

# Number of Future Centenarians by Age Group

April 2011

# Population Projections

- This analysis utilises ONS population projections for the UK, along with ONS cohort life expectancy tables for the UK.
- Population projections are not forecasts: they make no attempt to account for future government policies, changing economic circumstances or other relevant factors (whether in the UK or overseas). They present the population levels and demographic structure that will result if assumptions about future fertility, mortality and migration are realised.
- Projections become more uncertain as they are extended further into the future.

## Methodology

This ad hoc analysis updates previous analysis undertaken in 2010<sup>1</sup>. The analysis has been rebased for 2011, taking into account of increases in life expectancies and the rise in the population's age structure over the year.

To identify the number of people alive today who are projected to live to reach 100 (and thus become a centenarian) we have undertaken the following:

- Using the Office for National Statistics's (ONS) Mid-Year Population Projections (UK)<sup>2</sup>, we calculated the population by sex and age (single year age bands) in 2011.
- We also used the cohort life expectancy<sup>3</sup> for each sex and age band to calculate the probability that someone aged  $x$  in 2011 will live to the age of 100.
- We then multiplied these probabilities by the population of each band, to obtain an estimate for the population in each year likely to reach an age of 100. These were then aggregated for different age groups.
- Population projections are also provided for those aged over 100 and those aged over 110 every five years, including 2066 which is the first year the centenarian population is projected to rise above half a million.

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<sup>1</sup> DWP Ad Hoc Analysis (December 2010), *Number of future centenarians*. Available at [http://research.dwp.gov.uk/asd/asd1/adhoc\\_analysis/2010/Centenarians.pdf](http://research.dwp.gov.uk/asd/asd1/adhoc_analysis/2010/Centenarians.pdf).

<sup>2</sup> ONS Population Projections : <http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=8519>

<sup>3</sup> ONS Life Expectancy Tables: <http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=15098>

# Results

**Table 1** summarises the findings of this analysis, showing the number of people in each age group, in 2011 and within the UK, who are projected to reach age 100. This is also shown as a proportion of people within each age group.

**Table 2** gives a complete breakdown of this analysis by individual age bands and by sex. It shows the likelihood of a person of any age in 2011 living to be 100, and the corresponding number of people of each age projected to live to 100. For example, of the 340,000 ten year old boys alive in 2011, 76,000 (22.4%) are projected to live to be 100.

**Chart 1** shows cohort life expectancies at birth for the UK from 1951 to 2058, split by gender. Life expectancies for years after 2008 are projections.

**Table 3** shows the projected centenarian population from 1981 to 2081, as well as the projected population aged 110 and over.

**Note:** All results are based on population projections (central projection) and are therefore subject to a degree of uncertainty.

**Table 1: Number of people in the UK projected to live to 100, by age groups**

Age group	Total		
	Population in 2011 ('000s)	Number to reach age 100 ('000s)	% of age group to reach age 100
Total aged under 100	62,637	11,023	17.6%
aged 16 and under	12,360	3,312	26.8%
aged 17 - 50	29,252	5,399	18.5%
aged 51 - 65	11,207	1,373	12.3%
aged 66 - 99	9,817	939	9.6%

Source: Ad hoc analysis of Office for National Statistics, National Population Projections (UK) & Cohort Life Expectancy Tables (UK)

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**Table 2: Number of people in the United Kingdom projected to live to age 100, by individual age bands**

Age in 2011	Males			Females			Total
	Population in 2011 ('000s)	Chance of reaching age 100	Number to reach age 100 ('000s)	Population in 2011 ('000s)	Chance of reaching age 100	Number to reach age 100 ('000s)	Number to reach age 100 ('000s)
0	397	25.7%	102	378	33.4%	126	228
1	398	25.5%	101	379	33.1%	126	227
2	401	25.1%	101	383	32.8%	125	226
3	404	24.8%	100	386	32.4%	125	225
4	388	24.4%	95	370	32.1%	119	213
5	375	24.1%	90	359	31.7%	114	204
6	367	23.8%	87	351	31.3%	110	197
7	362	23.4%	85	345	31.0%	107	192
8	350	23.1%	81	333	30.6%	102	183
9	340	22.7%	77	325	30.2%	98	176
10	340	22.4%	76	326	29.9%	97	174
11	350	22.1%	77	332	29.5%	98	175
12	359	21.7%	78	343	29.1%	100	178
13	365	21.4%	78	349	28.8%	101	179
14	377	21.1%	79	358	28.4%	102	181
15	375	20.7%	78	356	28.1%	100	178
16	379	20.4%	77	359	27.7%	99	177
17	390	20.1%	78	370	27.3%	101	179
18	401	19.8%	79	381	27.0%	103	182
19	421	19.4%	82	401	26.6%	107	189
20	436	19.1%	83	412	26.3%	108	192
21	436	18.8%	82	415	25.9%	108	190
22	442	18.5%	82	426	25.6%	109	191
23	457	18.2%	83	439	25.2%	111	194
24	458	17.9%	82	438	24.9%	109	191
25	459	17.6%	81	446	24.5%	109	190
26	468	17.3%	81	447	24.2%	108	189
27	457	17.0%	78	431	23.9%	103	181
28	442	16.7%	74	414	23.5%	97	171
29	423	16.4%	69	411	23.2%	95	165
30	430	16.1%	69	417	22.8%	95	165
31	425	15.8%	67	414	22.5%	93	161
32	401	15.6%	62	397	22.2%	88	150
33	379	15.3%	58	379	21.9%	83	141
34	373	15.0%	56	372	21.5%	80	136
35	383	14.8%	57	382	21.2%	81	137
36	392	14.5%	57	392	20.9%	82	139
37	400	14.2%	57	402	20.6%	83	140
38	417	14.0%	58	422	20.3%	86	144
39	435	13.7%	60	446	19.9%	89	149
40	448	13.5%	60	457	19.6%	90	150
41	446	13.2%	59	451	19.3%	87	146
42	455	13.0%	59	464	19.0%	88	147
43	460	12.7%	58	465	18.7%	87	145
44	469	12.5%	58	475	18.4%	87	146

**Number of Future Centenarians by Age Group – April 2011**

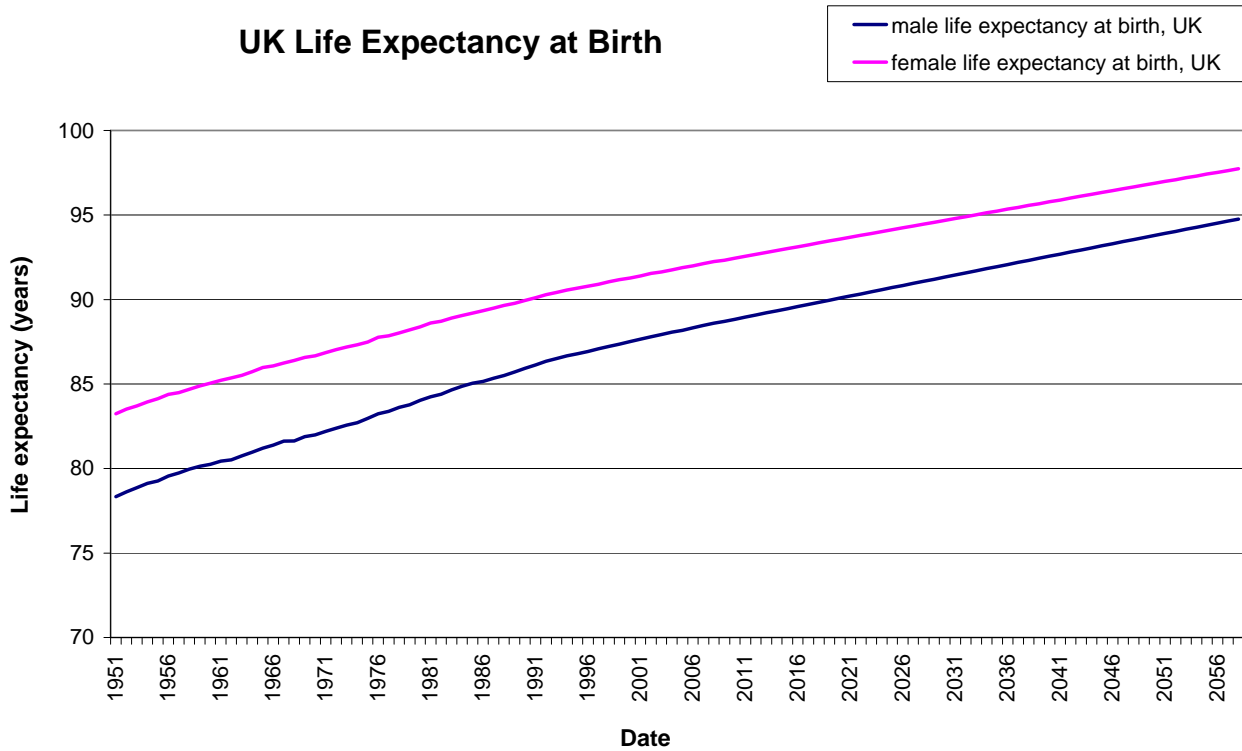
<b>45</b>	463	12.2%	<b>57</b>	476	18.1%	<b>86</b>	143
<b>46</b>	464	12.0%	<b>56</b>	478	17.8%	<b>85</b>	141
<b>47</b>	457	11.8%	<b>54</b>	474	17.5%	<b>83</b>	137
<b>48</b>	448	11.5%	<b>52</b>	467	17.3%	<b>81</b>	132
<b>49</b>	437	11.3%	<b>49</b>	453	17.0%	<b>77</b>	126
<b>50</b>	427	11.1%	<b>47</b>	441	16.7%	<b>74</b>	121
<b>51</b>	410	10.9%	<b>45</b>	423	16.4%	<b>69</b>	114
<b>52</b>	402	10.7%	<b>43</b>	413	16.2%	<b>67</b>	110
<b>53</b>	396	10.5%	<b>41</b>	405	15.9%	<b>64</b>	106
<b>54</b>	380	10.3%	<b>39</b>	390	15.7%	<b>61</b>	100
<b>55</b>	365	10.1%	<b>37</b>	376	15.4%	<b>58</b>	95
<b>56</b>	355	9.9%	<b>35</b>	365	15.2%	<b>55</b>	91
<b>57</b>	354	9.7%	<b>35</b>	365	14.9%	<b>55</b>	89
<b>58</b>	347	9.6%	<b>33</b>	358	14.7%	<b>53</b>	86
<b>59</b>	342	9.4%	<b>32</b>	356	14.5%	<b>51</b>	84
<b>60</b>	341	9.2%	<b>32</b>	358	14.2%	<b>51</b>	82
<b>61</b>	348	9.1%	<b>32</b>	367	14.0%	<b>51</b>	83
<b>62</b>	357	8.9%	<b>32</b>	376	13.8%	<b>52</b>	84
<b>63</b>	381	8.8%	<b>33</b>	402	13.6%	<b>54</b>	88
<b>64</b>	397	8.6%	<b>34</b>	420	13.4%	<b>56</b>	90
<b>65</b>	319	8.5%	<b>27</b>	340	13.2%	<b>45</b>	72
<b>66</b>	308	8.4%	<b>26</b>	330	13.0%	<b>43</b>	68
<b>67</b>	300	8.3%	<b>25</b>	320	12.8%	<b>41</b>	66
<b>68</b>	284	8.2%	<b>23</b>	308	12.6%	<b>39</b>	62
<b>69</b>	254	8.1%	<b>20</b>	277	12.5%	<b>35</b>	55
<b>70</b>	235	8.0%	<b>19</b>	259	12.3%	<b>32</b>	51
<b>71</b>	241	7.9%	<b>19</b>	268	12.2%	<b>33</b>	52
<b>72</b>	236	7.8%	<b>18</b>	266	12.0%	<b>32</b>	50
<b>73</b>	229	7.6%	<b>17</b>	260	11.7%	<b>30</b>	48
<b>74</b>	218	7.5%	<b>16</b>	251	11.4%	<b>29</b>	45
<b>75</b>	206	7.3%	<b>15</b>	242	11.1%	<b>27</b>	42
<b>76</b>	194	7.0%	<b>14</b>	231	10.7%	<b>25</b>	38
<b>77</b>	178	6.8%	<b>12</b>	219	10.3%	<b>22</b>	35
<b>78</b>	170	6.6%	<b>11</b>	213	9.8%	<b>21</b>	32
<b>79</b>	162	6.3%	<b>10</b>	208	9.4%	<b>20</b>	30
<b>80</b>	152	6.1%	<b>9</b>	203	9.0%	<b>18</b>	28
<b>81</b>	138	5.9%	<b>8</b>	192	8.7%	<b>17</b>	25
<b>82</b>	124	5.8%	<b>7</b>	179	8.5%	<b>15</b>	22
<b>83</b>	110	5.8%	<b>6</b>	164	8.4%	<b>14</b>	20
<b>84</b>	100	5.9%	<b>6</b>	155	8.4%	<b>13</b>	19
<b>85</b>	89	6.0%	<b>5</b>	145	8.5%	<b>12</b>	18
<b>86</b>	77	6.2%	<b>5</b>	132	8.7%	<b>11</b>	16
<b>87</b>	66	6.5%	<b>4</b>	120	8.9%	<b>11</b>	15
<b>88</b>	56	6.9%	<b>4</b>	108	9.3%	<b>10</b>	14
<b>89</b>	49	7.4%	<b>4</b>	99	9.8%	<b>10</b>	13
<b>90</b>	42	8.1%	<b>3</b>	91	10.4%	<b>9</b>	13
<b>91</b>	32	9.0%	<b>3</b>	73	11.3%	<b>8</b>	11
<b>92</b>	22	10.2%	<b>2</b>	51	12.6%	<b>6</b>	9
<b>93</b>	14	11.9%	<b>2</b>	36	14.5%	<b>5</b>	7
<b>94</b>	11	14.4%	<b>2</b>	29	17.2%	<b>5</b>	6
<b>95</b>	8	18.2%	<b>1</b>	23	21.1%	<b>5</b>	6
<b>96</b>	6	23.8%	<b>1</b>	18	27.0%	<b>5</b>	6
<b>97</b>	4	32.3%	<b>1</b>	13	35.8%	<b>5</b>	6
<b>98</b>	2	45.5%	<b>1</b>	9	49.0%	<b>5</b>	6

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99	2	66.3%	1	6	68.9%	4	5
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Source: Ad hoc analysis of Office for National Statistics, National Population Projections (UK) & Cohort Life Expectancy Tables (UK)

Chart 1: UK Life Expectancy at Birth, 1951–2058 (projected)



Source: Office for National Statistics, Cohort Life Expectancy Tables (UK)

Table 3: Number of centenarians in the United Kingdom<sup>4</sup>

Year	100+			110+		
	Female	Male	All	Female	Male	All
1981	2,300	300	2,600	0	0	0
1986	3,200	500	3,700	0	0	0
1991	4,000	500	4,500	0	0	0
1996	5,200	600	5,800	0	0	0
2001	6,600	800	7,400	0	0	0
2006	8,200	1,200	9,400	0	0	0

<sup>4</sup> Numbers rounded to nearest 100. Population estimates have been used for figures prior to 2009; and 2008-based population projections from 2010 onwards

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2011	10,400	2,000	12,400	0	0	0
2016	12,200	3,200	15,400	0	0	0
2021	19,400	6,500	25,900	0	0	0
2026	29,400	11,500	40,900	0	0	0
2031	45,000	20,500	65,500	100	0	100
2036	71,200	36,500	107,700	100	0	100
2041	100,700	54,200	154,900	300	100	400
2046	137,600	77,100	214,700	900	400	1,300
2051	179,200	102,000	281,200	1,600	700	2,300
2056	200,000	116,000	316,000	2,600	1,200	3,800
2061	250,300	148,300	398,600	3,900	1,900	5,800
2066	316,700	190,400	507,100	5,200	2,500	7,700
2071	356,500	219,000	575,500	7,800	3,900	11,700
2076	359,700	226,500	586,200	11,400	5,900	17,300
2081	393,300	257,700	651,000	14,300	7,700	22,000

Source: Office for National Statistics, National Population Projections (UK)

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**April 2011**