

Pension Trends

Chapter 3: Life expectancy and healthy ageing

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*Type of information

NS	Information classed as National Statistics
Non-NS	Information not classed as National Statistics
Mixed	Mixture of NS and non-NS information

Life expectancy and healthy ageing

- In recent years, Parliament has passed legislation raising the State Pension Age (SPA). Women's SPA began to rise in April 2010. Under current legislation, it will rise from 60 to 65 by 2020, when SPA will be the same for men and women. Then SPA for both sexes will rise to 68 by 2046.
- Cohort life expectancy at SPA will decline for women over the next decade. Between 2021 and 2051 it is expected to level off for both sexes as planned increases in SPA match projected increases in life expectancy. Cohort life expectancy at SPA between 2021 and 2051 is projected to be around 25 years for women and under 23 years for men (Figure 3.1).
- A related question is whether longer life expectancy is associated with longer healthy life expectancy in old age, allowing people to enjoy their retirement in good health. In 2006, UK men at age 65 had 17.2 years of period life expectancy and 12.9 years of healthy life expectancy, compared with 19.9 years and 14.5 years respectively for UK women (Figure 3.2).
- Increases in healthy life expectancy at age 65 between 1981 and 2006 were smaller than increases in period life expectancy (Figure 3.3).
- There are inequalities in period life expectancy estimates between social class groups (Figures 3.4 and 3.5). If the trend continues, people from the lowest social classes may experience declining life expectancy at SPA as the life expectancy of the 'average person' at SPA levels off in coming decades.
- There is new evidence that healthy life expectancy and disability-free life expectancy are closely related to levels of deprivation (Table 3.6).
- In 2006, women in England had the highest life expectancy and healthy life expectancy at age 65, while men in Scotland had the lowest life expectancy and healthy life expectancy at age 65 (Table 3.7). Within England in 2007, women in the South West had the longest life expectancy at age 65 (Table 3.8).
- As economically active people age, the percentage reporting a long term health problem or disability increases (Figure 3.10). It is hard to predict the health of future generations of older people, but there is evidence of trends for two health-related factors in recent years: there has been a decline in smoking (Figure 3.12) and an increase in obesity (Figure 3.14).

Over the course of the 20th century, life expectancy for all groups in the UK increased. At the same time fertility rates broadly declined (with the exception of the periods following both world wars, and in the 1960s). As the 1960s 'baby boomers' reach retirement in the next few decades they will be replaced in the working population by smaller numbers of people born since the 1960s. This will cause the ratio of retired people to those of working age to rise considerably, putting increased pressure on the pensions system.

In response to this, Parliament has passed several measures to address the adequacy of the state pension system (see Pension Trends Chapter 5), including increases in State Pension Age (SPA). The Pensions Act 1995 establishes that women's SPA will rise gradually from 60 to 65 years of age between April 2010 and April 2020, bringing it into line with the SPA for men. The Pensions Act 2007 raises the SPA for men and women from 65 to 68 by 2046. The projections presented in this chapter are based on the existing legislation, but readers should be aware that this may be amended: in June 2010, the new Government launched a review to decide whether to bring forward the date at which SPA starts to rise to 66.

In a similar vein, the Employment Equality (Age) Regulations Act 2006 made it easier for employees to continue working beyond age 65 (see Pension Trends Chapter 1). It prevents employers from retiring employees below the employer's normal retirement age or, where there is no normal retirement age, below 65; and it gives employees the right to request to continue working beyond this age. The new Government has promised to phase out the default retirement age.

Taken together, these measures are designed to lower the pension burden on Government and private pension providers by reducing the average number of years spent in retirement and increasing years spent in employment and saving for retirement. Present trends in retirement behaviour indicate an apparent rise in the average age at which people withdraw from the labour market (see Pension Trends Chapter 4).

This chapter sets out to examine three related questions of interest. First, it considers what life expectancy at SPA is likely to be for men and women over the next four decades, as SPA rises under the Pensions Acts 1995 and 2007. Second, it asks whether the planned increases in SPA during this period will allow people to enjoy their remaining years of retirement in a relatively good standard of health. As the First Report of the Pensions Commission¹ pointed out in 2004: "The feasibility and desirability of later retirement depends upon whether longer life expectancy is associated with greater health in old

age, i.e. whether people living 20 years beyond 65 rather than 15 are enjoying five more years of healthy active life, or facing five more years of ill health and impaired capability".

The third question which the chapter explores is whether people are able to continue their participation in the labour market beyond SPA, or if, due to age-related health problems, they are limited in their economic participation.

These questions are not easy to answer, particularly as it is not possible to predict with any certainty the health profile of the future UK population. However, this chapter presents the evidence currently available. To address the first question, life expectancy is examined at current and future SPAs (based on existing legislation) for men and women in the UK. In relation to the second question, the chapter compares the current life expectancy, healthy life expectancy and disability-free life expectancy of men and women at age 65, and looks at trends in life expectancy and healthy life expectancy over time.

Although the average experience is a useful starting point, it is also important to examine the experience of different groups in society. Therefore we examine inequalities in life expectancy in terms of gender and social class. For England, it is possible to look at inequalities in life expectancy, healthy life expectancy and disability-free life expectancy by 'deprivation quintile' (where the population is classified according to levels of deprivation in the areas that they live in). We also present differences in life expectancy, healthy life expectancy and disability-free life expectancy for men and women in the countries of the UK – England, Wales, Scotland and Northern Ireland – and variations in life expectancy between English regions. Such differences are important not only in terms of individual experience, but because of their implications in relation to the pension burden on Government and private pension providers.

In relation to the third question, the 'fitness to work' section of the chapter considers the economic activity of older people with long term health problems, before examining the main types of health problem affecting people limited by health issues in the kind of work that they can do. Finally, the chapter presents evidence on conditions which increase the risk of disease in old age, such as smoking and obesity, and raises the question of how these may affect the health profiles of future generations of retired people and older workers.

Life expectancy calculations

Life expectancy is calculated by applying age and sex specific mortality rates (the proportions of people of a given age and sex who die in each year) to estimate the average number of

years of life remaining to a man or woman of a specific age in a particular year (such as a boy at birth in 1950, or a woman aged 65 in 2020). There are two methods of calculating life expectancy: the period and cohort methods.

The period method applies mortality rates based only on deaths in the year in question. For example, to estimate the average life expectancy of a man aged 65 in 1940, the calculation would use the mortality rates for men aged 65, 66, 67 and so on in 1940. The period method follows the implied assumption that mortality rates do not change over time. Therefore, when mortality rates are falling, the method underestimates life expectancy.

The period method is a hypothetical measure as it assumes that mortality rates remain constant over time. The cohort method, in contrast, uses mortality rates that prevail as the type of person in question ages. For example, the cohort method calculation of life expectancy for a man aged 65 in 1940 would use the mortality rate for a 65 year old man in 1940, a 66 year old in 1941, a 67 year old in 1942 and so on. This requires the estimation of future mortality rates as well as the observation of past rates.

Official estimates of cohort life expectancy produced by the Office for National Statistics (ONS) base their projections of future mortality rates on a combination of extrapolation from preceding trends in mortality rates and expert consensus on the likely impact on future mortality rates of trends in public health and medicine. When mortality rates are known (as they are for past years), the cohort method is clearly the more accurate. When the calculation concerns population groups young enough to live beyond the present year (for example, men aged 50 in 1970), both known and projected rates of mortality must be used and the accuracy of the method will depend upon the validity of the assumed mortality rates. ONS often uses estimates of life expectancy based on the period method because this avoids the element of uncertainty associated with assumptions about future mortality rates.

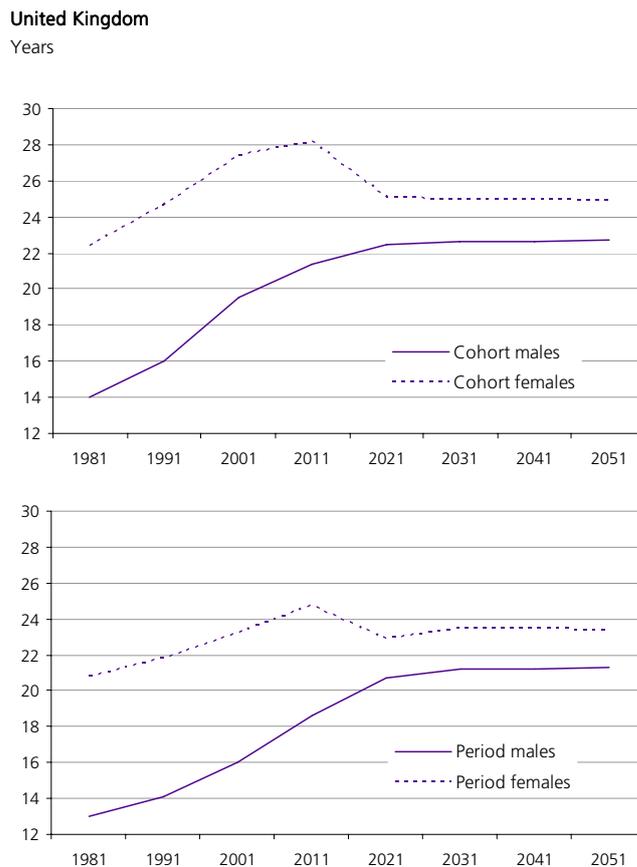
Both period and cohort estimates acknowledge the inevitable uncertainty around such projections by producing two variants, one based on low expectations of mortality and the other based on higher expectations. The ‘principal projection’, which is the one used in the next section, falls between these two extremes and is based on assumptions judged to be the best that could be made at the time they are adopted. However, uncertainties remain in these projections.

Life expectancy at State Pension Age

Under the Pensions Act 1995, there will be a gradual rise in the SPA of women from 60 to 65 years between April 2010 and April 2020. The Pensions Act 2007 establishes that men’s and women’s SPA will increase by a year every decade between 2024 and 2046, when SPA for both sexes will be 68 years. The projections presented in this section are based on this legislation, and do not take into account possible changes as a result of the new Government’s review.

Figure 3.1 shows principal projections of life expectancy at the SPA which applies in each year from 1981 to 2051. The birth cohorts reaching SPA in 1981 are therefore men born in 1916 (aged 65) and women born in 1921 (aged 60), whereas those reaching SPA in 2021 are men and women born in 1956 (aged 65) and in 2051, those born in 1983 (aged 68).

Figure 3.1
Projected principal cohort and period life expectancies^{1,2} at SPA: by sex, 1981 to 2051



1 Period and cohort life expectancies calculated using historic mortality rates (from 1981 to 2008) and projected mortality rates from the 2008-based national population projections (for 2009 onwards).
2 For 2011, estimates for women have been produced by interpolating between life expectancies at age 60 and age 61 to allow for the fact that women will be reaching SPA at 60 years and 7 months in mid-2011.

Source: Office for National Statistics

Figure 3.1 shows the difference between projected life expectancies produced by each measure, with the cohort method presenting a higher life expectancy at each data point than the period approach. For both period projections and cohort projections, life expectancy of women at SPA exceeds that of men.

From 1981 to 2011, life expectancy at SPA increases each decade for both sexes. Women then see a decline in their life expectancy at SPA, corresponding with the gradual increase in women's SPA from age 60 to 65 between 2010 and 2020. This narrows the gap in cohort life expectancy at SPA between women and men from around seven years to less than three years. Between 2021 and 2051, where there is a planned increase in SPA for both sexes by one year in each decade, cohort life expectancy at SPA for both sexes is expected to level off as the increases in SPA match projected increases in life expectancy. With the period method the levelling off occurs after 2031. This is because period life expectancy for both sexes is projected to increase faster than the increases in SPA between 2021 and 2031.

In both the cohort and period projections, women have greater life expectancy at SPA than men even after the alignment of SPA in 2020. The cohort measure gives women around 25 years of life expectancy at SPA between 2021 and 2051 while men have under 23 years of life expectancy at SPA. The period measure is slightly less favourable, giving women 22.9 years of life expectancy at SPA in 2021 and around 23 and a half years from 2031 to 2051; whereas men are projected to have 20.7 years of life expectancy at SPA in 2021 and just over 21 years in 2031 to 2051.

Health expectancy

ONS calculates two types of health expectancy using information for Great Britain from the General Lifestyle Survey (GLF) – known before 2008 as the General Household Survey (GHS) – and from the Continuous Household Survey of Northern Ireland (CHS) and the 2001 Census²:

1. **Healthy life expectancy** is defined as expected years of remaining life in 'good' or 'fairly good' general health.
2. **Disability-free life expectancy** is defined as expected years of remaining life free from a limiting chronic illness or disability.

Health expectancies are calculated in a similar way to life expectancies but include rates of poor health or limiting chronic illness and disability in addition to mortality rates (see Box: **Health expectancy calculations**).

Health expectancy calculations

Health expectancy is estimated using Sullivan's method³ of combining the age and sex specific mortality rates used to calculate life expectancy estimates with age and sex specific rates of 'good' and 'fairly good' general health or free from limiting chronic illness or disability. When health expectancies are calculated for a specific age such as 65, the measure is based on the number of person years lived in good or fairly good health or free from a limiting chronic illness or disability in all age groups aged 65 and older, divided by the number of people surviving to age 65.

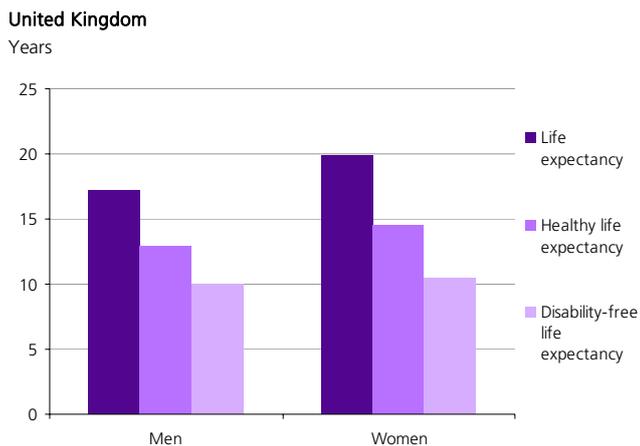
For example, healthy life expectancy in the UK at age 65 for the year 2006 is defined as the average number of years a person aged 65 would live in good or fairly good health if he or she experienced the UK's age specific mortality and good or fairly good general health rates at age 65 and over for the years 2005 to 2007, pooled. The resulting figure reflects current mortality and morbidity experiences, not how long people can expect to live in future in good or fairly good health, as both death and health rates are likely to change in the future.

Health expectancy measures are based on what individuals report in surveys about their own health or disability status⁴. They suffer from the limitations common to all measures based on self-perception, which are 'subjective' because each respondent makes their own assessment, rather than reporting against standard measures. However, a measure based on self-perception is useful in this context, as we want to understand what older people feel about their own health and how this affects their behaviour – for instance, whether they can enjoy their period of retirement. It is also useful because self-assessed health status is associated with chances of (objectively measured) illness and risk of death.

Figure 3.2 illustrates the life expectancy, healthy life expectancy and disability-free life expectancy of men and women at age 65 in the UK⁵. Life expectancy at age 65 informs us of the years an individual who has survived to age 65 can expect to live, while healthy life expectancy and disability-free life expectancy at age 65 inform us of the number of years in good or fairly good health or free from limiting chronic illness or disability an individual can expect to live. As already seen in the previous section, women in the UK have longer life expectancy than men at the same age. Figure 3.2 shows that in 2006 (with estimates based on a three-year moving average using data from 2005 to 2007), period life expectancy at age 65 was 17.2 years for men and 19.9 years for women. In terms of healthy life expectancy, men at age 65 in 2006 could expect to live for a further 12.9 years in good

or fairly good health, while women could expect to live for a further 14.5 years. In terms of disability-free life expectancy, men at age 65 in 2006 could expect to live for a further 10.0 years free from a limiting chronic illness or disability, while women could expect to live a further 10.5 years.

Figure 3.2
Period life expectancy, healthy life expectancy and disability-free life expectancy at 65: by sex, 2006^{1,2}



- 1 Estimates calculated using life table data from the Office for National Statistics, and health related data from the GHS, CHS and the Census.
- 2 Estimates are based on a three year moving average plotted on the central year. Therefore the 2006 figures use data from 2005 to 2007 (population data are mid-year estimates).

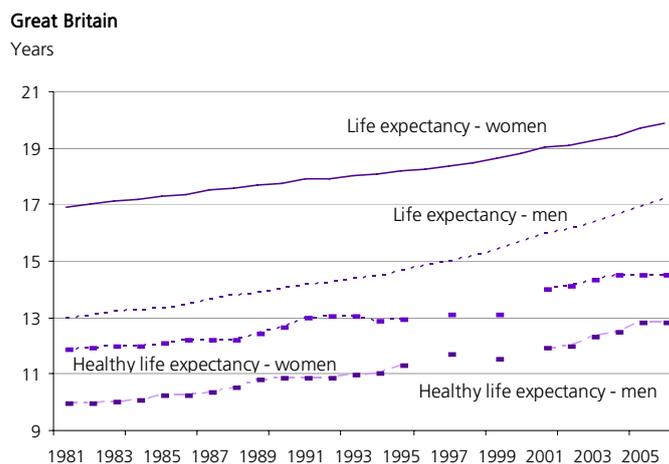
Source: Office for National Statistics

Figure 3.3 shows a comparison for Great Britain of increases in the period life expectancy and healthy life expectancy estimates of men and women aged 65 between 1981 and 2006. A consistent year-on-year increase can be seen in the life expectancy of men and women. Men were estimated to live for a further 13.0 years at age 65 in 1981, rising to 17.2 years in 2006. Women have experienced a similar increase in life expectancy over this period with life expectancy at age 65 in 1981 of 16.9 years, increasing to 19.9 years in 2006. These increases in life expectancy represent an extension to the periods of time that people who are retired at age 65 have in which to enjoy their retirement⁶.

Over the same period there have also been increases in the number of years that men and women at 65 in Great Britain can expect to live in good or fairly good health as measured by estimates of healthy life expectancy. However, these increases are not as consistent year-on-year as the increases in life expectancy. Figure 3.3 shows that healthy life expectancy for women and men did rise overall between 1981 and 2006, but there were years where it remained static or fell in comparison to the previous year. Overall, the increases in healthy life expectancy at 65 between 1981 and 2006 were

smaller than increases in period life expectancy. Men’s healthy life expectancy rose by 2.9 years, whereas for life expectancy the increase was 4.2 years. For women, the increase in healthy life expectancy was 2.6 years, while life expectancy increased by 3.0 years.

Figure 3.3
Period life expectancy and healthy life expectancy at 65: by sex, 1981 to 2006^{1,2}



- 1 Estimates calculated using life table data from the Office for National Statistics, and health related data from the GHS, CHS and the Census.
- 2 Life expectancy and healthy life expectancy estimates based on a three year moving average plotted on the central year. Healthy life expectancy data for 1996, 1998 and 2000 are unavailable because the GHS was not carried out in 1997 and 1999.
- 3 The calculation of health expectancies from 2001 applies a different assumption about inter-censal growth in the communal establishment population and in the prevalence of poor health in children aged 0-15 than previously: details of these changes and their effect on estimates are available on the ONS website : www.statistics.gov.uk/cii/article.asp?ID=1421&Pos=1&ColRank=1&Rank=1

Source: Office for National Statistics

As the previous section showed, life expectancy at SPA is expected to level off for both men and women as planned increases in SPA match projected increases in life expectancy from 2021 (cohort method) or 2031 (period method). If healthy life expectancy increases less than life expectancy, then as SPA rises, people will spend a greater part of their retirement in poor health. However, it remains to be seen whether current trends in healthy life expectancy will continue over the next few decades. How these trends develop will determine the proportion of time that people retiring at SPA have to enjoy life in a good or relatively good state of health.

Inequalities

We have seen in the previous section that distinct differences exist between men and women in regard to life expectancy, healthy life expectancy and disability-free life expectancy. Similar differences or inequalities also exist between other groups in society, notably between individuals from different socio-economic backgrounds and locations.

For England and Wales, Figure 3.4 shows changes in men’s life expectancy at age 65 by Social Class (SC) group (see Box: **Social Class groups**) from the early 1970s to 2002-05, the latest years for which such breakdowns are available. Throughout this period overall life expectancy increased for all SC groups. However, men in non-manual occupations had higher life expectancies than those in manual occupations. Men in the ‘professional’ class (SCI) have the highest life expectancy at age 65 among men. In 1972-76 they could expect to live 2.5 years longer than ‘unskilled’ men in SCV. By 2002-05 this gap had increased to 4.2 years, with men in SCI expecting to live for 18.3 years at age 65 compared with 14.1 years for men in SCV. SC group inequalities in men’s life expectancy at age 65 have a clear impact upon the number of years that men have to enjoy retirement.

Social Class groups

From 2001 the National Statistics Socio-economic Classification (NS-SEC) replaced the Registrar General’s Social Class based on Occupation (RGSC) in all official statistics and surveys. However, the statistics in this part of the chapter use RGSC because they include the pre-2001 period. RGSC is divided into manual and non-manual occupations, with three levels within each. The Social Class (SC) groups, with examples of each, are as follows⁷:

Non-manual

- I Professional: doctors, accountants, engineers
- II Managerial and technical/intermediate: marketing and sales managers, teachers, journalists
- IIIN Skilled non-manual: clerks, cashiers, retail staff

Manual

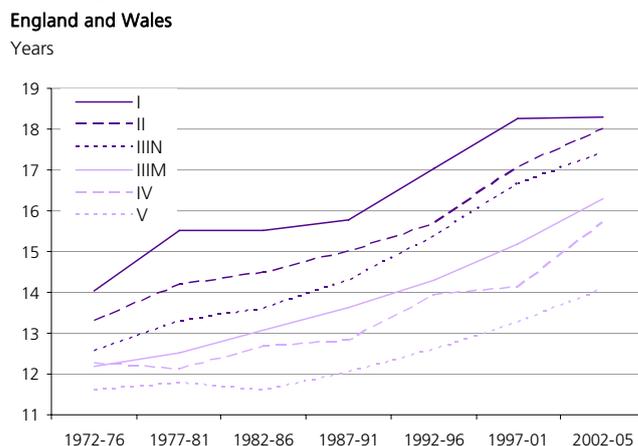
- IIIM Skilled manual: carpenters, goods van drivers, joiners
- IV Partly skilled: warehousemen, security guards, machine tool operators
- V Unskilled: building and civil engineering labourers, other labourers

It should be noted that in the period between 1972-76 and 2002-05 there have been changes in the distribution of the population by SC group. These may have affected the observed pattern of inequalities between SC groups with regard to life expectancy.

A similar pattern applies to women’s life expectancy at age 65. Figure 3.5 shows changes in life expectancy for women at 65 by SC group in England and Wales from the early 1970s to 2002-05. It is again clear that life expectancy increased for all SC groups over this period but that there are distinct inequalities. Women in SCI have the highest life expectancy at age 65. In 1972-76 they could expect to live 2.5 years longer than women in SCV. By 2002-05 the gap had increased to

4.2 years. At this point, women in SCI could expect to live for 22.0 years at age 65 compared with 17.7 years for women in SCV. Women maintained their higher life expectancy over men in every equivalent SC group during this period.

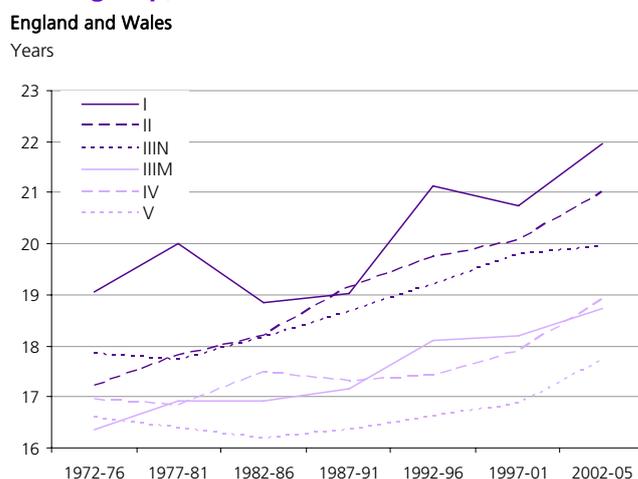
Figure 3.4
Period life expectancy for men at 65: by Social Class group, 1972 to 2005¹



1 The Longitudinal Study includes communal establishments in its sample.

Source: Longitudinal Study, Office for National Statistics

Figure 3.5
Period life expectancy for women at 65: by Social Class group, 1972 to 2005¹



1 The Longitudinal Study includes communal establishments in its sample.

Source: Longitudinal Study, Office for National Statistics

Thus, socio-economic differences have a distinct influence on the amount of time that both men and women have to enjoy their retirement. Despite the increased life expectancy at age 65 for all SC groups since the early 1970s, the gap in estimates of life expectancy between the extreme SC groups has increased. If this trend continues, it is likely that those from the lowest SC groups will experience declining life

expectancy at SPA between 2021 (cohort method) or 2031 (period method) and 2051, rather than a flattening out of life expectancy in these periods which reflects the experience of the 'average person' (Figure 3.1). However, it is unclear at present whether the trend can be expected to continue.

As suggested in the Second Report of the Pensions Commission⁸, the recent development of 'enhanced' or 'impaired life' annuities may take account of factors such as socio-economic status in the calculation of annuity rates. These annuities can provide more favourable rates for members of pension schemes who are thought to have lower life expectancies. However, it remains to be seen whether such products will be popular and, more generally, how pension scheme design and annuity provision will adapt to differences in life expectancy.

It would be useful to consider the trends in healthy life expectancy and disability-free life expectancy of those at age 65 from different social class groups in order to explore whether inequalities exist between the extremes of the social scale and whether healthy life expectancy and disability-free life expectancy show similar trends to life expectancy. However, there is at present a shortage of data in this area, so it is not possible to present this analysis.

Deprivation quintiles

The Index of Multiple Deprivation (IMD) 2004 is based on data collected at the 2001 census. It uses 37 indicators across seven 'domains' which are combined and weighted to calculate a relative score for Lower Super Output Areas (LSOAs) in England. The domains are as follows (figures in brackets indicate the domain's weighting): income deprivation (22.5 per cent), employment deprivation (22.5 per cent), health deprivation and disability (13.5 per cent), education, skills and training deprivation (13.5 per cent), barriers to housing and services (9.3 per cent), living environment deprivation (9.3 per cent) and crime (9.3 per cent). A newer version, the IMD 2007, is also available.

LSOAs are relatively homogenous in terms of population size and structure. Each has approximately 1,500 residents. There are 32,482 LSOAs in England, each of which is assigned a score for each domain and ranked accordingly.

In a recent study for Health Statistics Quarterly⁹, the 32,482 LSOAs in England were divided into quintile groups so that they could be used to analyse survey data. The first quintile group is made up of the 20 per cent of least deprived LSOAs ranked by the IMD 2004, while the fifth quintile group is made up of the 20 per cent of most deprived LSOAs.

Nevertheless, for England a new study⁹ makes it possible to consider life expectancy, healthy life expectancy and disability-free life expectancy at age 65 in relation to indicators of multiple deprivation using IMD 2004 quintiles (see Box:

Deprivation quintiles). Table 3.6, based on pooled data for 2001 to 2005, shows that in 2003 women had more years of life expectancy, healthy life expectancy and disability-free life expectancy than men in every quintile of deprivation. The table also shows a clear correlation between deprivation quintiles and life expectancy, healthy life expectancy and disability-free life expectancy. Thus men in the most deprived areas had the lowest life expectancy, healthy life expectancy and disability-free life expectancy at age 65, while women in the least deprived areas had the longest life expectancy, healthy life expectancy and disability-free life expectancy.

Table 3.6
Period life expectancy, healthy life expectancy and disability-free life expectancy at 65: by deprivation quintile and sex, 2003^{1,2}

England	Index of Multiple Deprivation 2004 (quintile)	Years					
		Life expectancy		Healthy life expectancy		Disability-free life expectancy	
		Men	Women	Men	Women	Men	Women
1 - Least deprived	18.2	20.8	15.0	17.2	12.0	13.4	
2	17.4	20.2	13.9	15.7	11.0	12.7	
3	16.8	19.6	13.0	15.3	10.4	12.4	
4	15.8	18.9	11.5	13.8	9.0	10.4	
5 - Most deprived	14.6	17.8	9.5	12.3	7.5	9.4	

1 Estimates calculated using life table data from the Office for National Statistics and health related data from the GHS.

2 Estimates are based on a pooling of five years of data plotted on the central year. Therefore the 2003 figures are based on data from 2001 to 2005.

Source: Health Statistics Quarterly 46, Office for National Statistics

The proportion of life expected to be spent in good or fairly good health at age 65 varies between quintiles. In 2003, men and women aged 65 in the first quintile (least deprived areas) could expect to spend over 80 per cent of their lives in good or fairly good health, while in the fifth quintile (most deprived areas) the figures were 65 per cent for men and 69 per cent for women. The picture is similar for the proportion of life expected to be spent free from disability: in 2003, men and women aged 65 in the first quintile could expect to spend 66 per cent and 64 per cent of their lives respectively living free from disability, while in the fifth quintile the figures were 51 per cent and 53 per cent respectively.

Table 3.7

Period life expectancy, healthy life expectancy and disability-free life expectancy at 65: by country and sex, 2006^{1,2}

United Kingdom	Men			Women			Years
	Life expectancy	Healthy life expectancy	Disability-free life expectancy	Life expectancy	Healthy life expectancy	Disability-free life expectancy	
UK	17.2	12.9	10.0	19.9	14.5	10.5	
England	17.3	12.9	10.2	20.1	14.6	10.7	
Wales	16.9	12.7	8.7	19.6	13.0	9.9	
Scotland	16.0	12.5	9.4	18.7	14.4	10.6	
Northern Ireland	16.8	12.9	8.9	19.7	13.9	9.1	

1 Estimates calculated using life table data from the Office for National Statistics, and health related data from the GHS, CHS and the Census.

2 Estimates are based on a three year moving average plotted on the central year. Therefore the 2006 figures use data from 2005 to 2007 (mid-year population estimates and annual mortality data combined).

Source: Office for National Statistics

Table 3.7 again presents data on period life expectancy, healthy life expectancy and disability-free life expectancy at 65, but this time the breakdowns are by countries of the UK: England, Wales, Scotland and Northern Ireland.

Of all of the countries of the UK, in 2006 England had the highest life expectancy and disability-free life expectancy for men at 65, and England and Northern Ireland had the highest healthy life expectancy for men at this age. At the other end of the scale, men in Scotland had the lowest life expectancy and healthy life expectancy. However, it was men in Wales and Northern Ireland who had the lowest disability-free life expectancy. Thus, although men in Wales and Northern Ireland had longer life expectancies at age 65 than men in Scotland, those retiring at 65 would probably spend less of their retirement free from disability (51 per cent and 53 per cent respectively in Wales and Northern Ireland, compared with 59 per cent in Scotland).

Women aged 65 in England and Scotland had the highest healthy life expectancy and disability-free life expectancy in 2006. As with men, it was women in Scotland retiring at 65 who were likely to have the shortest retirement period and women in England who were likely to have the longest. Women aged 65 in Wales had the lowest healthy life expectancy and those in Northern Ireland the lowest disability-free life expectancy. Women aged 65 in Northern Ireland were likely to spend less of their remaining lives free from disability (46 per cent) than women in Scotland (57 per cent) or England (53 per cent).

Although distinct inequalities exist between life expectancy, healthy life expectancy and disability-free life expectancy of people living in different parts of the UK, it is at present unclear whether such inequalities will persist into the future. If these inequalities do persist, the effects of a future rise in SPA in the UK as a whole could be seen as disproportionately affecting the amount of time that those living in areas with lower rates of life expectancy, healthy life expectancy and disability-free life expectancy have to enjoy their retirement. Whether this will occur is at present uncertain and will depend on how differences in life expectancy, healthy life expectancy and disability-free life expectancy affect those living in different parts of the UK in years to come.

We can also examine life expectancy at the level of English Government Office Region (GOR) and compare it with life expectancy in Scotland, Wales and Northern Ireland. Further breakdowns are also available at Local Authority level¹⁰. However, breakdowns at regional and Local Authority level are not available for healthy life expectancy and disability-free life expectancy.

Table 3.8 shows that in 2007, the English GORs with the highest life expectancy at age 65 were the South East and South West of England for men (18.4 years) and the South West of England for women (21.2 years). This compares with 16.2 years for men and 18.8 years for women in Scotland. Over the period 2001 to 2007, life expectancy at age 65 improved in all countries and regions of the UK. The biggest improvements were in London, where life expectancy increased by 1.9 years for men and 1.5 years for women. The smallest improvement for men was in Northern Ireland (an

increase of 1.2 years). The smallest improvements for women were in Scotland and in Yorkshire and The Humber, with increases of 0.8 years in both cases.

Table 3.8
Period life expectancy at 65: by country and English Government Office Region, 2007^{1,2}

United Kingdom	Years	
	Men	Women
United Kingdom	17.4	20.0
England	17.5	20.2
North East	16.7	19.3
North West	16.8	19.4
Yorkshire and The Humber	17.2	19.8
East Midlands	17.5	20.2
West Midlands	17.4	20.1
East of England	18.2	20.7
London	18.1	21.0
South East	18.4	21.0
South West	18.4	21.2
Wales	17.1	19.8
Scotland	16.2	18.8
Northern Ireland	16.8	19.8

1 Estimates are based on a three year moving average plotted on the central year. Therefore the 2007 figures use data from 2006 to 2008 (mid-year population estimates and annual mortality data combined).
 2 Figures for the UK, England, Wales, Scotland and Northern Ireland were calculated using complete life tables (based on single year of age). English Government Office Region figures were calculated using abridged life tables (based on 5-year age bands) due to smaller numbers, to ensure that the figures produced were sufficiently robust.

Source: Office for National Statistics

Inequalities and the pension burden

Differences in life expectancy between social classes and regional or local differences are important not only in terms of individual retirement experiences, but in relation to the pension burden on Government and private pension providers. Private pensions provided in the form of annuities can take account of differences in life expectancy. Insurance companies can adjust the annuity rates they offer. Other things being equal, such an adjustment might, for example, offer a lower annuity rate to a woman living in the South West of England (with an average life expectancy of 21.2 years at age 65 in 2007) than to a man living in Scotland (with an average life expectancy of 16.2 years).

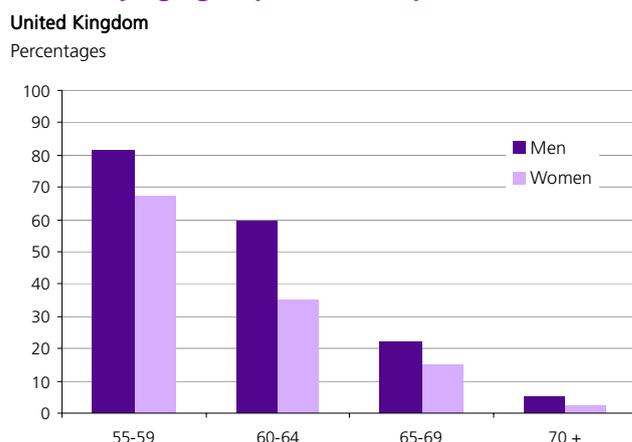
However, this is not the case for state pensions (the basic state pension and additional state pension) or for defined benefit private pensions (see Glossary). In such schemes, individuals accumulate rights to the same annual pension as others with the same contribution record during their working

lives, irrespective of differences in life expectancy reflecting factors such as sex, socio-economic status or location. Therefore with state pensions and defined benefit private pensions, the pension provider (the Government and private employers) must ensure that differences in life expectancy are taken into account so that sufficient funds are available to provide the promised pension benefits. Assuming identical working life histories and retirement ages, it will cost more, on average, to provide a pension to a woman living in South West England than to a man living in Scotland.

Fitness for work

The combination of the Pensions Acts 1995 and 2007 which increase SPA over the next four decades and the 2006 legislation enabling people to work later in life was designed to encourage people to continue working beyond the retirement ages prevalent in the second half of the 20th century: 60 for women and 65 for men. An analysis of the ages at which men and women withdraw from the labour market is presented in Pension Trends Chapter 4. This section explores whether people are able to continue their participation in the labour market beyond SPA. It looks at information about economic activity before and after SPA, and the proportion of economically active older people who face problems of ill health or disability. It then considers the main health problems reported by those who are limited in the kind of work they do.

Figure 3.9
Proportion of the population that is economically active: by age group and sex, April to June 2009^{1,2}



1 The Labour Force Survey excludes most people living in communal establishments from its sample.
 2 Data is not seasonally adjusted.

Source: Labour Force Survey, Office for National Statistics

Some people choose to work later in life or have to continue working because they have not saved enough for their

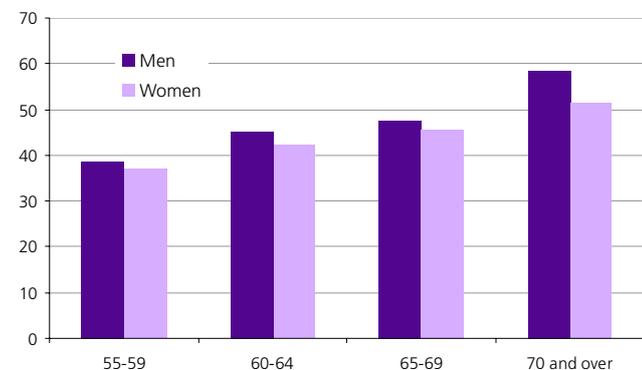
retirement. Figure 3.9 shows the proportion of the UK population before and after SPA who were economically active (in employment including self-employment, or actively seeking work) in April to June 2009. Despite a fall in the proportion of economically active women after age 60 and economically active men after age 65, over one-third of women aged 60 to 64 and over one-fifth of men aged 65 to 69 were still economically active.

Figure 3.10 shows the proportion of economically active men and women who consider themselves to have health problems or disabilities that they expect to last for more than a year¹¹. Unsurprisingly, as people age, the percentage reporting a long term health problem or disability increases. Over one-third of economically active men and women in the 55 to 59 age band reported having a long term health problem or disability in April-June 2009. By 65 to 69, over two-fifths of economically active men and women reported long term health problems. At age 70 and over, 58 per cent of economically active men and 52 per cent of economically active women reported having long term health problems.

It would be interesting to explore whether people in the older age groups choose to continue working despite their long term health problems or disabilities, or whether their continued employment is due to necessity. Some evidence on older people’s reasons for continuing to work and their motivations for leaving the labour force is available from the third wave of the English Longitudinal Study of Ageing¹².

Figure 3.10
Proportion of economically active population with a long term health problem or disability: by age band and sex, April to June 2009^{1,2}

United Kingdom
 Percentages



1 The Labour Force Survey excludes most people living in communal establishments from its sample.

2 Data is not seasonally adjusted.

Source: Labour Force Survey, Office for National Statistics

Table 3.11 illustrates the main health problems of economically active men and women over 60 years of age who report having a health problem that limits the kind of work that they can do. The main health problems of men and women are similar, although the types of health problems which affect older workers may affect men and women to a different extent at the same age. The most common problem relates to the heart, blood pressure and the circulatory system. In the 60 to 64 age band, 15 per cent of economically active men and 10 per cent of economically active women reported this as their main health issue in April-June 2009, increasing to 20 per cent of economically active men and 17 per cent of economically active women aged 70 and over. Other common health problems for older workers relate to the legs and feet (including arthritis and rheumatism), the back and neck, the chest, and the arms and hands. Diabetes is also a problem, particularly for men: it affected 6 to 7 per cent of economically active men and 3 to 4 per cent of economically active women in the 60 plus age groups in April-June 2009.

Table 3.11
Proportion of economically active adult population with a health problem or disability that limits the kind of work that they can do: by main health problem, age band and sex, April to June 2009^{1,2}

United Kingdom	Percentages					
	60-64		65-69		70 and over	
	Men	Women	Men	Women	Men	Women
Heart, blood pressure, circulation	15	10	17	13	20	17
Legs or feet	5	5	6	6	8	7
Back or neck	3	4	4	5	3	5
Chest, breathing problems	3	5	3	4	5	6
Arms or hands	3	4	2	5	1	4
Diabetes	7	3	6	4	7	3

1 The Labour Force Survey excludes most people living in communal establishments from its sample.

2 Data is not seasonally adjusted.

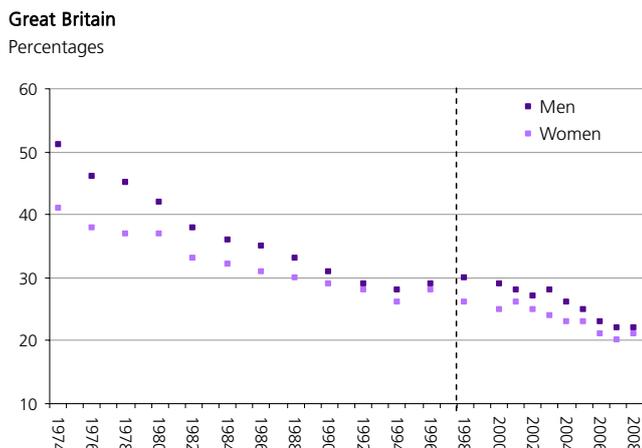
Source: Labour Force Survey, Office for National Statistics

Although the evidence suggests that at present these are the main health barriers to older people who want to participate in the labour market, it is hard to say whether today’s age-related health issues will be those experienced by older workers in future. It should also be noted that people in relatively good health may leave the labour market before SPA to care for other individuals with age-related health problems and disabilities. Due to increases in life expectancy, these people may require care for longer periods than in the past.

Generational health uncertainties

As already discussed, there is a great deal of uncertainty about trends affecting older people in the UK. This makes it hard to predict life expectancy, healthy life expectancy and disability-free life expectancy of people around SPA, as well as the likelihood of labour market participation by older people. In particular, although we have evidence about current health problems, it is hard to predict the health of future generations of retired people and older workers. There has been much debate on the conditions which increase risk of disease in old age, such as smoking, obesity, alcohol consumption, high cholesterol levels, high blood pressure (hypertension) and diabetes. This section draws attention to two of these factors: smoking and obesity. For most of the others, we lack analyses of health indicators over time¹³, which would allow us to document the trends and to predict how such problems might affect future generations of older people. This is an area where more research needs to be done.

Figure 3.12
Adult cigarette smoking levels: by sex, 1974 to 2008^{1,2}



1 Figures for 1974 to 1998 are unweighted; figures for 1998 onwards are weighted.
 2 2005 data includes last quarter of 2004/05 data due to survey change from financial year to calendar year.
 3 Results for 2006, 2007 and 2008 include longitudinal data.

Source: General Lifestyle Survey, Office for National Statistics

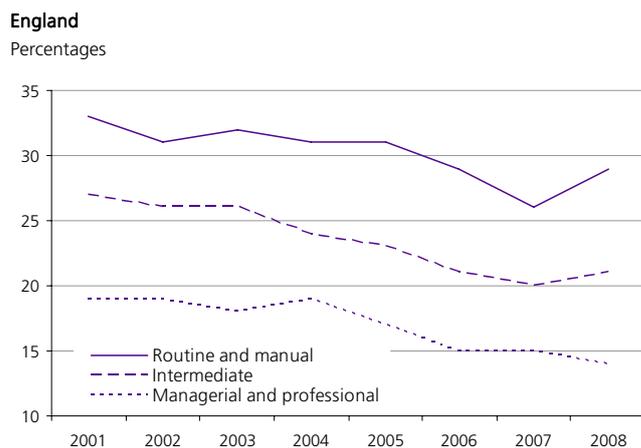
The smoking of tobacco products is seen as the biggest single factor reducing life expectancy and has been identified as the prime cause of lung cancer and a major cause of heart disease¹⁴. Smoking can be related to rates of healthy life expectancy as well as life expectancy¹⁵. Figure 3.12 shows the percentage of adults smoking cigarettes in Great Britain, by sex, from 1974 to 2008. Smoking has declined significantly for both men and women over this period. In 2008, 22 per cent of men and 21 per cent of women smoked, compared with 51 per cent of men and 41 per cent of women in 1974.

With continued campaigning to reduce the prevalence of smoking, a continuation in this downward trend might reasonably be expected.

Variations in smoking levels exist between birth cohorts and socio-economic backgrounds¹⁶. Figure 3.13 shows, for England, trends in cigarette smoking for adults by household socio-economic status using the National Statistics Socio-economic Classification (NS-SEC)¹⁷. There are clear differences between the groups. People from households classified as 'routine and manual' reported the highest levels of cigarette smoking in 2008, with 29 per cent of adults in such households smoking cigarettes. Adults from households classified as 'intermediate' reported lower levels of cigarette smoking (21 per cent) and those from 'managerial and professional' households still lower levels (14 per cent). Such differences mean that the negative health effects associated with cigarette smoking will disproportionately affect those from households with lower socio-economic status.

People from all socio-economic groups experienced a decline in cigarette smoking between 2001 and 2007. In 2008, there was a noticeable increase in the proportion of people in 'routine and manual' households smoking and a slight increase in smoking by people in 'intermediate' households (Figure 3.13). However, it is too early to tell whether this signals a permanent change in smoking behaviour.

Figure 3.13
Adult cigarette smoking levels: by household socio-economic classification¹, 2001 to 2008^{2,3}



1 Using NS-SEC.
 2 Results are weighted; for 2006, 2007 and 2008, they include longitudinal data.
 3 2005 data includes last quarter of 2004/05 data due to survey change from financial year to calendar year.

Source: General Lifestyle Survey, Office for National Statistics

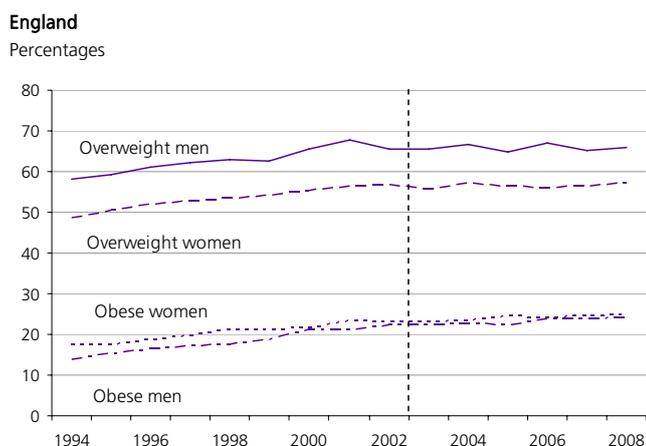
The World Health Organization finds that individuals diagnosed as either obese or overweight are at increased risk

of premature death and at greater risk from chronic diseases including cardiovascular disease (heart disease and stroke), diabetes, musculoskeletal disorders such as osteoarthritis, and certain forms of cancer. The key causes of obesity and being overweight are related to factors such as the increased consumption of energy-dense foods high in saturated fats and sugars, reduced physical activity exaggerated by changes in modes of transportation, urbanisation and the increasingly sedentary nature of contemporary working practices¹⁸.

Figure 3.14 shows the proportion of overweight and obese men and women in England between 1994 and 2008. Overweight and obesity levels have shown an increase for both men and women over this period. In 1994, 17.3 per cent of women were classified as obese; by 2008 this had risen to 24.9 per cent. For men, 13.8 per cent were recorded as obese in 1994; by 2008 this had risen to 24.1 per cent. In 1994, 58.1 per cent of men and 48.7 per cent of women were classified as overweight; by 2008, these figures had risen to 65.9 per cent and 56.9 per cent respectively.

Changes in individual behaviour patterns, such as smoking, and in the prevalence of conditions such as obesity, high cholesterol levels, hypertension and diabetes are likely to have an impact on the health of future generations of older people. However, at present there remains much uncertainty about how these factors will affect the life expectancy, healthy life expectancy and fitness for work of older people. Research may provide answers to these questions in years to come.

Figure 3.14
Adult obesity and overweight¹ levels: by sex, 1994 to 2008²



1 Adults are defined as obese if they have a Body Mass Index greater than 30 kg/m², and overweight if they have a Body Mass Index greater than 25 kg/m².

2 Data up to 2002 are unweighted, from 2003 onwards data have been weighted for non-response.

Source: Health Survey for England, Department of Health

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- 1 Pensions Commission (2004), Chapter 2.
- 2 The GLF and the CHS are used to estimate health expectancy for the private household population of the UK. The Census is used to estimate health expectancy for the UK population resident in communal establishments. Before 2008, the GLF was known as the General Household Survey (GHS).
- 3 See Jagger (1999).
- 4 The question in the General Household Survey (GHS) for Great Britain, the Continuous Household Survey (CHS) of Northern Ireland and the 2001 Census which is used to define healthy life expectancy is "Over the last 12 months, would you say your health has on the whole been good, fairly good or not good?" For disability-free life expectancy, the GHS and CHS ask: "Do you have any longstanding illness, disability or infirmity? (By longstanding I mean anything that has troubled you over a period of time or that is likely to affect you over a period of time)". If 'Yes': a) "What is the matter with you?" and b) "Does this illness or disability (do any of these illnesses or disabilities) limit your activities in any way?". The 2001 Census asks: "Do you have any long-term illness, health problem or disability which limits your daily activities or the work you can do?" The meanings attached by respondents to the categories may change over time due to medical advances.
- 5 ONS calculations of health expectancy are available at: www.statistics.gov.uk/StatBase/Product.asp?vlnk=12964
- 6 Age 65 is used as a reference point for this analysis. However, some people retire before this age and others retire after it.
- 7 The process of deciding to which SC group an individual belongs can be complicated. For this analysis, an individual's own Social Class was used where possible. For those with no assigned occupation, spouse's Social Class was used. Immigrants were assigned a Social Class at the first census at which they appeared and were not included in the sample unless they were identified as having a census record. If none of this information produced a valid Social Class, the individual was recorded as 'unclassified' (see Office for National Statistics, Health Statistics Quarterly 35).
- 8 Pensions Commission (2005), Chapter 8.
- 9 See Smith, Olatunde and White (2010b).
- 10 Life expectancy estimates by local area in the UK are available at: www.statistics.gov.uk/StatBase/Product.asp?vlnk=8841&Pos=1&ColRank=1&Rank=272
- 11 The questions in the Labour Force Survey relating to health, disability and work are: 1) "Do you have any health problems or disabilities that you expect will last for more than a year?" 2) "Does this health problem affect the kind of paid work that you might do?" and 3) "Which of these is your main health problem/disability?"
- 12 See Chapter 2 in Banks, Breeze, Lessof, and Nazroo (eds) (2008).

- 13 The General Lifestyle Survey presents results on alcohol consumption since 1992 at www.statistics.gov.uk/downloads/theme_compendia/GLF08/GLF08chapter2-Drinking.xls
- 14 Smoking Kills: A White Paper on Tobacco (1998) HMSO: London. Available at: <http://www.archive.official-documents.co.uk/document/cm41/4177/4177.htm>
- 15 See Bronnum-Hansen and Juel (2004).
- 16 See Davy (2007) and Evandrou and Falkingham. (2002).
- 17 Details of NS-SEC are available at: www.ons.gov.uk/about-statistics/classifications/current/ns-sec/index.html
- 18 World Health Organization Fact sheet N°311 September 2006, Available at: www.who.int/mediacentre/factsheets/fs311/en/

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The ONS gives population projections and variants which are available at: www.statistics.gov.uk/statbase/Product.asp?vlnk=15098

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