

Projections of Demand for Social Care and Disability Benefits for Younger Adults in England

Report of Research Conducted for the Commission on Funding of Care and Support

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Introduction

This paper presents projections of demand for social care and disability benefits for younger adults (aged 18 to 64) in England to 2030 and associated future expenditure under current and alternative funding scenarios. The research was requested by the Commission on Funding of Care and support and its findings used to inform the July 2011 report *Fairer Care Funding* (Dilnot et al, 2011).

The disability and expenditure projections were produced using an adapted version of an aggregate projections model for younger adults developed by the Personal Social Services Research Unit (PSSRU) described in "Future demand for social care, 2005 to 2041: Projections of demand for social care and disability benefits for younger adults in England" (Wittenberg et al, 2008).

The model produces projections of:

- numbers of disabled younger adults, by broad client group;
- numbers of assessments of younger adults;
- numbers of younger disabled adults receiving informal care support;
- numbers of users of residential and community-based social services;
- numbers of recipients of Disability Living Allowance (DLA) care component;
- numbers of recipients of Independent Living Fund (ILF) payments;
- public expenditure on social services for younger adults, gross and net of income from user charges, and on DLA care component and ILF;
- numbers of staff providing social care for younger adults.

The client group breakdown is:

- people with learning disabilities;
- people with physical or sensory impairments;
- other groups (such as people with mental health problems) combined.

The detailed analyses focus on the first two of these groups, which account for around 75% of net expenditure on younger adult social services (Information Centre, 2010), but the expenditure projections cover all younger adult groups.

The first part of the paper describes the various data used in the modelling. The second part presents a set of base case assumptions. The third part presents the projections obtained using those assumptions. The fourth part investigates the sensitivity of the projections to changes in those assumptions. A final section sets out some conclusions.

Data Sources

The model uses a range of data sources since no one data set could meet all the needs of the project. Most of these are described in detail in the earlier report "Future demand for social care, 2005 to 2041: Projections of demand for social care and disability benefits for younger adults in England" (Wittenberg et al, 2008). Updated estimates of the prevalence of learning disabilities, based on new evidence provided by Eric Emerson and colleagues at the Centre for Disability Research (CeDR) described below, have been incorporated into the model. Base levels of expenditure have been updated in line with 2008/9 PSS EX1 data, and GDP levels have been revised according to March 2011 Office for Budgetary Responsibility (OBR) projections. A description of key data sources is provided in Appendix 1 attached to this paper.

Data on the base prevalence of learning disability and on the socio-economic characteristics, severity of disability, use of services and receipt of benefits for young adults with learning difficulties were obtained from the survey "Adults with Learning Difficulties in England 2003/4" (Emerson et al., 2005). It should be noted that fewer adults with learning difficulties living in private households were identified in the survey than had been expected. The researchers felt that the wording of the questions asked in the survey to identify people with learning disabilities probably resulted in an underestimate of the numbers with *mild* learning disabilities. The prevalence of learning disability drawn from this survey and used for modelling purposes is, therefore, likely to mainly represent adults with *severe* learning disabilities who comprise the majority of service users.

Estimates of the future rates of increase in the prevalence of learning disability were derived from the November 2008 report "Estimating Future Need for Adult Social Care

Services for People with Learning Disabilities in England" (Emerson and Hatton, 2008). The report provided upper, middle and lower estimates of the number of adults of all ages in need of social services between 2009 and 2026, on three different assumptions about eligibility to services. Rates of increase in prevalence that were consistent with the three levels under the two most restricted definitions of eligibility (Tables 4 and 5 in Emerson and Hatton 2008) were incorporated into the model – six alternative scenarios in total. Since the projections provided by Emerson and Hatton 2008 did not go beyond 2026, subsequent levels were extrapolated from the final years of the projections. As age- and gender-specific projections were not available from this publication, we assumed an equal rate of increase among age and gender groups. Using the base level of 212,000 younger people with learning disabilities assumed in the aggregate model in 2008 (the 2010 projection being 222,000 younger people), we created three new scenarios with prevalence increases consistent with the proportional increase suggested by Emerson and Hatton's new projections.

Base case assumptions and projections

The PSSRU model produces projections on the basis of specific assumptions about future trends in the key drivers of demand for long-term care. The main assumptions used in the base case are summarised in box 1 below. The base case projections take account of expected changes in factors exogenous to long-term care policy, such as demographic trends. They hold constant factors endogenous to long-term care policy, such as patterns of care and the funding system. The 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 base case of the PSSRU model

- The number of younger adults by age and gender changes in line with the Office for National Statistics (ONS) 2008-based population projections (GAD, 2009).
- Marital status rates for physically disabled younger adults change in line with ONS 2008based marital status and cohabitation projections (ONS, 2010), while those for learning disabled people remain constant.
- There is a constant ratio of single people living alone to single people living with others.
- Prevalence rates of learning disability by age and gender change in line with the 'middle' projections of the future need for social care services among adults with learning disabilities by Emerson and Hatton (2008; Table 4) and the prevalence rates of physical disability by age and gender remain unchanged as reported in the 1996/7 FRS.
- The proportions of younger adults receiving informal care, formal community care services, residential care services and disability benefits remain constant for each sub-group by age,

gender, client group, disability and other needs-related characteristics.

- The real unit costs of social services and of ILF payments remain unchanged to 2015 and rise by 2% per year in real terms thereafter¹². DLA rates remain constant in real terms.
- Real Gross Domestic Product rises in line with Office for Budget Responsibility assumptions (OBR, 2011).
- 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.

According to ONS 2008-based principal population projections for England, the number of people aged 18 to 64 will rise by 6.1% between 2010 and 2030, from 32.6 million in 2010 to 34.6 million in 2030.

Under the base case assumptions, the number of learning disabled younger people defined using Emerson's definition of learning disability from his 2005 Emerson study would rise by 32.2% between 2010 and 2030, from around 220,000 in 2010 to around 290,000 in 2030 (see Table 1). This projected increase is clearly higher than the rate of change in the size of the overall population, and is derived from a central estimate of the change in the number of adults eligible for care services based on individuals with critical and substantial levels of need only (Emerson 2008). The projected increase takes into account changes in mortality within the disabled population and the characteristics of new entrants into adult services transitioning from children's services.

The number of physically and sensorily impaired younger people would rise under base case assumptions by 7.5% between 2010 and 2030, from almost 2,900,000 to 3,100,000. This is on the basis of unchanged prevalence rates by age and gender.

Projections have not been produced for numbers of younger adults with mental health problems or other conditions. Numbers of service recipients and associated expenditure accounted for by this group are projected to increase in line with changes in the overall population.Some of those with learning or physical disabilities may also have mental health problems

The numbers of learning or physically disabled younger adults in households receiving informal care are projected to increase by 10.8%, from approximately 1,010,000 in 2010 to around 1,110,000 in 2030 (see Table 1). This is on the basis that the probability of

¹ Non-labour non-capital costs are assumed to remain constant in real terms.

² The results published by the Commission on Funding of Care and Support (Dilnot et al, 2011) assume a real rise of 1.5% in unit costs during the period 2010 to 2015.

receipt of informal care remains constant by age, gender, household composition and severity of disability.

	2010	2015	2020	2025	2030	% increase 2010-2030	
Projected numbers of younger adults with disabilities							
Adults with a (severe) learning disability	220,000	240,000	260,000	280,000	290,000	32.2%	
Adults with a physical or sensory impairment	2,890,000	2,930,000	3,030,000	3,110,000	3,110,000	7.5%	
Adults with mental health needs / other (service users only)	210,000	210,000	220,000	220,000	220,000	7.3%	
Projected numbers of recipients	s of care and	benefits					
Adults receiving informal care	1,010,000	1,020,000	1,070,000	1,110,000	1,110,000	10.8%	
Adults receiving assessments	575,000	590,000	615,000	635,000	645,000	11.8%	
Adults receiving home care	85,000	88,000	93,000	97,000	99,000	17.7%	
Adults receiving day care	88,000	94,000	99,000	104,000	108,000	22.4%	
Adults receiving local authority funded residential and nursing care	59,000	63,000	67,000	72,000	74,000	25.1%	
Adults receiving DLA (care)	1,295,000	1,320,000	1,370,000	1,415,000	1,425,000	10.0%	
Projected size of social care wo	rkforce						
Social care staff caring for disabled younger adults	325,000	345,000	365,000	390,000	400,000	24.7%	
Projected levels of expenditure							
Total gross (of user charges) expenditure on social care services (£billion)	£7.2	£7.7	£9.0	£10.4	£11.9	64.0%	
(% GDP)	0.57%	0.53%	0.56%	0.59%	0.61%		
Total net (of user charges) expenditure on social care services (£billion)	£6.8	£7.2	£8.5	£9.9	£11.3	66.6%	
(% GDP)	0.54%	0.50%	0.53%	0.56%	0.58%		
Total net expenditure on social care services and benefits (DLA care and ILF) (£billion)	£9.9	£10.4	£11.8	£13.4	£14.9	50.3%	
(% GDP)	0.78%	0.72%	0.74%	0.76%	0.77%		

Table 1: Key results of the base case of the PSSRU model

The numbers of assessments of younger adults (all client groups) are projected to rise by 11.8%, from 575,000 in 2010 to 645,000 in 2030 (see Table 1). This is on the basis that the numbers of assessments rise in line with the projected numbers of disabled people (or service users in the case of mental health and other conditions).

The numbers of users of local authority home care services (all client groups) would need to rise by 17.7%, from 85,000 in 2010 to 99,000, in 2030 to keep pace with demographic pressures; and the numbers of users of day care services by 22.4%, from 88,000 in 2010 to 108,000 in 2030 (see Table 1). The number of younger adults in local authority funded residential and nursing care would need to rise by 25.1%, from 59,000 in 2010 to 74,000 in 2030.

In order to keep pace with demographic pressures, the numbers of recipients of DLA care (all groups including those without disability under the OPCS definition) would need to rise by 10.0%, from 1,295,000 in 2010 to 1,425,000, in 2030 (see Table 1). This is on the basis that take-up remains constant by age, gender, household composition and type and severity of disability, and is not directly comparable with DWP projections that assume rising take-up.

The number of social care staff caring for disabled younger adults is projected to rise from just under 325,000 (headcount) in 2010 to over 400,000 (headcount) in 2030, an increase of 24.7% (see Table 1).

Gross public expenditure on social care (including assessments and care management, DLA and ILF) is projected to rise by 64.0%, from £7.2 billion in 2010 to £11.9 billion in 2030 in constant 2010 prices (see Table 1). In addition to the increased level of demand for care by 2030, much of this increase is attributable to rising costs associated with care – sensitivity to unit cost assumptions is covered later in this paper. Assessments and care management account for approximately £0.9bn of this figure in 2010, and £1.4bn in 2030.

Net public expenditure on social care (net of user contributions) is projected to rise by 66.6%, from £6.8 billion in 2010 to £11.3 billion in 2030. This is on the basis that the real unit costs of care rise by 2% per year from 2015 onwards but that user contributions remain constant in real terms. If Gross Domestic Product rose in line with March 2011 Office for Budget Responsibility assumptions, net public expenditure on social services for younger adults would grow from 0.54% of GDP in 2010 to 0.58% in 2030.

Expenditure on DLA care is projected to rise by 10.1%, from £2.8 billion in 2010 to £3.1 billion in 2030. This is on the basis that weekly DLA care payments remain constant in real terms. Net public expenditure on social care and benefits (DLA care and ILF) is projected to rise by 50.3%, from £9.9 billion in 2010 to £14.9 billion in 2030, at constant prices.

Impact of changes in model assumptions

The analysis has explored the impact on the projections of changes in assumptions about four key factors:

- overall numbers of people aged 18 to 64
- prevalence of disability
- unit costs of services
- funding scenarios

We have in this way investigated the sensitivity of our findings to some of the important assumptions made in the base case. We have not investigated all the assumptions: in particular we have not examined the impact of potential changes in the supply of informal care or changes in expectations about quality of care.

Changes in life expectancy assumptions

The Commission asked us to examine the impact of using the official ONS high and low life expectancy variant population projections. These yield increases in the overall adult population of 6.2% and 5.9% between 2010 and 2030 respectively compared to a base rate increase of 6.1%. In terms of total gross expenditure on care for all user groups, this translates as an increase of 64.3% in the high life expectancy scenario and 63.7% in the low life expectancy scenario, compared to a 64.0% increase in total gross expenditure under the base scenario (see Table 2).

Table 2: Projected expenditure on long-term care in England in 2010 and in 2030 under
alternative assumptions about future life expectancy, in £bn at 2010 prices

	2010	2030			
	2010	Base case	High LE	Low LE	
Total gross expenditure on social care services (£billion)	£7.2	£11.9	£11.9	£11.8	
(% GDP)	0.57%	0.61%	0.61%	0.61%	
Total net expenditure on social care services (£billion)	£6.8	£11.3	£11.4	£11.3	
(% GDP)	0.54%	0.58%	0.59%	0.58%	
Total net expenditure on social care services and benefits (DLA care and ILF) (£billion)	£9.9	£14.9	£14.9	£14.9	
(% GDP)	0.78%	0.77%	0.77%	0.77%	

Changes in assumptions about prevalence of disability

The Commission asked us to explore two alternative physical disability prevalence scenarios, which assume decreases and increases of 1% per year (not percentage points) in the age and gender specific prevalence rates of physical disability. These were felt to reflect the likely range of plausible changes in the prevalence rates of physical disability.

A reduction of 1% per year in the prevalence rates of physical disability translates by 2030 into a reduction of approximately 620,000 in the number of young adults with physical disabilities compared to the base case estimate, whereas an increase of 1% per year in the prevalence of physical disabilities yields an increase of approximately 760,000 disabled people.

In terms of expenditure, this translates to an increase in total gross expenditure of 70.9% between 2010 and 2030 in the high prevalence scenario and 58.5% in the low prevalence scenario compared to a 64.0% increase in the base scenario (see Table 3).

		2030		
	2010	Base case	High increase (+1% p.a.)	Low increase (-1% p.a.)
Total gross expenditure on social care services (£billion)	£7.2	£11.9	£12.4	£11.4
(% GDP)	0.57%	0.61%	0.64%	0.59%
Total net expenditure on social care services (£billion)	£6.8	£11.3	£11.9	£10.9
(% GDP)	0.54%	0.58%	0.61%	0.56%
Total net expenditure on social care services and benefits (DLA care and ILF) (£billion)	£9.9	£14.9	£15.7	£14.3
(% GDP)	0.78%	0.77%	0.81%	0.74%

Table 3: Projected expenditure on long-term care in England in 2010 and in 2030 under alternative assumptions about future changes in the prevalence of physical disability, in £bn at 2010 prices

The Commission also asked us to examine the impact of using Emerson and Hatton's (2008) variant projections of numbers of adults with severe learning disabilities needing care. Applying the upper and lower rates of increase in the number of adults with learning disabilities consistent with Table 4 of Emerson and Hatton (2008) results in an increase in the number of young adults with learning disabilities of 64,000 or a decreased number of 34,000 in 2030 relative to the base 2030 estimate.

This equates to an increase in total gross expenditure between 2010 and 2030 of 83.2% in the high increase scenario and 53.6% in the low increase scenario, compared with a base scenario of 60.4% (see Table 4).

Table 4: Projected expenditure on long-term care in England in 2030 under alternative assumptions about future changes in the number of adults with a learning disability needing care, in £bn at 2010 prices

		2030			
	2010	Base case	High increase	Low increase	
Total gross expenditure on social care services (£billion)	£7.2	£11.9	£13.5	£11.0	
(% GDP)	0.57%	0.61%	0.69%	0.57%	
Total net expenditure on social care services (£billion)	£6.8	£11.3	£12.9	£10.5	
(% GDP)	0.54%	0.58%	0.66%	0.54%	
Total net expenditure on social care services and benefits (DLA care and ILF) (£billion)	£9.9	£14.9	£16.6	£14.0	
(% GDP)	0.78%	0.77%	0.85%	0.72%	

Changes in assumptions about future unit costs

There is inevitable uncertainty about future rises in the real unit costs of care, such as the cost of an hour's home care. The most important factor is future rises in the wages of care staff. Two percentage points real growth per year may seem high although it is the official projection for growth in productivity and real earnings over the long-term.

The analysis explored the impact on projected levels of expenditure of assuming 1.0%, 1.5%, 2.5% and 3.0% real annual increases in the unit cost of services from 2015 onwards (the base case assumes a 2.0% increase)³. In keeping with the base case assumption, all scenarios assume an average 0% increase in unit costs up to 2015. Rates of DLA and income from charges continue to be held constant in real terms.

Increasing the rate of growth of unit costs in the model to 3% yields an increase in total net public spending on all services and benefits of approximately £1.9bn compared to the 2030 base case level, the latter assuming a 2% rate of growth. Reducing the rate to 1% sees a reduction of £1.6bn compared to base case levels (see Table 5).

³ Since the model does not incorporate demand effects, changes in the unit cost of services do not affect quantities other than expenditure.

Table 5: Projected expenditure on long-term care in England in 2030 under alternative assumptions about future rates of increase in unit costs after 2015, in £bn at 2010 prices

	2030				
	1%	1.5%	2% (base)	2.5%	3%
Total gross expenditure on social care services (£billion)	£10.3	£11.0	£11.9	£12.7	£13.7
(% GDP)	0.53%	0.57%	0.61%	0.66%	0.70%
Total net expenditure on social care services (£billion)	£9.7	£10.5	£11.3	£12.2	£13.2
(% GDP)	0.50%	0.54%	0.58%	0.63%	0.68%
Total net expenditure on social care services and benefits (DLA care and ILF) (£billion)	£13.3	£14.1	£14.9	£15.8	£16.8
(% GDP)	0.68%	0.72%	0.77%	0.82%	0.87%

Impact of changes in funding system

The report published by the Commission on Funding of Care and Support (Dilnot et al, 2011) considered a range of funding options and proposed the introduction of a tiered cap on social care, starting at a zero cap for eligible adults aged below 40 and rising by £10,000 per decade of age to £35,000 for those aged 65 and above⁴.

Data necessary to model a cap which rises with age in this way are not available. We have instead modelled a zero cap for all younger adult age groups, which is equivalent to a free care funding system. This over-estimates the costs of the Commission's recommendations. Since however many younger disabled people receive services for many years, so reaching a cap of £10,000 or £20,000 early in their total duration of care receipt, the over-estimation is probably not substantial.

We therefore prepared projections of demand and expenditure based on two alternative funding systems: the current funding system, whereby eligibility for state care is based on a means test, and a *free care* funding system, whereby all eligible care costs are covered by the state but accommodation costs in care homes would continue to be means-tested and paid by residents up to a maximum charge of £10,000.

In the community, it is assumed that the shift to a free care system would have no significant effect on the demand for and cost of care services among young adults with

⁴ A cap of £10,000 would apply to eligible adults aged 40; £20,000 to those aged 50; and £30,000 to those aged 60.

learning disabilities, since most already meet the financial eligibility criteria implied by the current means-testing rules. Levels of employment and associated wage rates are generally low (Emerson, 2005), constraining the ability to save above the current means-testing threshold.

By contrast, it is probable that a free care system would trigger an increase in the demand for community-based services among adults aged 18 to 64 with physical disabilities. A non-trivial proportion will have assets which currently exclude them from state-funded care, in particular among older working age adults with late-onset physical disabilities who will have had significant opportunities to accumulate wealth during their disability-free years.

Analysis of data from the English Longitudinal Study of Ageing (ELSA) (Marmot et al 2010) and the 1996/7 Family Resources Survey (FRS) disability follow-up (Department of Social Security 2000) suggests that approximately one quarter of adults aged 50-64 with a physical disability reporting at least 2 problems with Activities of Daily Living (ADLs) have non-housing assets over the current means-testing threshold. The analysis explored the impact of two alternative assumptions about the impact on demand: a high demand effect (whereby take-up among newly-eligible disabled adults would be equal to take-up rates among currently eligible service users – most likely an over-estimate given the high level of informal care receipt within this group) and a more modest demand effect (assuming that new take-up would be limited to those currently in receipt of privately-funded care).

Due to the heterogeneity in the characteristics of the different user groups, it is difficult to estimate the demand effects for the third user group defined in the aggregate model, i.e. people with mental health problems and people with other disabilities. However, in the absence of any reliable data relating specifically to these client groups, it is assumed that patterns would follow those of the group with physical disabilities.

Paying all eligible care costs associated with residential care would present an additional cost to the state under a free care system. This additional cost is likely to be low, however: while the exact number of self-funders is not known, the accommodation costs of residential care is likely to exceed the disposable income of the vast majority of young disabled people living in a residential care setting, and therefore would not translate into a rise in user contributions. Equally, it is unlikely that any significant number would have an assessable income high enough for the £10,000 accommodation cost threshold to come into effect. The modelling has assumed no significant increase in residential care costs among younger adults.

Were a free care system to be in place in 2010, our projections suggest that total net expenditure on care services would be £7.3bn in the high demand scenario and £7.0bn in the low demand scenario compared to £6.8bn under the current means-tested system (see Table 6). In 2030, total net expenditure is projected to be £12.1bn in the

high demand scenario and £11.6bn in the low demand scenarios (see Table 7) – an increase of £0.8bn (6.7%) and £0.3bn (2.4%) respectively compared to the current system.

	2010		
	Current funding system	Free care (high estimate)	Free care (low estimate)
Total gross expenditure on social care services (£billion)	£7.2	£7.7	£7.3
(% GDP)	0.57%	0.60%	0.58%
Total net expenditure on social care services (£billion)	£6.8	£7.3	£7.0
(% GDP)	0.54%	0.58%	0.55%
Total net expenditure on social care services and benefits (DLA care and ILF) (£billion)	£9.9	£10.5	£10.1
(% GDP)	0.78%	0.83%	0.80%

Table 6: Projected expenditure on long-term care in England in 2010 under alternativefunding systems, in £bn at 2010 prices

Table 7: Projected expenditure on long-term care in England in 2030 under alternative funding systems, in £bn at 2010 prices

	2030			
	Current	Free care	Free care	
	funding	(high	(low	
	system	estimate)	estimate)	
Total gross expenditure on social care services (£billion)	£11.9	£12.5	£12.0	
(% GDP)	0.61%	0.64%	0.62%	
Total net expenditure on social care services (£billion)	£11.3	£12.1	£11.6	
(% GDP)	0.58%	0.62%	0.60%	
Total net expenditure on social care services and benefits (DLA care and ILF) (£billion)	£14.9	£15.7	£15.2	
(% GDP)	0.77%	0.81%	0.78%	

Conclusions

The model produces projections of future public expenditure on care and disability benefits for younger adults based on a specified set of base case assumptions. This set of assumptions seems plausible but is clearly not the only possible set. As the sensitivity analysis demonstrates, the projections are sensitive to changes in those assumptions. This means that the projections should not be regarded as forecasts of the future.

The sensitivity analysis shows that projected future demand for social services and disability benefits for younger adults is sensitive to assumptions about future numbers of younger adults and about future prevalence rates of disability. Projected future public expenditure on care and disability benefits is also sensitive to assumptions about future rises in the real unit costs of services, such as the cost of an hour's home care.

Transition to a free or capped care system would present an increase in expenditure due to increases in the level of demand for care and reductions in user charges. In practical terms, however, the impact of such changes is expected to be relatively limited as it is likely that a high proportion of disabled younger adults service users are already eligible for free care under the current funding system.

These expenditure projections do not constitute the total costs to society of long-term care for younger adults. That would require inclusion of the costs of a wider range of services to a wider range of public agencies and service users and the opportunity costs of informal care. It should also be stressed that no allowance has been made here for changes in public expectations about the quality, range or level of care.

References

Department of Social Security (2000) Social Research Branch, *Disability Follow-up to the 1996/97 Family Resources Survey* [computer file]. UK Data Archive [distributor], Essex.

Dilnot A, Warner N and Williams J (2011) *Fairer Care Funding: the Report of the Commission on Funding of Care and Support.* Commission on Funding of Care and Support. London.

Emerson E (2005) Adults With Learning Difficulties in England 2003/4.

Emerson E, Mallam S, Davies I and Spencer K (2005) *Adults with Learning Difficulties in England 2003/4*. Office for National Statistics and NHS Health and Social Care Information Centre.

Emerson E and Hatton C (2008). *Estimating Future Need for Adult Social Care Services for People with Learning Disabilities in England*. Centre for Disability Research (CeDR), Lancaster University

Emerson E and Hatton C (2004) *Estimating Future Need/Demand for Support for Adults* with Learning Disabilities in England. Institute for Health Research, Lancaster University.

Government Actuary's Department (2009) *National population projections: 2008-based*. Available from <u>www.gad.gov.uk</u>.

Marmot M et al (2010) *English Longitudinal Study of Ageing: Wave 0 (1998, 1999 and 2001) and Waves 1-4 (2002-2009)* [computer file]. *13th Edition.* UK Data Archive [distributor], Essex.

OBR (Office for Budget Responsibility) (2011) Economic and Fiscal Outlook: March 2011. Cm 8036. The Stationery Office, London.

ONS (Office for National Statistics) (2010) 2008-based marital status and cohabitation projections for England and Wales.

The Information Centre (2010) *Personal Social Services Expenditure and Unit Costs, England, 2008-09.* The Information Centre for Health & Social, available at www.ic.nhs.uk

Wittenberg R, Comas-Herrera A, King D, Malley, J, Pickard L and Darton R (2006) *Future Demand for Long-Term Care, 2002 to 2041: Projections of Demand for Long-Term Care for Older People in England,* PSSRU Discussion Paper 2330, March 2006

Wittenberg R, Malley J, Comas-Herrera A, Fernandez J-L, King D, Snell T and Pickard L (2008) *Future Demand for Social Care, 2005 to 2041: Projections of Demand for Social Care and Disability Benefits For Younger People in England,* PSSRU Discussion Paper 2512, March 2008.

Appendix 1: Key data sources

Office for National Statistics 2008-based mid-year population estimates for England by age and gender, 2008-based population projections by age and gender, and 2008-based marital status and cohabitation projections are central to the first part of the model.

Census 2001 data are used on the overall numbers of younger adults in communal establishments, by age, gender and marital status.

Findings from **"Adults with Learning Difficulties in England 2003/4"** (Emerson et al., 2005) are used to derive data on the prevalence of learning disability and on the socioeconomic characteristics, severity of disability, use of services and receipt of benefits for young adults with learning difficulties.

"Estimating Future Need for Adult Social Care Services for People with Learning Disabilities in England" (Emerson and Hatton, 2008) provides the basis of the model's assumptions about future changes in the prevalence of learning disability.

Family Resource Survey (FRS) data for 1996/7, including in particular data from the Disability Follow-up survey, is used to derive an estimate of the base prevalence of physical disability among 18 to 64s in England, as well as to break down the young disabled population by age, gender marital status, living arrangements and level of disability. The 1996/7 follow up survey covered the following topics: prevalence, severity and types of disability; socio-demographic characteristics; economic activity; financial circumstances; use of social and health services; needs for assistance; and social participation. Data from the survey are also used to estimate the likelihood of receipt of benefits and of formal and informal care in the community.

Tribal Secta 2005 data, which were provided by the Department of Health, have been used on the age and gender distribution of recipients of residential and community-based services (other than for people with learning disability). These data were collected as part of a study funded by DH to review the resource allocation formula used to distribute social care resources for younger adult groups equitably between local authorities in England.

Health and Social Care Information Centre data were used to derive Supported Residents (SR1) data on the numbers of supported residents in care homes on 31 March 2009; Referrals, Assessments and Packages (RAP) data on the number of assessments during 2008/9 and of users of community-based services on 31 March 2009; PSS expenditure (EX1) data on the unit costs of services, the average intensity of community-based services and gross and net expenditure on services in 2008/9.

Data collected by PSSRU at Kent as part of the **user experience survey** for younger adults with physical and sensory impairments receiving services to support them to live

in their own homes, have been used to investigate the age and gender distribution of recipients of community-based services for a wider range of services than those covered in the Tribal Secta dataset. These data have only been used for those with physical and sensory impairments.

Department for Work and Pensions (DWP) data on the numbers of recipients of Disability Living allowance (DLA) care component by age, gender and condition in November 2008.

Independent Living Fund (ILF) data on numbers of recipients by age and gender and on expenditure in 2008/9.

Estimates from Eborall (2005) of the numbers of staff in social care in the independent sector in 2004 (these are the most recent figures publicly available).

2011 Office for Budgetary Responsibility (OBR) projections provided estimates of GDP levels for the projection years.