

## 6. CHILDREN, YOUNG PEOPLE AND THEIR FAMILIES

### 6.2 Pregnancy and Maternity

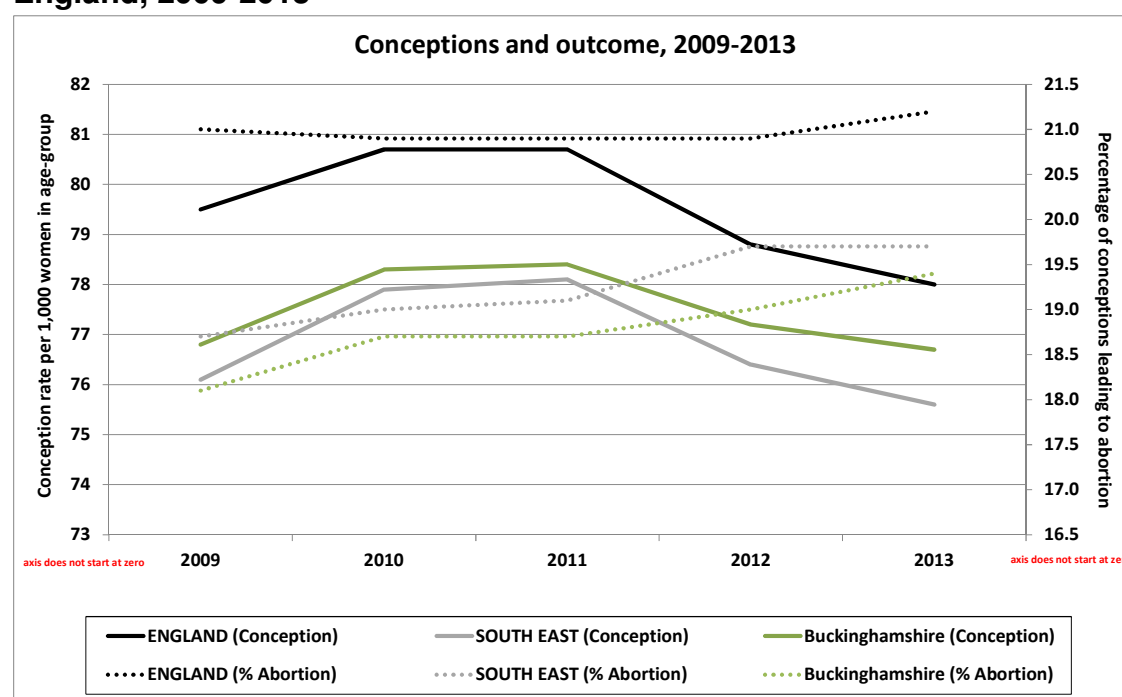
This section presents information on population indicators relating to maternity including birth and fertility, characteristics of Buckinghamshire mothers, and deliveries. Other relevant information is included in JSNA sections on antenatal and newborn screening (section 6.5), smoking in pregnancy (6.3), low birth weight and prematurity (6.6), breastfeeding (6.7), perinatal mental health (6.8), teenage pregnancy (6.2), female genital mutilation (6.21) and population changes (3.2). Maternity services which include public health interventions are essential to ensure the best possible outcome of pregnancy for both mother and baby, and to give infants the best start in life.

#### 6.2.1 Conceptions, fertility and births in Buckinghamshire

##### 6.2.1.1. Conceptions

In Buckinghamshire there were 7,244 conceptions in 2013, a rate of 76.7 conceptions per 1,000 women in the reproductive age-group, not statistically significantly different from the England rate of 78.0/1000 or the South East rate of 75.6/1000. This rate has been falling over the last 3 years, in line with the regional and national trends (figure 1).

**Figure 1 Conceptions and outcome, Buckinghamshire, South East and England, 2009-2013**



Source: ONS Conception Statistics, 2013

In 2013 19.4% of all conceptions in Buckinghamshire led to an abortion, lower than the regional (19.7%) and national (21.2%) averages<sup>1</sup>. The proportion of conceptions ending in abortion has increased both in Buckinghamshire and the South East in the last few years, while the national proportion has remained about the same.

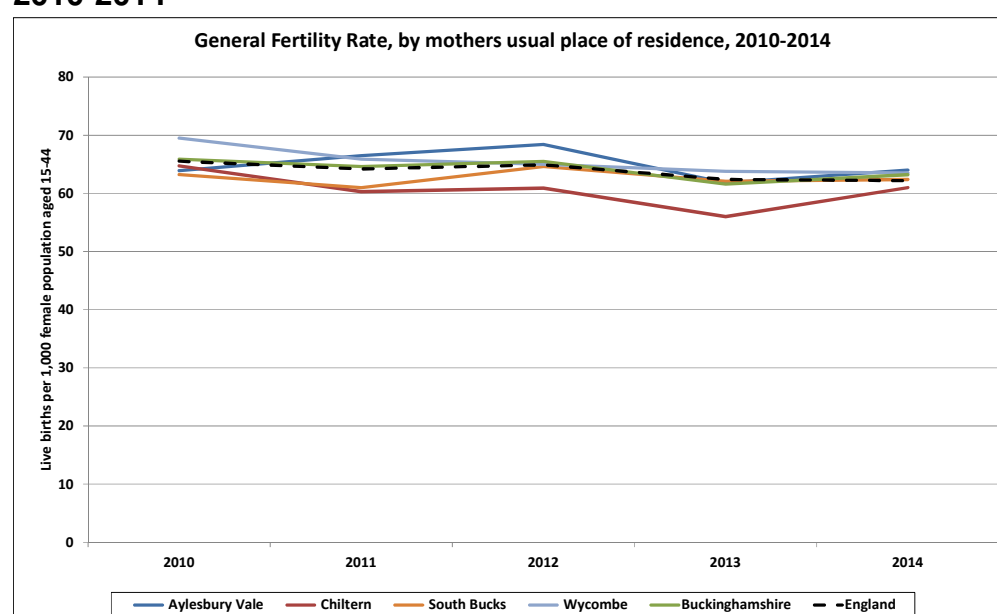
### 6.2.1.2. Fertility rate

Fertility can be measured using the general fertility rate and the total fertility rate. The general fertility rate (GFR) is the actual number of live births in a year per 1,000 women aged 15-44. The total fertility rate (TFR) is the average number of children who would be born per woman in her lifetime if the current age specific fertility rates applied throughout her childbearing years. Between 2001 and 2010, fertility rates in Buckinghamshire rose steadily, but have subsequently plateaued<sup>2</sup>.

The GFR in Buckinghamshire has fallen slightly over the past five years (2010-2014) in line with the national trend with the Buckinghamshire 2014 GFR of 63.2/1000 similar to the England average of 62.2/1000. The GFR varied at District level from a lower rate in Chiltern of 61.0/1000 to a higher rate in Aylesbury Vale of 64.0/1000 and Wycombe of 63.5/1000. The GFR in South Bucks was 62.4/1000 (figure 2). However none of the District rates were significantly different from each other or the Buckinghamshire average.

The TFR in Buckinghamshire (1.93 children per woman) in 2014 was significantly higher than the rates for the South East and England (1.86 and 1.83 respectively), but not significantly different from the 2013 rate of 1.91 children per woman in Buckinghamshire<sup>3</sup>.

**Figure 2 General fertility rate in Buckinghamshire and at District Council level, 2010-2014**



Source: HSCIC Indicator Portal and ONS Birth Summary Tables

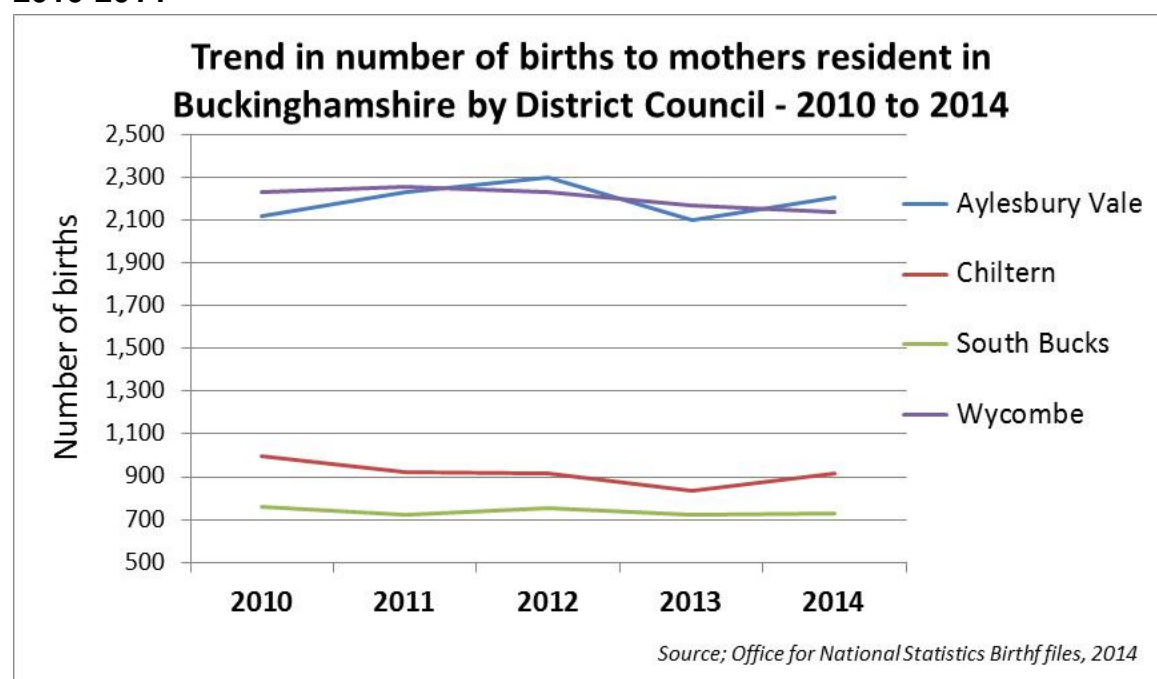
Between 2001 and 2014, the estimated number of women in Buckinghamshire aged between 15 and 44 fell from 97,900 to 94,800 (a 3% decrease)<sup>4</sup>. Current projections show that the number of women aged 15-44 is expected to fall further to 93,200 by 2025<sup>5</sup>. However the projected housing growth in Buckinghamshire over the next five to ten years is likely to have an impact on migration and corresponding population growth (see JSNA section 3.2). If the population migrating into Buckinghamshire includes more women of childbearing age this could lead to an increase in the birth rate and fertility rate.

#### 6.2.1.3. Births

In 2014 there were 5,989 live births to mothers in Buckinghamshire. Just over a third of these (36.9%) were born to mothers from Aylesbury Vale District with a similar proportion in Wycombe District (35.7%). In Chiltern and South Bucks the proportions were smaller, at 15.3% and 12.1% respectively<sup>6</sup>. There were 35 stillbirths in Buckinghamshire in 2014<sup>7</sup>.

The number of births in Buckinghamshire declined from 6,076 in 2008 to 5,989 in 2014, a fall of 1.4% (although there was a small increase between 2013 and 2014) (see table 4, JSNA section 3.2). The crude birth rate per 1,000 population in Buckinghamshire fell by 7.3% between 2008 and 2014 (see figure 3, JSNA section 3.2). The crude birth rate differs from the fertility rate (shown above) as the birth rate is calculated using the total population, so is influenced by the population age structure, whereas the fertility rate relates only to women of childbearing age. The birth rate fell more than the number of births between 2008-2014 because of an increase in the size of the total population. Buckinghamshire has a lower birth rate than England, and within Buckinghamshire, Wycombe District has the highest birth rate and Chiltern District the lowest. However, in 2014 compared to 2013 Chiltern District had the biggest increase in births (10% increase) followed by Aylesbury Vale (5% increase) (figure 3).

**Figure 3 Trend in annual number of births in Buckinghamshire at District level, 2010-2014**



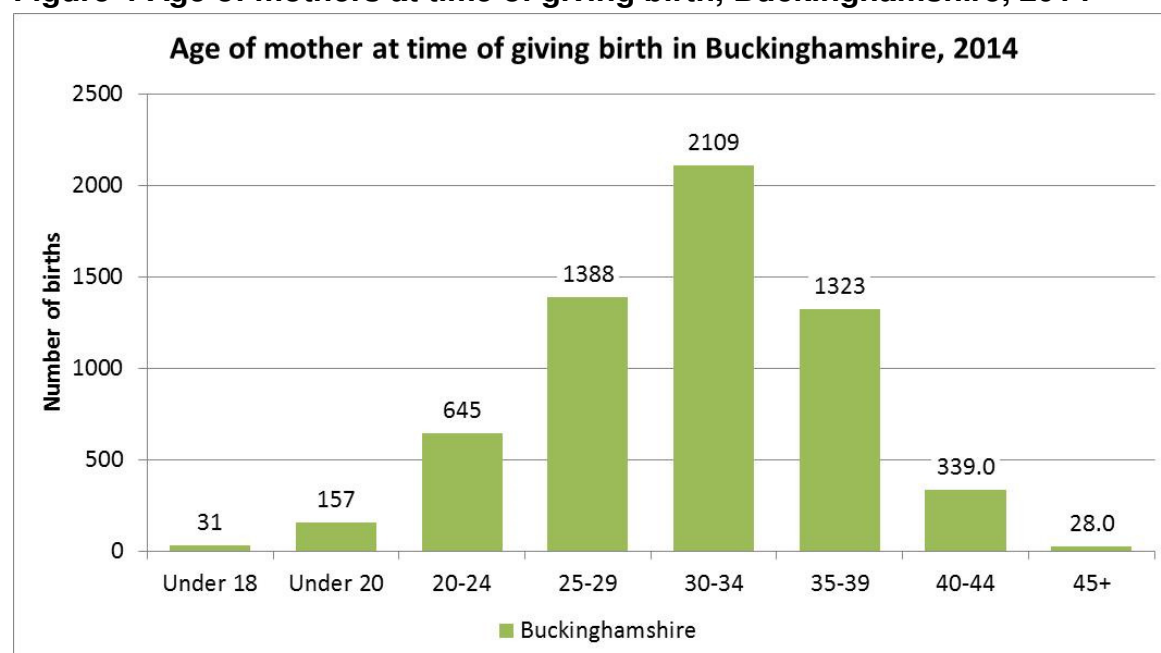
Note truncated Y axis

## 6.2.2 Women who give birth in Buckinghamshire

### 6.2.2.1. Age of maternities

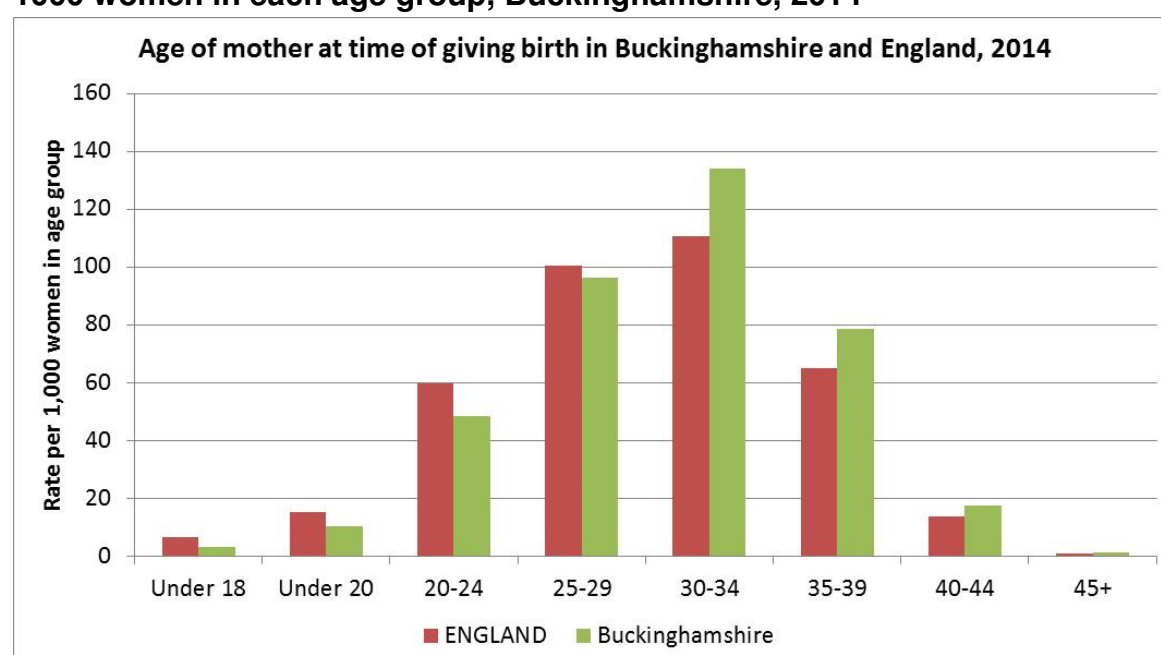
In Buckinghamshire the highest proportion and rate of births in 2014 were to women aged 30-34 at the time of delivery (figure 4 and 5). While this is also the commonest age group for giving birth nationally, Buckinghamshire mothers have an older age profile than nationally, with higher birth rates in women aged 30 and over and lower birth rates in those aged under 30 compared with the national average<sup>6</sup>.

**Figure 4 Age of mothers at time of giving birth, Buckinghamshire, 2014**



Source: ONS Births by Area of Usual Residence of Mother, 2014

**Figure 5 Age of mothers at time of giving birth expressed as a crude rate per 1000 women in each age group, Buckinghamshire, 2014**



Source: ONS Births by Area of Usual Residence of Mother, 2014

#### 6.2.2.2. Ethnicity of mothers

In Buckinghamshire in 2014, 64.7% births were to mothers of White ethnicity, 16% to Asian/Asian British, 10.2% to Other White, 4.8% to Other Ethnic groups, 2.4% to Black/ Black British, 1.4% to Mixed ethnic groups and for 0.4% ethnicity was not

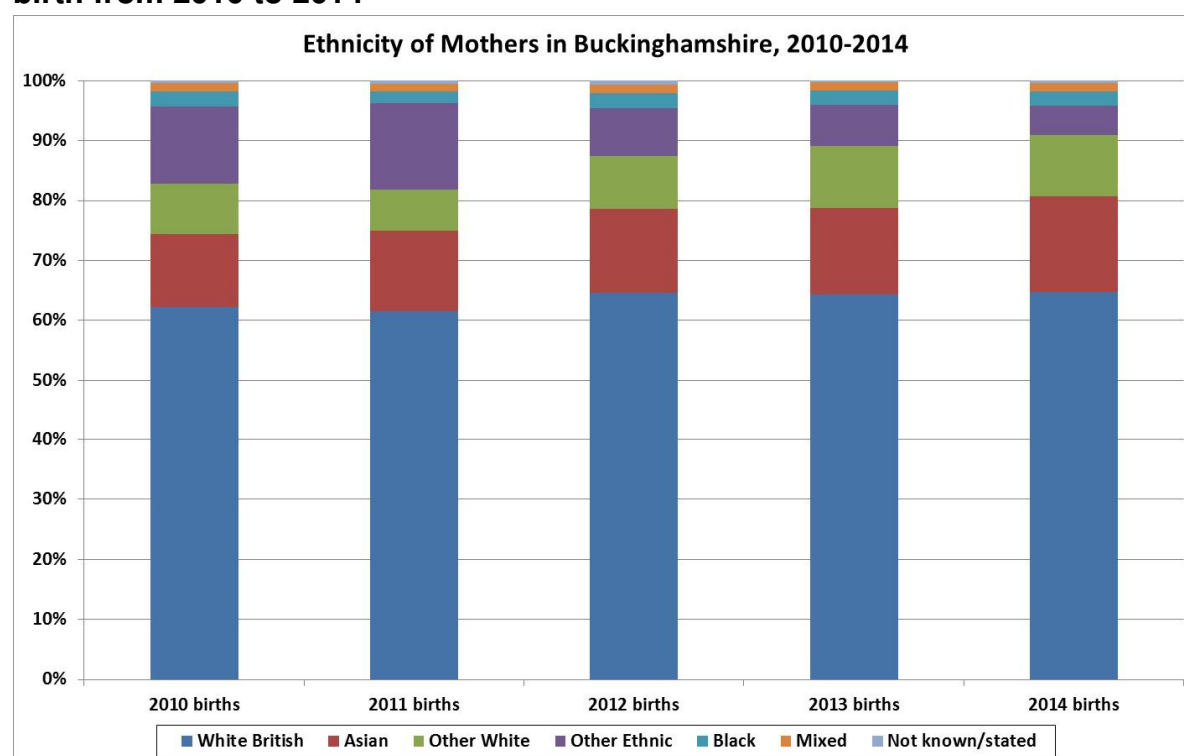
stated (table 1 and figure 6). The main changes since 2010 have been a decline in the proportion of mothers who were recorded as being from 'Other' ethnic groups and an increase in the proportions recorded as White or Asian.

**Table 1 Ethnicity of mothers usually resident in Buckinghamshire who gave birth from 2010 to 2014 (% of total births)**

<b>Ethnic Group</b>	<b>2010 births</b>	<b>2011 births</b>	<b>2012 births</b>	<b>2013 births</b>	<b>2014 births</b>
White British	62.2%	61.5%	64.7%	64.3%	64.7%
Asian/ Asian British	12.2%	13.5%	14.0%	14.4%	16.0%
Other White	8.4%	6.8%	8.8%	10.4%	10.2%
Other Ethnic	12.8%	14.5%	7.9%	6.9%	4.8%
Black/ Black British	2.5%	1.9%	2.6%	2.4%	2.4%
Mixed	1.4%	1.3%	1.3%	1.3%	1.4%
Not known/stated	0.4%	0.5%	0.7%	0.3%	0.4%

Source: Secondary Uses Services (SUS), Admitted Patient Care (APC) Dataset, Central Southern Commissioning Support Unit (CS-CSU)

**Figure 6 Ethnicity of mothers usually resident in Buckinghamshire who gave birth from 2010 to 2014**



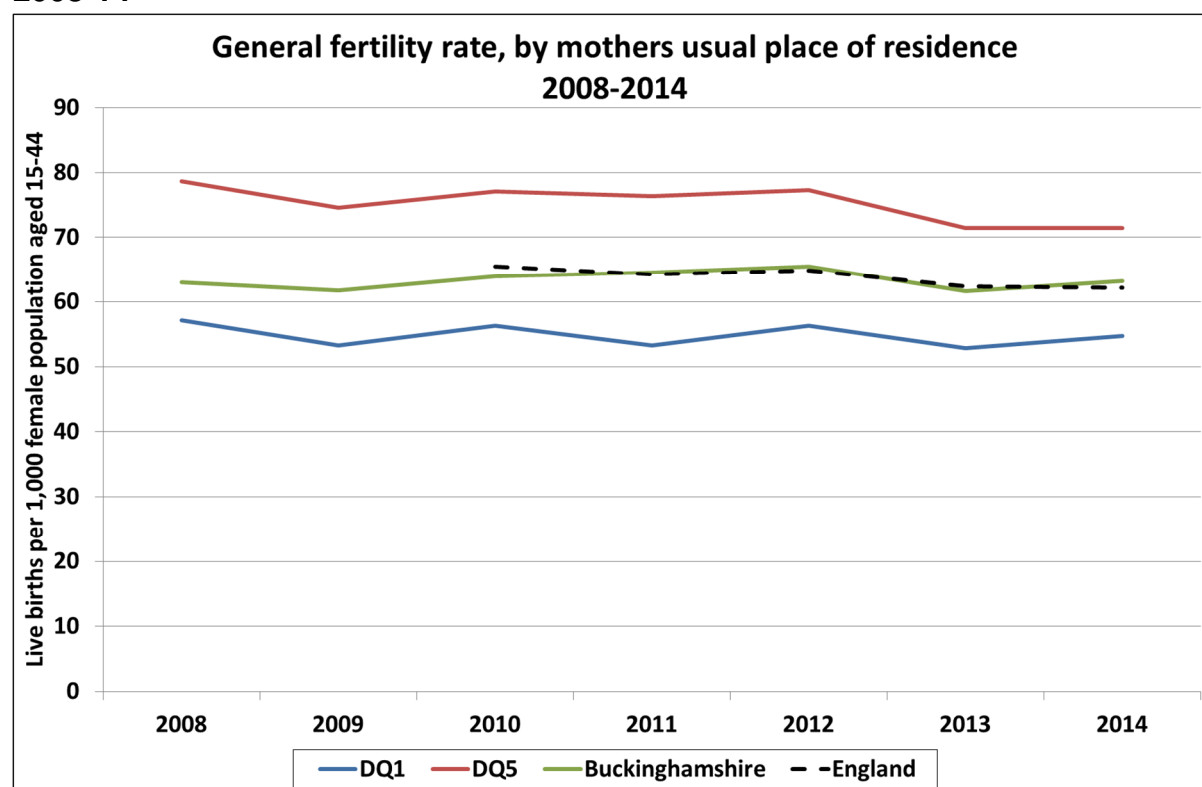
Source: Secondary Uses Services (SUS), Admitted Patient Care (APC) Dataset, Central Southern Commissioning Support Unit (CS-CSU)

### 6.2.2.3. Births by Deprivation Quintile

In Buckinghamshire, the GFR in mothers in the most deprived population quintile, follows the same trend, but is greater than that in the least deprived population quintile and greater than the GFR for England (figure 7).

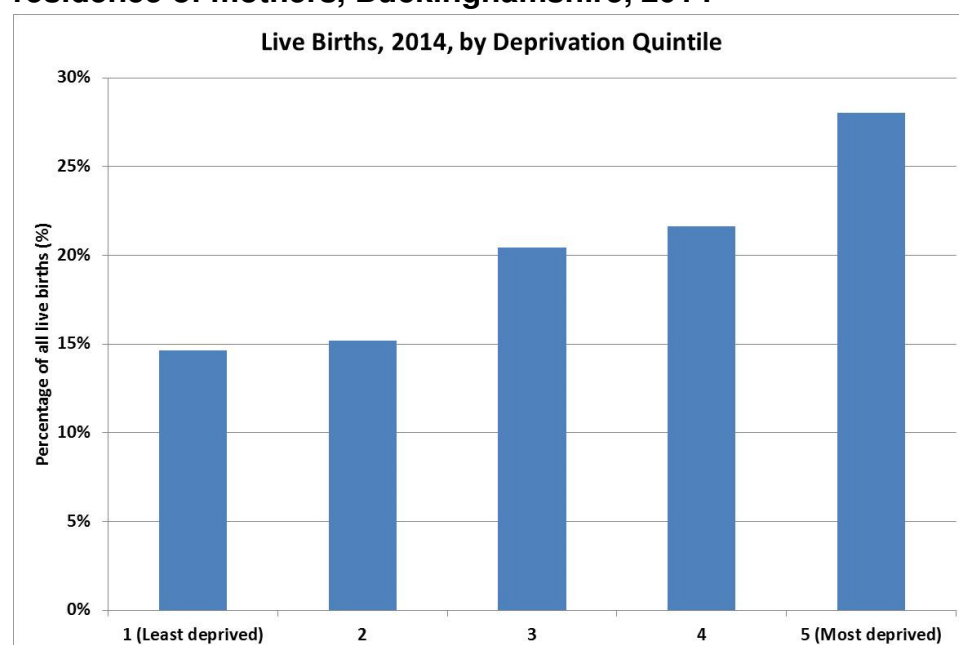
Figure 8 shows the proportion of births by deprivation quintile in Buckinghamshire in 2014. The proportion of the total births to mothers in each quintile increases with increasing deprivation; 28% of all births were to mothers in the most deprived quintile of the population compared to 15% of all births to mothers in the least deprived population quintile. The size of each quintile is roughly similar, each comprising around one-fifth of the Buckinghamshire population. Therefore the crude birth rate was also highest in the most deprived quintile at 15.84 live births per 1000 population, compared to 8.57 per 1000 in the least deprived quintile. The crude birth rate in Buckinghamshire overall was 11.47/1000 compared to 12.2/1000 in England.

**Figure 7 General fertility rate, by Buckinghamshire's most and least deprived population quintile based on usual residence of mothers, Buckinghamshire, 2008-14**



Source: Health & Social Care Information Centre indicators

**Figure 8 Proportion of total live births by deprivation quintile based on usual residence of mothers, Buckinghamshire, 2014**



Source: Office for National Statistics. Public Health Birth files

### 6.2.3. Booking for antenatal care and maternal risk factors

At Berkshire Healthcare Trust (BHT) in 2014/15, where there was a record of gestation at booking, 85.9% of women were recorded as booking for antenatal care by 12 completed weeks of pregnancy, compared with 85.6% in Thames Valley and 75.9% nationally<sup>8</sup>. The proportion of women where these data were recorded was also significantly higher at BHT, where there was no record of gestation at booking for only 7.3% of women, compared with 24.3% in Thames Valley and 30.8% nationally. A maternity needs assessment carried out in 2014 found that late booking for antenatal care was more common among the youngest and oldest mothers and those from ethnic groups other than White British.

The 2014 needs assessment also found that among women booking for antenatal care at BHT, 71% had a valid record of Body Mass Index (BMI), and among these 56.1% were of healthy weight, 27.2% overweight and 16.7% obese. The highest rates of obesity were among Black and Black British women, but the largest numbers were White British. Information on other risk factors is included in other sections of the JSNA (see introduction above). In 2014-15, 8.1% of mothers in Buckinghamshire were smokers at the time they delivered their baby, significantly lower than the England and South East averages (see JSNA section 6.4). It is estimated that between around 1,800-3000 women and 300 men in Buckinghamshire suffer from perinatal mental ill-health annually (see JSNA section 6.8).



#### 6.2.4. Mode of delivery and place of birth

##### 6.2.4.1. Mode of delivery

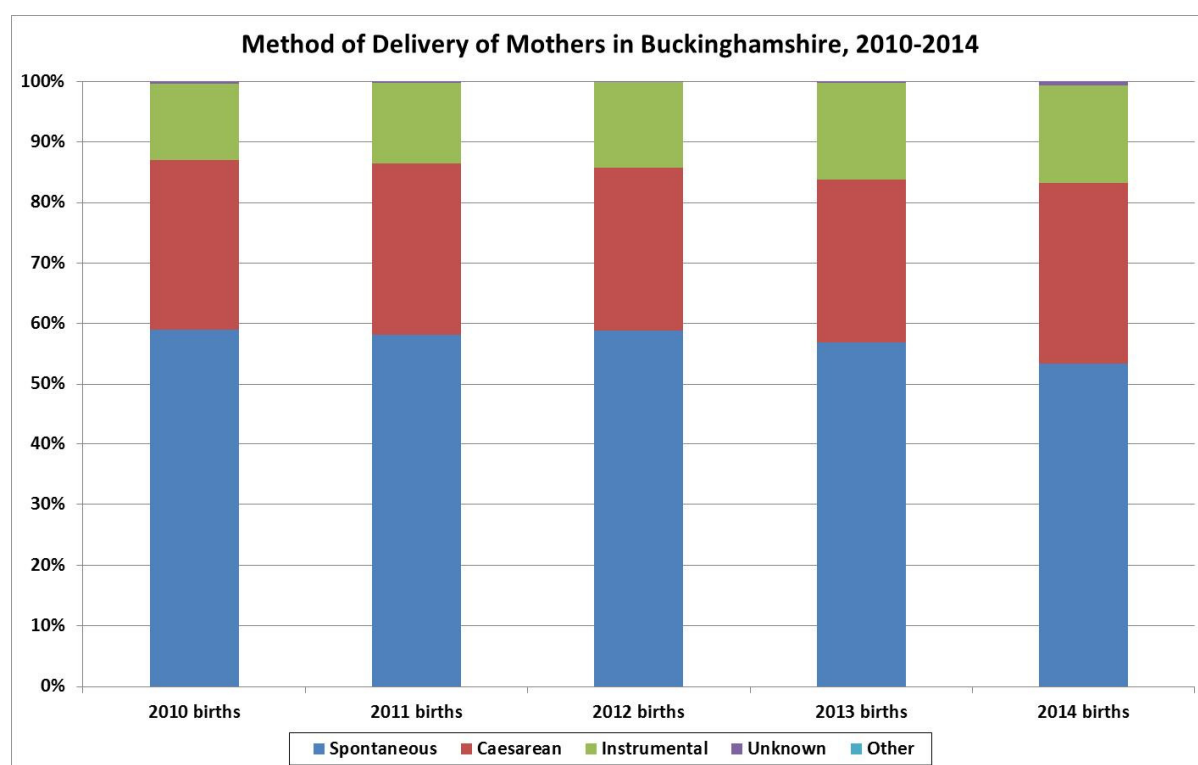
In 2014 53.4% of all births to Buckinghamshire women spontaneous deliveries, 29.9% were by Caesarean section and 16% were instrumental deliveries (table 2 and figure 9). The proportion of spontaneous deliveries fell over the 5 years 2010-2014, with a corresponding increase in instrumental deliveries and a slight increase in Caesarean sections. National data from HSCIC show that in 2014/15, 25.6% of women in Thames Valley and 26.5% nationally delivered by Caesarean section<sup>8</sup>. A Maternity Needs Assessment carried out in 2014 also found that increasing numbers of Buckinghamshire women were undergoing inductions of labour; at Berkshire Healthcare Trust this was 30.6% of women in 2014/15, compared with 23.8% in Thames Valley and 26.8% nationally<sup>8</sup>.

**Table 2 Mode of delivery, Buckinghamshire, 2010-2014 (% of total births)**

<b>Mode of delivery</b>	<b>2010 births</b>	<b>2011 births</b>	<b>2012 births</b>	<b>2013 births</b>	<b>2014 births</b>
Spontaneous	59.0%	58.2%	58.9%	56.9%	53.4%
Caesarean section	28.0%	28.3%	26.9%	26.9%	29.9%
Instrumental	12.7%	13.3%	14.1%	15.9%	16.0%
Unknown	0.4%	0.2%	0.1%	0.2%	0.7%

*Source: Secondary Uses Services (SUS), Admitted Patient Care (APC) Dataset, Central Southern Commissioning Support Unit (CS-CSU)*

**Figure 9 Mode of delivery, Buckinghamshire, 2010-2014**



Source: Secondary Uses Services (SUS), Admitted Patient Care (APC) Dataset, Central Southern Commissioning Support Unit (CS-CSU)

#### 6.2.4.2 Place of birth

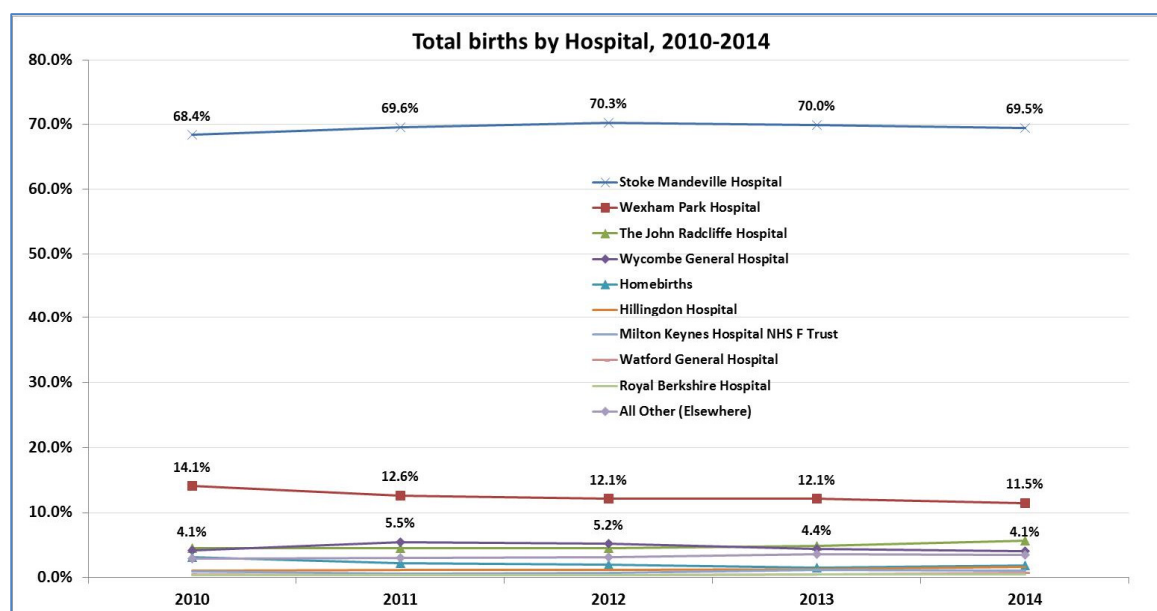
Table 3 and figure 10 show place of birth of for Buckinghamshire women between 2010-2014. Around 70% of deliveries take place at Stoke Mandeville hospital, followed by Wexham Park hospital with 11.5% in 2014, although the proportion of deliveries there has declined in the last few years. The proportion of home births has also fallen, to 1.8% in 2014. Around 4-5% of mothers deliver at each of Wycombe hospital and the John Radcliffe hospital in Oxford, and the remainder at a number of other hospitals.

**Table 3 Proportion of births to Buckinghamshire mothers by place of birth, 2010-2014**

Place of birth	2010	2011	2012	2013	2014
Stoke Mandeville Hospital (BHT)	68.4%	69.6%	70.3%	70.0%	69.5%
Wexham Park Hospital	14.1%	12.6%	12.1%	12.1%	11.5%
The John Radcliffe Hospital	4.5%	4.5%	4.5%	4.9%	5.7%
Wycombe General Hospital (BHT)	4.1%	5.5%	5.2%	4.4%	4.1%
Homebirths	3.1%	2.2%	2.0%	1.6%	1.8%
Hillingdon Hospital	1.1%	1.2%	1.2%	1.2%	1.6%
Milton Keynes Hospital	1.0%	0.6%	0.8%	1.2%	1.0%
Watford General Hospital	0.5%	0.4%	0.4%	0.5%	0.7%
Royal Berkshire Hospital	0.4%	0.4%	0.4%	0.5%	0.5%
All Other (Elsewhere)	2.9%	3.0%	3.2%	3.6%	3.5%

Source: ONS Public Health Birth files

**Figure 10 Proportion of births to Buckinghamshire mothers by place of birth, trend 2010-2014**

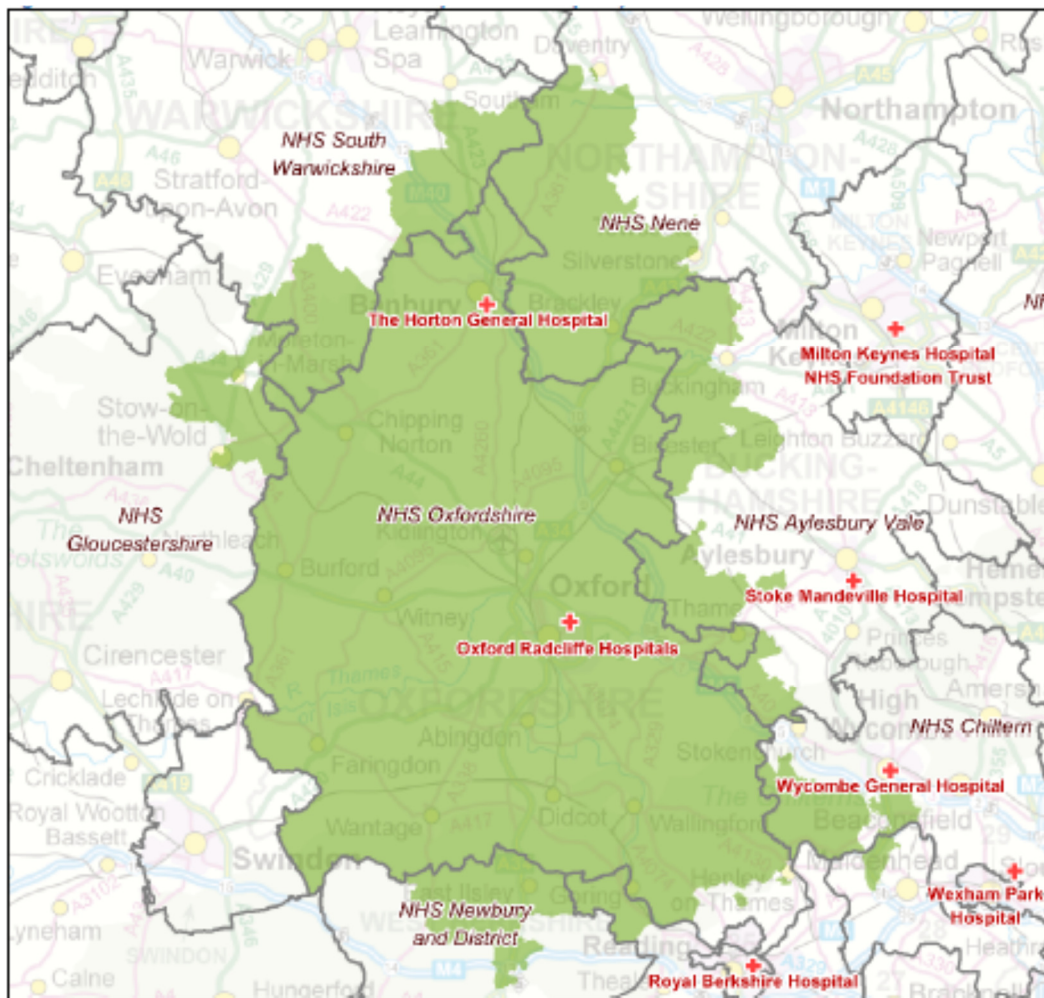


Source: ONS Public Health Birth files

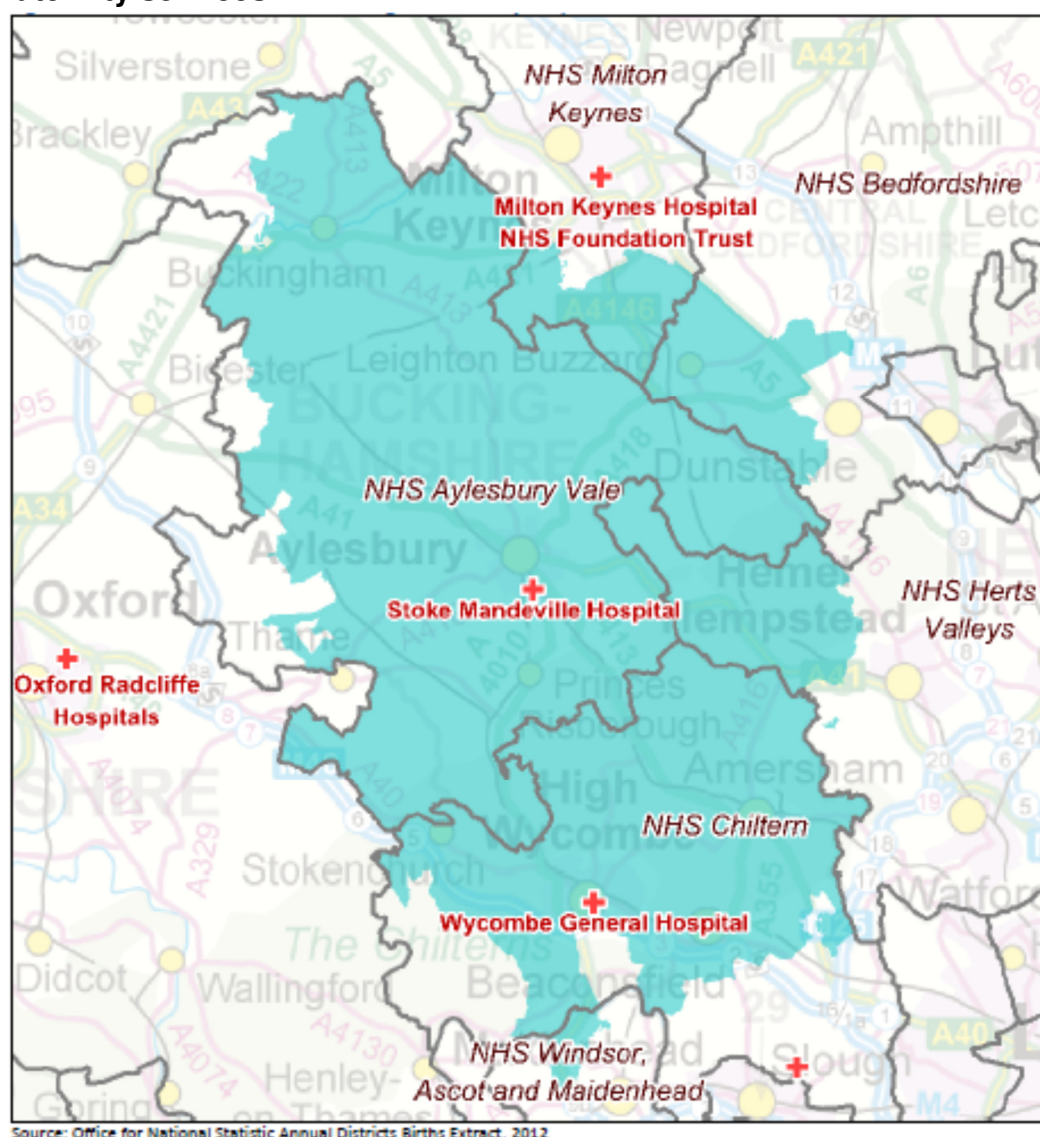
#### 6.2.4.3. Catchment areas of hospital Trusts serving Buckinghamshire

Figures 11 and 12 are taken from a report completed by Thames Valley maternity network in 2012. This shows the estimated catchment area for Oxford University Hospital Trust and Buckinghamshire Healthcare Trust (which includes Stoke Mandeville and Wycombe hospitals). Women living on the Buckinghamshire border with Oxfordshire may give birth in Oxford, and those living near the Berkshire border may give birth in Wexham Park. However, women living in Bedfordshire or Hertfordshire near the Buckinghamshire border may give birth in Buckinghamshire. This is important in understanding patient flows that can assist in capacity planning of maternity services.

**Figure 11 Estimated catchment area for Oxford University Hospitals NHS Trust maternity services**



**Figure 12 Estimated catchment area for Buckinghamshire Hospitals NHS Trust maternity services**



### 6.2.5 Conclusions

The rates of conceptions and fertility and the number of births have declined in Buckinghamshire in recent years, although the total number of births rose slightly in 2014. The general fertility rate (GFR) varies at District level with the highest GFR in Aylesbury Vale and Wycombe Districts and the lowest GFR in Chiltern District.

Buckinghamshire mothers have an older age profile than nationally with higher birth rates in women aged 30 and over. Around two-thirds of births in Buckinghamshire are to White British women and another 10% to women from Other White ethnic groups. Almost one-sixth of births are to Asian or Asian British women and this proportion has increased in the last few years. The number and rate of births are

highest among women in the most deprived groups of the population and lowest in the least deprived.

The proportion of women at BHT who book for antenatal care by 12 completed weeks of pregnancy is around 86%, higher than the national average, and data completeness is also significantly better at BHT than nationally. Late booking is more common among younger and older mothers, and those from ethnic groups other than White British. Around 44% of women at BHT for whom there was a record of BMI were overweight or obese at booking, which is an important risk factor in pregnancy.

The proportion of women who have a spontaneous delivery has been declining in Buckinghamshire, to 53% in 2014, and the proportion who have an instrumental delivery has increased. Almost 30% of deliveries in 2014 were by Caesarean section.

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*June 2016*

## *References*

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- <sup>1</sup> Office for National Statistics Conception Statistics, England and Wales, 2013
- <sup>2</sup> Health and Social Care Information Centre Indicator Portal Fertility: crude rate, ID P00427
- <sup>3</sup> Office for National Statistics Birth Summary Tables, England and Wales, 2014
- <sup>4</sup> Office for National Statistics Revised Annual Mid-year Population Estimates, 2001 to 2010; Annual Mid-year Population Estimates, 2011-2014
- <sup>5</sup> Office for National Statistics Subnational Population Projections, 2012-based projections
- <sup>6</sup> Office for National Statistics Births by Area of Usual Residence of Mother, UK - 2014
- <sup>7</sup> Health & Social Care Information Centre Annual Births Data, 2014
- <sup>8</sup> Health & Social Care Information Centre, NHS Maternity Statistics 2014-15