 billion if demand does not increase and around £58 billion under the current funding system (Table 17).

Table 17: Public and private long-term care expenditure (in billions of pounds) under the current (England) funding regime (central base case) and under free personal care ('fixed care costs' version) with different demand assumptions, 2002, 2022 and 2051, UK

	2002	2022	2051
Central base case			
Public	10.150	19.665	58.308
Private	5.570	11.800	35.907
Total	15.720	31.450	94.210
'Fixed care costs' version of free personal care			
Public	11.745	22.513	67.484
Private	4.030	8.932	26.541
Total	15.775	31.445	94.025
'Fixed care costs' version of free personal care, with 25% increase in demand for domiciliary care			
Public	12.448	23.952	71.851
Private	4.037	8.943	26.574
Total	16.485	32.895	98.430
'Fixed care costs' version of free personal care, with 50% increase in demand for domiciliary care			
Public	13.146	25.386	76.217
Private	4.049	8.954	26.613
Total	17.195	34.340	102.830

Source: PSSRU/CARESIM model estimates

Expressed as a percentage of GDP, however, the effects on public expenditure of an increase in demand for domiciliary care, potentially arising from a policy of free personal care, seem comparatively modest. A 25 percent increase in demand for domiciliary care, following the introduction of free personal care, would mean that public expenditure would increase to 1.18 percent of GDP in 2002, and a 50 percent increase in demand would mean that public expenditure would increase to 1.24 percent of GDP in 2002, compared to 1.11 percent of GDP if there was no increase in demand (Table 18). A 25 percent increase in domiciliary care demand is projected to lead to public spending of approximately 2.40 percent of GDP by 2051, and a 50 percent increase in demand to public spending of 2.54 percent of GDP by 2051, compared to 2.25 percent if demand does not increase (Table 18).

Table 18: Projected public and private expenditure on long-term care under central base case and under free personal care ('fixed care costs' version) with different demand assumptions, 2002-2051, UK

Per cent of GDP

	2002	2012	2022	2031	2041	2051
Central base case						
Public expenditure	0.96	0.99	1.16	1.45	1.71	1.94
Private expenditure	0.52	0.56	0.70	0.87	1.03	1.20
All long-term care expenditure	1.49	1.56	1.86	2.32	2.74	3.14
'Fixed care costs' version of free personal care with no increase in demand						
Public expenditure	1.11	1.14	1.33	1.67	1.97	2.25
Private expenditure	0.38	0.42	0.53	0.66	0.77	0.88
All long-term care expenditure	1.49	1.56	1.86	2.32	2.74	3.13
'Fixed care costs' version of free personal care, with 25% increase in demand for domiciliary care						
Public expenditure	1.18	1.21	1.42	1.78	2.10	2.39
Private expenditure	0.38	0.42	0.53	0.66	0.77	0.89
All long-term care expenditure	1.56	1.63	1.95	2.43	2.87	3.28
'Fixed care costs' version of free personal care, with 50% increase in demand for domiciliary care						
Public expenditure	1.24	1.28	1.50	1.88	2.22	2.54
Private expenditure	0.38	0.42	0.53	0.66	0.77	0.89
All long-term care expenditure	1.63	1.70	2.03	2.54	3.00	3.43

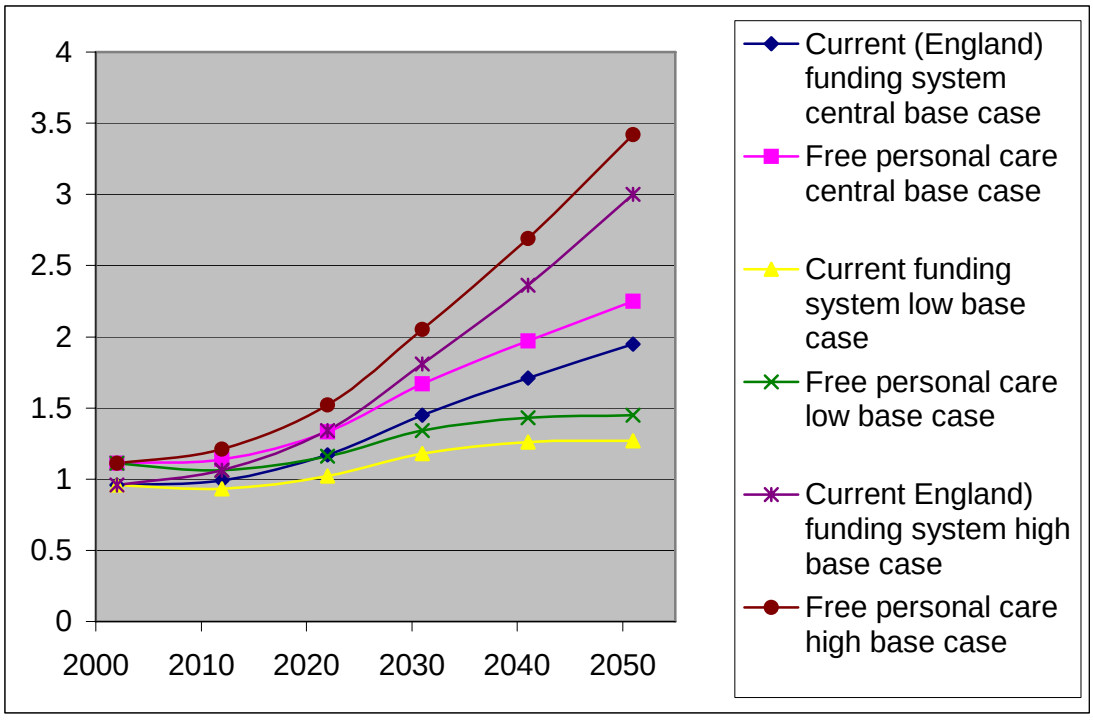
Source: PSSRU/CARESIM model estimates

The results from the PSSRU/CARESIM models may throw some light on the interpretation of the trends in provision of publicly-funded domiciliary care in Scotland since the introduction of free personal care. The data from the models presented here has suggested that, even without an increase in demand for care, a policy of free personal care would mean that the number of people receiving some publicly-funded home care would increase by approximately 40 percent. The Scottish data suggests that, as already noted, following the introduction of free personal care, the number of older people receiving publicly-funded community care services has increased by around 20 percent. Even allowing for the fact that public funding on health and social services tends to be more generous in Scotland than in England, the extent of the increase in receipt of publicly-funded care at home in Scotland so far seems consistent with the effect of the introduction of free personal care without an increase in demand.[22]

Free personal care under low and high base case assumptions

The final set of variant projections around a policy of free personal care explore the implications for public expenditure on long-term care under the change in policy assuming the low and high base-case assumptions. These are variant projections within the plausible range of assumptions on the projected future numbers of older disabled people and the unit costs of care. The results show that if the numbers of disabled people do not rise as fast as the base case assumes, as in the low base case assumptions, then under free personal care, state spending on long-term care in 2051 as a percentage of GDP might not be much higher than it is today under the current funding system - 1.45 percent of GDP compared with 0.96 percent (Figure 26). However, if the numbers of older people and the unit costs of care rise faster, as in the high base-case assumptions, free personal care is projected to result in 3.42 percent of GDP being spent by the state on long-term care in 2051 – more than three times its current value.

Figure 26: Projected public expenditure on long-term care as a percentage of GDP under the current funding system and under free personal care ('fixed care costs' version): central, low and high base cases, 2002-2051, UK



Source: PSSRU/CARESIM model estimates
Note: the free personal care scenario shows no increase in demand

The distributional effects of free personal care scenarios

The distribution of gains from the three versions of free personal care is shown in Table 19. There is a steady increase in mean gains relative to the overall average as income rises. In 2002, mean gains are below average in all but the highest income quintile (Table 19a). The highest income group gain around 76% more than the average gain in 2002. Owner-occupiers gain between 51% and 56% more than average in 2002 (Table 19b). In 2022 mean gains in the lowest income group are projected to be even lower relative to the average than in 2002. Under the Scottish model they are just 43% of the average, under the fixed care costs version they are about half average and under the fixed hotel costs variant they are 58% of average. Gains in the top income group are projected to be well above average in 2022 although a little lower than in 2002, with slightly above average gains experienced by care recipients in the fourth income quintile.

Table 19
Mean gains from free personal care by income level and housing tenure, overall mean gain=100; care home residents and recipients of home care aged 85+

Table 19a: By income level

	Income quintile									
	1 (lowest)		2		3		4		5	
	2002	2022	2002	2022	2002	2022	2002	2022	2002	2022
'Fixed hotel costs'	63	58	75	90	84	83	99	106	178	157
'Fixed care costs'	63	52	76	86	85	88	99	107	176	160
'Scotland' version	63	43	78	79	85	96	98	109	174	163

Table 19b: By housing tenure

	(previous) housing tenure			
	owners		non-owners	
	2002	2022	2002	2022
'Fixed hotel costs'	155	146	36	26
'Fixed care costs'	156	142	39	33
'Scotland' version	151	135	41	45

Source: CARESIM model estimates

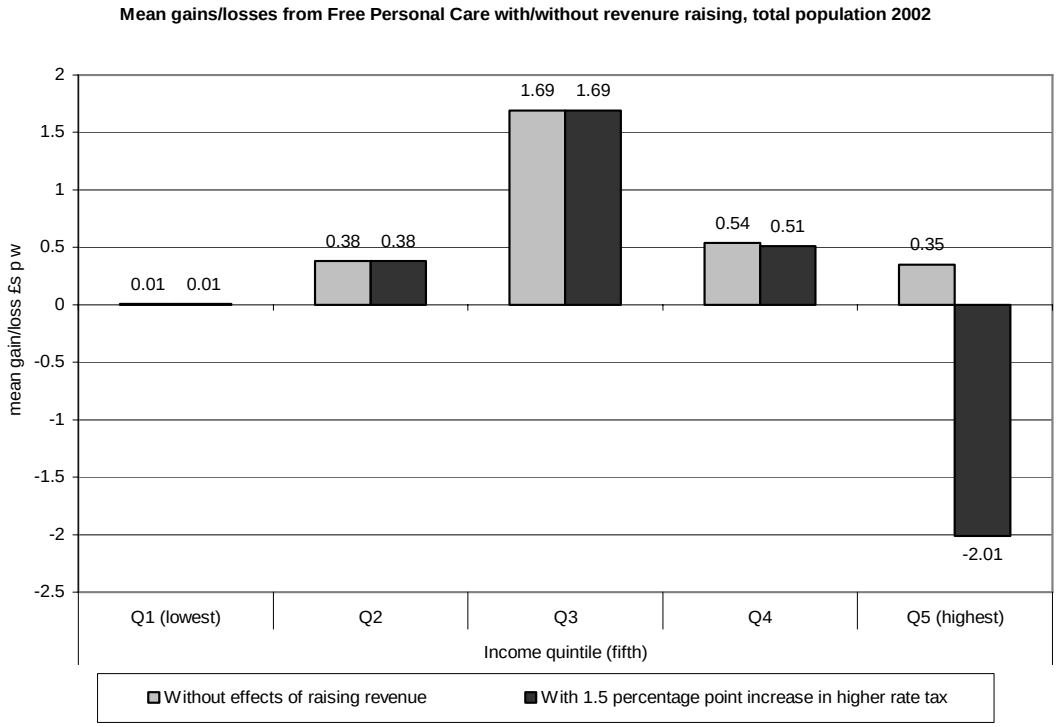
Combining free personal care with an increase in the income tax rate on higher incomes

A policy of free personal care would be the more regressive than any of the other scenarios examined in this study, before allowing for the effect of revenue raising. It is therefore

important to examine how far the regressive nature of free personal care could be balanced through the tax system. The Royal Commission on Long Term Care (1999) argued that the revenue to finance free personal care could be raised from income tax, to counteract the tendency of the policy to benefit relatively well-off people. Our analysis suggests that an increase from 40 percent to 41.5 percent in the tax rate on higher incomes would be sufficient to meet the costs of the 'fixed care costs' version of free personal care.

The distributional effect of the 'fixed care costs' variant of free personal care combined with an increase in the rate of income tax on higher incomes is illustrated in Figure 27. Classifying by the total population income distribution, suggests that gains from free personal care, before allowing for revenue raising, are concentrated in the middle income group. This implies that the richest group of care home residents are concentrated in the middle of the total population income distribution. The higher rate of tax changes the picture only for those in the highest fifth of the total population income distribution. Instead of gaining an average of 35 pence a week they lose on average £2 a week.

Figure 27



Source: CARESIM model estimates

Conclusions

This paper has used two simulation models to project the costs and distributional consequences of alternative funding regimes for long-term care for older people in the UK. The paper has looked at three different ways of implementing free personal care and a number of options for reforming the existing means test. These include options for more generous treatment of capital in the means test, a lifetime limit on the contribution an older person could be required to make towards the costs of their residential care, a higher personal expenses allowance for people in care homes and some options specific to non-residential care.

Of all the options considered in this paper, the free personal care options would be the most far-reaching. A policy of free personal care would increase the number of publicly-funded residential and home care clients more than any of the scenarios around the reform of the means-tested system examined in this paper. Overall, under a policy of free personal care, there would be nearly a third of a million more older people in both care homes and at home receiving some public support in the base year.

A policy of free personal care would initially also be more costly than any of the other reform options considered here. Public expenditure under the free personal care options is estimated to be between 1.09 percent and 1.13 percent of GDP in the base year, as against 0.96 percent of GDP under the current (England) funding system.

Over the longer term, however, some versions of free personal care would not be more costly than some options for reform of the means tests involving capital assets. Under the current funding regime, public spending on long-term care is projected to rise to 1.94 percent of GDP by 2051. This paper has estimated that the 'fixed hotel costs', 'fixed care costs' and 'Scotland' versions of free personal care would raise this to 2.38 percent, 2.25 percent and 2.15 percent respectively. The projections indicate that by 2051, one of the options that change the treatment of capital in the means test would have public costs similar to the 'fixed care costs' system of free personal care, and several options would have public costs similar to or greater than the 'Scotland' version of free personal care. Increased rates of owner-

occupation constrain the future public cost of the current system but their effects are less under options which disregard more capital, including more housing capital.

There has been considerable debate in the recent literature about the impact of a policy of free personal care on demand for care (Bell & Bowes 2006, Dickinson & Glasby 2006, McNamee 2006). It has been estimated here that, if there was an increase in demand for home care of 25 percent as a result of a 'fixed care costs' system of free personal care, public expenditure would rise to approximately 2.40 percent of GDP by 2051, rising to 2.54 percent if demand increased by 50 percent. The current paper has also shown, however, that even without any possible demand effects, a policy of free personal care would lead to a very substantial increase in the number of older people receiving some publicly-funded home care. This is because, under a policy of free personal care, there would be a shift from privately- to publicly-funded care.

Most of the options for reform of the means test and for a policy of free personal care considered here would favour home owners and those with relatively high incomes. An exception to this is a policy of raising the Personal Expenses Allowance for publicly-funded older people in care homes, which would be of least benefit to the highest income groups and would particularly benefit the lowest income groups and non-owners. By way of contrast, a lifetime maximum payment for residential care would be of greatest benefit to those in the highest income group and to owner-occupiers.

This paper has considered the impact of the revenue-raising mechanism on the distributional consequences of a policy of free personal care. Although the immediate beneficiaries from free personal care would be relatively well-off older people, the Royal Commission on Long Term Care (1999) argued that the revenue to finance free personal care could be raised from income tax to counteract this effect. The modelling presented here suggests that an increase from 40% to 41.5% in the rate of tax on higher incomes would be sufficient to meet the costs of the 'fixed care costs' version of free personal care. The results show that, consistent with the Royal Commission's expectations, those in the highest income group of the whole population would *lose* from the combination of free personal care and a higher tax rate. The net gain would be greatest for the middle quintile of the population.

This paper has sought to contribute to the debate on the costs and equity of alternative ways to pay for long-term care in the UK. The debate is very much alive, with the recent publication of reports by the JRF (2006) and Wanless Social Care Review team (2006). The simulation models used here involve making very many assumptions about exogenous factors and of the details of the reforms. The results must be considered projections of the possible effects of the reforms, not forecasts of what would happen in practice. Many more permutations of the sorts of reforms analysed here are possible.

The complexity of long-term care funding in the UK makes it difficult to gauge the current and projected future costs and distributional effects of such reforms without the kind of analysis presented here. An important conclusion of the present paper is that analysis of this kind is essential if informed judgements about policy options are to be made.

Notes

1 There was a commitment at the 2003 Welsh Assembly elections to introduce free personal care in Wales, but in February 2006 it was announced that the policy would not be implemented (www.wales.gov.uk). Instead, there are plans to increase the margin above income support before people pay charges for personal care at home.

2 A clear account of the current means-tested system in care homes in England is contained in the Age Concern Factsheet 10, *Local Authority Charging Procedures for Care Homes* (Age Concern England, 2006). Further details of residential and home care charging regimes are given in the sections below describing scenarios around changes to the funding system and in Appendices One and Three.

3 People entitled to Disability Living Allowance before reaching age 65 can continue to receive this benefit rather than Attendance Allowance. The eligibility conditions for the care component of Disability Living Allowance and the rate of benefit are the same as for Attendance Allowance. In this paper all references to Attendance Allowance should be interpreted as Attendance Allowance or the care component of Disability Living Allowance.

4 Restricting the age groups in this way was necessary because of the increasingly limited range of ages covered by the microsimulation model as the projections go further into the future (see earlier).

5 For Attendance Allowance this is partly the result of our assumptions on disability-related expenditure

6 Unless the house continues to be occupied by the person's spouse (or other older or disabled relative).

7 Abolition of the upper capital limit has been proposed in relation to non-residential charging in a recent Age Concern study (Thompson and Mathew, 2004).

8 The lower capital limit is lower for Pension Credit, but only slightly so for people in residential care.

9 It should also be noted that scenarios relaxing the means test would also benefit some existing Local Authority-supported people, who would receive more public funding than under the current (England) regime.

10 The proportion of publicly-funded residents is somewhat higher if NHS-funded nursing home care is included. NHS-funded care is excluded from the results presented in Table B because their numbers are not affected by these scenarios.

11 The modelling of the lifetime maximum payment for long-term care looks at uncompleted lengths of stay and so does not capture the full benefits to individuals of the scenario, although the modelling does capture the point-in-time change in costs.

12 Although this has not been modelled here, there would be a knock-on effect on public expenditure on residential care, if housing assets were taken into account for domiciliary

care. Single home owners requiring first home care and then residential care would have lower levels of capital on admission to residential care under this option than under the current funding system. This means that some would spend down to public support in residential care sooner than under the current funding system.

13 As described more fully Appendix Three, in the base case of the model, disability benefits are taken into account, but £15 a week for low intensity home care, £25 week for medium intensity and £40 a week for high intensity are disregarded as disability-related expenditure. These figures are based on examples given in the Department of Health (2001) guidance on charging for home care, with the examples in turn being derived from the experience of one local authority (Torbay Council).

14 The results for Quintile 1 in 2022 and Quintile 2 in 2002 are being investigated further. They are probably due in part to the sensitivity of these income quintiles to the Guarantee Credit level within Pension Credit and the fact that this level is an integral part of the home care means test and is linked to earnings.

15 'Hotel' costs refer to living and housing costs, and are distinguished from other care costs, comprising personal and nursing care costs.

16 There could in practice be variation across the UK in the personal care allowance. The scenario for 'fixed care costs', presented here, assumes a UK average, without allowance for variation around the average (which could have distributional implications).

17 At the time when the Care Development Group (CDG) in Scotland calculated personal care costs, the difference between the costs of residential care and nursing homes was assumed to be met by nursing care costs (CDG, 2001: 44-45). However, this is not the case in the calculations presented here, partly because all care home fees for the UK are assumed to be higher than those presented by the CDG for Scotland and partly because the difference between the fees in residential homes and in nursing homes is greater than the NHS nursing care contribution.

18 People who receive publicly-funded home care and also purchase private home care are assumed to continue to purchase private home care. The assumption is that they are receiving the maximum amount of publicly-funded home care that councils would provide under their eligibility criteria and are purchasing private care to top up the publicly funded care.

19 It should be noted that the Scotland version of free personal care is not fully modelled beyond 2022. The assumption of a steady state in terms of CARESIM output beyond 2022 means that the value of the voucher in the Scotland version is implicitly held roughly constant in real terms from 2022. Therefore, the value of the voucher ceases to fall in real terms from 2002.

20 It has been assumed in all the free personal care scenarios here that, because local authorities would be responsible for financing free personal care, all residents in independent sector care homes would pay local authority fee rates, which are lower than those charged for self-funders. However, this did not happen when a voucher version of free personal care was introduced in Scotland. Here, private and voluntary

care providers were reluctant to provide places for older people under 'integrated' contracts, under which local authorities managed the contractual arrangements with care homes on behalf of older people (Age Concern Scotland, 2003: 19-20). It is, however, much more likely that local authorities would need to manage contractual arrangements on behalf of older people if they (local authorities) were responsible for increases in care home fees

21 Disability benefits cease four weeks after the start of local authority funding of residential care, whether under the means-tested system or under free personal care.

22 The numbers of older people receiving publicly-funded domiciliary services in Scotland may also have been affected by the amount of funding available.

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Appendix One

Assumed Parameter Values and Uprating Assumptions used in Simulating the Charging Regime for Residential and Nursing Home Care

The structure and rates of social security benefits for older people, income tax in the base year and care charging regime are those prevailing in April 2005, expressed in April 2002 prices.

Charging for care home fees

Upper capital limit	£19,000
Lower capital limit	£11,750
Personal Expenses Allowance	£18.05 p.w.
NHS contribution to nursing care in a nursing home (set at the average of £85 in 2003/4 deflated by RPI to April 2002. Implies the average at April 2005 levels is £90.10**)**	£83.60 p.w.
Hotel costs in 'fixed hotel costs' model of free personal care	£152.05 p.w.
Personal care contribution (1) (=difference between publicly-funded fee rate in independent residential homes and hotel costs)	£175.95 p.w.
Personal care contribution (2) (Scottish rate)	£145 p.w
Care home fees (UK)[1]	
LA residential homes	£560 p.w.
Independent residential home, self-funders	£362 p.w.
Independent residential home, LA supported	£328 p.w.
Independent nursing home, self-funders	£500 p.w.
Independent nursing home, LA supported	£453 p.w.
Domiciliary care package costs	
Low public	£16.21 p.w.
Low private	£13.68 p.w.

[1] These rates are derived from Laing and Buisson (2004) using assumptions about the difference in weekly fees met by privately and publicly funded residents.

Medium public	£44.00 p.w.
Medium private	£37.13 p.w.
High public	£162.12 p.w.
High Private	£136.78 p.w.
Allowances for disability related expenditure	
Low level domiciliary care package	£15 p.w.
Medium level of domiciliary care package	£25 p.w.
High level of domiciliary care package	£40 p.w.

Key social security benefit rates

Attendance Allowance	
higher rate	£56.20 p.w.
lower rate	£37.60 p.w.
Pension Credit for single person aged 65+ in a care home	
'ordinary' Guarantee Credit level	£105.10 p.w.
severe disability premium	£43.70 p.w.
upper capital limit	No limit
lower capital limit	£9,601
Full rate basic state pension/savings credit threshold	£76.10 p.w.
Maximum savings Credit	£17.40[2] p.w.
Maximum savings disregard	£4.50 p.w.

Uprating and inflation assumptions (base scenario)

Real earnings growth	2% p.a.
House prices	as earnings
NHS contribution to nursing care in nursing homes	2% p.a.

[2] The maximum savings credit is higher in 2002 prices than in 2005 prices (£16.44) because it is 60 per cent of the difference between the Guarantee Credit level (which has been uprated by earnings) and the savings credit threshold (which has been uprated by prices).

LA contribution to personal care (under 'free personal care by voucher' version)	
	0% p.a.
Relevant disability benefits	0% p.a.
Guarantee Credit level	as earnings
Basic state pension and savings credit threshold	0% p.a.
Savings credit disregard for residential care means test	as earnings
Care home fees (UK)	staff and capital costs as earnings, non staff costs 0
LA residential homes	1.79% p.a.
Independent residential home, self-funders	1.67% p.a.
Independent residential home, LA supported	1.63% p.a.
Independent nursing home, self-funders	1.76% p.a.
Independent nursing home, LA supported	1.74% p.a.
Domiciliary care packages	as earnings

Uprating and inflation assumptions (high expenditure scenario)

As base scenario except:

Care home fees (UK)	staff and capital costs 2.5%, non staff costs 0
LA residential homes	2.23% p.a.
Independent residential home, self-funders	2.09% p.a.
Independent residential home, LA supported	2.04% p.a.
Independent nursing home, self-funders	2.20% p.a.
Independent nursing home, LA supported	2.17% p.a.
Domiciliary care packages	2.5%

Appendix Two

Further Details of the PSSRU Model[3]

1. Projected numbers of older people

The first part of the model classifies the projected numbers of older people into subgroups, according to age bands, gender, disability and other key characteristics. The model uses the Government Actuary's Department (GAD) 2004-based population projections as the basis for the numbers of people by age band and gender in each year under consideration until 2051.

The projected older population by age band and gender are then separated into disability groups. Disability is a crucial factor in considering need for long-term care, as it is disability rather than age which influences need for care. Previous studies have shown that projections of long-term care expenditure are sensitive to assumptions about future rates of disability among older people (Nuttall et al., 1994; House of Commons Health Committee, 1996; Wittenberg et al., 2001; Lagergren and Batljan, 2000; Rothgang et al., 2003; Karlsson et al., 2005). The model uses as a measure of disability the ability to perform activities of daily living (ADLs) and instrumental activities of daily living (IADLs). Six disability groups have been used in the model (Box One). Information from the 2001/2 General Household Survey (GHS) was used to break down the private household population into the six groups.

Appendix Two: Box One
Dependency Groups used in the PSSRU Model

The six disability groups used in the model are as follows:

1. People able to perform ADL (personal care) tasks and IADL (domestic care) tasks without difficulty or need for help
2. People who have difficulty performing IADL but not ADL tasks
3. People who have difficulty bathing
4. People with difficulty with other ADL tasks
5. People who cannot perform at least one ADL task without help
6. People who live in the community and cannot perform two or more ADL tasks without help, and people who are in care homes or long-stay hospital

[3] A more detailed account of the PSSRU model can be found in Wittenberg et al. (2006).

Another key factor in the receipt of long-term care is household type (Arber et al., 1988; Davies et al., 1990; Evandrou, 2005; McNamee et al., 1999). In general, older people who live alone are more likely to receive formal services than those living with others (Evandrou, 2005), while those living with others are more likely to receive informal care (Pickard et al., 2000).

The projections of household composition/informal care in the PSSRU model are driven by the 2003-based GAD marital status and cohabitation projections (Government Actuary's Department, 2005**).** The model incorporates the GAD marital breakdown by age and gender to 2031 and then assumes that the proportion of the population, by age and gender, who are married/cohabiting remains constant from 2031 onward.

The household type/informal care classification in the model is based, in the first instance, on *de facto* marital status. The two marital status groups, those who are *de facto* married and those who are *de facto* single, are broken down into five household types using official national statistics (Office for National Statistics, 2002) and the 2001/2 GHS. The following five household type categories are distinguished: single alone, single with children, single with others, couple alone and couple with others. The projections assume that the propensity within marital status groups to live alone, with children or with others remains constant over time.

The five household type groups are then further broken down by receipt of informal care to produce an eight-fold classification by household type and informal care (Box 2). Informal care in the PSSRU model is based on analyses of receipt of unpaid help with domestic tasks by disabled older people using the 2001/2 GHS. The projections assume that the propensity, within household type categories, to receive informal care remains constant over time.[4]

[4] The PSSRU model is also able to distinguish between different sources of informal care for disabled older people (care from adult children, spouses and others). For analyses using this distinction, see Malley et al., 2006, Pickard et al., (forthcoming) and Wittenberg et al., 2006.

Appendix Two: Box Two
Household Type/Informal Care Classification used in the PSSRU Model

The eight different categories used in the model are as follows:
1. Single, living alone, no informal care
2. Single, living alone, with informal care
3. Single, living with children
4. Single, living with others
5. Couple, living with spouse/partner only, no informal care
6. Couple, living with spouse/partner only, with informal care
7. Couple, living with spouse/partner only, with informal care from outside the household
8. Couple, living with partner and others

The model includes, for those living in private households, a simple breakdown by housing tenure, between those living in owner-occupied tenure and those living in rented accommodation. One reason for the inclusion of housing tenure is that it can be regarded as a simple proxy for socio-economic group. Another is that it is relevant, in the case of older people living alone, to the division between those who fund their own residential or nursing home care and those who are funded by their local authority. The current means test for public support in residential or nursing home care generally takes account of the value of the person's home (unless it is occupied by their spouse or an older or disabled relative). This means that older home-owners who live alone generally need to fund their residential care privately, while older tenants and older home-owners living with their spouse are often eligible for public funding.

The rates of home ownership, by age, gender and marital status, for 2002 are from the Family Resources Survey. Projected rates for future years to 2022 are projections produced from CARESIM (see Appendix Five). Home ownership rates are then assumed to remain constant, by age, gender and marital status, from 2022 onward.

2. Projected amounts of services and disability benefits demanded

The second part of the model projects the volumes of services demanded by combining the output of the first part of the model (the projected numbers of older people by disability, household type/informal care and other characteristics) with functions that assign receipt of services to each sub-group of the older population. The services covered include a range of

formal social and continuing health services relevant to meeting long-term care needs. Disability benefits are also included.

The probability of older people receiving residential, nursing home or long-stay hospital care, by age, gender, household type and housing tenure, was estimated using a combination of data. Official national statistics were used on the total numbers of local authority supported residents in residential care and nursing homes on 31 March 2003 (Department of Health, 2003b) and estimates of the numbers of privately funded and NHS funded care home residents. 2001 Census data on the numbers of older patients by age and gender were used as estimates of the numbers in long-stay hospital care. A proportionate breakdown of care home residents by age band, gender, previous household type and previous housing tenure was derived from PSSRU surveys of residential care (Netten et al., 1998) and applied to the totals.

The probability of receipt of each individual non residential service, including home care, day care, meals and community nursing services, was estimated through multivariate (logistic regression) analysis of the 2001/2 GHS data. The independent variables were age, gender, disability, household type/informal care and housing tenure.

A similar approach was used to estimate the probability of receipt of three packages of home care. Those reporting receipt of local authority or private home care in the 2001/2 GHS were divide into three groups according to the total hours of home care received:

- Low intensity: under 2 hours (mean 1.4 hours)
- Medium intensity: 2 hours but under 5 hours (mean 3.8 hours)
- High intensity: 5 hours and over (mean 14.0 hours)

A multinomial logistic regression was run to determine the factors associated with receipt by disabled people of these three different levels of intensity of home care hours. This regression provided the coefficients to use in calculating the predicted probabilities for receipt of each level of intensity of home care.

Demand for non-residential services was calculated by using the fitted values from the logistic regression models as the estimated probabilities of receipt of each individual service and each home care package by age band, disability and the other factors described above.

These fitted values were then multiplied by the projected numbers of older people within each cell by age band and other needs-related circumstances to produce estimates of the numbers of service recipients.

The estimated numbers of recipients of local authority home care, day care and meals were grossed to match official data on numbers of service recipients (Department of Health, 2004a). The grossing factors estimated for 2002 were then applied for all projection years. Grossing was not possible for NHS community or day hospital services or for private services, as there are no official data on numbers of clients of these services.

Finally, these estimates of numbers of service recipients were multiplied by estimates of the average intensity of service receipt, that is, the average number of home help hours or district nursing visits per recipient week. Information on intensity of service receipt by disability was also obtained from the 2001/2 GHS. For local authority home care, day care and meals, the GHS data were grossed up to match the Department of Health data on average hours, sessions or meals per client week.

The number of assessments and the number of clients receiving care management are also included in the model. The number of assessments is assumed to rise in line with the projected number of disabled older people. All recipients of local authority funded residential, day or home care are assumed to receive care management. This means that the number of clients receiving care management is assumed to rise in line with the projected number of recipients of these services.

The model includes both Attendance Allowance (AA) and Disability Living Allowance (DLA) (care and mobility components). Department for Work and Pensions (DWP) data on receipt of disability benefits, by age, gender, and rate of benefit, are used for 2002. The numbers of recipients are expressed as age- and gender-specific rates through division by a weighted sum of the numbers of older people in each disability group. The weighting is included to reflect the finding that level of disability is positively associated with receipt of disability benefits. The weights are derived from the relative proportions of older people reporting receipt of disability benefits in the 2001/2 GHS.

3. Projected aggregate expenditure on long-term care services

The third part of the model projects the total expenditure on the formal services demanded applying unit costs of formal care, drawn from a PSSRU study (Curtis and Netten, 2004) and from Laing and Buisson (2004), to the volume of services projected in the second part of the model. The model covers the costs to the health service, social services and users of services, for those services included in the model, and costs of disability benefits. Estimated expenditure on local authority home care, day care and meals services, on assessments and care management and on NHS community health services has been grossed up broadly to match official data.

4. Projected breakdown of expenditure between funders

The fourth part of the model breaks down projected aggregate expenditure by source of funding: NHS, social services, service users and disability benefits. The costs of the health services included are assigned to the NHS. The costs of the social services are divided between personal social services and service users. As there are no national data on the quantities of privately funded care, the projections for privately funded care, especially on non residential care, need to be treated with caution as it is not possible to verify that all privately funded care is captured by the model.

Residents of care homes and recipients of home care packages are divided into privately and publicly funded service users. The breakdown for 2002 is based on Department of Health data for nursing homes, Laing and Buisson data (Laing and Buisson, 2004) for independent sector residential care homes, 1996 PSSRU survey data (Netten et al., 1998) for local authority homes and the 2001/2 GHS for home care packages. The future trend in the proportion of service users who fund their care privately is derived from the CARESIM microsimulation model.

Expenditure on local authority funded residential care, home care, day care and meals is divided between local authority social services and users on the basis of the ability of users to meet charges as estimated by the microsimulation model. The full costs of privately funded residential and nursing home care and private domestic care, and a proportion of the costs of all other social services, are thus assigned to users. These costs are then broken down

between those met through disability benefits and those met from other private sources of income, on the basis of the CARESIM microsimulation analyses.

5. Social care workforce

A fifth part of the model makes projections of the numbers of social care (but not NHS) staff required to provide the projected volume of social services, for different groups of social care staff. Department of health estimates on whole-time equivalent staff numbers by category of staff and service have been used for 2002. For care staff, it is assumed that the ratio of staff to clients remains constant to 2051. For administrative and managerial staff, it is assumed that the ratio of such staff to care staff remains constant over the projection years.

Appendix Three

Further Details of CARESIM

Data

CARESIM uses respondent-level data on older participants in the Family Resources Survey (FRS). The FRS is a nationally representative sample of British households carried out for the Department for Work and Pensions (see, for example, Department for Work and Pensions, 2006). It contains detailed information on the incomes, wealth, housing and other relevant characteristics of sample members, sufficient to make good estimates of their liability for care charges. All money values are uprated from the years of the survey (1999-2000, 2000-01, 2001-02 in the analysis reported here) to the price levels prevailing in the base year for the simulation (here 2002). Estimates of housing wealth are made for each owner-occupier based on recorded Council Tax band[5], characteristics of the home and regional changes in house prices between 1991 and the base year. The method uses predictions of property values from an interval regression of council tax band on housing characteristics with the addition of a stochastic error term, and is described in more detail in Hancock (2000).

The FRS excludes people living in care homes and therefore represents the population from which future entrants to care homes will come. It may provide a less accurate picture of the incomes and assets of people already resident in care homes. For example, controlling for health-related factors, older home-owners appear less likely to enter residential care than those who do not own their homes (Hancock et al., 2002) while older people in receipt of Income Support (who therefore have low incomes and low capital) are more likely than others to enter residential care (Almond et al., 1999).

'Ageing' the FRS sample of older people

CARESIM performs simulations for 21,334 FRS respondents (the simulation sample) consisting of all single people currently aged 65 and over, and the older partner in couples

[5] The Council Tax is a local property tax for which every dwelling was assigned to a 'Council Tax Band' according to its assessed market value in 1991.

where at least one partner is aged at least 65 years. Within this sample 5682, 5396, 4855, 3063 and 2338 were in the age groups 65-69, 70-74, 75-79, 80-84 and 85+ respectively. For future years, sample members are 'aged' in the following steps:

1. Predict, stochastically, whether each member of all FRS households containing a member of the simulation sample will be alive in 5, 10, 15 and 20 years' time. This uses the age and sex-specific survival probabilities underlying the Government Actuary's population projections. The ages of those who are predicted to be alive are increased by 5, 10, 15 and 20 years.

2. Predict whether each simulation sample member will have become a widow or widower in 5, 10, 15, 20 years' time. This is done deterministically once survival of each partner has been predicted.

3. Simulate how the income and wealth of each simulation sample member and partner will have changed by 2007, 2012, 2017, 2022.

   The following assumptions are made:

   - Any earned income has ceased by the projection year (or at least would cease on needing care).
   - All sources of state and private pension income maintain their real value, but no more than this, in relation to retail prices (if anything this is likely to be an over-generous assumption for private sector pensions).
   - All financial assets and income derived from them maintain their real value implying that there is no depletion of existing capital before starting to receive care services and no additions to capital except through inheritance of a partner's capital (see below). This is likely to overestimate the capital of some and underestimate it for others.
   - For those who own their homes, it is assumed that they stay in the same property and, in the analysis reported here, that these increase in real value at the same rate as average earnings. It is assumed that by the projection year any outstanding mortgage is paid off.

4. Model any inheritance of income and capital of the surviving partner if there is one.

Assumptions are:

- The survivor inherits all of his/her late partner's financial assets and income from them.
- He/she inherits all of his/her partner's share in their home if they are owner-occupiers.
- The survivor inherits half of any private pension income that his/her partner had.
- The survivor inherits half of the late partner's state earnings-related pension (SERPS) income.
- If the survivor is a woman (usually the case) and her own basic state pension is less than that of her late husband's, her own basic state pension is increased by the difference between the two.

Re-weighting CARESIM results

CARESIM simulates the contribution older FRS sample members would have to make towards care home fees should they need to be cared for in such settings. It does not simulate which sample members may need care nor what type of care they would receive. Weights are therefore used in CARESIM to re-weight the FRS sample of people aged 65+ (base year of 2002), 70+ (2007), 75+ (2012), 80+ (2017) and 85+ (2022). The weights take the form of grossing-up factors which reflect the PSSRU model projections of the composition of the population in these age groups in each of 7 care categories:

1. not receiving any chargeable care[6]
2. receiving lowest level of domiciliary care
3. receiving middle level of domiciliary care
4. receiving highest level of domiciliary care
5. receiving care in a LA care home
6. receiving personal care in an independent sector care home
7. receiving nursing and personal care in an independent sector care home

[6] Strictly, not receiving chargeable care covered in the modelling. Some may be receiving NHS continuing care whose cost is met entirely by the NHS.

In the base year, every FRS respondent aged 65 and over is assigned a grossing-up factor to allow it to be grossed-up to the first of these care categories, i.e. not receiving chargeable care. Charges for each type of care home or level of domiciliary care are calculated for every member of the simulation sample[7]. Members of the simulation sample are therefore assigned six additional grossing-up factors to allow them to be grossed-up to the population in each of the care categories 2 to 6. For future years, grossing-up factors are assigned only to those FRS respondents for whom the simulation remains valid, i.e. those aged 70+ in 2007, 75+ in 2012, 80+ in 2017 and 85+ in 2022. The grossing-up factors are specific to age group, gender, housing tenure and marital status (see main text).

People aged 16-64 are included in analyses of revenue raising options for the base year. Grossing-up factors which vary by gender but relate to the single age group 16-64 are used for FRS respondents in this age group. They are derived from GAD population estimates for the base year.

Modelling the current charging regime for long-term care

Charging for care in a care home

The following paragraphs describe the current charging rules for local authority supported residential and nursing home care in England and indicate where simplifying assumptions are made in implementing them in CARESIM.

People entering residential or nursing homes on a permanent basis must first be assessed by their local authority as needing such care, if they wish to receive any financial support from the local authority in meeting the fees of the care home. Local authorities are responsible for paying negotiated fees but determine a contribution from the resident. For those with capital in excess of an upper capital limit the contribution is 100 per cent for as long as capital remains above this threshold. The value of an older person's home is not included in capital for the first twelve weeks after entry to a care home. After that, it is taken into account unless the older person has a partner or relative who is disabled or aged 60 or over who continues to live in the home. In CARESIM, the value of owner-occupiers' homes are taken into account,

[7] The default in the case of couples is for care charges to be modelled for the older partner.

after the first twelve weeks, for all householders without partners, even if they have other relatives who might mean that the value would be disregarded. Where there is a partner it is assumed that he or she continues to live in the couple's home and its value is disregarded.

If total capital, including the value of the home where appropriate, is less than the upper capital limit, the resident's contribution to the care home's fees is an amount which leaves the resident with net income of no less than a 'personal expenses allowance'. In calculating income for this purpose, investment income is disregarded but a notional 'tariff' income is assumed from capital between a lower capital limit and the upper capital limit. This is at the rate of £1 per week for every £250, or part of £250, between these limits.

Older people needing care may be entitled to Attendance Allowance. Attendance Allowance is a non means-tested benefit for people who need help with personal care or supervision because of physical or mental illness or disability. It is payable at one of two rates depending on the extent of help or supervision they need. If an older person is entitled to Attendance Allowance, it is included in the income on which his or her contribution to a care home's fees is calculated. Attendance Allowance remains payable if the older person is required to pay the full fees. However if the person is entitled to any financial support from the local authority, Attendance Allowance ceases to be payable (after four weeks) although an 'underlying entitlement' remains. Where this happens, the amount the local authority has to pay is greater, and the contribution of the Department of Work and Pensions, through Attendance Allowance, is smaller.

Because the model simulates care home charges for people not currently in need of care, it would not be appropriate to use current receipt of Attendance Allowance. Instead, data from a recent PSSRU study of self-funding care home residents (Netten et al., 2002) were used to determine the proportions of people in care homes with actual or underlying entitlements to the lower or higher rate of Attendance Allowance. This study suggested that approximately 30 per cent of self-funding residential care home residents receive the lower rate of Attendance Allowance, 40 per cent receive the higher rate and 30 per cent do not receive Attendance Allowance. Corresponding figures for residents in nursing homes are 25 per cent, 50 per cent and 25 per cent respectively. CARESIM randomly assigns receipt of Attendance Allowance to each older person in accordance with these proportions.

Older people may be entitled to Pension Credit, a means-tested income maintenance benefit. Entitlement to Pension Credit depends on both income and capital but unlike the care charging system, Pension Credit does not have an upper capital limit. Instead all capital above a lower threshold is deemed to generate income at the rate of £1 per week per £500 of capital i.e. a lower rate than for care home charging. In assessing entitlement to Pension Credit, Attendance Allowance is disregarded. Receipt of Attendance Allowance triggers entitlement to the Pension Credit Severe Disability Premium. However, older people living in care homes who receive local authority help with their fees cease to be entitled to the Severe Disability Premium.

If a married person enters a care home, Local authorities are required to disregard half the value of any private pension income received by a married care home resident where at least that amount is passed to the spouse remaining at home. The model assumes that where the partner in a care home has more private pension income than the partner remaining at home, 50 per cent of his or her private pension income is passed to the partner at home and is disregarded in assessing liability for care home fees.

For independent sector care homes, two fee levels are relevant – the rate charged for local authority supported residents and a higher rate for 'self-funders'. The lower rate is used to determine eligibility for local authority help with care home fees. The higher rate is then substituted where application of the means test precludes the resident from local authority support. There are therefore five different rates used in the projections (see Appendix One).

The model allows for the fact that once their capital has fallen to the upper capital limit, privately-funded residents may become eligible for local authority help with the fees and, if in an independent sector home, also for the lower fee rate that local authorities are able to negotiate for residents receiving local authority support.

Charging for home care

There is no national charging system for non-residential services but national guidance sets out common principles to which Local Authorities must adhere in determining how much to charge users. One key principle is that charges should not leave users with disposable incomes lower than 125 per cent of the ordinary (before disability premiums) level of the 'Guarantee Credit' within Pension Credit. This level is the minimum income guaranteed to

pensioners who claim any entitlement to Pension Credit. Disposable income is measured net of income tax and housing costs. Housing costs include rent, mortgage interest payments and council tax. Rent and council tax are measured net of any entitlement to Housing and Council Tax Benefit.

Another key principle is that if income from disability benefits is included in the means test for home care, Local Authorities must deduct from income an allowance for extra expenditure resulting from the user's disability (disability related expenditure (DRE)). The relevant disability benefits are Attendance Allowance[8] and the Severe Disability Premium in Pension Credit. A 2003 survey of Local Authorities found that three-quarters of Local Authorities undertook an individual assessment of DRE, the rest used a fixed amount or disregarded disability benefits. Only 6 per cent of Local Authorities disregarded SDP completely and 5 per cent ignored AA/DLA completely in their means-test (Thompson and Matthew, 2004).

A third principle is that the value of the user's home should be disregarded in full for home care charging and the capital thresholds and tariff income applied to other capital should be no less generous than for residential care.

Home care charges are simulated for three stylised packages of home care corresponding to low, medium and high intensity care needs. In each case, two levels of gross cost are relevant: the cost of the package if provided via the Local Authority and the cost if purchased privately. In the case of non-residential care, privately purchased care tends to cost less than care provided via a local authority (Curtis and Netten, 2004). CARESIM therefore assesses whether the user would pay less for Local Authority care, (because the Local Authority meets some of the cost), or for privately purchased care. It then assigns them the lower cost.

CARESIM does not try to capture variation across Local Authorities in charging for non-residential services but applies a standard home care means-test. The base charging regime used in this report has the following features:

[8] Or Disability Living Allowance for those who started to received this benefit before reaching the age of 65.

- the user charge is the minimum of
  - the excess of disposable income over 125 per cent of the relevant ordinary Guarantee Credit level

  and
  - the gross cost of the care package
- disability benefits (AA/DLA and the SDP) are taken into account in full with flat rate allowances for DRE which vary with the level of the home care package.

The stylised means test for home care adopted here results in greater user payments than occur in practice. One reason is that the simulated means test does not impose a weekly maximum charge, whereas many Local Authorities do set weekly maximum charges, which may be less than the costs of higher intensity packages of care.

As for residential care, receipt of AA is assigned randomly. The proportions assumed to be receiving AA are based on an analysis of the General Household Survey and differ across the different packages of home care. The percentages assumed to be receiving the lower and higher rates of AA among those receiving the lowest level of home care are 19.1 per cent and 40.0 per cent respectively. Corresponding percentages for medium level care are 17.6 per cent and 58.1 per cent and for high level care 55.6 per cent and 42.8 per cent.

Home care charges are calculated assuming that all users have been receiving the package of home care for 18 months and allowing for capital to be depleted to that point if necessary.

Modelling the care charging regime under free personal care

Care in a care home

It is assumed here that older people themselves would continue to be responsible for their accommodation and living costs subject to the means-test. As noted in the text, when the Royal Commission on long-term care looked at the cost of free personal care, they assumed that the state contribution to personal care in care homes would be the difference between the care home fee (less an NHS contribution to nursing care in nursing homes), and a fixed allowance for accommodation and living costs ('hotel' costs). Living costs were calculated

using the then ordinary Income Support[9] rate for single pensioners, the rationale being that this, constituted the official view of the minimum an older person needs to meet everyday living costs, excluding rent, council tax and mortgage interest (which the basic Income Support rates were not intended to cover). The charging rules for care home fees implicitly assume that all ordinary living costs are included in the care home fees apart from those intended to be met from the personal expenses allowance. The Royal Commission therefore deducted the personal expenses allowance from the ordinary Income Support rate to arrive at the component of ordinary living costs included in care home fees. The accommodation costs were assumed to be equal to the residential allowance which used to form a part of Income Support for older people living in care homes. When the Scottish Executive implemented free personal care they adopted a similar approach to arrive at hotel costs but used the result to derive a flat rate contribution to care home fees equal to the difference between the average independent residential care home fee and these hotel costs. This produced a flat rate contribution to personal care in care homes of £145 a week, which has not been uprated since it was introduced.

Here we use the same approach as the Royal Commission and the Scottish Executive, substituting the April 2005 Guarantee Credit rates for Income Support rates, to arrive at accommodation and living costs of £152.05 a week expressed in April 2002 prices.[10] In the projections for the 'fixed hotel costs' version of free personal care, the accommodation component is assumed to remain constant in real terms, whereas living costs follow the uprating assumption for Guarantee Credit rates of rising in line with average earnings. In the remaining two free personal care scenarios, as noted in the text, the uprating of the personal care allowance varies by scenario. In the 'fixed care costs' version, the personal care component in care homes stays constant in real terms. In the Scotland version of free personal care, the personal care allowance of £145 is kept constant in nominal terms, and therefore falls in real terms.

It is assumed under each of these versions of free personal care, that people in care homes would not be eligible to receive Attendance Allowance or the severe disability premium since

[9] Income Support has now been replaced by Pension Credit.
[10] The residential allowance which used to be paid with Income Support no longer exists. We have therefore used the most recent value for the residential allowance uprated to April 2002 prices by the RPI.

these are not currently paid where the resident of a care home receives state help with personal or hotel costs and under free personal care all residents would receive help with their personal care costs.

Non-residential care

Under free personal care all home care which is personal care is assumed to be free of charge. Help with domestic tasks would continue to be subject to means-tested charges. Under each level of home care, a proportion of users are randomly assigned to receiving exclusively personal care and the rest to receipt of only help with domestic tasks. The proportions are 50 per cent (low level of care), 60 per cent (medium level) and 85 per cent (high level of care) and are based on the GHS analysis described in Appendix Two.

The apportionment of user contributions to care charges

Assumptions underlying the apportionment of user charges to each of the last three of these sources are set out in the box below.

Appendix Three Box 1
Assumptions underlying the apportionment of user contributions to care charges among different sources of income and capital

Any apportionment of user contributions to individual sources of income or capital is essentially arbitrary. However, some assumptions need to be made to analyse the impact of the means-test (for example, whether all income is used before drawing on capital) and others are useful to gauge the contribution of income sources such as disability-related social security benefits to care costs.

The assumptions made are:

- all income above the personal expenses allowance in residential care and disregarded income in home care is put towards the user's assessed charge before drawing on capital
- income sources are used towards care charges in the following order:
  - Attendance Allowance/Disability Living Allowance (excluding any disregard for disability-related expenditure)
  - Pension Credit
  - other income

Assigning lengths of stay in care homes

Each older person is randomly assigned to one of ten possible uncompleted lengths of stay in a care home. The ten possibilities correspond to estimates of the average lengths of stay within each decile of the distributions of stay lengths in residential or nursing homes. The derivation of the estimates, which use a PSSRU survey of residential care (Netten et al., 1998, table 2.2), is described in Wittenberg et al. (2002).

Appendix Four

Tables Showing Apportionment of Care Homes Fees Among Hotel Costs, Personal Care Costs and Nursing Costs Under Three Different Versions of Free Personal Care, £ Per Week, 2002, 2022, 2051

Appendix Four Table 1: Apportionment of care homes fees among hotel costs, personal care costs and nursing costs under three different versions of free personal care, £ per week, 2002

	'Fixed hotel costs' version of free personal care		**'Scotland' version of free personal care**		**'Fixed care costs' version of free personal care**	
	Residential care home	Nursing home	Residential care home	Nursing home	Residential care home	Nursing home
Total fee	328.00	453.00	328.00	453.00	328.00	453.00
Accommodation + living costs	152.05	152.05	183.00	224.40	152.05	193.45
NHS contribution to nursing care costs	0.00	83.60	0.00	83.60	0.00	83.60
Personal care costs	175.95	217.35	145.00	145.00	175.95	175.95

Note: The total fee shown is the fee charged to Local Authority-supported residents in independent care homes.

Appendix Four Table 2: Apportionment of care homes fees among hotel costs, personal care costs and nursing costs under three different versions of free personal care, £ per week, 2022

	'Fixed hotel costs' version of free personal care		**'Scotland' version of free personal care**		**'Fixed care costs' version of free personal care**	
	Residential care home	Nursing home	Residential care home	Nursing home	Residential care home	Nursing home
Total fee	458.23	643.98	458.23	643.98	458.23	643.98
Accommodation + living costs	202.78	202.78	375.16	436.68	282.28	343.80
NHS contribution to nursing care costs	0.00	124.23	0.00	124.23	0.00	124.23
Personal care costs	255.45	316.97	83.07	83.07	175.95	175.95

Note: The total fee shown is the fee charged to Local Authority-supported residents in independent care homes.

Appendix Four Table 3: Apportionment of care homes fees among hotel costs, personal care costs and nursing costs under three different versions of free personal care, £ per week, 2051

	'Fixed hotel costs' version of free personal care		**'Scotland' version of free personal care**		**'Fixed care costs' version of free personal care**	
	Residential care home	Nursing home	Residential care home	Nursing home	Residential care home	Nursing home
Total fee	767.20	1097.05	767.20	1097.05	767.20	1097.05
Accommodation + living costs	307.85	307.85	725.26	834.51	591.25	700.50
NHS contribution to nursing care costs	0.00	220.60	0.00	220.60	0.00	220.60
Personal care costs	459.35	568.60	41.94	41.94	175.95	175.95

Note: The total fee shown is the fee charged to Local Authority-supported residents in independent care homes.

Appendix Five

Projections of Owner-Occupation Rates Among Older People, UK, 2002-2022[11]

Projections of owner-occupation, utilised in the modelling, derive from the CARESIM model. The projections are shown in a series of three tables in this appendix. Table V.1 shows projected owner-occupation rates by gender and age-group between 2002 and 2022. It also shows mean estimated house prices for owner-occupiers by gender and age-group. Tables V.2 and V.3 show projected owner-occupier rates by gender and age-group for single and married/cohabiting people respectively.

In interpreting the results of the projections shown in the tables, the following points should be noted:

- The projections assume no change in tenure during the remainder of people's lives. The change in proportions who are owner-occupiers is therefore the result of younger cohorts becoming older and older ones dying off.
- Deaths are predicted on the basis of age and gender alone – there is no allowance for lower mortality among owner-occupiers. The projections are therefore likely to underestimate the increase in owner-occupation rates among older people.
- The starting population is the population of people aged 65+ living in private households. There is no allowance for entry to residential care from this population. Since owner-occupiers are less likely than tenants to enter residential care, the projections of owner-occupation rates for future years probably underestimate rates for the private household population.
- The unit of analysis is the individual. Thus the rates are the proportion of men or women of the specified age who own their homes. In the case of couples, each is counted as an owner-occupier.

[11] A supporting paper, entitled *Projections of Owner Occupation Rates, House Values, Income and Financial Assets among People Aged 85 and Over, UK, 2002-202*2 by Hancock and colleagues (2006) is also available as a Discussion Paper on the PSSRU website.

- The projections are disaggregated by age and gender and by whether living with partner or not. CARESIM predicts changes from living with partner to not living with partner as the result of the death of one partner. It does not simulate people leaving or joining an older person's household or an older person moving in with others. For this reason it does not seem valid to produce owner-occupation rates for a more detailed categorisation of household type.

In general, owner-occupation rates decrease with age and tend to be lower for women than for men (Table V.1). Owner-occupation rates are lower for single older people than for those living with spouses or partners (Tables V.2 and V.3). Owner-occupation rates are generally projected to increase over the next twenty years or so. Table V.1 shows an increase in owner-occupation rates among people aged 85 and over from 59 per cent in 2002 to 73 per cent in 2022. Owner-occupation rates for people aged 85 and over with spouses/partners are projected to rise from 70 per cent in 2002 to 83 per cent in 2022 (Table V.3).

Appendix Five Table 1: Projected owner-occupation rates of older people by gender and age-group, and mean estimated 2002 house prices for owner-occupiers, UK, 2002-2022

	Projected owner-occupation rates, 2002-2022					Mean estimated 2002 house prices for owner-occupiers
	2002 %	2007 %	2012 %	2017 %	2022 %	£
Men						
65-69	77					171000
70-74	75	77				163000
75-79	70	75	78			154000
80-84	67	70	75	78		161000
85-89	65	66	70	75	77	144000
85+	66	66	69	73	76	149000
90+	67	67	67	70	74	166000
65+						163000
Women						
65-69	76					166000
70-74	68	74				151000
75-79	65	67	74			143000
80-84	60	65	67	74		141000
85-89	57	60	66	67	74	135000
85+	56	59	63	66	71	135000
90+	51	58	58	65	67	138000
65+						153000
Men and women combined						
65-69	77					168000
70-74	71	76				157000
75-79	67	70	76			148000
80-84	62	67	71	76		149000

85-89	60	62	67	70	75	138000
85+	59	62	65	69	73	141000
90+	56	61	61	67	70	148000
65+						157000

Source: CARESIM; [1] prices shown to nearest £1,000.

Appendix Five Table 2: Projected owner-occupation rates of single[1] older people by gender and age-group, UK, 2002-2022

	2002 %	2007 %	2012 %	2017 %	2022 %
Single men, living alone or with others					
65-69	54				
70-74	59	54			
75-79	57	58	54		
80-84	57	56	58	53	
85-89	59	52	58	55	51
85+	61	57	57	56	53
90+	65	66	55	58	55
Single women, living alone or with others					
65-69	62				
70-74	59	64			
75-79	59	61	66		
80-84	56	61	62	67	
85-89	55	57	62	62	69
85+	54	57	60	62	67
90+	51	57	57	62	63
Single men and women combined					
65-69	59				
70-74	59	61			
75-79	59	60	63		
80-84	56	60	61	64	
85-89	56	56	62	61	66
85+	56	57	60	61	64
90+	54	59	56	62	62

Source: CARESIM.
[1] Single older people include widowed, divorced, separated and never married.

Appendix Five Table 3: Projected owner-occupation rates of married/cohabiting older people by gender and age-group, UK, 2002-2022

	2002 %	2007 %	2012 %	2017 %	2022 %
Men with partners					
65-69	83				
70-74	80	83			
75-79	75	80	84		
80-84	73	75	80	84	
85-89	70	75	75	81	83
85+	71	73	75	80	83
90+	69	69	75	76	81
Women with partners					
65-69	83				
70-74	78	82			
75-79	75	77	83		
80-84	74	76	77	84	
85-89	71	76	77	79	84
85+	69	74	76	78	83
90+	59	67	71	76	82
Men and women with partners					
65-69	83				
70-74	79	83			
75-79	75	78	84		
80-84	74	76	79	84	
85-89	71	75	76	81	84
85+	70	74	75	79	83
90+	66	69	74	76	81

Source: CARESIM.