

Trends in Life Expectancy by social class 1972-2005

This note provides figures on trends in period life expectancy by Registrar General's Social Class (RGSC) in England and Wales over the period 1972 to 2005. It updates figures previously published on the National Statistics website which covered the period 1972-2001¹. The figures are derived from the ONS Longitudinal Study.

What data are presented?

Table 1 shows, for men in each social class, life expectancy at birth and at age 65, for each of the five-year periods from 1972 to 2001 and the four-year period 2002 to 2005. A 95 per cent confidence interval is shown for each estimate. Aggregated life expectancy estimates for the non-manual and manual social classes are also presented, since these are less volatile from period to period than estimates for the individual social classes. The differences in life expectancy between non-manual and manual social classes are also given. Box One lists the social classes, divided into non-manual and manual, and examples of the occupations contained in each class.

Table 2 shows, for men in each social class, the change in life expectancy between each of the three periods 1972-76, 1992-96 and 1997-2001 and the most recent estimates, 2002-05.

Table 3 and *Table 4* show the results for women corresponding to those given for men in Tables 1 and 2.

For example, in 2002-05, life expectancy at birth for the professional social class was 80.0 years for males and 85.1 years for females, 8.1 and 6.1 years more than in 1972-76, respectively.

Figure 1 and *Figure 2* illustrate the trends in life expectancy at birth for non-manual and manual social classes for males and females respectively.

What does life expectancy mean?

Life expectancy at birth for a particular social class and time period is an estimate of the number of years a new born baby would survive, were he or she to experience the average age-specific mortality rates of that social class for that time period throughout his or her life. Life expectancy at age 65 is an estimate of the number of additional years a person who has reached the age of 65 would survive, were he or she to experience the average age-specific mortality rates of that social class for that time period for the remainder of his or her life. This is known as "period" life expectancy and it does not incorporate any projected future changes in life expectancy.

How was life expectancy calculated?

These figures are estimated using the ONS Longitudinal Study (LS). The LS is a one per cent representative sample of the population of England and Wales which links census data from 1971 onwards with death registrations and other data². Social class

was based on data relating to the individual, their spouse or parents, according to priority rules. Methods for assigning a social class to LS members and for calculating life expectancy were described in *Health Statistics Quarterly* 02³, and recent methodological refinements are described in *Health Statistics Quarterly* 35⁴.

Life expectancy figures based on the LS were calculated using abridged life tables for men and women separately.

ONS publishes national life tables for the United Kingdom and constituent countries, which give statistics on period expectation of life. (Responsibility for the production of national life expectancy figures transferred to the ONS from the Government Actuary's Department (GAD) on 31 January 2006).

Life expectancy figures based on the LS may differ from those shown in the national life tables for England and Wales since the latter are based on complete rather than abridged life tables, and use all deaths and all years lived rather than a sample. A detailed description of the methods and notation associated with the calculation of life expectancy using a complete life table can be found within the Interim Life Table files on the ONS National Statistics website⁵. (These are not available by social class).

BOX ONE

Registrar General's Social Class based on occupation

Class description	Examples of occupations:
Non-manual	
I Professional	Doctors, chartered accountants, professionally qualified engineers
II Managerial & technical/intermediate	Managers, journalists, school teachers
IIIN Skilled non-manual	Clerks, cashiers, retail staff
Manual	
IIIM Skilled manual	Supervisors of manual workers, plumbers, electricians, goods vehicle drivers
IV Partly skilled	Warehousemen, security guards, machine tool operators, care assistants, waiters and waitresses
V Unskilled	Labourers, cleaners and messengers

Notes on interpretation

The new figures reaffirm the social class gradient in expectation of life which was found previously. People in professional occupations (Social Class I) have the longest expectation of life, followed by managerial and technical occupations (Social Class II), and so on. People in unskilled manual occupations (Social Class V) have the shortest expectation of life.

Table 1 suggests that in 2002-05, unskilled men had a similar life expectancy at age 65 (14.1 years) to that of professional men in 1972-76 (14.0 years). Table 3 suggests that unskilled women had a lower expectation of life (17.7 years) at age 65 than men in the top two social classes, and lower than professional women in 1972-76. This

overlap of the top social classes for men with the lowest for women began in 1992-96 and has steadily increased.

The new figures for 2002-05 do not provide a clear indication of change in the pattern of inequalities among social classes. Care should be taken in interpreting the figures and confidence intervals are shown for this reason. The difference between manual and non-manual expectation of life at birth provides a more reliable estimate of the trend in inequality than variations among individual social classes.

Between 1972-76 and 2002-05, males classified to non-manual occupations had a greater increase in life expectancy, both at birth and at age 65, (8.0 and 4.8 years respectively), than those classified to manual occupations, (6.8 and 3.8 years respectively, Table 2). By contrast, between 1997-2001 and 2002-05, life expectancy at birth and at age 65 increased more for males classified to manual occupations, (1.8 and 1.2 years respectively), than for those classified to non-manual occupations, (1.3 and 0.8 years respectively). However, this is a long-term study and some degree of short-term variation is to be expected as a result of sampling and the method of assigning social class, (see section on “health related selection” below). At least two periods showing the same pattern are needed to determine whether the trend in inequalities is changing.

Females classified to non-manual occupations also had a greater increase in life expectancy at birth and age 65 (5.2 years and 3.0 years respectively) over the period 1972-76 to 2002-05 than those in manual occupations, (4.8 and 2.0 years respectively, Table 4). Between 1997-2001 and 2002-05, life expectancy increased by a similar amount for those classified to non-manual and manual occupations, and there has been no evidence of a significant change in the pattern of inequalities.

The greatest improvement in life expectancy at birth over the study period was for LS members who were ‘unclassified’ – that is, they could not be assigned to a social class (see below for further details).

Socio-economic Classification

RGSC based on occupation was used here to provide a continuous method of social classification in the LS sample between 1971 and 2001. The National Statistics Socio-Economic Classification⁶, (NS-SEC) replaced RGSC as the official socio-economic classification at the 2001 Census. The occupational classification for the 2001 Census, SOC2000, was devised with NS-SEC in mind. For continuity, LS members’ occupations at the 2001 Census were dual coded to both SOC2000 and the previous occupational classification, SOC90. The SOC90 codes were used to derive RGSC for LS members present at the 2001 Census. Occupational information for parents in birth records for babies born after the 2001 Census was coded to SOC2000. For these LS members, RGSC was approximated using a matrix devised by Rose, and available on the University of Essex website⁷.

Mortality rates for men aged 25-64 for the period 2001-03 have been calculated by NS-SEC (forthcoming article in *Health Statistics Quarterly*⁸), and work is in progress to investigate the feasibility of calculating life expectancy by NS-SEC in the future. The current series on life expectancy by social class will continue in the medium term, to allow consistent comparisons to be made over time.

Those unclassified by social class

The composition of the unclassified category has changed substantially over time and this group should not be treated as a separate ‘class’ for analytical purposes.

Moreover, in 1972, the unclassified group comprised mainly those too old or too young to have an occupation at the 1971 Census. Only 27 per cent of ‘unclassified’ person-years in the analysis related to people aged 20 to 59 years in 1972-76. By 2002-05, this had risen to 64 per cent. The improvement over the first five year period can largely be discounted owing to “health related selection” effects.

Health related selection effects

Life expectancy estimates by social class using the LS are subject to minor variations as a result of “health related selection”. This is the process whereby people already in deteriorating health at the census at which they are assigned a social class, tend not to be in their usual occupation or have left the labour force for health reasons. They are therefore more likely to be unclassified by social class. The main effect of health related selection on these estimates is in the periods following each census. For a detailed analysis of the role of health related selection on LS analysis, see Fox, Goldblatt and Jones⁹.

Further information

These tables are also available as an Excel spreadsheet.

If you require additional information on the data presented here, please contact

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Table 1 Life Expectancy at birth and at age 65 by social class, men, England and Wales 1972-2005

Social Class	Years													
	1972-76		1977-81		1982-86		1987-91		1992-96		1997-2001		2002-2005	
	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)
At birth														
I	71.9	1.2	74.4	1.2	75.1	1.1	76.2	1.0	78.0	0.9	79.5	0.9	80.0	1.0
II	71.9	0.6	72.6	0.6	74.1	0.5	75.0	0.5	76.1	0.5	77.9	0.5	79.4	0.5
IIIN	69.5	0.8	71.1	0.7	72.5	0.7	74.4	0.7	75.3	0.7	77.0	0.7	78.4	0.7
IIIM	70.0	0.4	70.0	0.4	71.7	0.4	72.7	0.4	73.8	0.4	74.8	0.4	76.5	0.4
IV	68.3	0.7	69.0	0.6	71.0	0.6	70.8	0.6	72.9	0.6	73.5	0.6	75.7	0.6
V	66.5	1.1	67.4	1.1	67.7	1.0	68.7	1.0	68.6	1.0	71.5	0.9	72.7	1.1
unclassified	57.5	1.9	62.7	1.6	65.5	1.5	66.7	1.3	68.8	1.2	71.5	1.1	73.8	1.1
All men	69.3	0.3	70.1	0.3	71.7	0.2	72.6	0.2	73.9	0.2	75.3	0.2	77.0	0.2
Non-manual	71.2	0.4	72.3	0.4	73.7	0.4	75.0	0.4	76.1	0.4	77.9	0.4	79.2	0.4
Manual	69.1	0.3	69.4	0.3	71.0	0.3	71.7	0.3	73.0	0.3	74.1	0.3	75.9	0.3
<i>Difference</i>	<i>2.1</i>	<i>0.5</i>	<i>2.9</i>	<i>0.5</i>	<i>2.7</i>	<i>0.5</i>	<i>3.3</i>	<i>0.5</i>	<i>3.2</i>	<i>0.5</i>	<i>3.8</i>	<i>0.5</i>	<i>3.3</i>	<i>0.5</i>
At age 65														
I	14.0	0.9	15.5	0.9	15.5	0.8	15.8	0.7	17.0	0.7	18.3	0.6	18.3	0.6
II	13.3	0.4	14.2	0.3	14.5	0.3	15.0	0.3	15.7	0.3	17.1	0.3	18.0	0.3
IIIN	12.6	0.4	13.3	0.4	13.6	0.4	14.3	0.4	15.4	0.4	16.7	0.4	17.4	0.5
IIIM	12.2	0.2	12.5	0.2	13.1	0.2	13.6	0.2	14.3	0.2	15.2	0.2	16.3	0.3
IV	12.2	0.3	12.1	0.3	12.7	0.3	12.8	0.3	13.9	0.3	14.1	0.3	15.7	0.4
V	11.6	0.4	11.8	0.4	11.6	0.4	12.0	0.5	12.6	0.5	13.2	0.5	14.1	0.7
unclassified	10.8	0.4	9.8	0.5	10.9	0.6	11.1	0.7	12.0	0.7	13.7	0.7	15.1	0.8
All men	12.3	0.1	12.6	0.1	13.1	0.1	13.7	0.1	14.5	0.1	15.5	0.1	16.6	0.2
Non-manual	13.1	0.3	14.0	0.3	14.3	0.2	14.9	0.2	15.8	0.2	17.1	0.2	17.9	0.3
Manual	12.1	0.2	12.3	0.2	12.7	0.2	13.2	0.2	14.0	0.2	14.7	0.2	15.9	0.2
<i>Difference</i>	<i>1.0</i>	<i>0.3</i>	<i>1.7</i>	<i>0.3</i>	<i>1.6</i>	<i>0.3</i>	<i>1.7</i>	<i>0.3</i>	<i>1.8</i>	<i>0.3</i>	<i>2.4</i>	<i>0.3</i>	<i>2.0</i>	<i>0.3</i>

Source: ONS Longitudinal Study

CI Confidence interval

Table 2 Change in life expectancy at birth and at age 65 by social class, men, England and Wales

Social Class	Years		
	Change between 1972-76 and 2002-05	Change between 1992-96 and 2002-05	Change between 1997-2001 and 2002-05
at birth			
I	8.1	2.0	0.5
II	7.4	3.3	1.4
IIIN	8.9	3.1	1.4
IIIM	6.5	2.7	1.7
IV	7.4	2.8	2.2
V	6.2	4.1	1.2
unclassified	16.3	5.0	2.3
All men	7.7	3.1	1.7
Non-manual	8.0	3.1	1.3
Manual	6.8	3.0	1.8
at age 65			
I	4.3	1.3	0.0
II	4.7	2.3	0.9
IIIN	4.9	2.1	0.8
IIIM	4.1	2.0	1.1
IV	3.5	1.8	1.6
V	2.5	1.5	0.8
unclassified	4.3	3.1	1.4
All men	4.4	2.1	1.1
Non-manual	4.8	2.1	0.8
Manual	3.8	1.9	1.2

Source: ONS Longitudinal Study

Table 3 Life Expectancy at birth and at age 65 by social class, women, England and Wales 1972-2005

Social Class	Years													
	1972-76		1977-81		1982-86		1987-91		1992-96		1997-2001		2002-2005	
	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)	Life exp.	95% CI (+/-)
At birth														
I	79.0	1.9	80.1	1.7	80.7	1.3	81.1	1.1	83.8	1.1	82.6	1.0	85.1	1.1
II	77.1	0.6	78.3	0.6	78.8	0.5	80.7	0.5	81.4	0.5	81.8	0.5	83.2	0.5
IIIN	78.3	0.7	78.2	0.7	79.0	0.6	80.0	0.5	80.7	0.5	81.6	0.5	82.4	0.5
IIIM	75.2	0.6	76.3	0.5	77.3	0.5	77.9	0.5	79.2	0.4	79.4	0.4	80.5	0.5
IV	75.3	0.7	75.9	0.6	77.5	0.6	77.4	0.5	78.2	0.5	78.8	0.5	79.9	0.6
V	74.2	1.2	75.6	1.0	75.9	0.9	76.6	0.9	77.5	0.9	77.9	0.9	78.1	1.2
unclassified	70.1	1.7	73.0	1.2	73.0	1.3	74.0	1.1	75.0	1.1	77.5	0.8	77.9	0.9
All women	75.3	0.3	76.5	0.2	77.4	0.2	78.3	0.2	79.3	0.2	80.0	0.2	81.1	0.2
Non-manual	77.7	0.4	78.4	0.4	79.0	0.4	80.4	0.3	81.3	0.3	81.8	0.3	82.9	0.3
Manual	75.2	0.4	76.0	0.4	77.2	0.3	77.5	0.3	78.5	0.3	79.0	0.3	80.0	0.3
<i>Difference</i>	2.5	0.6	2.4	0.5	1.9	0.5	2.9	0.5	2.8	0.4	2.8	0.4	2.9	0.5
At age 65														
I	19.1	1.7	20.0	1.5	18.9	1.1	19.0	0.8	21.1	0.9	20.7	0.8	22.0	0.9
II	17.2	0.4	17.8	0.4	18.2	0.4	19.2	0.3	19.7	0.3	20.1	0.3	21.0	0.3
IIIN	17.9	0.6	17.7	0.4	18.2	0.4	18.7	0.3	19.2	0.3	19.8	0.3	19.9	0.3
IIIM	16.4	0.5	16.9	0.4	16.9	0.3	17.2	0.3	18.1	0.3	18.2	0.3	18.7	0.4
IV	16.9	0.4	16.8	0.3	17.5	0.3	17.3	0.3	17.4	0.3	17.9	0.3	18.9	0.3
V	16.6	0.7	16.4	0.6	16.2	0.5	16.4	0.5	16.6	0.5	16.9	0.5	17.7	0.6
unclassified	15.5	0.2	15.8	0.3	15.6	0.3	15.8	0.4	16.0	0.4	17.1	0.5	17.6	0.5
All women	16.3	0.1	16.7	0.1	17.0	0.1	17.5	0.1	18.1	0.1	18.6	0.1	19.4	0.2
Non-manual	17.5	0.3	17.9	0.3	18.2	0.2	18.9	0.2	19.5	0.2	20.0	0.2	20.5	0.2
Manual	16.6	0.3	16.8	0.2	17.0	0.2	17.1	0.2	17.6	0.2	17.9	0.2	18.6	0.2
<i>Difference</i>	0.9	0.4	1.1	0.4	1.2	0.3	1.8	0.3	2.0	0.3	2.1	0.3	1.9	0.3

Source: ONS Longitudinal Study

CI Confidence interval

Table 4 Change in life expectancy at birth and at age 65 by social class, women
England and Wales

Social Class	Years		
	Change between 1972-76 and 2002-05	Change between 1992-96 and 2002-05	Change between 1997-2001 and 2002-05
at birth			
I	6.1	1.3	2.5
II	6.1	1.9	1.4
IIIN	4.1	1.6	0.8
IIIM	5.3	1.4	1.1
IV	4.5	1.7	1.0
V	3.9	0.6	0.1
unclassified	7.8	2.9	0.4
All women	5.8	1.8	1.1
Non-manual	5.2	1.6	1.1
Manual	4.8	1.5	1.1
at age 65			
I	2.9	0.8	1.2
II	3.8	1.3	1.0
IIIN	2.1	0.7	0.2
IIIM	2.4	0.6	0.5
IV	2.0	1.5	1.0
V	1.1	1.1	0.9
unclassified	2.1	1.7	0.5
All women	3.1	1.3	0.7
Non-manual	3.0	1.0	0.6
Manual	2.0	1.1	0.8

Source: ONS Longitudinal Study

Figure 1

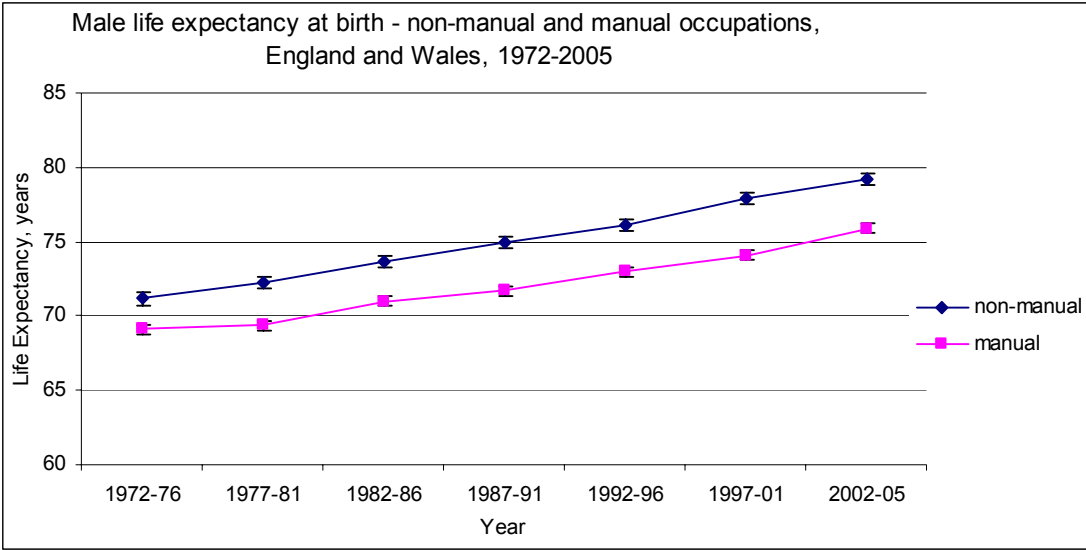


Figure 2

