

Differences in life expectancy between those aged 20, 50 and 80 – in 2011 and at birth

August 2011

Methodology

Cohort life expectancy tables for England and Wales were used to compare life expectancies across generations. These 2008-based statistics were obtained from the Office for National Statistics (ONS) on request. Similar statistics are available on the ONS website; however those provided by ONS cover a longer historical timeframe, and include the chances of the selected cohorts living to age 100¹.

The following analysis shows life expectancy for those aged 20, 50 and 80 in 2011. These ages were chosen because ages 50 and 80 are commonly used to highlight statistics on ageing. In addition, a period of 30 years is a realistic period for the length of a generation². Therefore these three ages allow the comparison of life expectancy of someone joining the workforce at aged 20, with that of their parents' and grandparents' generations. The chosen measure of life expectancy was the chance of living to age 100.

Previous work has been undertaken on the number of people of each age currently alive who can expect to reach age 100. This is available at:

http://statistics.dwp.gov.uk/asd/asd1/adhoc_analysis/2011/centenarians_by_age_groups.pdf

¹ See *Period and cohort expectation of life tables (2008-based)*:

http://www.statistics.gov.uk/downloads/theme_population/Interim_Life/period_cohort_tables_index08.pdf

² For further discussion see: <http://www.ancestry.co.uk/learn/library/article.aspx?article=11152>

Results

Table 1 shows the chances of living to 100 for those aged 20, 50 and 80 in 2011, from which it can be calculated that:

- those aged 20 in 2011 are 1.6 times more likely to reach age 100 than those aged 50; and
- those aged 20 in 2011 are 3.0 times more likely to reach age 100 than those aged 80.

Table 1: Chance of living to 100 for those aged 20, 50 and 80 in 2011.

Age in 2011	Chance of living to age 100		
	Male	Female	Unweighted average ³
20	19.5%	26.6%	23.0%
50	11.4%	17.0%	14.2%
80	6.2%	9.2%	7.7%

Table 2 shows the chance of living to age 100 for these same age cohorts from birth. This view of life expectancy is more relevant to the funding arrangements for the cohorts' future pensions. Those aged 20, 50 and 80 in 2011 were born respectively in 1991, 1961 and 1931. It can be calculated from table 2 that:

- those born in 1991 (aged 20 in 2011) were 1.7 times more likely to reach age 100 than those born in 1961 (aged 50 in 2011); and
- those born in 1991 (aged 20 in 2011) were 6.0 times more likely to reach age 100 than those born in 1931 (aged 80 in 2011).

Table 2: Chance of living from birth to 100 for those aged 20, 50 and 80 in 2011.

Year of birth	Chance of living to age 100, from birth		
	Male	Female	Unweighted average ³
1991	19.2%	26.4%	22.8%
1961	10.5%	16.2%	13.3%
1931	2.5%	5.1%	3.8%

Source: Office for National Statistics, 2008-based period and cohort life expectancy tables. Similar statistics for all age cohorts are provided as an appendix.

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³ This is a simple average of the male and female survival figures and does not account for the relative size of the male and female populations. This ensured the averages used in tables 1 and 2 (and tables 3 and 4 in the appendix) were consistent.

Appendix

Table 3: Chance of living from 'age in 2011' to 100.

Age in 2011	Chance of living to age 100			Age in 2011	Chance of living to age 100		
	Male	Female	Unweighted average ³		Male	Female	Unweighted average ³
0	26.0%	33.7%	29.9%	50	11.4%	17.0%	14.2%
1	25.8%	33.5%	29.6%	51	11.1%	16.8%	13.9%
2	25.5%	33.1%	29.3%	52	10.9%	16.5%	13.7%
3	25.1%	32.7%	28.9%	53	10.7%	16.2%	13.5%
4	24.8%	32.4%	28.6%	54	10.5%	16.0%	13.2%
5	24.4%	32.0%	28.2%	55	10.3%	15.7%	13.0%
6	24.1%	31.6%	27.9%	56	10.2%	15.5%	12.8%
7	23.7%	31.3%	27.5%	57	10.0%	15.2%	12.6%
8	23.4%	30.9%	27.2%	58	9.8%	15.0%	12.4%
9	23.1%	30.5%	26.8%	59	9.6%	14.8%	12.2%
10	22.7%	30.2%	26.5%	60	9.5%	14.5%	12.0%
11	22.4%	29.8%	26.1%	61	9.3%	14.3%	11.8%
12	22.1%	29.5%	25.8%	62	9.1%	14.0%	11.6%
13	21.7%	29.1%	25.4%	63	9.0%	13.8%	11.4%
14	21.4%	28.7%	25.1%	64	8.8%	13.6%	11.2%
15	21.1%	28.4%	24.7%	65	8.7%	13.4%	11.0%
16	20.7%	28.0%	24.4%	66	8.6%	13.2%	10.9%
17	20.4%	27.7%	24.0%	67	8.4%	13.0%	10.7%
18	20.1%	27.3%	23.7%	68	8.3%	12.9%	10.6%
19	19.8%	27.0%	23.4%	69	8.3%	12.7%	10.5%
20	19.5%	26.6%	23.0%	70	8.2%	12.6%	10.4%
21	19.1%	26.3%	22.7%	71	8.1%	12.4%	10.2%
22	18.8%	25.9%	22.4%	72	7.9%	12.2%	10.1%
23	18.5%	25.6%	22.0%	73	7.8%	12.0%	9.9%
24	18.2%	25.2%	21.7%	74	7.6%	11.7%	9.6%
25	17.9%	24.9%	21.4%	75	7.4%	11.3%	9.4%
26	17.6%	24.5%	21.1%	76	7.2%	10.9%	9.0%
27	17.3%	24.2%	20.8%	77	6.9%	10.4%	8.7%
28	17.0%	23.9%	20.4%	78	6.7%	10.0%	8.3%
29	16.7%	23.5%	20.1%	79	6.4%	9.6%	8.0%
30	16.5%	23.2%	19.8%	80	6.2%	9.2%	7.7%
31	16.2%	22.9%	19.5%	81	6.0%	8.9%	7.5%
32	15.9%	22.5%	19.2%	82	5.9%	8.7%	7.3%
33	15.6%	22.2%	18.9%	83	5.9%	8.5%	7.2%
34	15.3%	21.9%	18.6%	84	6.0%	8.5%	7.2%
35	15.1%	21.5%	18.3%	85	6.1%	8.6%	7.4%
36	14.8%	21.2%	18.0%	86	6.3%	8.8%	7.5%
37	14.5%	20.9%	17.7%	87	6.6%	9.0%	7.8%
38	14.3%	20.6%	17.4%	88	7.0%	9.4%	8.2%
39	14.0%	20.3%	17.1%	89	7.5%	9.9%	8.7%
40	13.7%	20.0%	16.8%	90	8.1%	10.5%	9.3%
41	13.5%	19.6%	16.6%	91	9.0%	11.4%	10.2%
42	13.2%	19.3%	16.3%	92	10.2%	12.7%	11.5%
43	13.0%	19.0%	16.0%	93	11.9%	14.5%	13.2%
44	12.7%	18.7%	15.7%	94	14.5%	17.2%	15.8%
45	12.5%	18.4%	15.5%	95	18.2%	21.2%	19.7%
46	12.3%	18.1%	15.2%	96	23.8%	27.1%	25.4%
47	12.0%	17.9%	14.9%	97	32.3%	35.9%	34.1%
48	11.8%	17.6%	14.7%	98	45.5%	49.0%	47.2%
49	11.6%	17.3%	14.4%	99	66.3%	69.0%	67.6%

Differences in life expectancy between those aged 20, 50 and 80 – August 2011

Table 4: Chance of living from birth to 100, by year of birth

Year of birth	Chance of living to age 100, from birth			Year of birth	Chance of living to age 100, from birth		
	Male	Female	Unweighted average ³		Male	Female	Unweighted average ³
2011	26.0%	33.7%	29.9%	1961	10.5%	16.2%	13.3%
2010	25.7%	33.3%	29.5%	1960	10.2%	15.9%	13.1%
2009	25.3%	32.9%	29.1%	1959	10.0%	15.6%	12.8%
2008	25.0%	32.6%	28.8%	1958	9.8%	15.2%	12.5%
2007	24.6%	32.2%	28.4%	1957	9.5%	14.9%	12.2%
2006	24.3%	31.8%	28.1%	1956	9.3%	14.7%	12.0%
2005	23.9%	31.5%	27.7%	1955	9.1%	14.4%	11.7%
2004	23.6%	31.1%	27.3%	1954	8.8%	14.0%	11.4%
2003	23.2%	30.7%	27.0%	1953	8.6%	13.7%	11.2%
2002	22.9%	30.4%	26.6%	1952	8.4%	13.5%	10.9%
2001	22.6%	30.0%	26.3%	1951	8.2%	13.1%	10.6%
2000	22.2%	29.6%	25.9%	1950	7.9%	12.8%	10.4%
1999	21.9%	29.3%	25.6%	1949	7.7%	12.5%	10.1%
1998	21.5%	28.9%	25.2%	1948	7.4%	12.2%	9.8%
1997	21.2%	28.5%	24.9%	1947	7.1%	11.8%	9.5%
1996	20.9%	28.2%	24.5%	1946	6.9%	11.5%	9.2%
1995	20.5%	27.8%	24.2%	1945	6.6%	11.1%	8.9%
1994	20.2%	27.5%	23.8%	1944	6.4%	10.9%	8.6%
1993	19.9%	27.1%	23.5%	1943	6.2%	10.6%	8.4%
1992	19.5%	26.7%	23.1%	1942	6.0%	10.3%	8.1%
1991	19.2%	26.4%	22.8%	1941	5.7%	9.9%	7.8%
1990	18.9%	26.0%	22.4%	1940	5.4%	9.6%	7.5%
1989	18.5%	25.6%	22.1%	1939	5.2%	9.3%	7.2%
1988	18.2%	25.3%	21.7%	1938	5.0%	8.9%	6.9%
1987	17.9%	24.9%	21.4%	1937	4.6%	8.4%	6.5%
1986	17.6%	24.5%	21.1%	1936	4.3%	7.9%	6.1%
1985	17.3%	24.2%	20.7%	1935	4.0%	7.3%	5.6%
1984	17.0%	23.8%	20.4%	1934	3.6%	6.8%	5.2%
1983	16.6%	23.5%	20.1%	1933	3.2%	6.2%	4.7%
1982	16.3%	23.1%	19.7%	1932	2.9%	5.6%	4.2%
1981	16.0%	22.8%	19.4%	1931	2.5%	5.1%	3.8%
1980	15.7%	22.4%	19.1%	1930	2.3%	4.6%	3.4%
1979	15.4%	22.1%	18.7%	1929	2.0%	4.2%	3.1%
1978	15.1%	21.7%	18.4%	1928	1.7%	3.8%	2.8%
1977	14.8%	21.4%	18.1%	1927	1.6%	3.5%	2.5%
1976	14.5%	21.1%	17.8%	1926	1.4%	3.2%	2.3%
1975	14.2%	20.7%	17.4%	1925	1.2%	3.0%	2.1%
1974	13.9%	20.4%	17.1%	1924	1.1%	2.7%	1.9%
1973	13.6%	20.0%	16.8%	1923	1.0%	2.5%	1.7%
1972	13.3%	19.7%	16.5%	1922	0.8%	2.3%	1.6%
1971	13.1%	19.4%	16.2%	1921	0.7%	2.1%	1.4%
1970	12.8%	19.0%	15.9%	1920	0.6%	1.8%	1.2%
1969	12.5%	18.7%	15.6%	1919	0.7%	1.9%	1.3%
1968	12.3%	18.4%	15.3%	1918	0.5%	1.6%	1.1%
1967	12.0%	18.1%	15.0%	1917	0.4%	1.4%	0.9%
1966	11.8%	17.7%	14.7%	1916	0.4%	1.3%	0.8%
1965	11.5%	17.4%	14.5%	1915	0.3%	1.2%	0.8%
1964	11.2%	17.1%	14.2%	1914	0.3%	1.2%	0.7%
1963	11.0%	16.8%	13.9%	1913	0.3%	1.1%	0.7%
1962	10.7%	16.5%	13.6%	1912	0.3%	1.1%	0.7%