



SHARPENS YOUR THINKING

## Age

ALLMARK, Peter, HYDE, Martin and GRIMSLEY, M

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# Chapter 5: Age

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## 5.1 Key messages

### **What are the inequalities? How persistent and how worrying are they?**

We note, particularly, the following:

- High rate of accident mortality (alongside normal rate of A&E attendance)
- High rates of mortality and morbidity
- High rates of LLTI
- A climbing rate of suicide in men in the oldest age groups
- A lower than average rate of healthy life in the UK compared with EU15 countries
- Discriminatory processes in allocation of resources
- Low rates of exercise and activity alongside high rates of obesity

One difficulty in identifying inequalities that are unfair or call for action is that some inequality might be expected as people age, such as a higher rate of disability or illness. But natural difference can be compounded by human action and decisions. Therefore, as explained in Chapter three, we should err on the side of social rather than natural explanations of inequality. For example, the presence of a high rate of cerebrovascular disease in the oldest group can be viewed as a spur to research and action rather than an inevitable fact of life. One helpful tool here is data comparison with other nations, particularly those that are economically similar. In this chapter we have primarily used established European Union countries to compare with the UK. These are the fifteen countries that were members of the EU in 2004; we have given them the abbreviation EU15.

#### *Outcome*

Mortality rates both in general and for most specific causes rise as people age. Those over the age of 85 seem highly vulnerable to deaths due to accident. This looks to be persistent, worrying and perhaps avoidable, at least to some extent. Direct comparison with EU countries was not possible. However, related figures suggest that the UK might not be particularly bad in

this respect. Those over 85 also suffer high rates of deaths due to heart disease, cerebrovascular disease and cancer.

The rate of suicide starts to climb amongst men in the oldest age groups. This is a gender inequality more than an age one - but it is persistent and worrying. The figures for the UK are not particularly high overall compared with the EU15 group.

Older people tend to suffer worse physical health than the general population. The UK has comparable life expectancy to the EU15 group. However, the UK fares poorly in terms of Disability-adjusted life years; in other words, our older people are more likely to be disabled. The UK fares slightly worse than average in terms of healthy life years. The figures on healthy life years should be read cautiously as there are trans-national differences in method of collection. As such, the DALY measure might be more meaningful.

As people age they are more likely to report a limiting life-long illness or disability (LLTI) and to report poor current health. The proportion of those with an LLTI ranges from 37-47% of the population in those aged 65-74 years. In all cases, levels increase with increasing age such that 68% of women over 75-years-old in Wales report an LLTI.

Pain is an issue discussed in the wider literature. In one review of evidence the authors admonish the attitude that we should accept pain as part of ageing. Such attitudes to pain and ill-health in general lead us to accept inequality that harms older people and is almost certainly avoidable.

Age is not strongly associated with poor mental health overall. However, depression and dementia are problems for the elderly. Around 25% of people over 65 have significant depressive symptoms on one scale developed for use in the elderly; the equivalent figure in the population under 65 is around 10%. Dementia occurs in around 5% of those over 65 but increases with age to around 20% of those over 80.

### *Process*

In surveys, older people do not score lower for being treated with dignity when using health services. One problem with these surveys is that those without mental capacity to take part are excluded; yet this group might be one that is more vulnerable to undignified treatment. One example is restraint, which is discussed in some academic research although precise data on its use are lacking.

There are a broad set of concerns around age-based inequality in medical treatment. Discrimination against the elderly results from cost-effectiveness decisions which tend to show that the older you are the less effective a treatment is for you. This is not the result of explicit ageist attitudes but might be said to be institutionally ageist.

Despite the high mortality rate due to accidents in older people, this is not reflected in a higher rate of attendance at A&E.

There is some survey evidence showing that people are concerned that the nutritional needs of older people in hospital are not met. Evidence only supports this claim in part. Older people are often malnourished when entering hospital and fail to improve during their stay. However, there is little evidence that older people become more malnourished in hospital. More data are currently being collected on this issue and so the picture will become clearer.

Older people are more likely to be obese and less likely to exercise sufficiently.

Sub-groups within the elderly face double-jeopardy in terms of inequality; for example, older refugees and asylum seekers are ill-placed to cope with the difficulties coping with such matters as negotiating the benefits system.

**Are there any emerging trends?**

The population in the UK is ageing. Therefore the health needs of this group will become more pressing. It is estimated by the charity Age Concern, using data from several sources, that there will be over 6 million people with LLTI by 2030. There is some discussion here with at least three different hypotheses stated about the effects of an ageing population (Hyde, Higgs and Newman 2009). One is compression morbidity; this is the idea that populations age because they are healthier; as such, people live longer but with a shorter spell of morbidity at the end of life. A second is the failure-of-success model; which states that technical progress lengthens life but not quality of life. The third model is of dynamic equilibrium. This states that as people age they suffer more chronic health problems but adapt to them such that these are not disabling. There are insufficient data to choose between these at present.

### **How might change be measured?**

The outcome measures used in the *Equality Measurement Framework* are useful and relevant in the main. They need careful interpretation in order to pick out inevitable from avoidable inequality. Additional outcome measures for older people might include specific focus on arthritis, falls, sensory impairment and incontinence. Healthy life expectancy would also be a useful addition. Comparison with EU15 countries is helpful in trying to assess whether inequality that is thought to be inevitable or natural is, in part, also the result of social decisions.

Some life and health indicators for those without capacity, for example, those with dementia are problematic. Such people are generally unable to state whether or not they are treated with dignity. More work is needed here to develop other indicators that do not require self-assessment.

### **Data quality and quantity**

Most relevant datasets can be disaggregated by age. However, there is some lack of data within the 65+ age group, particularly in relation to the oldest, 80+ group.

## **5.2 Age Evidence**

The main datasets relating to life and health collect data disaggregated by age. As such, there is no shortage of evidence in relation to the key indicators. The issue lies rather in interpretation.

The difficulty in selecting Life indicators for older people lies in finding those that are informative in terms of inequality. Natural causes will cause higher mortality in this group. However, these indicators can be informative as they allow comparisons within the older population, for example, between ethnic groups. Furthermore, as we argued in chapter three, on methodology, where there is scope it is probably better to err on the side of a social rather than a natural explanation of inequality. Take, for example, the high accident mortality rate of the 85+ group requires particular consideration. This could be seen as natural and inevitable; but a fatal accident is a function of the environment as well as of the person. We have seen the suggestion that disability is a social product; people differ in their abilities but some are disabled in an environment that is not designed for them. Where the unmet needs of older people for, say, handrails or gritted pavements in the winter result in accidents we might view these at least in part the result of policy decisions.

Selecting health indicators of inequality is problematic in the same way as selecting life indicators. As we get older we naturally face increasing morbidity. As such, the self-reporting of current health seems uninformative as a marker of inequality between older people and others; it is, though, useful as a marker between groups within the older population. The same point applies to some extent in relation to longstanding health problems, illnesses and disability. Both indicators could be worsened through inequality. For example, if the health service discriminates against older people, the current health of older people could decline and this would be reflected in self-reports of health status. But the best way to uncover this discrimination might be through examination of health service processes. If these seem to discriminate against older people, then we could anticipate that a positive

change in them would result in improvements to current health self-reports. In other words, the removal of discrimination would improve self-report of health in older people.

To get a notion of how well older people in the UK are faring it is useful to do some comparison with other countries in the EU. In this chapter we have drawn on data from the European Health for All (HfA) database where it is possible and informative. We have chosen the main groups to compare as male and female, UK and EU members before 2004 (EU15). The reason for choosing the latter group is that these are the more prosperous EU countries that we might expect the UK to be equivalent to.

Judging whether mental health and wellbeing is a good indicator of inequality is also difficult. Some mental health problems are certainly a function of ageing, for example, dementia. On the other hand, it is not clear whether depression is age-related or, for example, a function of contingently age-related factors such as loneliness. Given that mental health and wellbeing are central to human capabilities, to living a good life, they should feature in the assessment. But judgement of the extent to which age-based differences are inequalities should be cautious and nuanced. As we say above in Chapter three, where there is doubt as to whether an inequality is natural or not we should err on the side of saying it is not and seeking ways to remedy it.

Perception of treatment with dignity is a good indicator of inequality; there is no acceptable reason for this to be lower for older people. But it is limited insofar as it is subjective. Those older people who are unable to state a view, for example, the severely demented, will not be covered by the indicator; and yet this is the group most in danger of insults to dignity, such as undue restraint. For this reason, we suggest that additional indicators of dignity are sought. One such indicator might be a measure of use of restraint in care-homes, hospitals and private homes.

A&E attendance and accidents as markers of inequality have similar problems to the accident mortality rate. Age might inevitably increase our vulnerability

to accidents; on the other hand, changes in the environment might reduce or increase this vulnerability.

Support for nutritional needs during hospital stays is a good marker for inequality. Its value lies partly in that nutrition is central to good human functioning and partly in its objectivity; we can say whether or not nutritional needs are met for people who lack capacity. This makes it a valuable addition to the treatment-with-dignity marker. Its usefulness is limited by its applying to hospital stays; but perhaps this is something that could be extended.

Healthy lifestyle may be a reasonable indicator in some respects; lifestyle can affect the health and wellbeing of older people for good or ill. However when we use lifestyle indicators as a comparator between older and younger people, we need to consider what they are telling us. One difficulty here is the extent to which changes in lifestyle seem less worthwhile for some older people. For example, an 80-year-old smoker might rightly be disinclined to stop now. Another is that differences between age groups may simply reflect healthy lifestyle choices prior to the onset of old age. For example, the proportion of non smokers will increase with increasing age because smoking increases the chances of dying at younger ages.

### 5.3 Life: main indicators

#### 5.3.1 Period life expectancy at birth, ages 20, 65 and 80

Life expectancy at birth and age 20 is irrelevant to this strand.

The number of further years someone reaching age 65 in 2006–08 could expect to live – life expectancy at age 65 - is higher for women than for men. Based on 2006–08 mortality rates for the UK as a whole, a man aged 65 could expect to live a further 17.4 years, and a woman aged 65 another 20.0 years. As with life expectancy at other ages, life expectancy at age 65 is also higher for England than for the other countries of the UK, and the female advantage can be seen across all three countries. However, in recent decades the increase in life expectancy among older adults in the UK has been dramatic and the gap between men and women has declined. For example, Office for National Statistics data show that life expectancy for men aged 65 increased by over 4 years between 1981 and 2007.

Table 1 Life expectancy at age 65, 2006-08

	<i>Years</i>		
	Males	Females	Difference
UK	17.4	20.0	2.6
England	17.5	20.2	2.7
Wales	17.1	19.8	2.7
Scotland	16.2	18.8	2.6

Source: ONS,  
[<http://www.statistics.gov.uk/cci/nugget.asp?ID=168>]

Source: Office for National Statistics

The trend towards greater life expectancy in recent years also extends to the oldest adults. Among individuals aged 80 in 2006-08, men could expect to live a further 7.8 years and women a further 9.2 years, compared to 5.8 and 7.5 expected additional years in 1980-02. Though women continue to have an advantage, the gap is, unsurprisingly, smaller.

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**Table 2 Life expectancy at age 80, 2006-8**

	Males	Females	Difference
UK	7.8	9.2	1.4
England	7.9	9.2	1.3
Wales	7.7	9.1	1.4
Scotland*	7.3	8.6	1.3

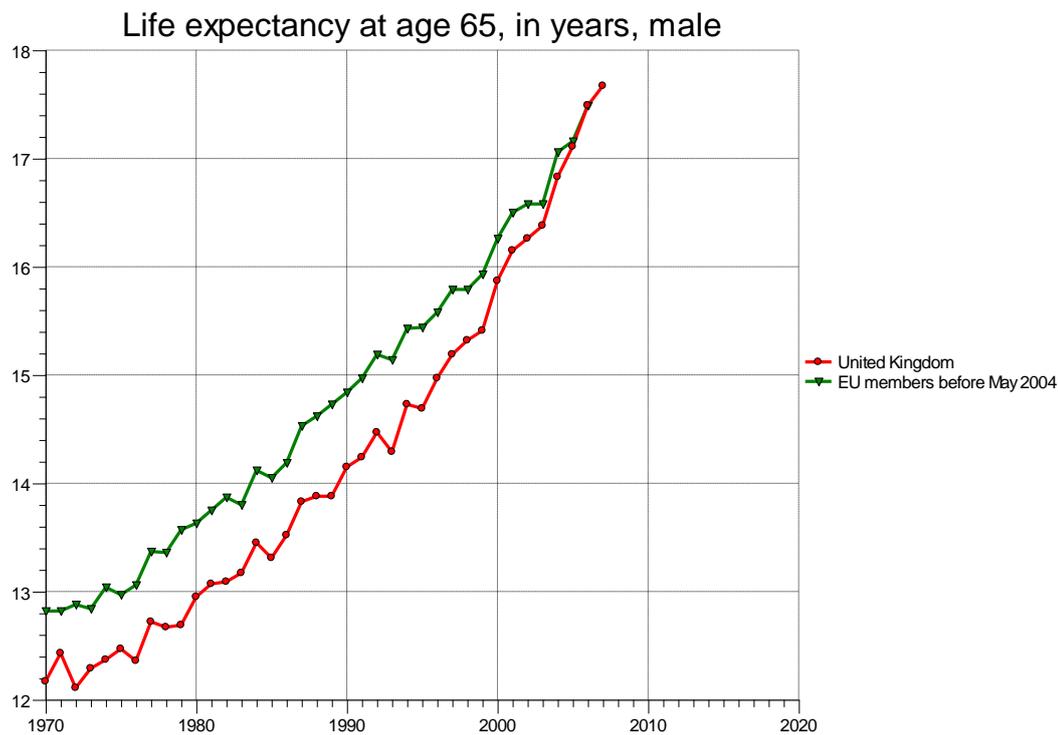
\*Figures for Scotland in the table above refer to 3-year period 2005-7.

Source: Office for National Statistics: <http://www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=9551>

To give an idea of how older people in the UK are faring it is worthwhile comparing life expectancy at age 65 in the UK with that of the established EU members (i.e. the more prosperous ones).

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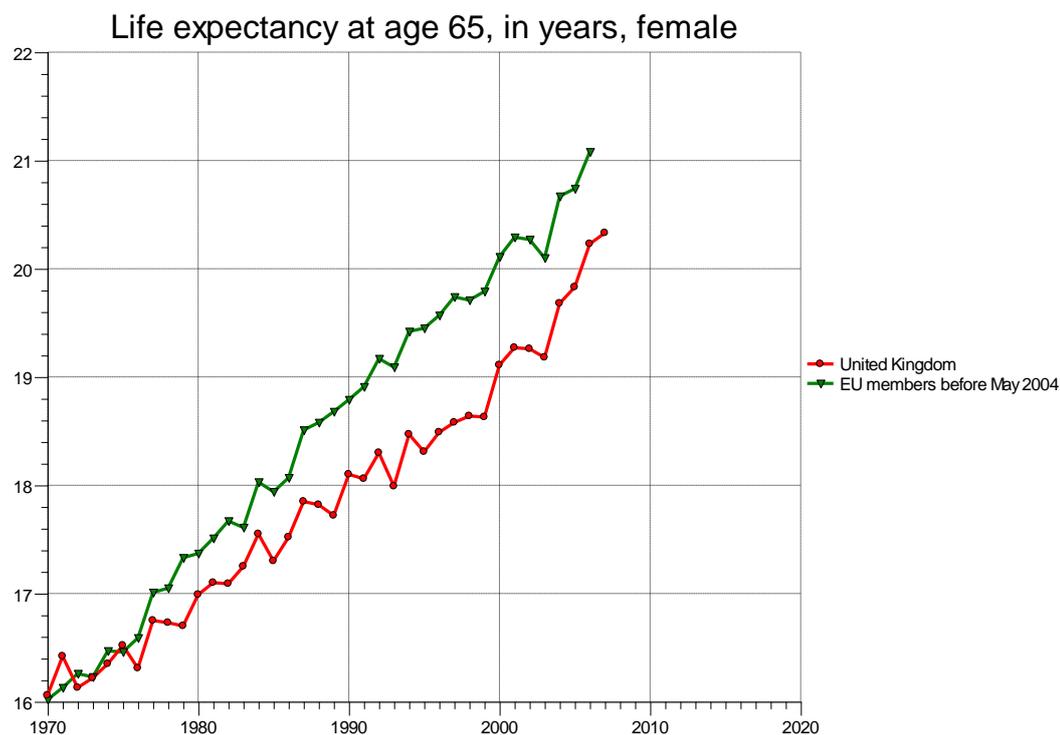
Figure 1 Life expectancy at age 65 in years, male, UK and EU15 members



Source: European Health for All (HfA) database, 2009

The graph shows life expectancy has increased steadily for both groups since 1970 and that the United Kingdom has caught up with EU members. Life expectancy for established EU members and the UK at age 65 for males is around 17 years.

Figure 2 Life expectancy at age 65 in years, female, UK and EU15 members



Source: European Health for All (HfA) database, 2009

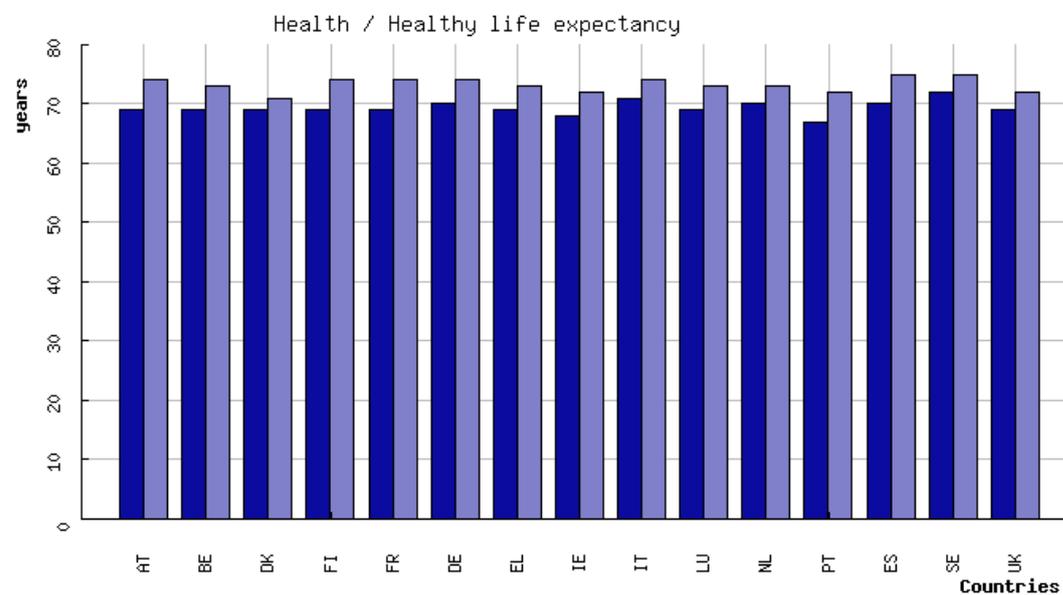
The picture for women is slightly different. Whilst both sets of women have improved life expectancy since 1970, a gap has opened up; women in the UK have a slightly shorter life expectancy than women in established EU countries.

Another useful comparison is with healthy life expectancy between the UK and EU15 countries.

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Figure 3 Healthy Life Expectancy by gender across the EU15 countries

(2002)



Countries	2002	
	m	w
AT	69	74
BE	69	73
DK	69	71
FI	69	74
FR	69	74
DE	70	74
EL	69	73
IE	68	72
IT	71	74
LU	69	73
NL	70	73
PT	67	72
ES	70	75
SE	72	75
UK	69	72

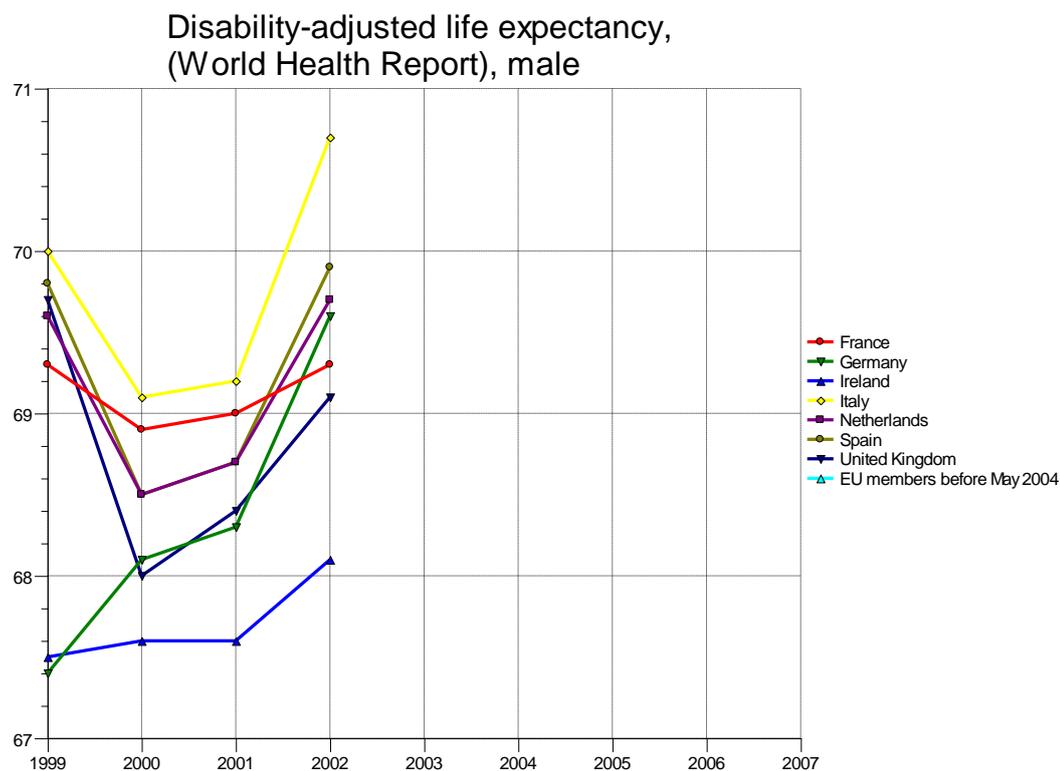
Source: World Health Organisation, via <http://www.eurofound.europa.eu/index.htm>

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The graph and table above show healthy life expectancy across the EU15 countries; the UK fares slightly worse than average in comparison here.

However, these figures need to be read with some caution as methods of data collection are inconsistent across nations.

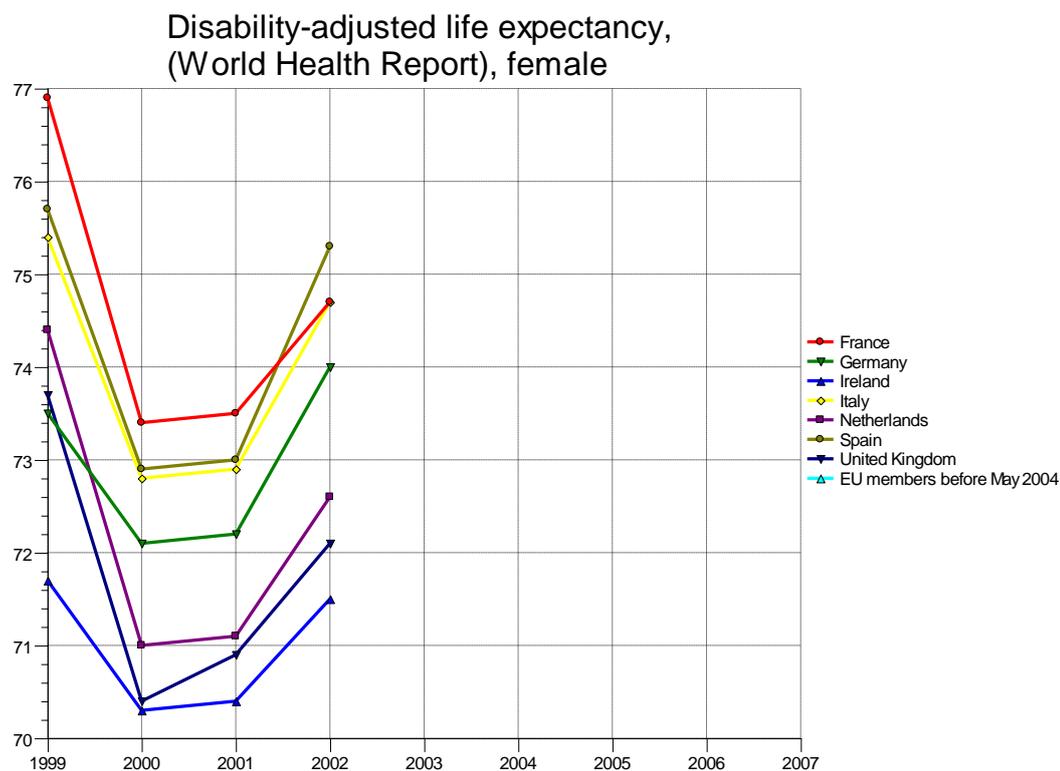
Figure 4 Disability-adjusted life expectancy in various EU countries, male



Source: European Health for All (HfA) database, 2009

Reading the graph from the top down, disability-adjusted life expectancy for men in selected European countries in 2002 was: Italy (70.7 DALY-years), Spain (69.9), Netherlands (69.7), Germany (69.6), France (69.3), United Kingdom (69.1), and Ireland (68.1). The DALY is not the same as healthy life expectancy but is related; it is the number of years someone would expect to live free of disability. The graph shows that the UK does not fare particularly well in this respect.

Figure 5 Disability-adjusted life expectancy in various EU countries, female



Source: European Health for All (HfA) database, 2009

For women, the order is different, running Spain (75.3), France and Italy (74.7), Germany (74), Netherlands (72.6), United Kingdom (72.1), and Ireland (71.5). Women in general have more DALYs than men but, again, the UK does not fare particularly well.

**5.3.1a Cause specific mortality**

All-ages mortality for those over 65 years for E, W and S is presented below.

Table 3 Cause-specific death rates by age-group and sex, 2008 (deaths per million population, England and Wales)

	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
Cancers								
men	44	84	246	970	3,508	9,062	18,772	30,390
women	28	106	370	1,111	2,957	6,245	11,693	17,321
Circulatory disease								
men	26	89	318	1,021	2,570	7,075	22,180	60,345
women	16	42	126	360	980	3,587	15,515	56,112
Heart disease								
men	18	59	246	813	2,036	5,159	14,663	38,711
women	9	23	71	210	641	2,347	9,096	32,193
Cerebrovascular diseases								
men	6	18	46	134	336	1,168	5,290	17,140
women	4	13	40	109	243	849	4,933	20,035
Diabetes Mellitus								
men	3	10	15	30	76	239	742	1,846
women	2	5	8	25	36	157	533	1,593
Accidents								
men	213	224	217	210	197	267	817	2,994
women	60	52	63	80	87	157	707	3,103
Assault and injury/poisoning undetermined intent								
men	39	31	29	19	14	8	4	5
women	10	13	9	8	4	6	10	9
Suicide and event undetermined								
men	97	171	222	189	152	109	125	172
women	25	51	52	66	50	42	48	39
Vascular and unspecified dementia								
men	-	-	-	1	17	153	1,330	6,707
women	-	-	-	1	13	145	1,592	10,592

Source: Office for National Statistics 2008

## Scotland

Table 4 Cause-specific death rates by age-group and sex, 2008 (deaths per million population, Scotland)

<b>Males</b>	<b>All ages</b>	<b>0-14</b>	<b>15-34</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
All cancers	7,729	9	39	111	433	1,319	2,370	3,448
Trachea, bronchus and lung	2,114	-	1	11	98	400	726	878
Bowel	839	-	1	16	50	139	262	371
Breast	7	-	-	1	-	1	2	3
Lymphoid, haematopoietic etc	539	3	15	8	28	75	167	243
Urinary tract	525	-	1	6	22	74	149	273
Oesophagus	520	-	-	11	44	115	172	178
Prostate	792	-	-	-	8	62	189	533
Pancreas	319	-	-	5	23	64	99	128
Stomach	300	-	-	5	16	49	80	150
Other cancers (e.g. bladder, liver)	1,774	6	21	48	144	340	524	691
Ischaemic heart disease	4,852	-	13	85	313	739	1,225	2,477
Respiratory system diseases	3,276	7	13	18	70	255	664	2,249
Cerebrovascular disease	2,051	1	9	30	82	153	392	1,384
Mental + behavioural disorders	1,335	-	188	158	98	86	112	693
Diseases of the digestive system	1,531	-	22	106	258	324	323	498
Diseases of the nervous system	717	10	35	25	49	78	155	365
Diseases of the genitourinary system	511	-	-	4	6	27	83	391
Accidents	696	16	148	67	89	81	76	219
Endocrine, nutritional and metabolic diseases	498	7	20	16	34	68	122	231
Certain infectious and parasitic diseases	380	4	7	13	31	34	57	234
<b>Females</b>	<b>All ages</b>	<b>0-14</b>	<b>15-34</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
All cancers	7,540	10	40	156	444	1,072	1,921	3,897
Trachea, bronchus and lung	1,966	-	3	11	99	306	625	922
Bowel	746	-	2	13	35	98	188	410
Breast	1,043	-	4	60	113	178	215	473
Lymphoid, haematopoietic etc	463	1	5	10	11	46	112	278
Urinary tract	350	-	-	4	12	34	88	212
Oesophagus	311	-	-	2	17	34	69	189
Pancreas	323	-	-	5	18	44	82	174
Stomach	211	-	-	4	11	16	49	131
Other cancers (e.g. bladder, liver, ovary)	2,127	9	26	47	128	316	493	1,108
Ischaemic heart disease	3,989	-	1	30	86	232	609	3,031
Respiratory system diseases	4,167	6	12	23	57	246	565	3,258
Cerebrovascular disease	3,316	2	6	19	49	122	313	2,805
Mental + behavioural disorders	2,027	-	50	40	36	37	77	1,787
Diseases of the digestive system	1,588	2	18	72	145	216	250	885
Diseases of the nervous system	896	11	27	19	37	69	141	592
Diseases of the genitourinary system	768	-	3	5	7	21	88	644
Accidents	565	7	31	13	33	33	39	409
Endocrine, nutritional and metabolic diseases	493	5	8	10	36	44	90	300
Certain infectious and parasitic diseases	556	3	9	16	11	18	90	409

<sup>1</sup> The causes are listed in descending order of their total numbers of deaths.

Source: Office for National Statistics 2008

In the 65 -74 year old, cancer is the major cause of death for men and women in England, Wales and Scotland. With increasing age, the death rate as a result of cardiovascular disease (CVD) increases such that it is the major

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cause of death in those aged 75+ in all three countries of interest. Death rates as a consequence of dementia increase rapidly with increasing age.

### 5.3.2 Cardiovascular disease mortality

The relevant figures for circulatory, cardiovascular and cerebrovascular disease by age-group and sex in those aged over 65 (deaths per million, England and Wales) are shown in the tables below.

Table 5 Deaths due to circulatory disease, heart disease and cerebrovascular disease in men and women, England and Wales 2008

	65-74	75-84	85+
<b>Circulatory disease</b>			
men	7,075	22,180	60,345
women	3,587	15,515	56,112
<b>Heart disease</b>			
men	5,159	14,663	38,711
women	2,347	9,096	32,193
<b>Cerebrovascular diseases</b>			
men	1,168	5,290	17,140
women	849	4,933	20,035

Source: Office for National Statistics, 2008

And for Scotland the relevant figures for cardiovascular and cerebrovascular disease by age-group and sex in those aged over 65 (deaths per 100,000) are:

**Table 6 Deaths due to circulatory disease, heart disease and cerebrovascular disease in men and women, Scotland 2008**

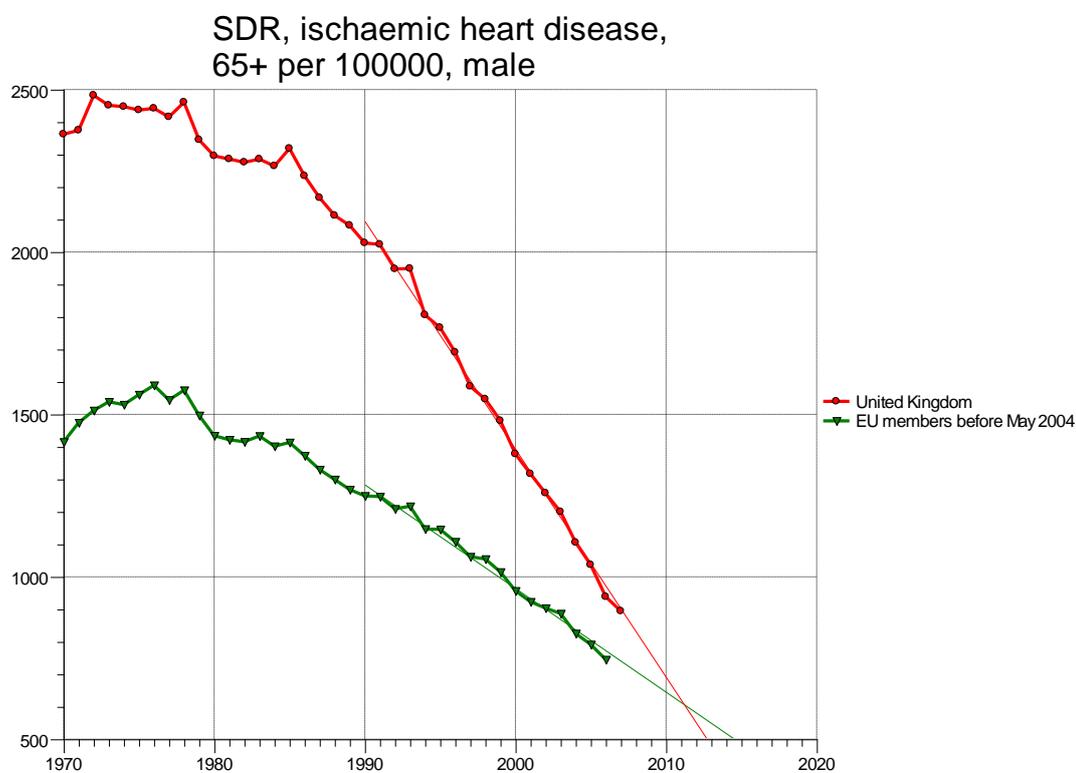
	65-74 years	75 + years
Ischaemic heart disease		
Men	1,225	2,477
Women	609	3,031
Cerebrovascular disease		
Men	392	1,384
Women	313	2805

Source: Office for National Statistics, 2008

The two tables above illustrate the patterns of ischaemic heart disease and cerebrovascular disease across the age range. They demonstrate that death rates as a result of both cardiovascular diseases increase rapidly after age 65 and continue to rise steadily with increasing age. The differential rates between men and women are maintained throughout the lifespan. The higher rates in Scotland as compared to England and Wales also persist across all ages. Death rates from CVD rise sharply in those aged over 65 with a second sharp increase in those aged over 75 years. The rate of increase in the older age group is greater in women than men in all three countries of interest.

The comparison with Europe is as follows:

Figure 6 Mortality due to ischaemic heart disease, 65 and over, male, UK and EU15 members

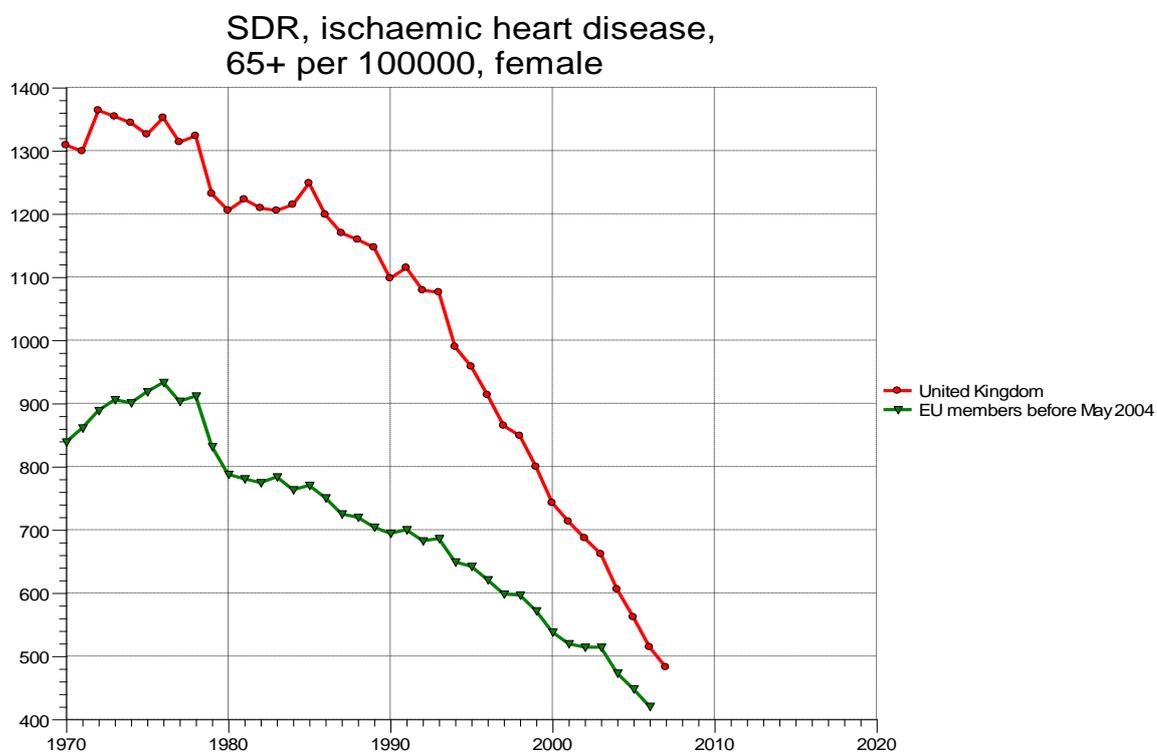


Source: European Health for All (HfA) database, 2009

The graph above shows that the death rate through ischaemic heart disease is declining rapidly in the UK and EU15, and that the UK death rate is declining more rapidly. It is still slightly higher than the EU15

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Figure 7 Mortality due to ischaemic heart disease at age 65 years, female, UK and EU15 members



Source: European Health for All (HfA) database, 2009

The graph above shows a similar picture for women as for men; death due to ischaemic heart disease is declining rapidly.

**5.3.3 Cancer mortality****Table 7 Cancer death rates by age-group and sex, 2008 (deaths per million population, England and Wales)**

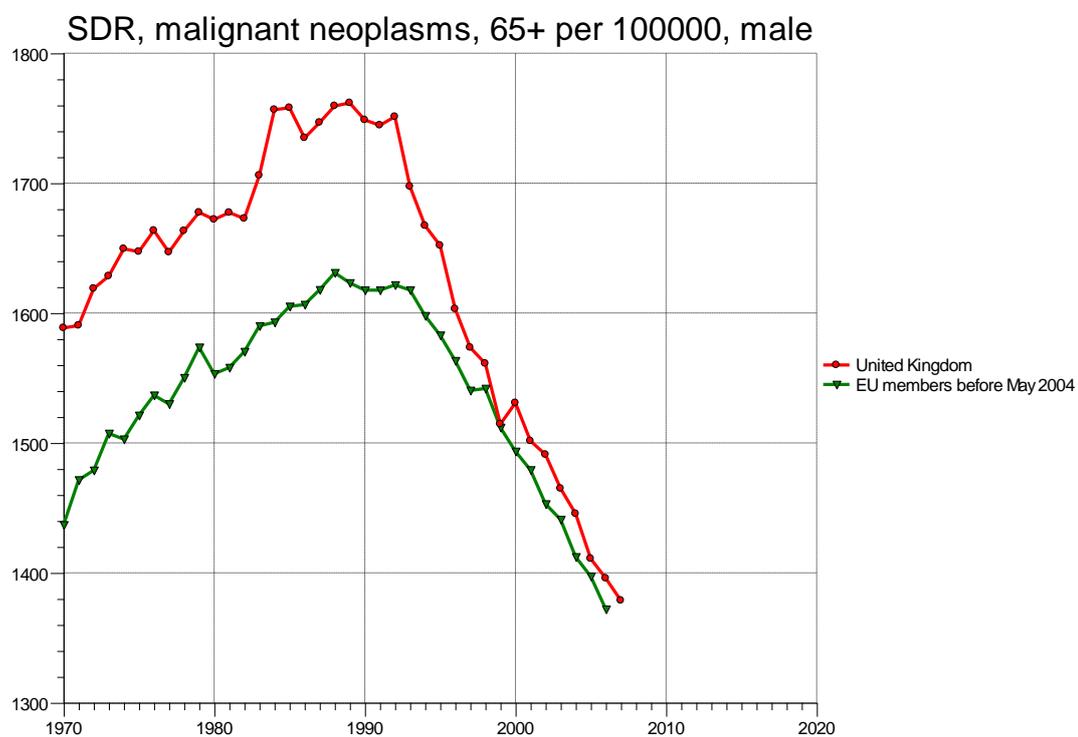
<b>Males</b>	<b>All ages</b>	<b>0-14</b>	<b>15-34</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
All cancers (C00-97)	7,729	9	39	111	433	1,319	2,370	3,448
Trachea, bronchus and lung (C33-34)	2,114	-	1	11	98	400	726	878
Bowel (C18-21)	839	-	1	16	50	139	262	371
Breast (C50)	7	-	-	1	-	1	2	3
Lymphoid, haematopoietic etc (C81-96)	539	3	15	8	28	75	167	243
Urinary tract (C64-68)	525	-	1	6	22	74	149	273
Oesophagus (C15)	520	-	-	11	44	115	172	178
Prostate (C61)	792	-	-	-	8	62	189	533
Pancreas (C25)	319	-	-	5	23	64	99	128
Stomach (C16)	300	-	-	5	16	49	80	150
Other cancers (e.g. bladder, liver)	1,774	6	21	48	144	340	524	691
<b>Females</b>	<b>All ages</b>	<b>0-14</b>	<b>15-34</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>
All cancers (C00-97)	7,540	10	40	156	444	1,072	1,921	3,897
Trachea, bronchus and lung (C33-34)	1,966	-	3	11	99	306	625	922
Bowel (C18-21)	746	-	2	13	35	98	188	410
Breast (C50)	1,043	-	4	60	113	178	215	473
Lymphoid, haematopoietic etc (C81-96)	463	1	5	10	11	46	112	278
Urinary tract (C64-68)	350	-	-	4	12	34	88	212
Oesophagus (C15)	311	-	-	2	17	34	69	189
Pancreas (C25)	323	-	-	5	18	44	82	174
Stomach (C16)	211	-	-	4	11	16	49	131
Other cancers (e.g. bladder, liver, ovary)	2,127	9	26	47	128	316	493	1108

Source: Office for National Statistics - note that figures in brackets refer the International Classification of Disease Codes

Age is the most important factor in the risk of most cancers including those which are the major causes of death. These figures can be disaggregated by some other strands; where that is possible, we have put the results in the relevant chapter. However, a comparison with Europe is interesting.

Figure 8 Mortality due to cancer at age 65 + years, male, UK and EU15

members

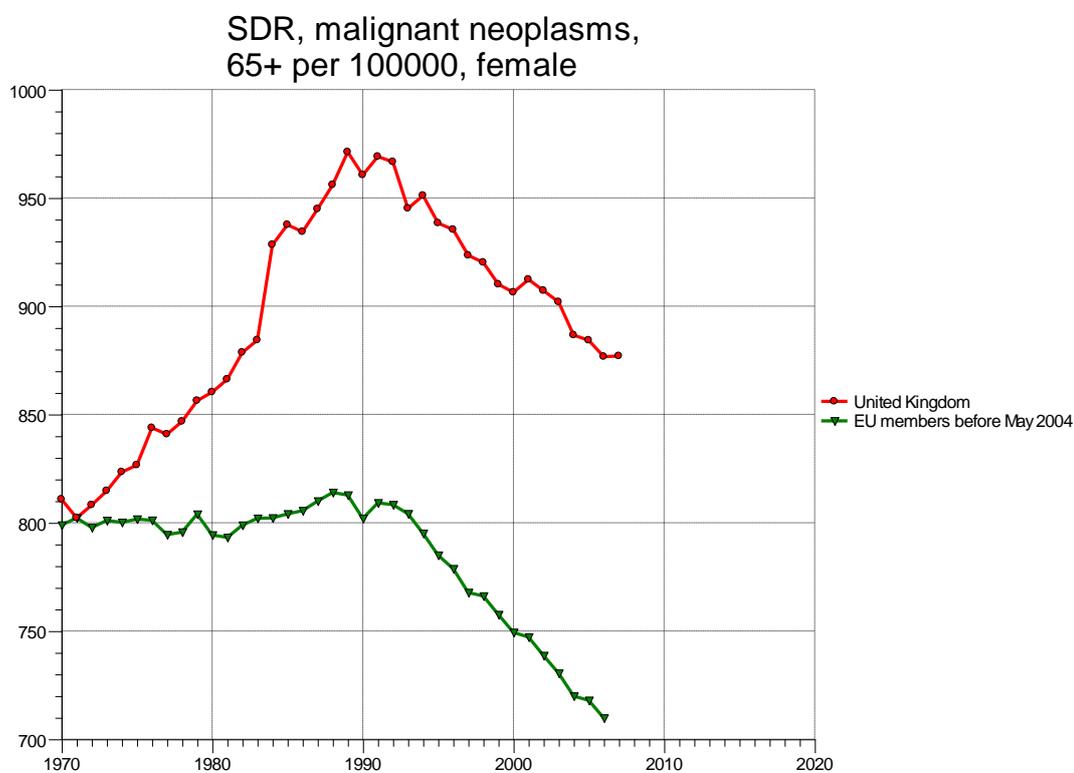


Source: European Health for All (HfA) database, 2009

The graph above shows that the figure for men is similar between the UK and EU15 and that both are declining.

Figure 9 Mortality due to cancer at age 65 + years, male, UK and EU15

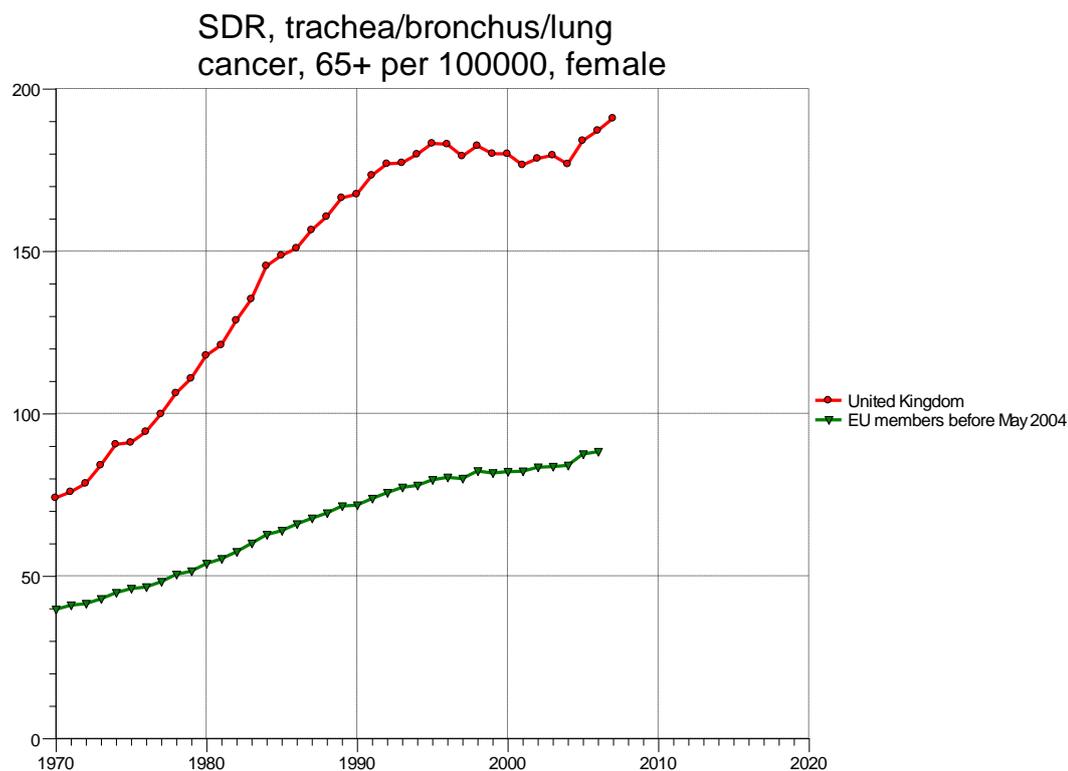
members



Source: European Health for All (HfA) database, 2009

The picture for women is different. Women over 65 in EU15 and the UK have a lower death rate than men. However, there is a large and statistically significant gap that has opened up between UK and EU15 women. This difference is largely down to a difference in mortality due to lung cancers, as the following graph illustrates.

Figure 10 Mortality due to lung and related cancers at age 65 + years, female, UK and EU15 members

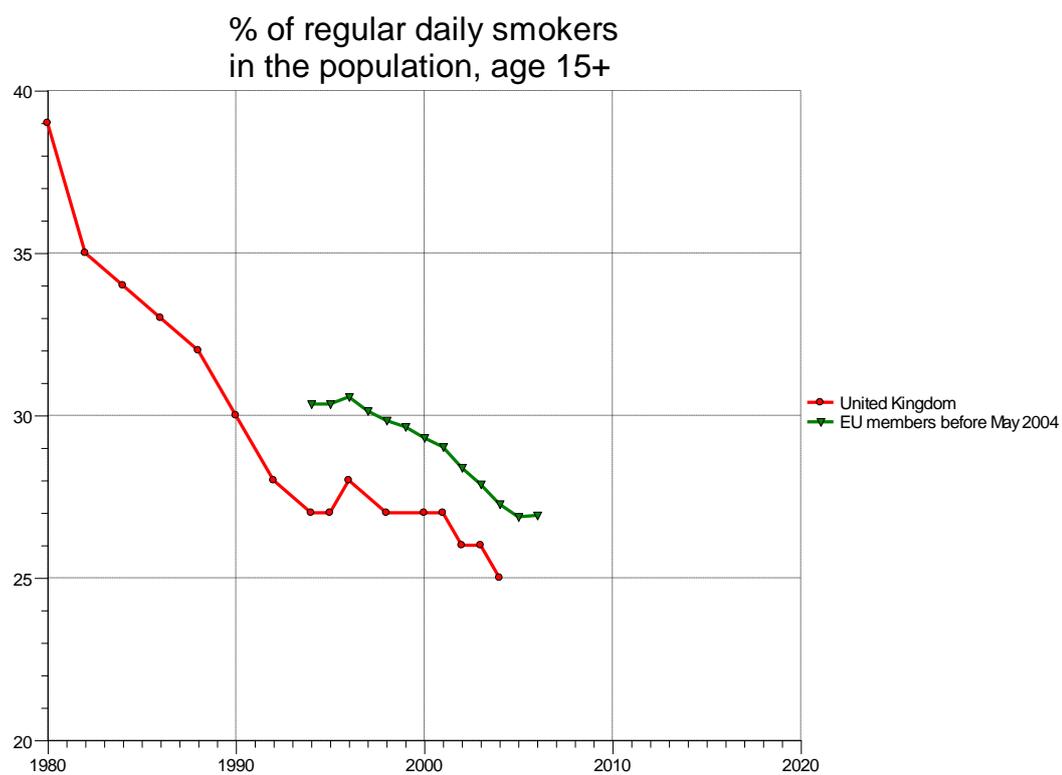


Source: European Health for All (HfA) database, 2009

This is an interesting inequality. We could not find comparative data on smoking for these particular groups but other data comparing smokers over 15, for example, suggest that smoking is not disproportionately high in the UK compared to other EU15 countries. This is shown in the graph below. As such, this inequality calls for further study.

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Figure 11 % of regular smokers in the population UK and EU15 members



Source: European Health for All (HfA) database, 2009

### 5.3.4 Suicide rates/risk

Table 8 Age specific suicide death rates, 2008 (deaths per million population, England and Wales)

	65-74	75-84	85+
Suicide and event undetermined (X60-X84, Y10-Y34)			
men	109	125	172
women	42	48	39

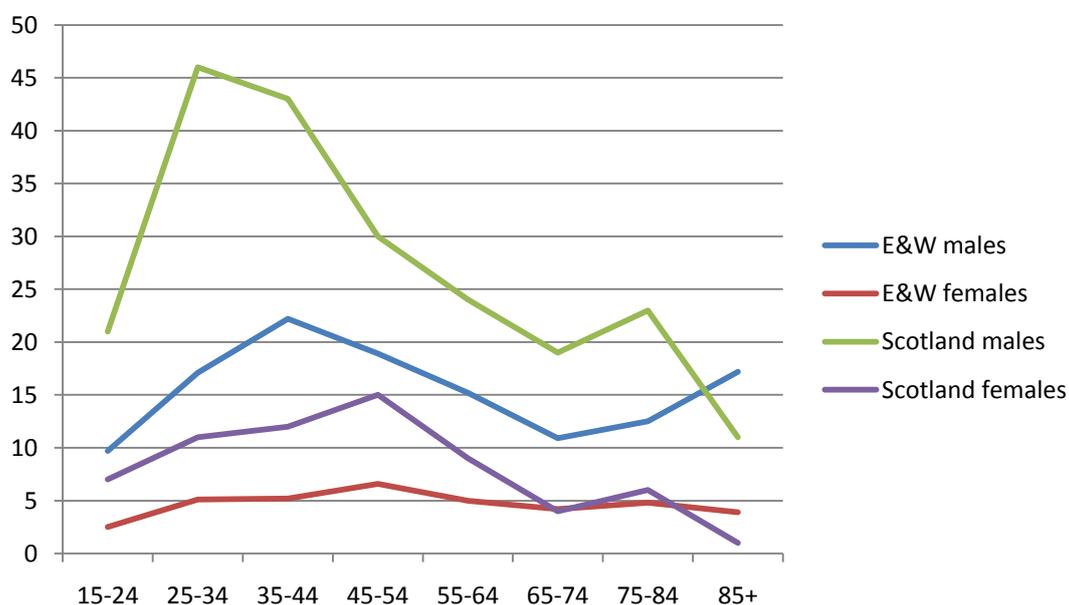
Source: Office for National Statistics

Table 9 Age specific suicide death rates, 2008 (deaths per 100,000 population, Scotland)

	65-74	75-84	85+
Suicide and event undetermined			
Men	19	23	11
Women	4	6	1

Source: Office for National Statistics

Figure 12 Age-specific suicide rates (deaths per 100,000 population) by sex  
2008 England & Wales and Scotland



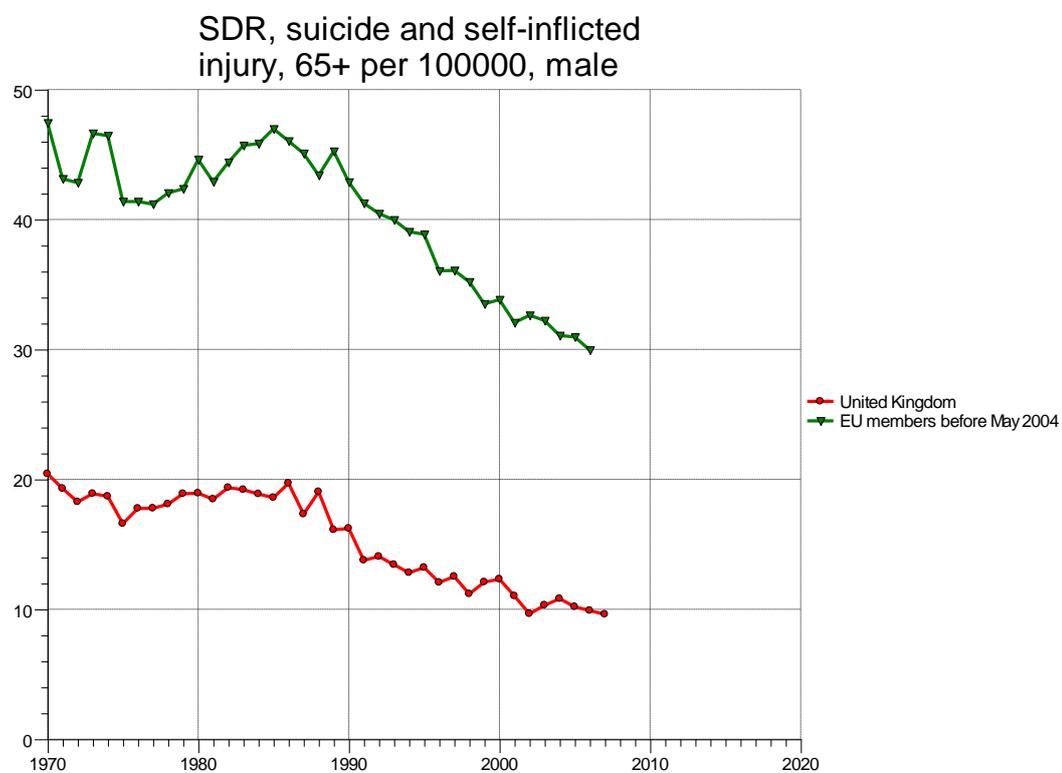
Source: Office for National Statistics

The graph above shows that the rate of suicide decreases in women as they age but increases in men. Middle-age is the peak for both groups but the rate for men is higher throughout the lifespan. We note that there is a marked increase in the suicide rate for those aged 65-74 both men and women. This subsequently falls in those aged 85+ with the exception of males in England & Wales who experience an increased rate throughout later age. It seems that the gender inequality is perhaps of greater concern than the age inequality here.

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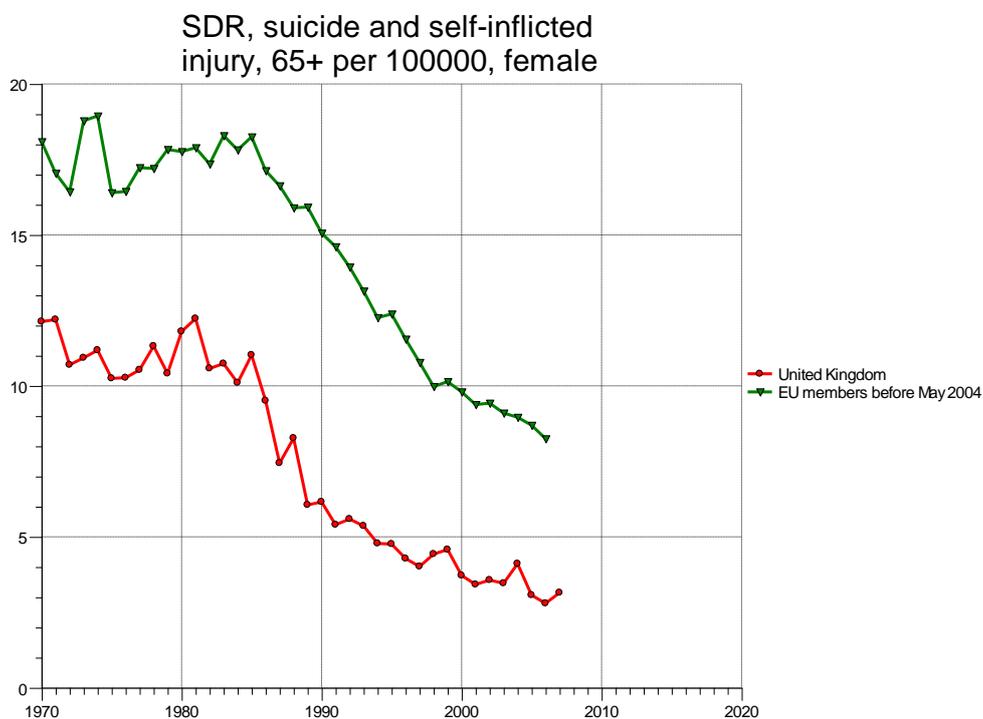
Figure 13 Suicide Death Rate at age 65 + years, male, UK and EU15

members



Source: European Health for All (HfA) database, 2009

Figure 14 Suicide Death Rate at age 65 + years, female, UK and EU15 members



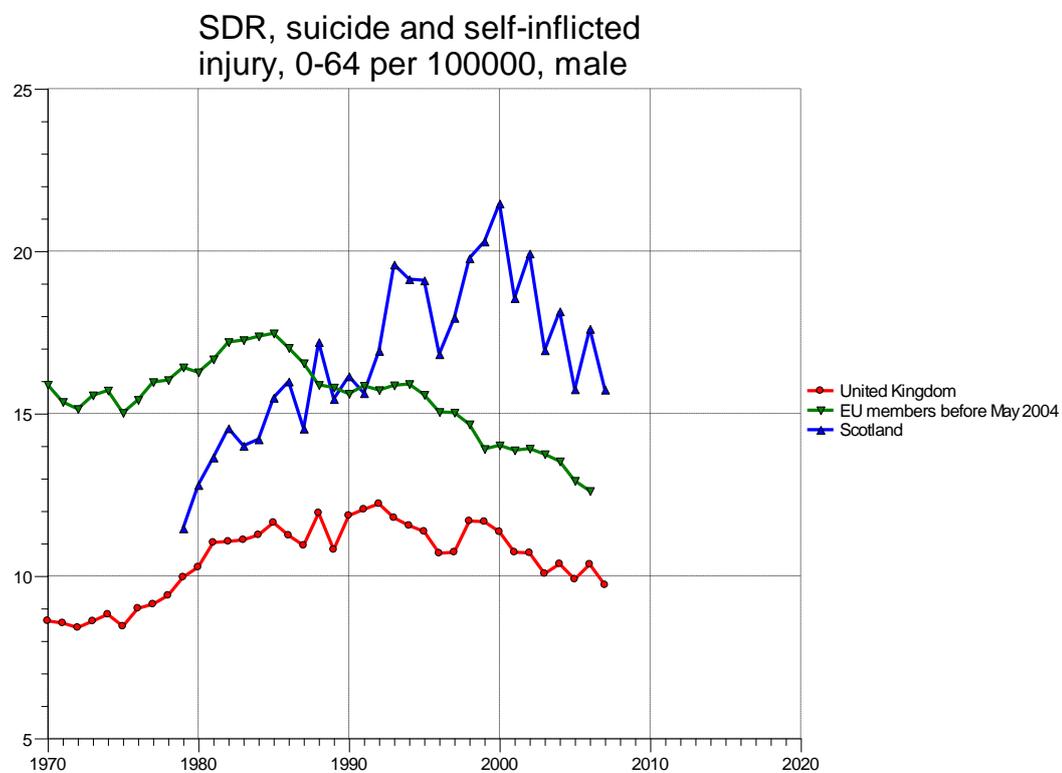
Source: European Health for All (HfA) database, 2009

The two graphs above illustrate that the UK has a lower rate of suicide for both men and women than do EU15 countries. Although Scotland has a high rate of suicide in men aged up to 64, that difference disappears after 65, as the following two graphs illustrate.

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Figure 15 Suicide Death Rate ages 0-64, male, Scotland, UK and EU15

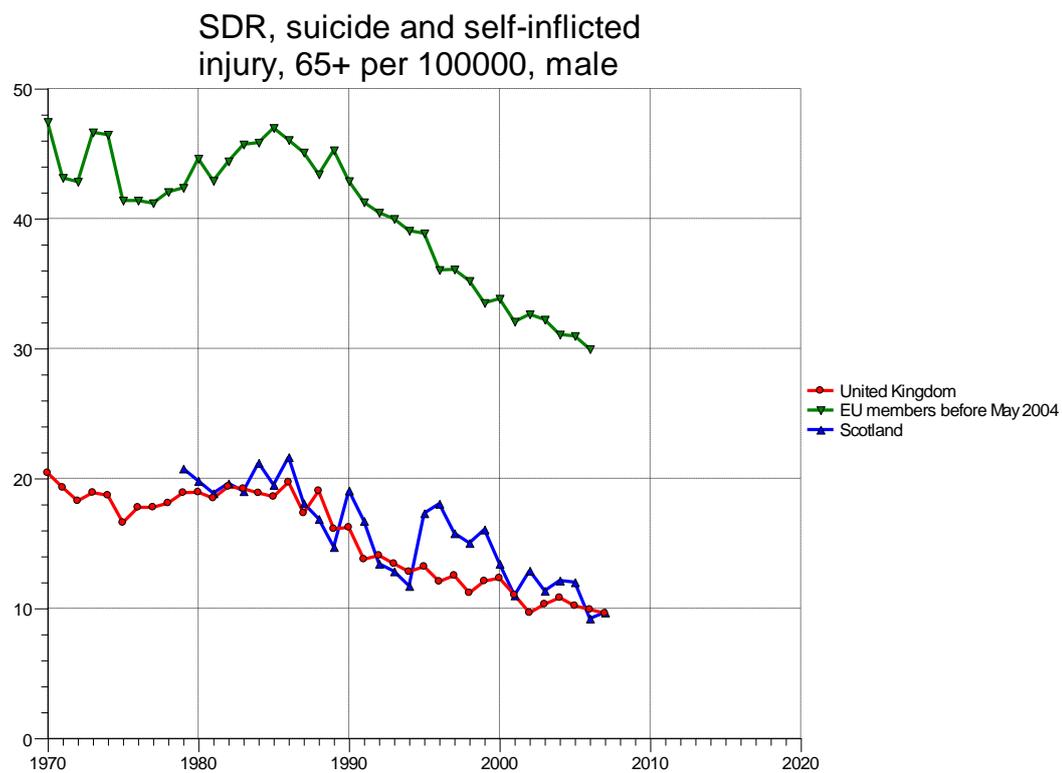
members



<http://www.eurofound.europa.eu/index.htm>

Figure 16 Suicide Death Rate ages 65+ male, Scotland, UK and EU15

members



<http://www.eurofound.europa.eu/index.htm>

**5.3.5 Accident mortality rate**

Table 10 Age specific accident mortality rates, 2008 (deaths per million population, England and Wales)

	65-74	75-84	85+
Accidents (V01-X59)			
men	267	817	2,994
women	157	707	3,103

Source: Office for National Statistics

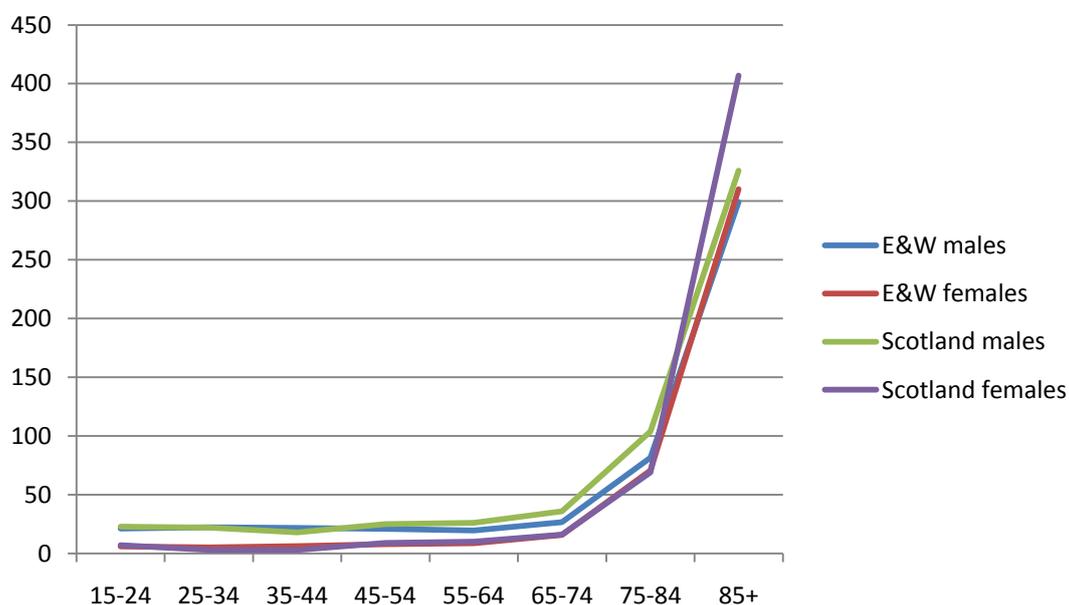
Table 11 Age specific accident mortality rates, 2008 (deaths per 100,000 population, Scotland)

	65-74	75-84	85+
Men	36	104	326
Women	16	69	407

Source: Office for National Statistics

The tables above illustrate the age-specific accident mortality rates in 2008 for England and Wales, and Scotland. The accident rate at age 65-74 is not a great deal higher than throughout the rest of the lifespan (see Table 3) but increases substantially after that and is notably high for the 85+ age group. This would seem to be a major inequality of concern. It is illustrated also by the graph below, which is drawn from these figures.

Figure 17 Age-specific accident death rates (deaths per 100,000 population) by sex 2008 England & Wales and Scotland

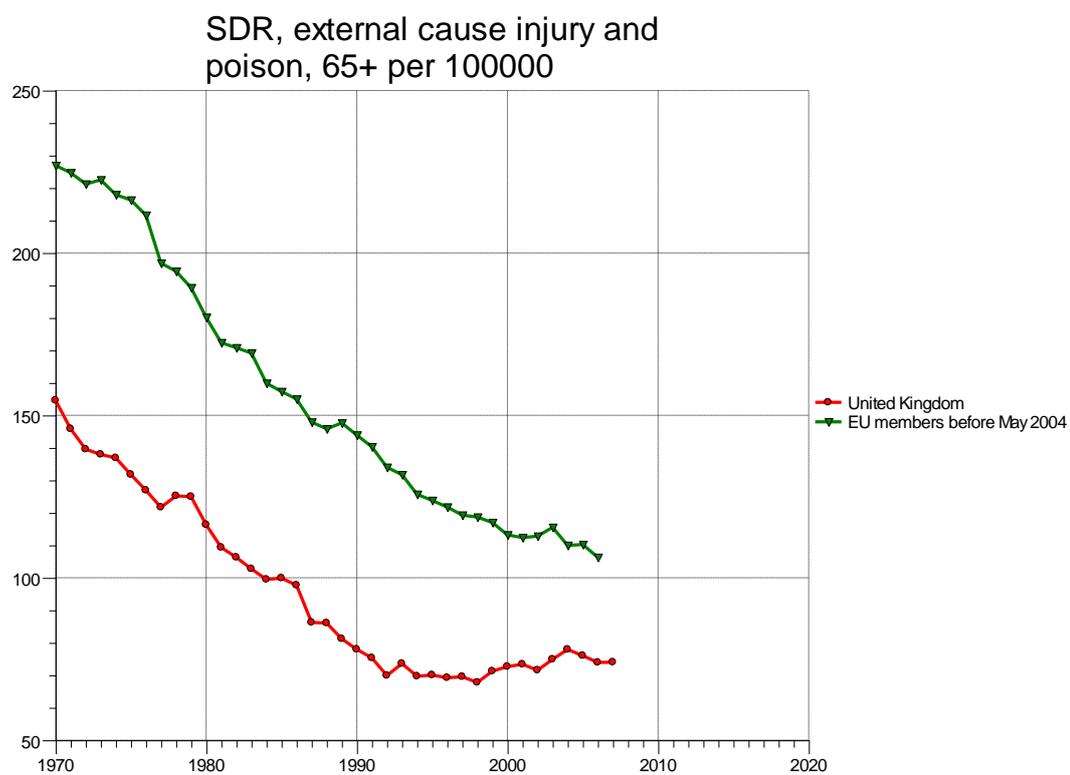


Source: Office for National Statistics

The graph above demonstrates the impact that age has on accident mortality rate. The rising accidental death rate for both men and women as they age is striking in England & Wales and in Scotland. Rising from a fairly constant overall rate throughout adult life, accidents account for a rapidly increasing number of deaths in older adults with an approximate threefold increase in the rate of increase in each of the age bands for which data are collected.

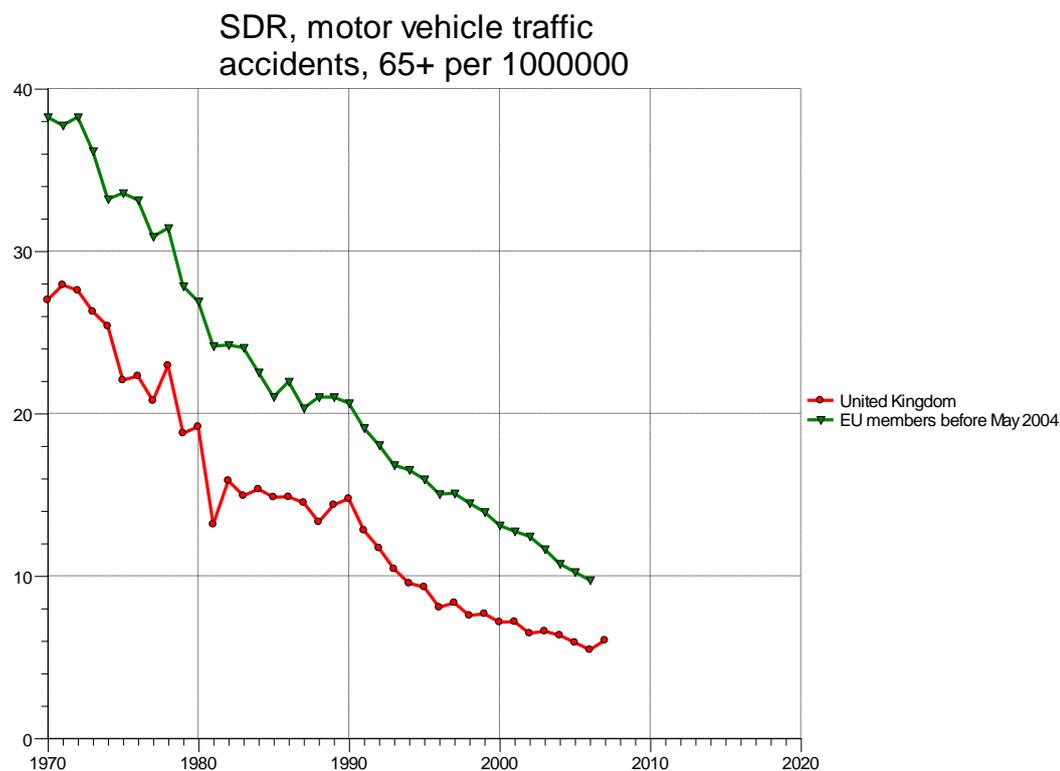
We found no directly equivalent data from the EU Health for All database. However, the following two graphs are relevant.

Figure 18 Death due to external cause and injury at age 65 + years, UK and EU15 members



Source: European Health for All (HfA) database, 2009

Figure 19 Death due to road traffic accidents, 65+, UK and EU15 members



Source: European Health for All (HfA) database, 2009

The two graphs above show that the UK has a slightly lower rate than EU15 countries of accidental death and death due to road traffic accident. In terms of our key concern, accidents in the over-85 age group this tells us little but perhaps indicates that the UK is unlikely to be worse than other EU countries in this respect.

### *5.3.6 Deaths from non-natural causes for people resident in health or social care establishments*

The terms unnatural death, death by natural causes and non-natural death are not defined by statute. As such, they are not captured on death certificates. However, presumably the sense behind the idea of non-natural death is that it is avoidable, perhaps the result of accident or mishap. Older people constitute a high proportion of those resident in health or social care establishments. Non-natural causes of death are a concern as they represent deaths that are often thought to be avoidable, such as through falls, accidental poisoning and accidental exposure.

A statutory category of death that might work as a proxy for death from non-natural causes is 'External causes of morbidity and mortality'. In the ICD-10 categorisation this is sub-categorised in the following way:

#### V01-Y98 - External causes of morbidity and mortality

1.1 (V01-X59) Accidents

1.2 (X60-X84) Intentional self-harm

1.3 (X85-Y09) Assault

1.4 (Y10-Y34) Event of undetermined intent

1.5 (Y35-Y36) Legal intervention and operations of war

1.6 (Y40-Y84) Complications of medical and surgical care

1.6.1 (Y40-Y59) Drugs, medicaments and biological substances causing adverse effects in therapeutic use

1.6.2 (Y60-Y69) Misadventures to patients during surgical and medical care

1.6.3 (Y70-Y82) Medical devices associated with adverse incidents in diagnostic and therapeutic use

1.6.4 (Y83-Y84) Surgical and other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

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1.7 (Y85-Y89) Sequelae of external causes of morbidity and mortality

1.8 (Y90-Y98) Supplementary factors related to causes of morbidity and mortality classified elsewhere

Of these causes, accidents and intentional self-harm are covered elsewhere in this chapter. However, we were unable to get a specific breakdown of external causes by place of death. Instead, we obtained the following more generic table.

Table 12 External causes of mortality and morbidity by age and place of birth

ICD-10 code	Underlying cause (ICD chapter) and age	Total deaths		Hospitals and communal establishments for the care of the sick (excluding psychiatric hospitals and hospices)				Hospices		Psychiatric hospitals				Other communal establishments		At home		In other private houses and other places	
				NHS		Other than NHS		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<b>U509, V01-Y89</b>	<b>XX External causes of morbidity and mortality</b>																		
	<b>All ages, 28 days and over</b>	<b>11,023</b>	<b>7,025</b>	<b>4,655</b>	<b>4,376</b>	<b>130</b>	<b>242</b>	<b>8</b>	<b>8</b>	<b>17</b>	<b>11</b>	<b>6</b>	<b>20</b>	<b>118</b>	<b>243</b>	<b>2,991</b>	<b>1,395</b>	<b>3,098</b>	<b>730</b>
	28 days - 4 years	78	60	67	47	1	-	-	1	-	-	-	-	-	-	5	6	5	6
	5 - 14	94	58	60	38	-	-	-	1	-	-	-	-	-	-	10	10	24	9
	15-44	4,733	1,252	1,271	352	4	1	1	-	8	3	-	1	37	7	1,383	512	2,029	376
	45-64	2,695	1,070	803	399	14	4	2	1	4	2	2	-	14	1	1,047	459	809	204
	65-74	879	527	479	319	12	10	1	1	-	1	3	-	6	7	245	133	133	56
	75-84	1,287	1,406	952	1,103	39	43	2	2	3	3	-	3	20	37	203	160	68	55
	85 and over	1,257	2,652	1,023	2,118	60	184	2	2	2	2	1	16	41	191	98	115	30	24

Source: Office for National Statistics, 2009

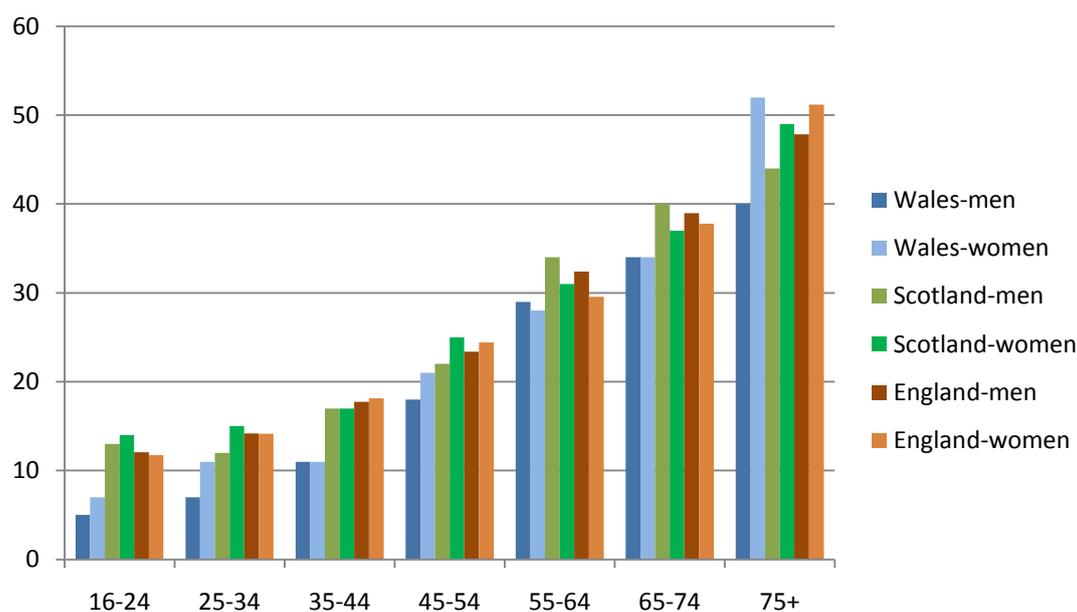
These are raw data only. Were further analysis required by more specific causes of death then the Office for National Statistics would have to be asked for that detail. However, there seems to be little here that appears to raise concerns about the treatment of elderly people in health or social care establishments other than a general concern about accident rates in older people already discussed above.

### 5.3 Health: Main indicators

#### Outcome

#### 5.3.7 [2.1] Self-report poor current health

Figure 20 Percentage reporting not good health by age and sex, England, Wales and Scotland, 2008



Source: Health Survey for England 2008, Scottish Health Survey 2008, Welsh Health Survey 2008.

Notes: Question wording varied slightly between the surveys. Welsh figures group responses 'fair' and 'poor', while Scottish and English figures group responses 'fair', 'bad' and 'very bad'.

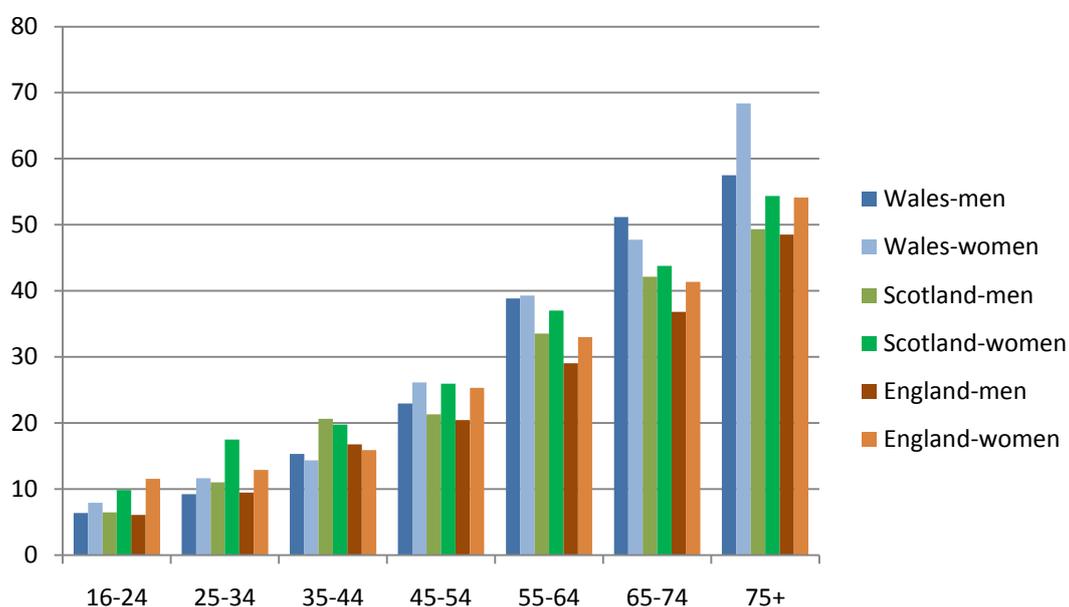
The graph above shows that in the health surveys conducted in England, Scotland and Wales, the proportion of the population reporting not good health increased with age for both men and women. The pattern is a fairly straightforward one in which 16-24 year-olds report the best health, those over 75, the worst. This pattern of deteriorating health with increasing old age is more pronounced in women than in men and particularly in women in Wales; however the wording of the questions differed in the three surveys and this is likely to compromise comparability.

Again, caution should be used in viewing these and other findings as due to an inevitable decline. A review by Kumar and Allcock is helpful here (Kumar and Allcock 2008). It concerns the issue of pain and in the report section the authors seek to establish: first, that pain is not an inevitable part of ageing; second, that attention should be focused on identifying the physical, psychological and social risk factors relating to persistent pain in old age; and third, that greater recognition should be given to the impact pain has on older people's lives. This attitude of not accepting poor health in older people is one that the Equality and Human Rights Commission might seek to encourage more widely.

### 5.3.8 [1.1] Longstanding health problem or disability (E W) and longstanding illness (S)

The 2008 health surveys in England, Wales and Scotland included questions on limiting long-term illness and disability (LLTI) and the results are presented in the graph below.

Figure 21 Percentage of people reporting a limiting long-term illness or disability by sex, England, Wales and Scotland, 2008

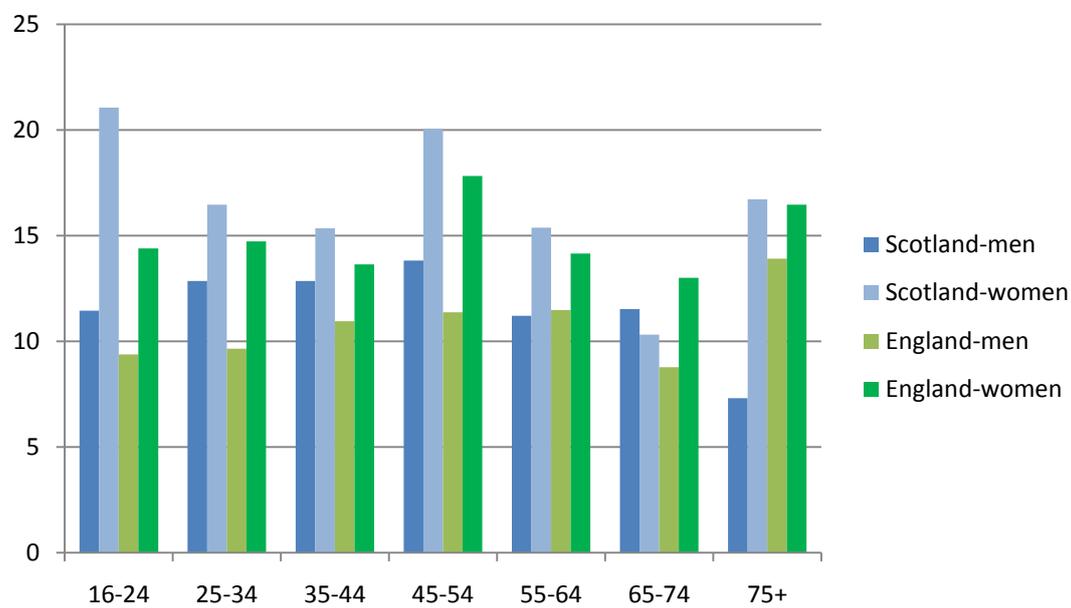


Source: Health Survey for England 2008 (authors' analyses), Scottish Health Survey 2008, Welsh Health Survey 2008.

The graph shows that the proportion of those with an LLTI ranges from 37-47% of the population in those aged 65-74 years. In all cases, levels increase with increasing age such that 68% of women over 75-years-old in Wales report an LLTI.

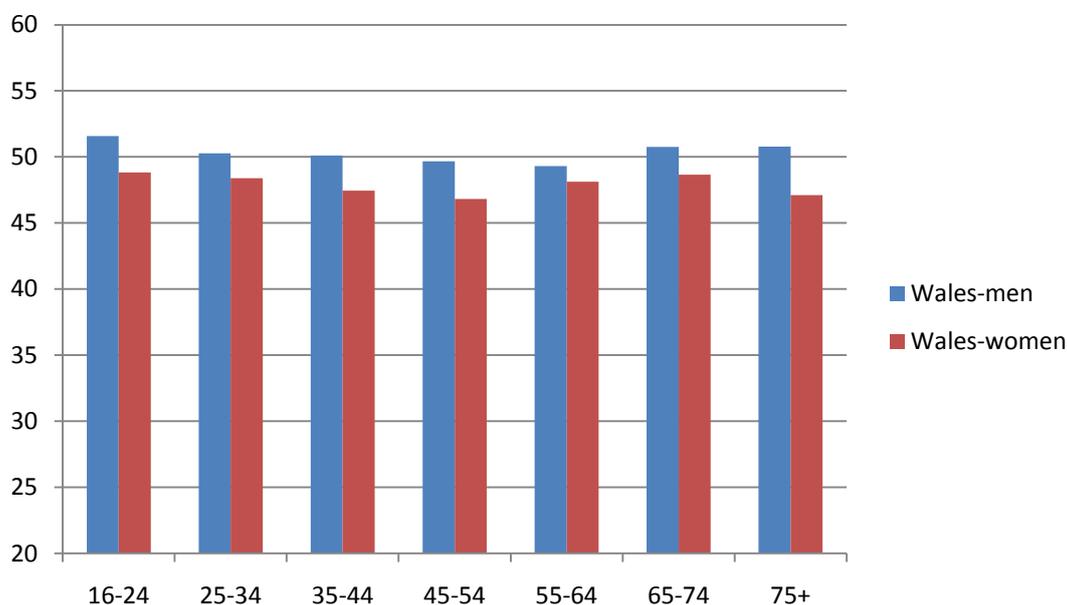
### 5.3.9 [1.2] Poor mental health or wellbeing

Figure 22 Percentage of people with GHQ score of 4 or more by sex and age-group, England and Scotland, 2008



Source: Health Survey for England 2008, Scottish Health Survey 2008 (authors' analysis).

Figure 23 Mean SF36 score (lower score indicates poorer mental health) by sex and age-group, Wales, 2008



Source: Welsh Health Survey 2008, authors' analysis.

Note: The proportion of the population reporting poor mental health, as measured by the General Health Questionnaire (GHQ12) scoring system in England and Scotland and the EMF-36 measurement system in Wales is presented in the two tables above. Both are validated as measures of poor mental health.

In general older age is not associated with increased levels of poor mental health as compared to the rest of the population. Indeed, the proportion of older females in Scotland reporting poor mental health is lower than for younger compatriots although we then see a sharp rise in the oldest age category. This is in contrast to the pattern for males which shows a substantial decrease

In the Health Survey for England 2005, however, the authors caution against these findings. They suggest that, in particular, the tools used for measurement of depression tend to miss depression in older people. They use, instead, a Geriatric Depression Score (GDS10). Using this, around 25% of those over 65 had significant depressive symptoms. The comparable figure in the population at large is around 10%.

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The Survey authors suggest that depression and dementia symptoms can get mixed up in older people, making differential diagnosis difficult. Furthermore, dementia itself is not a single diagnosis but rather the behavioural product of other illness, such as Alzheimer's. However, one study gives the following figures from 1998.

Table 13 Prevalence of dementia by age and sex (%) (pooled results from five centres of the Medical Research Council Cognitive Function and Ageing Study)

<b>Table 1 Prevalence of dementia by age and sex (%) (pooled results from five centres of the Medical Research Council Cognitive Function and Ageing Study)</b>		
<b>Age-group</b>	<b>Men (%)</b>	<b>Women (%)</b>
65-69	1.4	1.5
70-74	3.1	2.2
75-79	5.6	7.1
80-84	10.2	14.1
85+	19.6	27.5

Source: MRC CFAS (1998) Cognitive function and dementia in six areas of England and Wales: the distribution of MMSE and prevalence of GMS organicity level in the MRC CFA Study. *Psychological Medicine*, 28: 319-335

The incidence of dementia increases with age. It occurs in around 5% of the total population aged 65 and over, rising to 20% in those over 85.

*Process**5.3.10 [3.1] Low perception of treatment with dignity*

The 2007 Citizenship Survey included the question 'In general, would you say that you are treated with respect when using health services?' Analysis by age is presented in the table below.

Table 14 Percentage of people who in general say that they are treated with respect when using health services by age, England and Wales 2007

Age group	All the time or most of the time	Some of the time or less	N
16-24	87.6	12.4	1948
25-34	87.7	12.3	2281
35-44	88.8	11.2	2706
45-54	91.8	8.2	2250
55-64	94.1	6.0	2067
65-74	95.3	4.7	1474
75-84	96.6	3.4	969
85+	97.2	2.8	287

Source: Citizenship survey 2007

The survey data in the table suggests that older people are more likely than younger to feel they are treated with respect. There are, however, some doubts as to the usefulness of this question. This survey only takes in the views of people with the capacity to answer and effectively therefore excludes the experience of the most vulnerable sector of this population. This may explain in part the inconsistency of these findings with other research and with official reports that highlight the poor treatment of elderly patients (for example (Alberti 2009).

The treatment of those without capacity might be more problematic. There is a strong link between capacity and ageing which is set to increase in line with increases in dementia rates. This gives rise to a number of concerns about the way that health care is provided for older people and the impact that this has on their health and wellbeing.

One particular area of concern is the use of restraint. In 2007 a report, *Rights, risks and restraints* from the Commission for Social Care Inspection gave many examples of restraint undermining the wellbeing and dignity of vulnerable older people. The Commission used qualitative methods primarily and says it cannot from this work give an idea of the prevalence of restraint. The implication of the report, however, is that it is widespread and troubling. Research findings on prevalence are currently inadequate and contradictory (Laurin et al. 2004).

A major concern in relation to process is access to services and treatment for older people. It seems that ageist discrimination is not viewed as equivalent to racism or sexism because it is thought to have a clinical justification. That justification is the result of the way in which cost-effectiveness is used as a criterion for treatment and resource allocation decisions. It is said that where there is a limited health care resource it should be put where it will do the most good. The problem for older people arises when measurement of what constitutes the most good is taken to include years of benefit. (The literature on this topic is vast; the following are useful introductions, however: (McKie et al. 2009, Tsuchiya, Dolan and Shaw 2003, Harris 2010)).

Take the example of the Quality Adjusted Life Years (QALYs) system used by the National Institute for Health and Clinical Excellence (NICE) in deciding whether a treatment should be funded by the NHS. A QALY is a measure of the additional life years someone will benefit for a treatment divided by a measure of that life's quality. Thus if a treatment adds ten years to someone's life but that life is of low quality (say, a quality score of 0.5) then the treatment is worth 5 QALYs. The cost of the treatment can then be divided by 5 to give a cost-effectiveness score of cost per QALY.

Under systems such as these older people are at a disadvantage because no matter how much a treatment benefits them it will not, on average, benefit them as much as a younger person.

Thus QALY scores will tend to encourage the decision that where a treatment is effective, younger people should receive it as a priority. They will also tend to encourage decisions in favour of treatments for illnesses that affect younger or mixed groups of people rather than older ones; thus expensive treatments for dementia will fare less well than expensive treatments for heart disease. There are elements of cost-effectiveness reasoning that offset the ageist results of QALYs. Where a treatment relieves costs elsewhere, this can be factored in to the reasoning. For example, an effective but expensive treatment for dementia might nonetheless be cost effective because of the reduced care costs that result. Nonetheless, the current methods of cost-effective reasoning generally seem to work against older people. The Department of Health (Department of Health 2009) is aware of and monitoring this issue.

A further problem arises from the desire to give people treatment only that is evidence based. Older people are one group that has in the past been excluded from much clinical research for what now seem to be doubtful scientific reasons (Safilidou-Rothschild 2010). The situation is changing but the legacy is that there is a shortage of information. There is a higher than average possibility that a standard treatment for a disorder has not been tested with older people. This leaves clinicians in a quandary over whether to treat.

## 5.3.11 [5.1] A&amp;E attendance/accidents

Data for A&E attendance are available for England only, in the database *A&E attendance in England (experimental)*. From that database we have the following by age, and by age and gender.

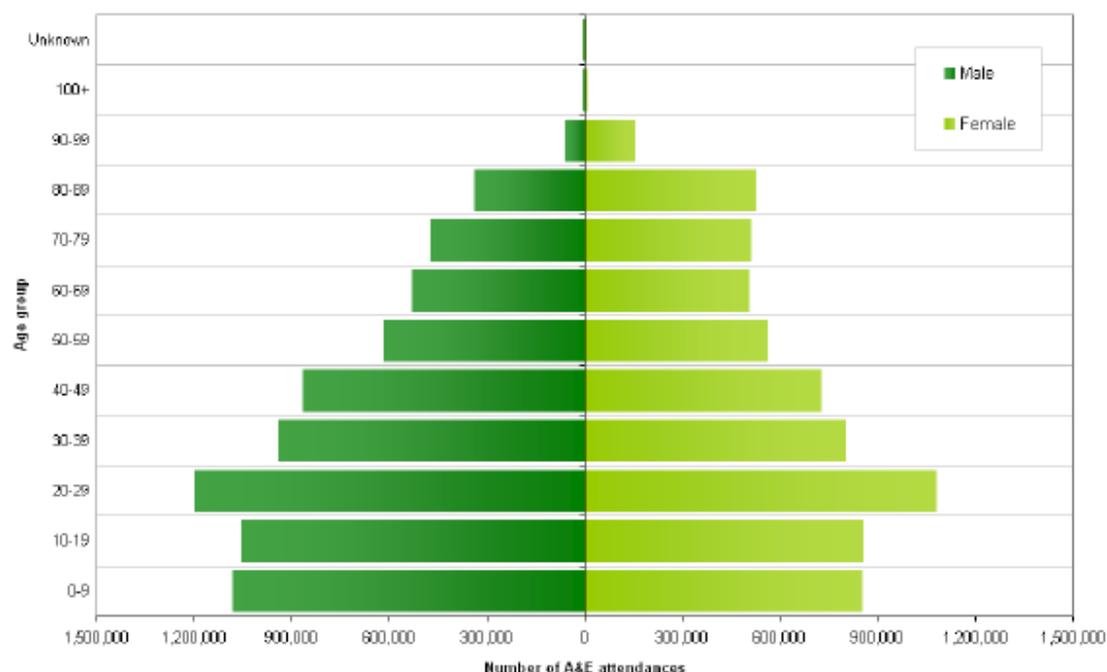
Table 15 A&amp;E attendances by age group, 2008-09 and 2007-8.

Age group	2008-09		2007-08	
	Number	Percentage	Number	Percentage
0-9	1,937,963	14.0%	1,736,586	14.1%
10-19	1,916,610	13.9%	1,775,031	14.4%
20-29	2,281,334	16.5%	2,041,981	16.6%
30-39	1,742,829	12.6%	1,593,210	12.9%
40-49	1,597,425	11.6%	1,404,411	11.4%
50-59	1,182,733	8.6%	1,033,300	8.4%
60-69	1,035,865	7.5%	886,748	7.2%
70-79	983,427	7.1%	842,406	6.8%
80-89	865,588	6.3%	720,805	5.9%
90-99	214,734	1.6%	185,830	1.5%
100+	9,377	0.1%	7,150	0.1%
Unknown	26,187	0.2%	90,593	0.7%

Source: A&E attendance in England (experimental)

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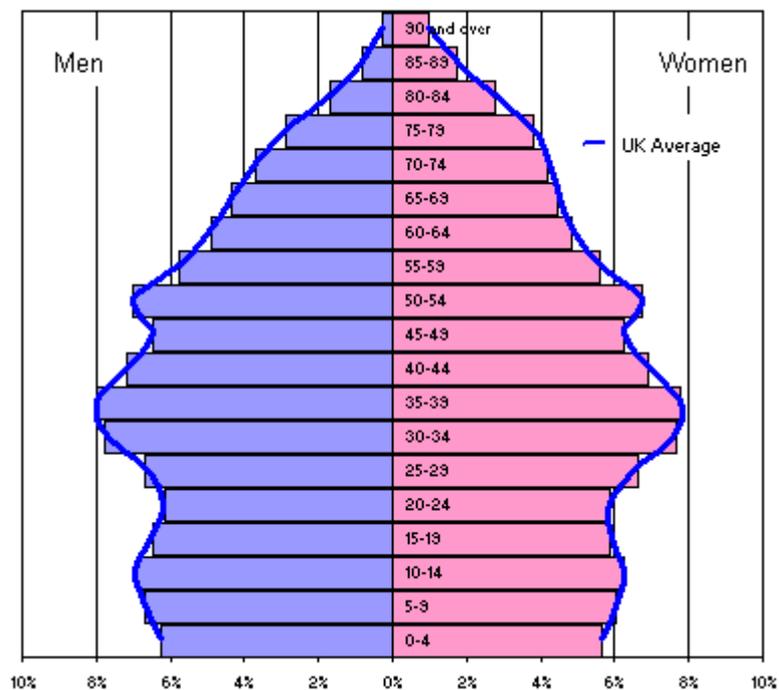
Figure 24 A&E attendances by gender and age, 2008-9



Source: A&E attendance in England (experimental)

The graph and table above give us bare figures only; the percentage or number of attendances. They show that A&E attendance peaks at age 20-29 and declines after that. In order to know whether older people are under or over-represented here we need to know the population make-up by age for England. This is represented in the population pyramid below.

Figure 25 Population pyramid, England, 2001



Source: Office for National Statistics, Census 2001

The pyramid above shows the bulge in the population to be around 30-40 years old (in 2001). It suggests that younger people are slightly over-represented in A&E; there is no obvious evidence of an inequality of concern here. However, the mortality through accidents should be recalled; this peaks as people age. It seems odd that this is not reflected in A&E attendance. This is a puzzle and we have not yet found the evidence to resolve it.

### 5.3.12 [3.2] *Lack of support for individual nutritional needs during hospital stays*

This is a specific area of concern in relation to older people (Schenker and Parker 2003). Data are not currently collected on a national basis. However, there is research that gives an indication of the problem. The Department of Health and the Food Standards Agency are undertaking a rolling survey commencing 2008: *National Diet and Nutrition Survey*. This will provide data in three main categories: children, adults and adults over 65. However, there are no data in the over-65 category yet (April 2010).<sup>4</sup>

The Social Care Institute for Excellence (SCIE) on-line guidance relating to dignity in care has a section on nutritional care. It says that 19-30 percent of all people admitted to hospitals, care homes or mental health homes were at risk of malnutrition. It claims the data come from the "largest nutritional screening survey, Nutrition Screening Survey in the UK 2007 saying this was carried out by BAPEN, the British Association for Parenteral and Enteral Nutrition. This is available online<sup>5</sup>. However, there are reasons to be cautious about the data.

In the first place, the definition of malnutrition used is not one that would accord with most people's understanding of the term. The more recent research on the topic uses a definition based in the MUST (Malnutrition Universal Screening Tool). This is a widely recognised tool for the assessment of patients on admission: the assessor takes the patient's BMI, recent weight loss, and acute disease. These factors are fed into the tool which gives an "overall risk of malnutrition" of low, medium or high. In some literature, this risk of malnutrition is taken to be malnutrition; e.g. (Stratton and Elia 2007). However, as a tool for actual malnutrition of patients, perhaps BMI itself would be better.

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<sup>4</sup> <http://www.scie.org.uk/publications/guides/guide15/index.asp>

<sup>5</sup> [http://www.bapen.org.uk/pdfs/nsw/nsw07\\_report.pdf](http://www.bapen.org.uk/pdfs/nsw/nsw07_report.pdf)

A second problem is that the finding of risk of malnutrition on admission to hospital is sometimes taken to imply lack of attention to patient's nutritional needs whilst in hospital. For example, Age Concern (2006) moves from saying that there is a high prevalence of malnutrition *on admission* to hospital and care homes to saying that malnutrition in these settings

"results mostly from logistic failures in getting appetising food to patients at the right time. Specific causes for concern are:

- Food delivered at inflexible and inconvenient times
- Insufficient time given to eat
- Lack of staff to help feed patients
- Patient difficulties in reaching food, using cutlery or opening food packaging
- Unpleasant sights, sounds and smells
- Limited provision for religious or cultural dietary meals."

(Adapted from Hickson, 2006)

The Hickson (Hickson 2006) article referred to by Help the Aged is a review; the list is not based clearly in any study and hence its basis in evidence is doubtful. The article refers to three further articles in making the claim that older people become more malnourished in hospital. Of these: McWhirter (McWhirter and Pennington 1994) is dated and methodologically flawed although it does show weight loss in some patients who were underweight on admission; (INCALZI et al. 1998) is based on Italian research that cannot be simply transferred to UK; and (Potter et al. 1995) is based on 1995 Scottish research and suggests a slight calorie deficit in elderly patients during stay on acute wards. This article itself refers to some older research in what it calls long-stay and psycho-geriatric establishments where under-nutrition is noticed.

It seems, then, there is little or no up-to-date evidence suggesting that older people's nutritional needs are neglected in hospital. There is, however, evidence that their older people have poor nutritional status on admission to hospital.

The claim that nutritional needs are not met in hospital seems to be based in a small amount of survey evidence. A report by the Patient and Public Involvement Forums (*Hospital food could you stomach it*<sup>6</sup>) found that around a third of patients left their food uneaten and that there were various problems; in particular, that people were not getting help they needed to eat. Age Concern's report (*Hungry to be heard*) referred to this and backed up the evidence with reports to it from concerned individuals.

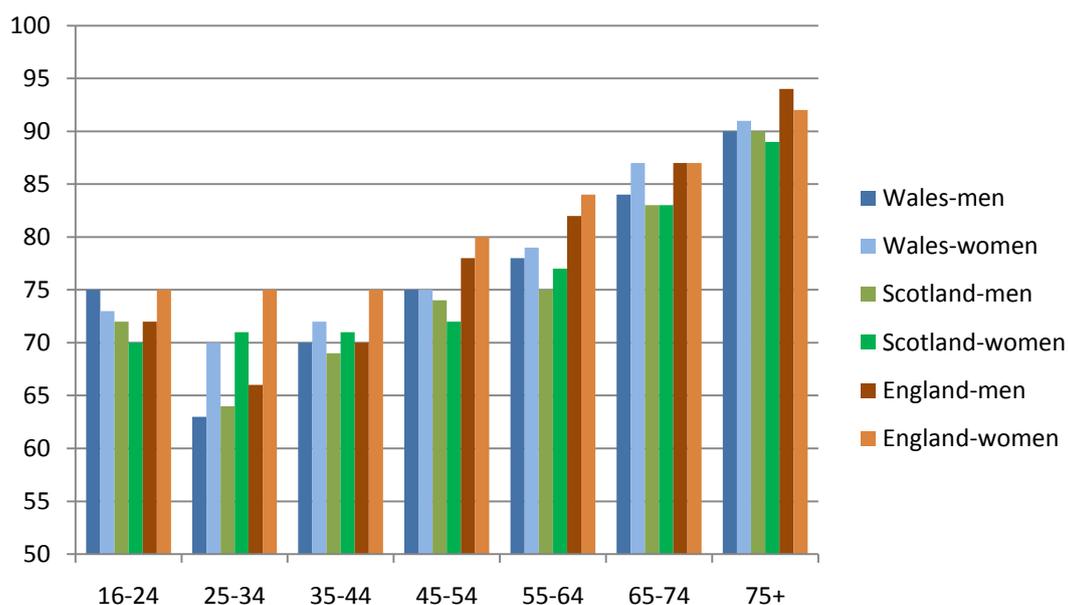
SCIE recommends that patient nutritional status is monitored on admission and throughout their stay in hospital. If this was done and the data could be set alongside the equality strands, we would have a good picture of the meeting of nutritional needs in hospital. As present, the data are unavailable and little can be said with any certainty except perhaps that older people who enter hospital malnourished tend to leave in a similar state; something which in itself represents an unmet and important need.

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<sup>6</sup> [http://webarchive.nationalarchives.gov.uk/20061023100409/http://cppih.org/about\\_new.html](http://webarchive.nationalarchives.gov.uk/20061023100409/http://cppih.org/about_new.html)

**Autonomy****5.3.13 [4.1] Health related behaviours and lifestyle factors****Smoking**

Figure 26 Percentage of people who report not currently smoking cigarettes by sex and age-group, England, Wales and Scotland, 2008



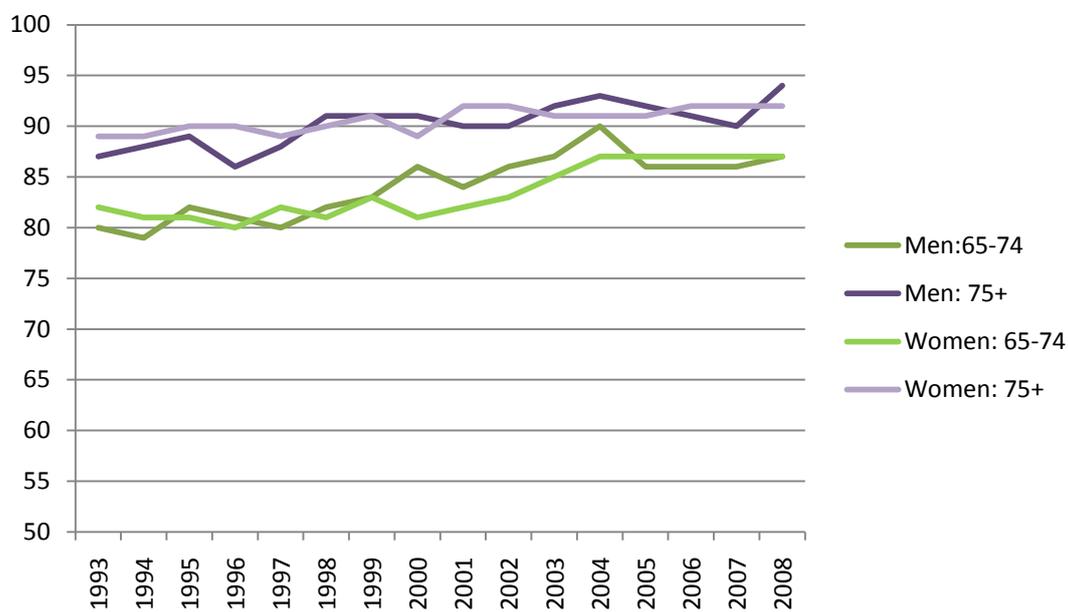
Source: Health Survey for England, 2008, Welsh Health Survey 2008 and Scottish Health Survey 2008.

Note: Figures include those who are ex-smokers and those who have never smoked.

The graph above presents information on smoking rates across the age band. Those over 65 are less likely to smoke than those under 65 years and the highest proportion of non-smokers is found in the oldest age group. This is unsurprising given that smoking is a major risk factor for several of the most common causes of death and therefore not smoking contributes substantially to life expectancy.

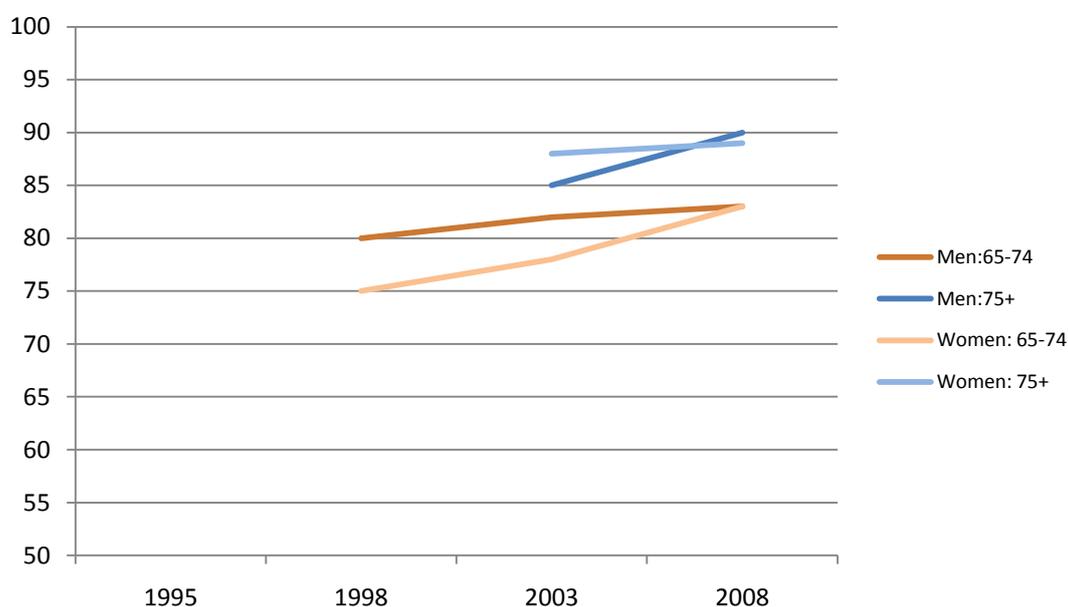
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Figure 27 Percentage of people reporting not currently smoking by age-group and sex, 1993-2008 England



Source: Health Survey for England latest trend tables <http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles-related-surveys/health-survey-for-england/health-survey-for-england--2008-trend-tables>

Figure 28 Percentage of people reporting not currently smoking by age-group and sex, 1995, 1998, 2003 and 2008 Scotland



Source: Scottish Health Surveys 1995, 1998, 2003 and 2008

The two graphs above present trends over time for older adults and in older adults over time respectively. These indicate that there has been an increase in the proportion of older men and women who do not smoke in recent years.

Older people who smoke are very likely to be long terms smokers and they are therefore most at risk of the long term cumulative health impact. However there is evidence that stopping smoking can have a positive health benefit, even in those who are long terms smokers with serious smoking related health problems (Connolly 2000). Smoking cessation treatments play a vital role in helping people stop smoking. In terms of possible health inequalities, it may be more meaningful to focus attention on smoking cessation and the availability of services and treatments across the age range.

In terms of comparison with Europe we saw above that smoking rates in the UK are slightly lower than EU15 countries.

**Alcohol**

Table 16 Usual frequency of drinking alcohol in past year by age and sex

<i>Aged 16 and over</i>								2006
Frequency of drinking	Age group							Total
	16-24	25-34	35-44	45-54	55-64	65-74	75+	
	%	%	%	%	%	%	%	%
<b>Men</b>								
Almost every day	4	9	13	18	24	24	26	16
Five or six days a week	3	4	8	7	8	6	4	6
Three or four days a week	16	20	18	19	18	12	9	17
Once or twice a week	37	33	30	27	26	27	20	29
Once or twice a month	13	13	11	10	8	8	10	11
Once every couple of months	7	5	5	5	5	4	7	5
Once or twice a year	4	4	4	5	5	8	10	5
Not at all	17	11	9	9	6	11	14	11
<b>Women</b>								
Almost every day	2	5	7	12	13	15	15	9
Five or six days a week	1	2	5	6	5	3	2	4
Three or four days a week	9	14	13	16	12	8	3	11
Once or twice a week	34	31	30	25	24	21	16	26
Once or twice a month	20	16	14	12	12	11	9	14
Once every couple of months	11	8	10	8	8	9	9	9
Once or twice a year	6	6	10	9	13	15	21	11
Not at all	16	18	12	11	13	19	25	16
<i>Bases (unweighted)</i>								
<i>Men</i>	615	860	1178	1046	1122	852	599	6272
<i>Women</i>	763	1146	1489	1278	1268	932	896	7772
<i>Bases (weighted)</i>								
<i>Men</i>	988	1126	1351	1116	1011	694	495	6781
<i>Women</i>	973	1158	1373	1140	1049	768	794	7253

Source: Health Survey for England, 2006

The table above shows that people aged over 65 are more frequent drinkers than other age groups, with around a quarter drinking every day.

Table 17 Summary of maximum alcohol consumption on any day in the past week, by age and sex

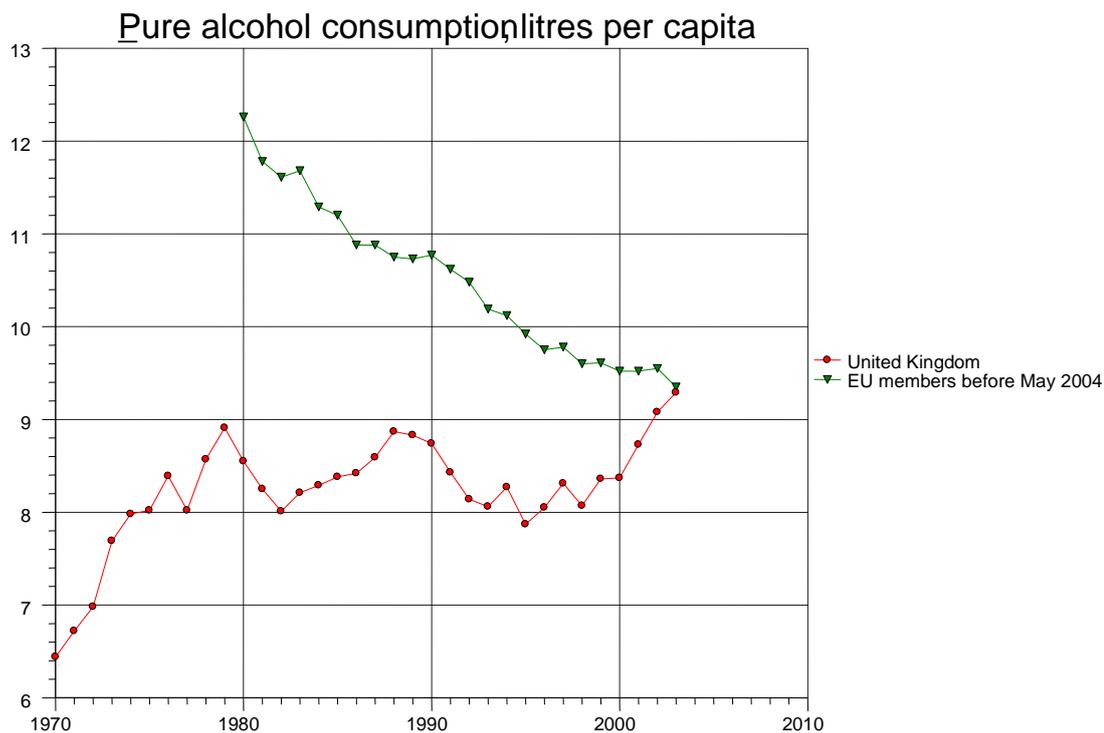
<i>Aged 16 and over</i>								<i>2006</i>
<b>Number of units</b>	<b>Age group</b>							<b>Total</b>
	16-24	25-34	35-44	45-54	55-64	65-74	75+	
	%	%	%	%	%	%	%	%
<b>Men</b>								
Did not drink in past week	39	28	24	25	22	30	38	28
Up to and including 4 units	18	24	29	34	34	43	49	31
More than 4, up to and including 8 units	13	15	17	17	23	17	10	17
More than 8 units	31	34	29	24	21	10	3	24
<b>Women</b>								
Did not drink in past week	45	41	37	33	38	47	61	42
Up to and including 3 units	14	19	23	24	30	34	32	25
More than 3, up to and including 6 units	14	17	19	24	20	16	5	17
More than 6 units	28	23	20	18	11	3	1	16
<i>Bases (unweighted)</i>								
<i>Men</i>	606	860	1178	1045	1123	851	600	6263
<i>Women</i>	745	1144	1490	1276	1268	931	894	7748
<i>Bases (weighted)</i>								
<i>Men</i>	972	1126	1351	1115	1012	693	496	6766
<i>Women</i>	951	1156	1375	1138	1049	767	792	7228

Health Survey for England, 2006

However, the table above suggests that although older people might drink more frequently, they drink less heavily.

Figures on alcohol intake by age in Europe are not available. The overall comparison, however, is interesting, as the following graph illustrates.

Figure 29 Alcohol consumption UK and EU15 members

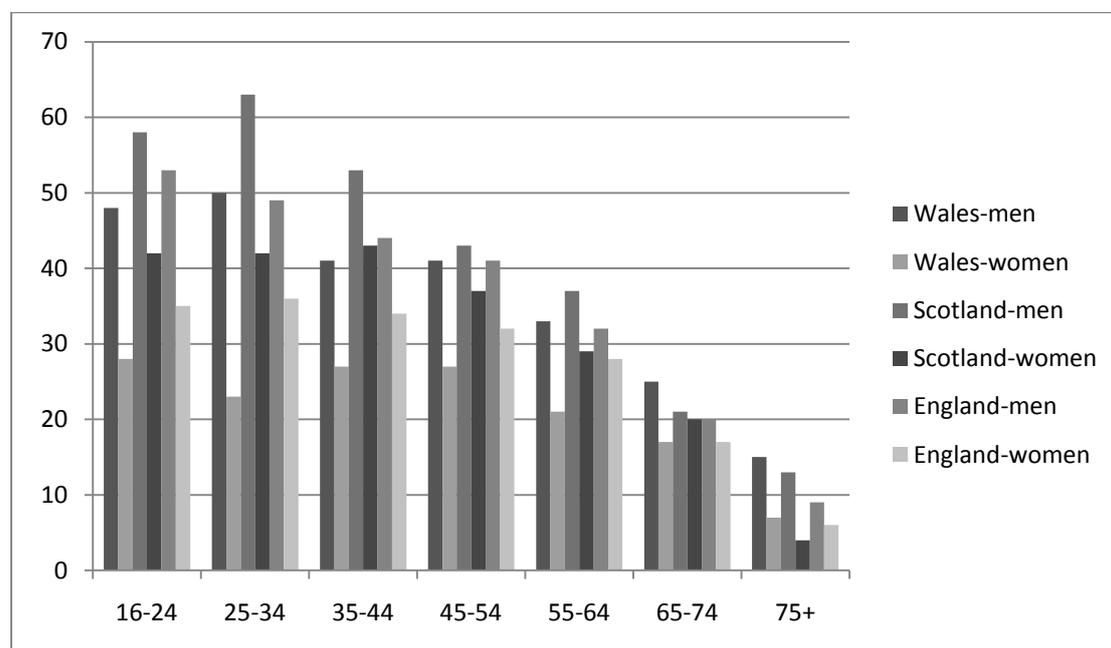


Source: European Health for All (HfA) database, 2009

The graph shows alcohol intake to be increasing in the UK and decreasing in EU15 countries. By 2003, the figures for the two areas were equivalent. If the pattern has continued, UK intake will now be above that of EU15 countries.

**Exercise**

Figure 30 Proportion of people meeting government recommendations for weekly physical activity by sex, England, Scotland and Wales, 2008



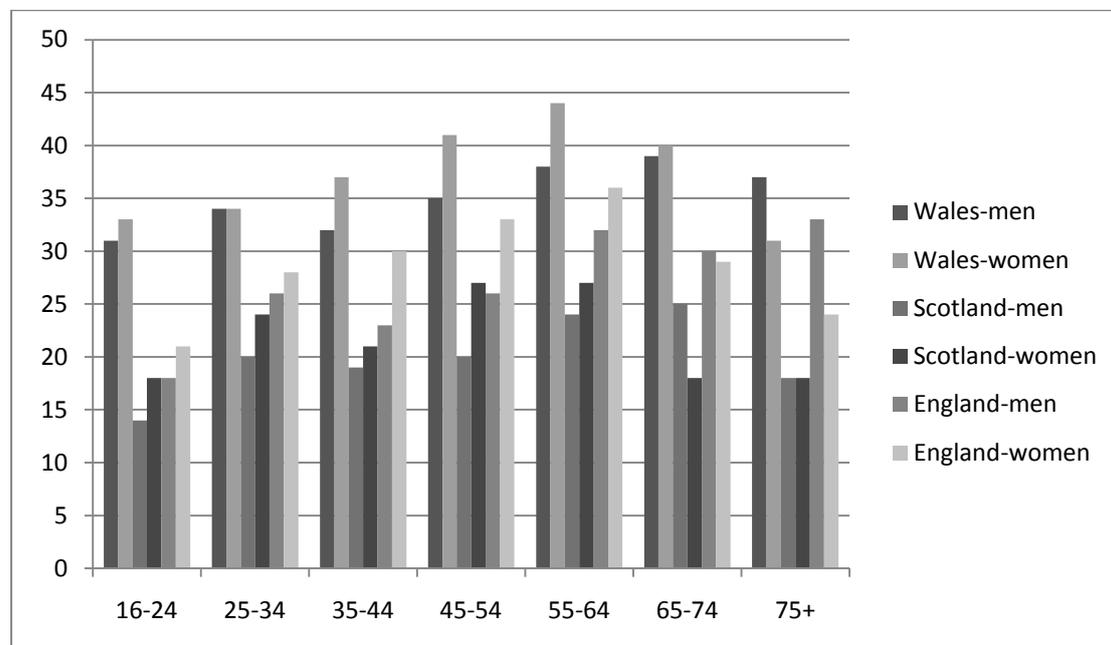
Source: Health Survey for England, Scottish Health Survey and Welsh Health Survey, 2008

Note: The measures are not directly comparable across the surveys since they were computed slightly differently. In the Scottish Health Survey, episodes of activity of about 10 minutes or more have been accumulated to meet the 30 minutes, 5 times a week threshold, whereas in the HSE episodes of activity less than 30 minutes are excluded. In the Welsh Health Survey, the measure represents five or more days in which 'at least moderate exercise/activity' was undertaken.

The graph above shows the proportion of individuals across the age bands who are exercising to the level recommended for health and wellbeing. The data between the surveys are not directly comparable because the information has been computed differently in the surveys. However all sources indicate that exercise levels are lower in those over 65 years as compared to those under 65 and that levels of exercise in the older adult decrease with increasing age. This is an inequality of concern. Lack of physical activity is both cause and effect of ill-health. To some extent, the inequality might therefore be seen as natural. However, the other cause is almost certainly lack of appropriate facilities and opportunity for physical activity. If so, a reduction in this inequality would be a welcome marker of improved welfare for older people.

### ***Consumption of fruit and vegetables***

Figure 31 Proportion of people meeting government recommendations for daily fruit and vegetable consumption by sex, England, Scotland and Wales, 2008



Source: Health Survey for England 2008, Scottish Health Survey 2008, Welsh Health Survey 2008

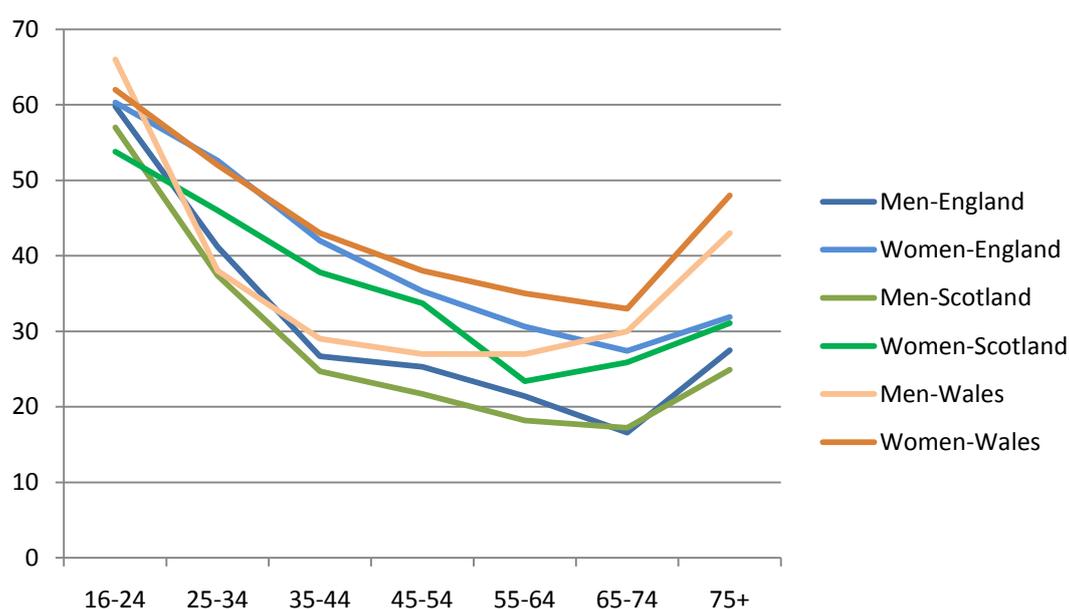
Notes: Measure was based on the reported number of portions of fruit and vegetables consumed in the day prior to interview.

The graph above shows that the proportion of older people eating the recommended amounts of fruit and vegetables are largely comparable with those reported in the younger age groups. Although there is a slight decrease in consumption in those over 65, levels are broadly maintained across the older age groups although there is some difference in direction between men and women. In England, consumption levels for women fall from 29% for those aged 65 - 74 to 24% for those 75+, whilst the pattern in men indicates a 3% increase in rates for the older age group, from 30% to 33%. In several groups, most notably men in both Scotland and Wales, rates of consumption do not fall to the level of those seen in the youngest age group, the 16-24 year olds.

**Obesity**

The proportion of the population who are of normal weight decreases steadily with increasing age up to age 65 years. In those 65 and over there is a subsequent increase in the proportion who are of normal weight which increases with age, a possible reflection of the extent to which weight impacts on life expectancy.

Figure 32 Proportion of people with normal weight by age-group and sex, England, Scotland and Wales, 2008



Source: Health Survey for England 2008, Scottish Health Survey 2008, Welsh Health Survey 2008

Notes: Normal weight includes those who are not overweight, obese or underweight.

## **5.4 Cross-over themes**

### *Class*

The raw data appear to suggest that the relationship between class and health declines as people age. However, McMunn et al show that this is only partially true (McMunn, Nazroo and Breeze 2009). Some of the change is due to selective mortality; in other words, those who were unwell and poor tend to die younger. In other cases, the difference persists into old age, for example, with some cancers such as lung cancer.

### *Disability*

The issues for ageing disabled people are discussed in the disability chapter.

### *Ethnicity*

See discussion in ethnicity chapter

### *Gender*

The most significant fact here is that women tend to live longer than men. However, older women are more likely to report ill-health than men.

### *LBG (sexuality)*

The issue of ageing and LBG status is discussed in the chapter on LBG issues.

### *Trans*

The issue of ageing and trans status is discussed in the chapter on trans issues.

## 5.5 Discussion

We saw in chapter three that inequalities are often explained as natural or inevitable. This is true particularly in relation to ageing. It is thought inevitable that as we age our health will deteriorate and disability will set in. There are at least three problems with this view.

The first problem is that the extent that ageing is necessarily linked to morbidity is disputed (Hyde, Higgs and Newman 2009). One hypothesis is of compression morbidity; this is the idea that populations age because they are healthier; as such, people live longer but with a shorter spell of morbidity at the end of life. A second is the failure-of-success model; which states that technical progress lengthens life but not quality of life. The third model is of dynamic equilibrium. This states that as people age they suffer more chronic health problems but adapt to them such that these are not disabling. There are insufficient data to choose between these at present, but it is clear that the link between morbidity and ageing cannot be taken as given.

The second problem is that some inequalities seem unlikely to be primarily due to natural causes. For example, it seems likely that depression in the elderly is more the result of unhappy circumstances such as loneliness than of a natural process.

The third is that natural difference can be compounded by human action. For example, as people age their chance of dying of stroke increases; but this can be compounded by a decision not to allocate resources to the treatment of stroke in older people. Similarly, allocation decisions that discriminate against older people on the basis that older people suffer worse outcomes will in turn worsen the outcomes further.

For these reasons, and in line with the view taken in chapter three, we suggest it is better to err on the side of social rather than natural explanations of inequality. Thus a high rate of morbidity in the elderly should be viewed as a spur to action rather than a twist of fate.

In terms of the evidence presented above, the most worrying inequalities seem to be:

- High rate of accident mortality (alongside normal rate of A&E attendance)
- High rates of mortality and morbidity
- High rates of LLTI
- A climbing rate of suicide in men in the oldest age groups
- A lower than average rate of healthy life in the UK compared with EU15 countries
- Discriminatory processes in allocation of resources
- Low rates of exercise and activity alongside high rates of obesity

The measures used in the *Equality Measurement Framework* are informative in this regard. They need careful interpretation in order to pick out inevitable from avoidable inequality. Additional outcome measures for older people might include specific focus on arthritis, falls, sensory impairment and incontinence. Healthy life expectancy would also be a useful addition. Comparison with EU15 countries is helpful in trying to assess whether inequality that is thought to be inevitable or natural is, in part, also the result of social decisions.

Some life and health indicators for those without capacity, for example, those with dementia are problematic. Such people are generally unable to state whether or not they are treated with dignity. More work is needed here to develop other indicators that do not require self-assessment.

## References

Age Concern England (2006). *Hungry to be heard: The scandal of malnourished older people in hospital*. Age Concern.

ALBERTI, G. (2009). *A review of the procedures for emergency admissions and treatment, and progress against the recommendation of the march healthcare commission report*. Staffordshire, Mid Staffordshire NHS Foundation Trust.

CONNOLLY, M. (2000). Editorial. smoking cessation in old age: Closing the stable door? *Age and ageing*, **29** (3), 193-194.

Department of Health (2009). *Age equality in health and social care*. Bristol, Department of Health.

HARRIS, J. (2010). More and better justice. *Royal institute of philosophy supplement*, **23**, 75-96.

HICKSON, M. (2006). Malnutrition and ageing. *Postgraduate medical journal*, **82** (963), 2.

HYDE, M., HIGGS, P. and NEWMAN, S. (2009). The health profile of ageing populations. In: NEWMAN, S., STEED, E. and MULLIGAN, K. (eds.). *Chronic physical illness: Self-management and behavioural interventions*. Maidenhead, Open University Press, 3-27.

INCALZI, R., et al. (1998). Inadequate caloric intake: A risk factor for mortality of geriatric patients in the acute-care hospital. *Age and ageing*, **27** (3), 303.

KUMAR, A. and ALLCOCK, N. (2008). *Pain in older people: Reflections and experiences from an older person's perspective*. London, Help the Aged.

LAURIN, D., et al. (2004). Physical restraint use among nursing home residents: A comparison of two data collection methods. *BMC nursing*, **3** (1), 5.

MCKIE, J., et al. (2009). Allocating healthcare by QALYs: The relevance of age. *Cambridge quarterly of healthcare ethics*, **5** (04), 534-545.

MCMUNN, A., NAZROO, J. and BREEZE, E. (2009). Inequalities in health at older ages: A longitudinal investigation of the onset of illness and survival effects in England. *Age and ageing*, **38** (2), 181.

MCWHIRTER, J. and PENNINGTON, C. (1994). Incidence and recognition of malnutrition in hospital. *British medical journal*, **308** (6934), 945.

POTTER, J., et al. (1995). The nutritional status and clinical course of acute admissions to a geriatric unit. *Age and ageing*, **24** (2), 131.

Equality and Human Rights Commission: Evidence analysis for the triennial review: Lot 1 - Life and Health Key messages: 5. Age

SAFILIOU-ROTHSCHILD, C. (2010). Age-based inequalities in medical treatment. [online]. *The journal (AARP)*, (Winter), 56-59. last accessed 28 June 2010 at: <http://journal.aarpinternational.org/current-edition> .

SCHENKER, N. and PARKER, J. D. (2003). From single-race reporting to multiple-race reporting: Using imputation methods to bridge the transition. *Statistics in medicine*, **22** (9), 1571-1587.

STRATTON, R. J. and ELIA, M. (2007). Deprivation linked to malnutrition risk and mortality in hospital. *British journal of nutrition*, **96** (05), 870-876.

TSUCHIYA, A., DOLAN, P. and SHAW, R. (2003). Measuring people's preferences regarding ageism in health: Some methodological issues and some fresh evidence. *Social science and medicine*, **57** (4), 687-696.