CHAPTER 2 – POPULATION (JSNA 2016)

2. Population
This section describes the changing size and profile of Oxfordshire’s population. Further resources are available online, by visiting the JSNA – Population webpage.

2.1. Population Size
In June 2015 the Office for National Statistics (ONS) released population estimates for mid-2014.¹ These put Oxfordshire’s population at 672,500, continuing a trend of growth. The county’s population is estimated to have risen by 2.9% since the 2011 Census (when it stood at 653,800 residents) and by 10.7% since the 2001 Census.

The estimated rate of population growth in Oxfordshire has been similar to that of the wider South East and slightly higher than for England overall. Across the county, estimated population growth between 2011 and 2014 has been highest in Oxford (4%).

Table 2.1: Estimated population change in Oxfordshire and its Districts (2011-2014)

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Cherwell</td>
<td>141,900</td>
<td>144,500</td>
<td>1.9%</td>
</tr>
<tr>
<td>Oxford</td>
<td>151,900</td>
<td>158,000</td>
<td>4.0%</td>
</tr>
<tr>
<td>South Oxfordshire</td>
<td>134,300</td>
<td>137,000</td>
<td>2.1%</td>
</tr>
<tr>
<td>Vale of White Horse</td>
<td>121,000</td>
<td>124,900</td>
<td>3.2%</td>
</tr>
<tr>
<td>West Oxfordshire</td>
<td>104,800</td>
<td>108,200</td>
<td>3.2%</td>
</tr>
<tr>
<td>Oxfordshire</td>
<td>653,800</td>
<td>672,500</td>
<td>2.9%</td>
</tr>
</tbody>
</table>


To compare population change in different parts of England and Wales, take a look at the data visualisation on population change produced by the Office for National Statistics.

Oxfordshire’s population is expected to continue to grow. The number of births in the county is expected to exceed the number of deaths and, meanwhile, more people are expected to move in than out.

Oxfordshire County Council produces two tools for estimating future population change:
- The population forecasts² are based on information about housing numbers, taken from current district local plans. More details of the methodology used can be found in the population forecasts report.

The long range population projections\[4\] take into account ambitions for 93,560-106,560 new homes between 2011 and 2031, as set out in Oxfordshire’s Strategic Housing Market Assessment.\[4\] The projections cover the period up to 2052, based on five growth scenarios. They represent the range of variation considered feasible for changes in life expectancy, fertility, migration, and housing growth. Unlike the population forecasts, these are independent of district local plans. More details of the methodology used can be found in the population projections report.

Oxfordshire County Council’s latest population forecast shows the county’s population increasing by 86,000 (13%) from 2014 to 2026. The principal projection shows a larger increase, of 9,400 (14%). However, this could be considerably higher or lower, depending on factors such as life expectancy, fertility, migration, and housing growth.

Overall, the projected growth in Oxfordshire’s population can be expected to increase the need for different forms of health and social care in the county.

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2.2. Life Expectancy

2.2.1. Overall Life Expectancy

Life expectancy at birth predicts the average number of years a person born could expect to live if they were to experience that area’s age-specific mortality rates. In practice, death rates of the area may change in the future and people may live in other areas for at least some part of their lives. In line with falling mortality rates, life expectancy has been increasing in the UK for some time.

Life expectancy for a boy born in Oxfordshire was estimated to be 81.0 years, if 2012-14 mortality rates persist throughout their lifetime (as mentioned above, this is unlikely in practice). For a girl born in Oxfordshire, life expectancy was estimated at 84.1 years.

Over the past 15 years, both male and female life expectancy at birth have increased significantly. However, in recent years, female life expectancy has plateaued, whilst male life expectancy has continued to increase. This has contributed to a narrowing of the gap between male and female life expectancy from 4.5 years in 2000-2002 to 3.1 years in 2012-2014.

Figure 4: Male and female life expectancy at birth in Oxfordshire, 3-year rolling data for 2000-02 to 2012-14

For the 2012-14 period, life expectancy for both sexes was higher in Oxfordshire than the national average. Male life expectancy was also higher than the regional average (whereas female life expectancy has continued to increase similar to the regional average).

All of Oxfordshire’s districts ranked among the top 50% of unitary and lower tier local authorities in England, for male life expectancy at birth. Three districts were ranked among the top 15%: South Oxfordshire (ranked 35th of 346 authorities), Vale of White Horse (ranked 37th) and West Oxfordshire (ranked 49th). However, male life expectancy in Oxford was significantly lower than the county average, at 79.9 years, respectively.

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For *female* life expectancy at birth, Cherwell was the only district ranked in the bottom 50% of unitary and lower tier local authorities in England (ranked 184th of 346 authorities). The other districts were among the top 50% and two were among the top 20%: South Oxfordshire (ranked 57th) and Vale of White Horse (ranked 65th).

Figure 5: Male and female life expectancy at birth in England, the South East, Oxfordshire and its districts, 3-year rolling data for 2012-2014

Nationally there is an established link between life expectancy and socioeconomic group: those with higher levels of education, more highly skilled occupations, and larger salaries, are more likely to live longer. Men in the most advantaged socioeconomic group now have a longer life expectancy than the average woman, for the first time. The figure below shows the national differences in estimates of male and female life expectancy, by decile of deprivation.

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In Oxfordshire, pooled data for the period 2009-2013 show that male life expectancy at birth was estimated to differ by 5.6 years between those living in the most and least deprived areas of the county. The confidence level for this figure is 95% within the range 4.4-6.9 years. The level of inequality was significantly lower than in England overall.

Meanwhile, the inequality in female life expectancy at birth was estimated at 3.8 years, with 95% confidence within the range 2.2-5.4 years. Again, this was significantly better than the national average.

The maps below show how life expectancy is thought to differ across areas of the county.
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Figure 7: Male life expectancy in Oxfordshire’s 86 Middle Layer Super Output Areas

Source: Office for National Statistics
2.2.2. Healthy Life Expectancy

The Office for National Statistics publishes three-year rolling estimates of healthy life expectancy (the number of years of life a person spends in good health) at national, regional and county levels.\(^9\) Nationally, overall life expectancy has been increasing faster than healthy life expectancy in recent years; this means people may have more years living in ill-health in the future.\(^{10}\)

The latest three-year rolling data, covering the period 2011-2013, shows that a child born in Oxfordshire could expect to live in good health until the age of nearly 67, if male, or a little over 65, if female. Again, the figures relate to current mortality rates which are, in practice, likely to change over an individual's lifetime. The difference between male and female healthy life expectancy was not statistically significant. The trend over time also shows a broadly stable pattern, although female healthy life expectancy decreased between the 2010-12 and 2011-13 periods.

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Healthy life expectancy in Oxfordshire is above the national average: for the period 2011-2013 the average healthy life expectancy for a boy born in England was 63.3; for a girl it was 63.9.\textsuperscript{11} Healthy life expectancy in Oxfordshire is statistically similar to the South East average (65.6 for a boy and 66.7 for a girl).

Pooled data for the period 2009-2013 allows analysis of healthy life expectancy at birth at neighbourhood (‘middle layer super output area’) level.\textsuperscript{12} This shows that most neighbourhoods in Oxfordshire have healthy life expectancies above national averages (some are among the best in England). However, a small number are below national averages, as shown by the darker shading on the maps below. For both men and women, these areas tend to be concentrated around parts of Oxford and Banbury.

\textsuperscript{11} ONS Health Expectancy statistics: http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Health+Expectancy#tab-sum-pub
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Figure 10: Male healthy life expectancy at birth, mapped at Middle Layer Super Output Area (2009-2013)

Source: Office for National Statistics health expectancies statistics
In Oxfordshire, for the period 2009-2013, male healthy life expectancy at birth was estimated to differ by 9.3 years between those living in the most and least deprived areas of the county. The confidence level for this figure is 95% within the range 7.9-10.8 years. The level of inequality was significantly lower than in England overall.

Meanwhile, the inequality in female healthy life expectancy at birth was estimated at 8.8 years, with 95% confidence within the range 6.9-10.7 years. Again, this was significantly better than the national average.

2.2.3. Disability-Free Life Expectancy

Disability-free life expectancy (DLE) is defined as the lifetime free from a limiting persistent illness or disability. This is based upon a self-rated assessment of how health limits an individual’s ability to carry out day-to-day activities. Similarly to healthy life expectancy, disability-free life expectancy in England has been increasing more slowly than overall life expectancy over the past 10 years; this means people are expected to have more years living with a disability in the future.\textsuperscript{14}

For the period 2009-2011 disability-free life expectancy at birth in Oxfordshire was 67.6 years for boys and 69.3 years for girls.\textsuperscript{15} Trends since 2006-2008 suggest that disability-free life expectancy is increasing for both sexes, although changes are not always statistically significant, due to relatively wide confidence intervals locally.

Disability free life expectancy in Oxfordshire remains significantly above the national average. Male disability free life expectancy has consistently been in the top 10% of the 150 upper tier local authorities in England since 2006-8. Female disability-free life expectancy has been in the top 20%. If current trends were to continue, male disability-free life expectancy could increase to around 73 by 2020, and female disability-free life expectancy to around 72.\textsuperscript{16}

\textsuperscript{14} Marmot Indicators 2015: \url{http://www.instituteofhealthequity.org/projects/marmot-indicators-2015}
\textsuperscript{15} ONS subnational health expectancies: \url{http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Subnational+Health+Expectancies} Again, the figures relate to current mortality rates which are, in practice, likely to change over an individual’s lifetime.
\textsuperscript{16} Projections for disability free life expectancy use Oxfordshire County Council’s Research and Intelligence team’s overall life expectancy projections and apply trends in disability free life expectancy from the period 2006-2008 to 2009-2011, based on ONS estimates. The changing ratios between overall life expectancy and disability free life expectancy are projected forward for both boys and girls. According to the projections, male disability free life expectancy outpaces female disability free life expectancy from 2012 onwards; this is because both male disability free life expectancy and overall male life expectancy have tended to increase at a faster rate than the female equivalents. However, the projected figures should be treated with caution, since trends are taken from just four estimated data points, and there is uncertainty about how patterns of life expectancy and disability free life expectancy will change in the future.
Pooled data for the period 2009-2013 allows analysis of disability-free life expectancy at birth at neighbourhood (‘middle layer super output area’) level.\(^\text{17}\) This shows that most neighbourhoods in Oxfordshire have disability free life expectancies above national averages (again, some are among the best in England). However, a small number are below national averages, as shown by the darker shading on the maps below. As for healthy life expectancy, these areas tend to be concentrated around parts of Oxford and Banbury.

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Figure 14: Male disability free life expectancy at birth, mapped at Middle Layer Super Output Area (2009-2013)

Source: Office for National Statistics health expectancies statistics
In Oxfordshire, for the period 2009-2013, male DLE at birth was estimated to differ by 8.0 years between those living in the most and least deprived areas of the county. The confidence level for this figure is 95% within the range 6.8-9.3 years. The level of inequality was significantly lower than in England overall.

Meanwhile, the inequality in female DLE at birth was estimated at 7.3 years, with 95% confidence within the range 5.8-8.8 years. Again, this was significantly better than the national average.

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2.3. Population by Sex and Age

The figure below shows the population profile of Oxfordshire, by sex and age, as of mid-2014.

Figure 16: Oxfordshire population profile

Source: Office for National Statistics population estimates for mid-2014

2.3.1. Sex

Whilst slightly more babies are recorded as male than female at birth, mortality rates (the number of deaths within a population during a given time period) are generally higher for men than for women.

In 2014 an estimated 49.6% of Oxfordshire’s population was male and 50.4% was female.¹⁹ The proportions were similar to those in the South East (49.2% male; 50.8% female) and England overall (49.3% male; 50.7% female). Across the county proportions were also similar, although Oxford was estimated to have a slightly higher proportion of male residents (50.4%). The relative proportions of men and women in the county have remained stable over time.

Several health and wellbeing outcomes are linked to a person’s sex; these are mentioned throughout the report.

2.3.2. Age

A breakdown of Oxfordshire’s population by age group is given in the table below. The number of people in each age group has grown between 2011 and 2014. The largest proportionate increase was among older people.²⁰ Ageing is a risk factor for many health

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conditions, whereas wellbeing is thought to be ‘U-shaped’, tending to be higher among younger and older age groups. The relationship between age and health and wellbeing is discussed in more detail throughout the report.

Figure 17: Oxfordshire’s population by age group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number in 2011 (Census)</th>
<th>Number in 2014 (ONS Mid-Year Estimate)</th>
<th>% change 2011-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3</td>
<td>33,000</td>
<td>33,200</td>
<td>+0.8%</td>
</tr>
<tr>
<td>4-17</td>
<td>105,000</td>
<td>107,900</td>
<td>+2.8%</td>
</tr>
<tr>
<td>18-64</td>
<td>412,000</td>
<td>415,800</td>
<td>+0.9%</td>
</tr>
<tr>
<td>65+</td>
<td>103,700</td>
<td>115,600</td>
<td>+11.4%</td>
</tr>
<tr>
<td>85+</td>
<td>14,700</td>
<td>16,200</td>
<td>+10.3%</td>
</tr>
</tbody>
</table>


Older People

In 2014 there were an estimated 115,600 people aged 65 and over, representing an increase of 11.4% since 2011. Within this group, the number of people aged 85 and over was estimated to have increased by 10.3%, to 16,200.

In 2014 those aged 65 and over made up an estimated 17.2% of the county’s population (up from 15.9% in 2011); 85 and overs made up 2.4% (up from 2.2% in 2011). These proportions were slightly lower than in the South East (where 65 and overs comprised 18.6% of the population and 85 and overs 2.6%). They were similar to England overall (17.6% and 2.3%, respectively).

The proportion of older people was higher in the more rural districts of the county. The lower number and proportion of older people in Oxford is due to the younger profile of the city, which is in turn partly attributable to the presence of two large universities in the city.

Figure 18: The number and proportion of older people in Oxfordshire and its districts

<table>
<thead>
<tr>
<th>Area</th>
<th>People aged 65+ (number and % of population)</th>
<th>People aged 85+ (number and % of population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherwell</td>
<td>24,500 (17%)</td>
<td>3,200 (2.2%)</td>
</tr>
<tr>
<td>Oxford</td>
<td>17,800 (11.3%)</td>
<td>2,800 (1.8%)</td>
</tr>
<tr>
<td>South Oxfordshire</td>
<td>27,300 (19.9%)</td>
<td>3,800 (2.7%)</td>
</tr>
<tr>
<td>Vale of White Horse</td>
<td>24,400 (19.5%)</td>
<td>3,300 (2.7%)</td>
</tr>
<tr>
<td>West Oxfordshire</td>
<td>21,600 (19.9%)</td>
<td>3,100 (2.9%)</td>
</tr>
<tr>
<td>Oxfordshire</td>
<td>115,600 (17.2%)</td>
<td>16,200 (2.4%)</td>
</tr>
</tbody>
</table>

Source: Office for National Statistics Mid-2014 Population Estimate

The growing number of older people in the county is likely to affect health and wellbeing needs significantly. Older people are more likely than younger people to experience many health conditions.

Babies and Infants

In 2014 there were an estimated 33,200 infants aged 0-3 in Oxfordshire. The number of 0-3 year-olds was estimated to have grown by just under 1% since 2011, increasing the relative size of this age group slightly from 4.9% of the population to 5%. The proportion of 0-3 year-olds in Oxfordshire was similar to that in the South East (4.9%) and England overall (5.1%); it was also similar across each district (within half a percentage point either way).

2014/mid-year-population-estimates-for-the-uk-2014.html. Percentages are based on raw ONS figures rather than the rounded figures included in the JSNA.
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Children and Young People
There were an estimated 107,900 children and young people aged 4-17 in Oxfordshire in 2014. Although the absolute number is estimated to have increased by 2.8% since 2011, the proportion of the population made up by 4-17 year olds fell slightly from 16.1% to 16% over the same period. The proportion of 4-17 year-olds in Oxfordshire was a little lower than in the South East (16.5%) and England overall (16.3%). Across the county, the proportion of 4-17 year olds was highest in Cherwell (24,700, making up 17.1% of the population).

Working Age Adults
There were an estimated 415,800 adults aged 18-64 in Oxfordshire in 2014, representing an increase of 0.9% since 2011. The proportion of the population made up by 18-64 year olds fell slightly, from 63% to 61.8%. There were proportionately slightly more people in this age group than in England (61.1%) and the South East (60%). Across the county there were estimated to be many more 18-64 year olds in Oxford than other districts (numbering 110,200 and making up 69.7% of the population). Again, this is likely to be linked to the presence of two large universities and a higher concentration of employment opportunities.