

Population and births

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Key messages

- In 2011, there were just under a million children and young people (aged 0-24 years) living in Wales, representing 30% of the total population.
- Cardiff and Vale is the health board with the highest percentage of children and young adults (34%). This is mainly attributable to the large number of university students (18-24 year olds) living in and around the Cardiff area. The size of the 0-24 year old population in the Cardiff and Vale area has been increasing since 2002 and from 2002 it is projected to increase by 33% to around 200,000 in the year 2033.
- The total fertility rate in Wales is 1.9 children per woman. The highest fertility rates in 2011 were seen in Denbighshire, Isle of Anglesey, Conwy, Pembrokeshire, Vale of Glamorgan and Bridgend.
- 1 in 18 babies are of low birth weight, this rises to 1 in 15 in Cwm Taf Health Board. Rhondda Cynon Taf is the only local authority area where the percentage of low birth weight babies is statistically significantly higher than the Wales average.
- Overall 56% of babies were breastfed at birth. This is as high as 4 in 5 in Ceredigion and Powys, but less than a third in Blaenau Gwent, Neath Port Talbot and Caerphilly.



In order to undertake any investigation of population health it is important to start with an understanding of the size and distribution of the population. This chapter provides information and indicators on the number of children and young people living in Wales by age group and area of residence. It also shows how the child and young adult population has changed over the last 10 years along with predicted changes in numbers for this age group over the next 20 years. Fertility rates are also included as they affect the growth of the population.

This chapter also looks at some of the birth measures which can be related to health outcomes for a child such as babies born preterm, low birth weight babies and breastfeeding.

1.1 Population structure

Mid-year population estimates (as at 30 June each year) provide an estimate of the resident population of an area. Students are included in these figures using area of residence in term time.¹

The latest population estimates (2011) report the number of children and young people aged 0-24 years and living in Wales is just under a million (928,400), ranging at the health board level from 35,600 in Powys to 199,400 in Betsi Cadwaladr. Based on the 2011 Census, around 7% of the 0-24 year old population of Wales has a non-white Ethnic background.

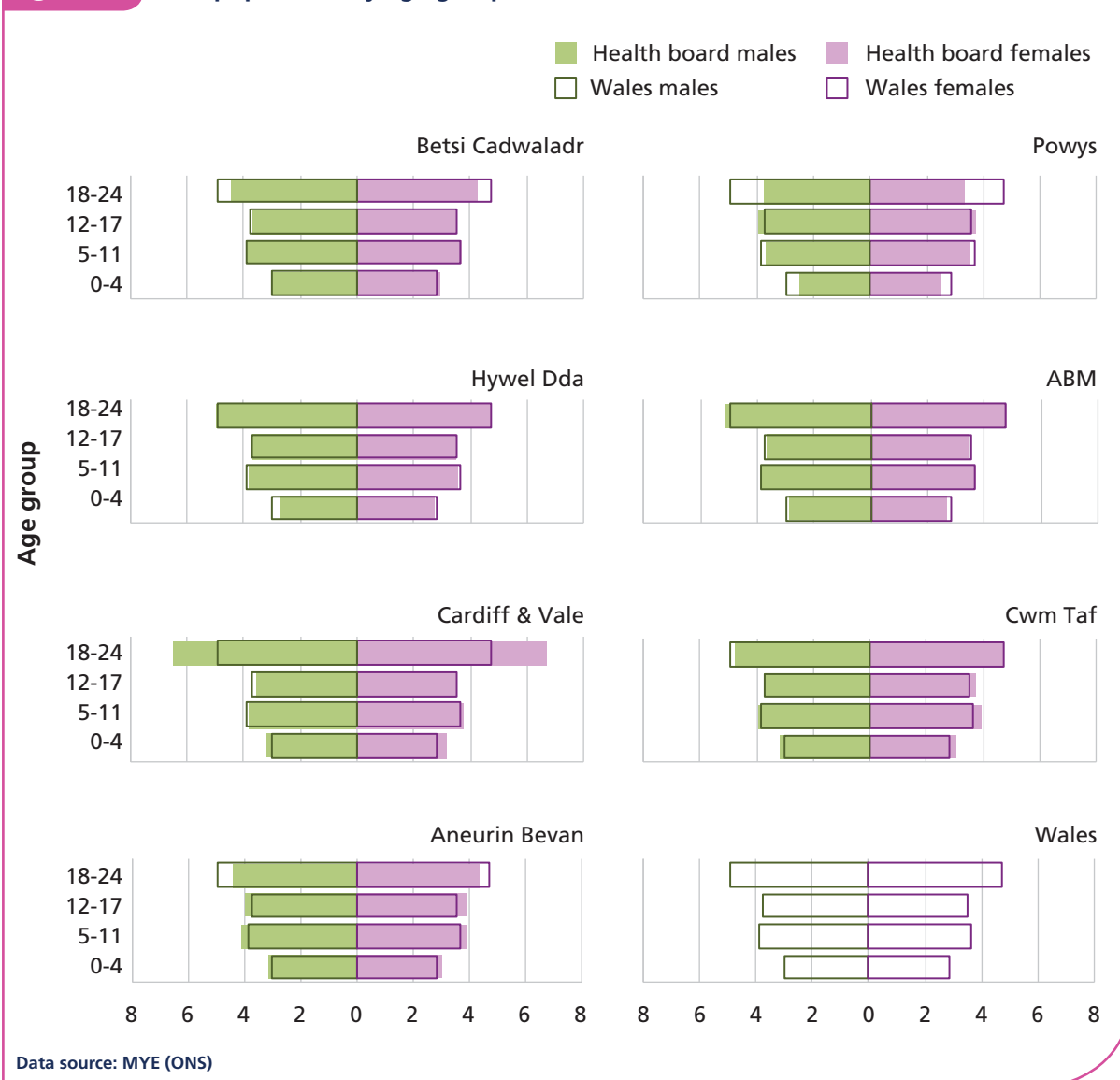
Figure 1.1 shows population pyramids for Wales and each of the seven health board areas. However, unlike the traditional population pyramids that use 5 or 10 year age bands, these population pyramids only present data for 0-24 year olds grouped into approximate educational age categories (0-4, 5-11, 12-17 and 18-24 years).

Hywel Dda, Abertawe Bro Morgannwg and Cwm Taf health boards are seen to have similar population structures to the all-Wales average for these age groups. Betsi Cadwaladr, Powys and Aneurin Bevan have smaller percentages of 18-24 year olds than Wales while Cardiff and Vale has much higher percentages in this age group. Variations such as these will have a bearing on the volume of different services needed in each of the health board areas.

**Governments
'... shall take
appropriate
measures to
ensure appropriate
pre-natal and post-
natal health care
for mothers'.**

*The United Nations
Convention on the
Rights of the Child,
Article 24.2(d)*

Figure 1.1 % of population by age group, 2011



Data source: MYE (ONS)

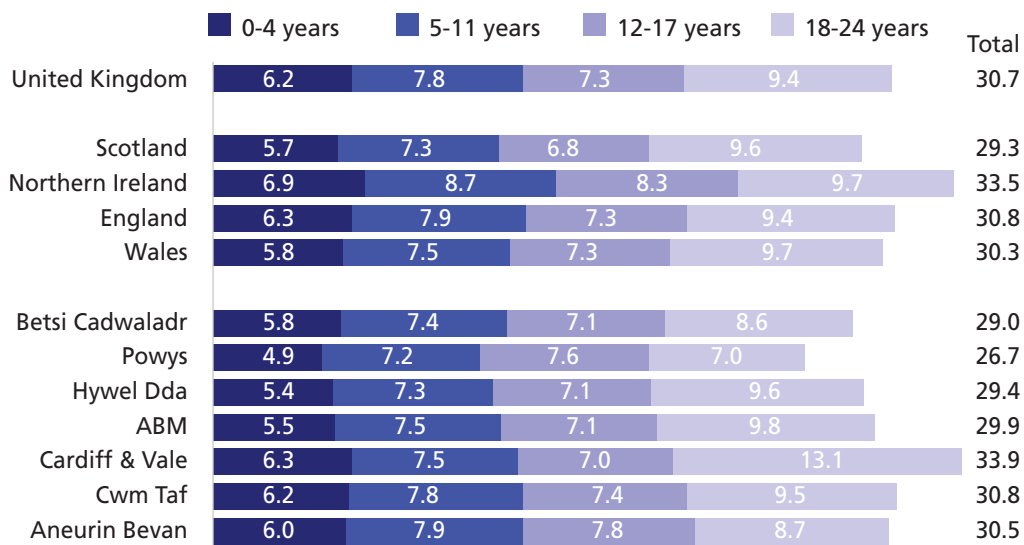
1.2 Child population

Figures 1.2a and 1.2b illustrate the distribution of school age children within each geographical area, allowing for comparisons across the UK nations and at the health board and local authority level.

Across the UK nations, Wales (30%) has similar percentages to England and Scotland. Northern Ireland has the greatest percentage of 0-24 year olds (34%) and also the highest percentage within each of the school age groups. At the health board level, the percentage of persons aged 0-24 also varies, ranging from just over 1 in 4 in Powys to about 1 in 3 in Cardiff and Vale. Cardiff and Vale also has the largest percentage of 18-24 year olds among the health boards.

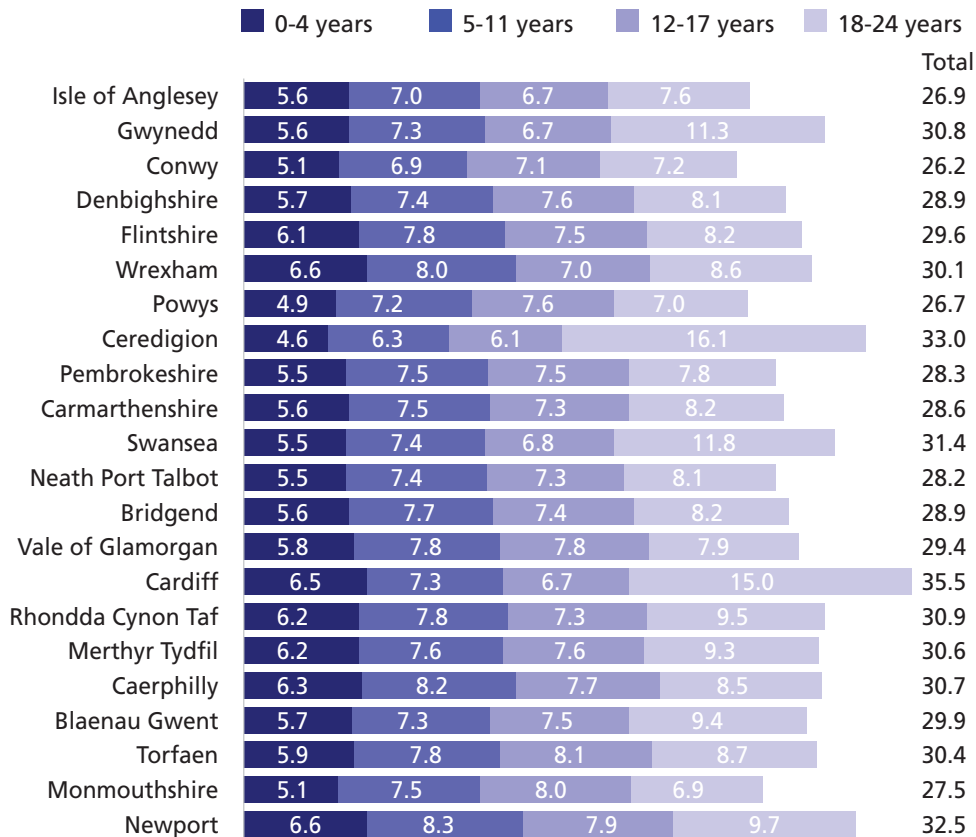
At the local authority level (Figure 1.2b) there is also considerable variation across areas. Ceredigion has the lowest percentage of 0-4 year olds (4.6%) and the highest percentage of 18-24 year olds (16.1%). Ceredigion, Cardiff and Swansea have over a third of their 0-24 year old population in the 18-24 age group which is largely due to their university student populations.

Figure 1.2a % of population aged 0-24 by school age group, 2011



Data source: MYE (ONS)

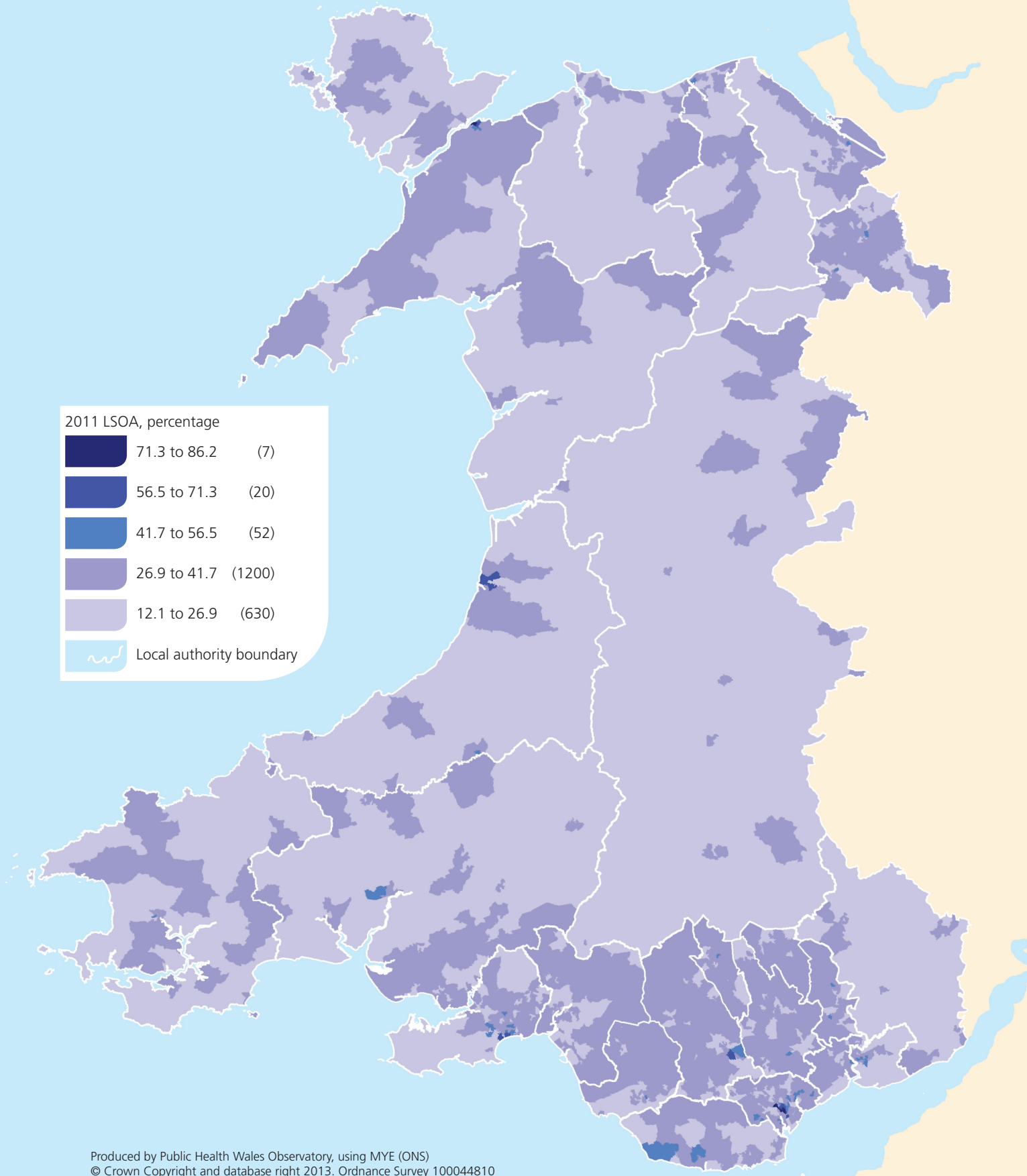
Figure 1.2b % of population aged 0-24 by school age group, 2011



Data source: MYE (ONS)

Variation across areas is also evident at the lower super output area (LSOA) level with percentages ranging from 12% to 86% (Figure 1.3).

Figure 1.3 % of population aged 0-24, 2011



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Figure 1.3 highlights that even within local authority areas which have a low percentage of 0-24 year olds, there are LSOAs which have a much higher percentage of their population in this age group. For example, 26% of the population in Conwy local authority are aged 0-24 but within this area there are LSOAs with over 40% of their population in this age group. Seven of the 1,909 LSOAs in Wales (6 being in Cardiff and the other in Bangor) have over 71% of their population aged 0-24. Variations such as these are important considerations for delivering services and targeting interventions.

1.3 Population change

Understanding how the population structure will change in the future is just as important as understanding the current population structure when delivering services and producing sustainable policies. Population projections represent future population estimates and are calculated using assumptions about future trends in fertility, deaths and migration. Trends in birth rates can be difficult to predict so these projections can only be best estimates.

Figure 1.4 Population change, past trends and projections, persons aged 0-24, 2002-2033

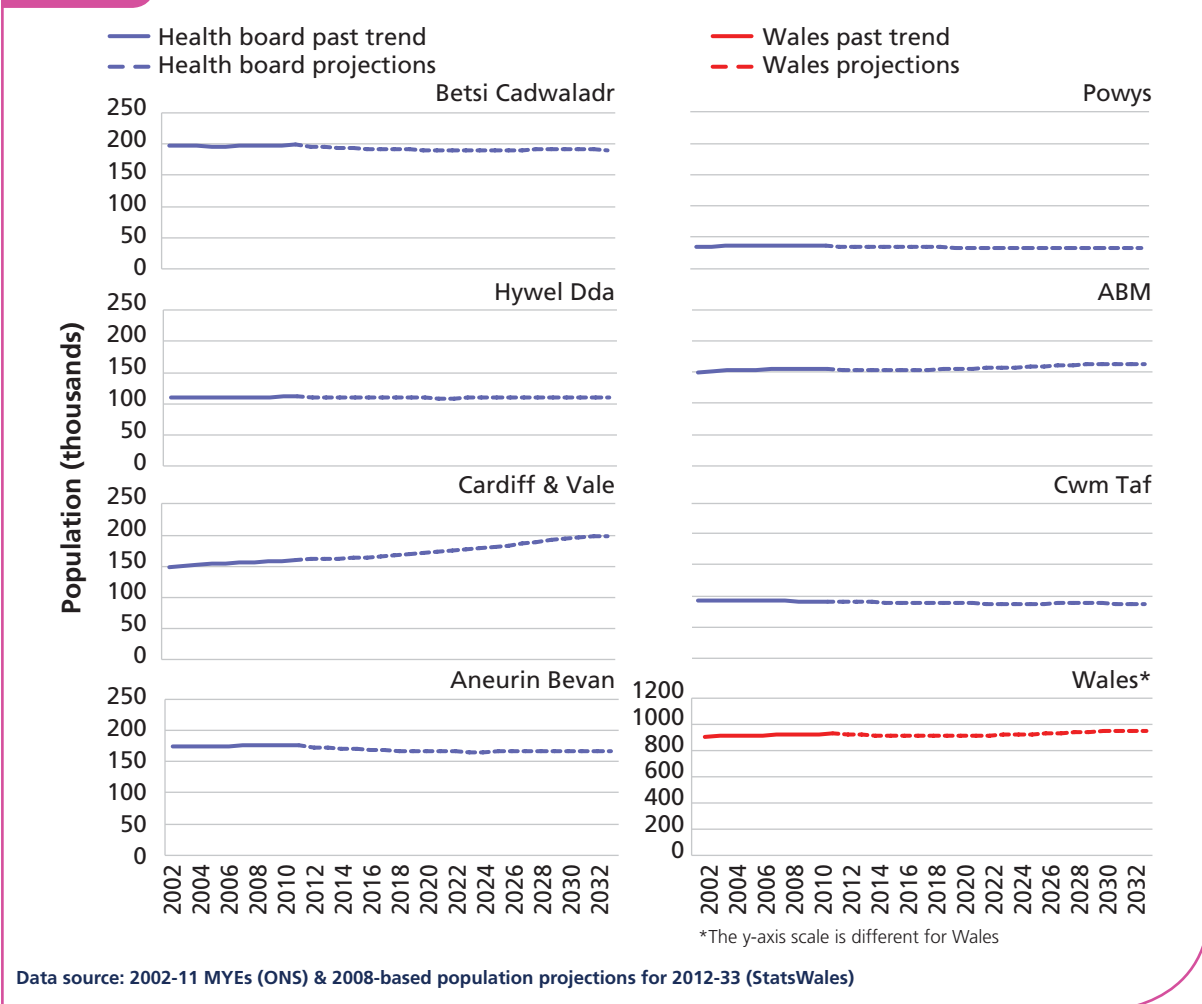


Figure 1.4 shows population change in persons aged 0-24 between 2002 and 2033. In the Cardiff and Vale area the size of the 0-24 year old population has been increasing since 2002 and from 2002 it is projected to increase by 33% to around 200,000 in the year 2033. The size of the population in the Abertawe Bro Morgannwg area is also projected to increase by 2033 but to a lesser extent. The areas of Betsi Cadwaladr, Cwm Taf and Aneurin Bevan are projected to see small decreases in their 0-24 populations. In Powys and Hywel Dda, populations in this age group have remained fairly constant and are projected to remain the same until 2033.

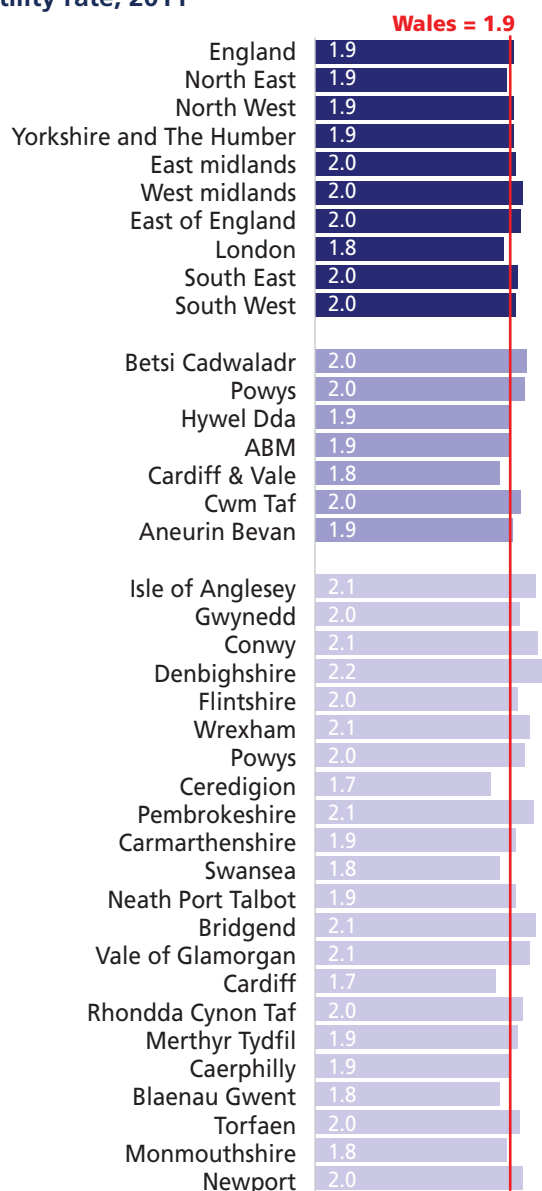
1.4 Fertility

The total fertility rate (TFR) is the average number of live children a group of women would have if they experienced the age-specific fertility rates for the calendar year in question throughout their childbearing lifespan. The replacement rate which describes the TFR required to replace the current population (excluding migration) is 2.075 for the UK.²

In 2011, the TFR for Wales was 1.9 children per woman which was equivalent to the TFR in England (Figure 1.5). TFR is higher in the Betsi Cadwaladr, Powys and Cwm Taf areas (2.0 children per woman) and with Cardiff and Vale having the lowest TFR (1.8 children per woman). Among local authorities in Wales the TFR ranged from 1.7 in Ceredigion and Cardiff to 2.2 in Denbighshire.

Fertility levels vary by local area for several reasons including differences in the timing of childbearing and differing ideals on family size. These can be influenced by the population characteristics of the area such as levels of educational attainment, ethnicity/country of birth, and deprivation levels.³ In areas such as Cardiff and Ceredigion, the TFR is skewed downwards due to the large female student population who experience very low birth rates.

Figure 1.5 Total fertility rate, 2011

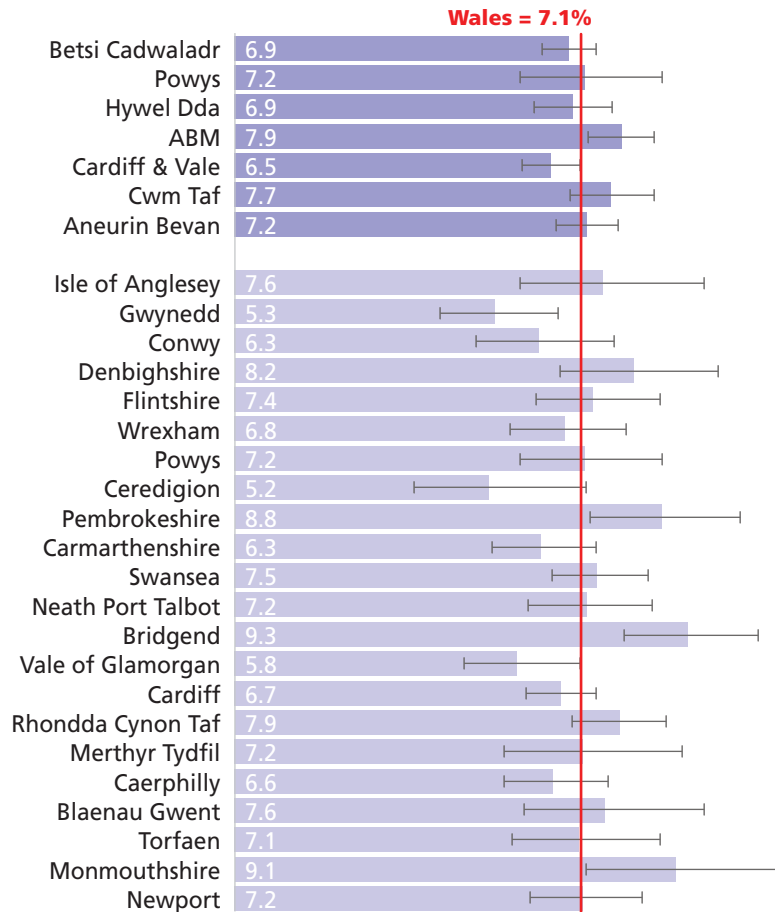


Data source: VS1 (ONS)

1.5 Preterm births

Gestational age has an impact on the health of a baby. Babies born preterm (before 37 weeks gestation) are more prone to poorer health outcomes and there are a number of risk factors associated with preterm births which include maternal age, nutrition and health.^{4,5,6} Since preterm babies are at risk of having low birth weight they are also at risk of the problems associated with it.

Figure 1.6 % of babies born preterm (<37 weeks gestation at birth), 2011



Data source: NCCHD (NWIS)

Figure 1.6 shows the percentage of live born babies who are born preterm by area of residence. In 2011, 7.1% of live births were born preterm (<37 weeks gestation) in Wales and at the health board level this ranged from 6.5% in Cardiff and Vale to 7.9% in Abertawe Bro Morgannwg.

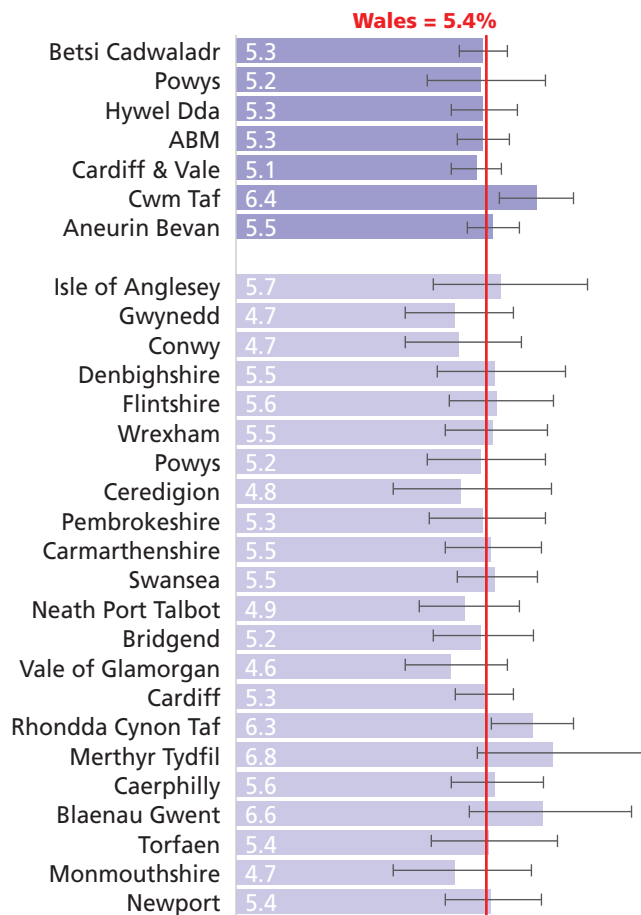
There is considerable variation at the local authority level, the lowest percentage of babies born preterm occurring in Ceredigion (5.2%) and the highest occurring in Bridgend (9.3%).

Three local authorities were statistically significantly higher than Wales (Pembrokeshire, Bridgend and Monmouthshire).

1.6 Low birth weight

Birth weight is an important consideration when determining the future health and well-being of children. Maternal smoking and nutrition are important risk factors associated with low birth weight.⁷ Low birth weight babies are not only at a greater risk of problems occurring during and after birth but there is also an association with poor health and increased risk of chronic diseases in adulthood.^{4,7,8}

Figure 1.7 % of low birth weight babies (under 2500g), singleton live births, 2011



Data source: NCCHD (NWIS)

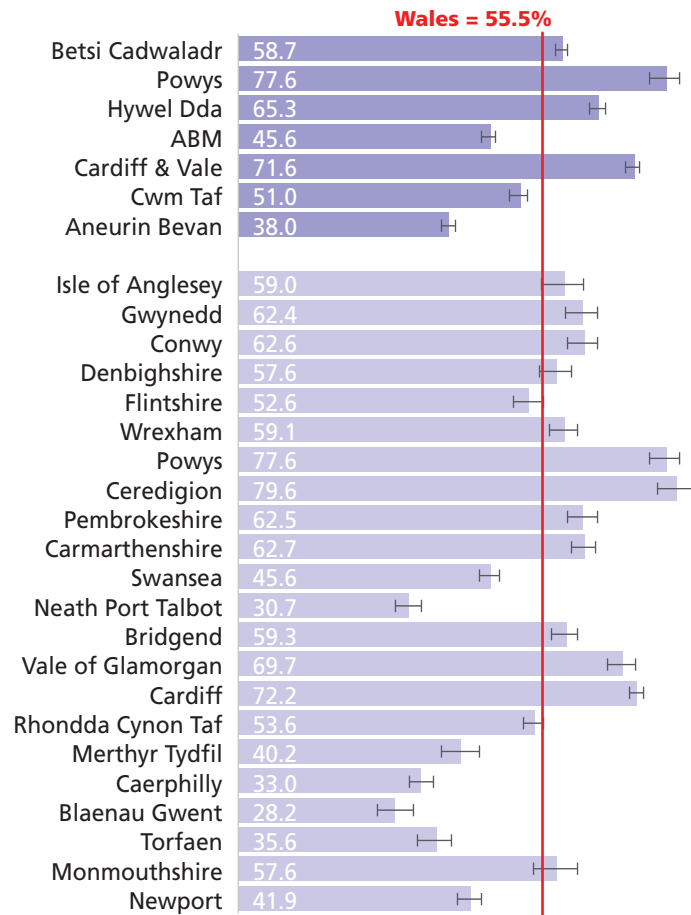
It can be seen that at the health board level the percentage of low birth weight babies are similar to Wales (5.4%) for all health boards apart from Cwm Taf where 6.4% of singleton births in 2011 were born with a low birth weight (Figure 1.7).

At the local authority level, the percentage ranges from 4.6% in the Vale of Glamorgan to 6.8% in Merthyr Tydfil. The percentage of low birth weight babies is statistically significantly higher in Rhondda Cynon Taf than Wales.

1.7 Breastfeeding at birth

Breast feeding has health benefits for both mother and baby and continues to be promoted as the most beneficial diet for babies.⁹ The presence of antibodies in breast milk give babies the best start in life by protecting them from common childhood illnesses.⁹ Breastfed babies are less likely to have to go to hospital with infections, and are more likely to grow up with a healthy weight and without allergies.¹⁰ Breastfeeding is free so saves money for both families and the health service.¹⁰

Figure 1.8 % of babies breastfed at birth, 2011



Data source: NCCHD (NWIS)

In 2011, 56% of babies were breastfed at birth in Wales (Figure 1.8). This percentage varied across both health boards and local authority areas in Wales. At the health board level the percentage ranged from 38% in Aneurin Bevan to 78% in Powys.

There is even greater variability at the local authority level with a difference of over 50 percentage points between the local authorities with the highest (Ceredigion 80%) and lowest (Blaenau Gwent 28%) breastfeeding rates at birth.

Breastfeeding at 6 to 8 weeks is a good measure of sustained breastfeeding and therefore greater benefit to the infant. However, data is not currently available for this measure as breastfeeding status is not always recorded for babies at that age. In 2011 there was considerable variation in coding across Wales with less than 1% of 8 week old babies having breastfeeding status recorded in Powys compared to 91% in Cwm Taf. In Cwm Taf the 2011 figures show that although 51% of babies are breastfed at birth, only 22% of babies (approximately 1 in 5) continued to be breastfed at 8 weeks.

Considerable work and effort by the Welsh Government Maternity strategy implementation group and Early years programme is being carried out to support breastfeeding in Wales and overcome the problems with the availability and quality of breast feeding data.

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