

## Maternity and Birth Statistics, Wales 2018

30 October 2019  
SFR108/2019

Statistics in this release provide an overview of maternity care and characteristics in Wales and provides an overview of births in Wales. The data and analysis is used to inform [Welsh's Government's maternity policy development](#). Note that the official source for births in Wales (and the UK) are [ONS' births and registration statistics](#); however, using the Maternity Indicators dataset (MI ds) and National Community Child Health Database (NCCHD) allows us to produce a wider range of statistics relating to births in Wales.

# 31,329

live births in Wales  
in 2018



# 3.8%

of live births were to  
mothers aged under  
20, in 2018; the lowest  
rate on record

### Main points

- At least 73.1% of women received their initial antenatal assessment before the end of their 10<sup>th</sup> week of pregnancy.
- 24.1% of women had a mental health condition reported at their initial assessment.
- 28.0% of women were obese (BMI 30+) at their initial assessment.
- 17.9% of women were recorded as a smoker at initial assessment; 17.3% of these were not recorded as smokers at birth.
- 50.4% of labours started spontaneously while 33.5% were induced.
- 27.9% of births occurred via caesarean section, just under half of which were elective and just over half were emergencies.
- 5.6% of singleton births had low birthweight, the same percentage as in 2017.
- 61.6% of mothers breastfed at birth, the highest on record.

### About this release

This new annual release publishes statistics on maternity and births in Wales, and replaces the two previous individual statistical releases on [maternity](#) and [births](#).

The two primary data sources for this release are the Maternity Indicators dataset (MI ds) and the National Community Child Health Database (NCCHD).

Statistics are provided on a range of topics including: the number of baby deliveries in Wales; smoking during pregnancy; mode of birth; gestation; birthweight; mothers' characteristics; and breastfeeding.

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## The Maternity Indicators dataset

The Maternity Indicators dataset (MI ds) was established in 2016. The dataset combines records from a mother's initial assessment with a child's birth record and enabled Welsh Government to monitor its initial set of outcome indicators and performance measures (Maternity Indicators) which were established to measure the effectiveness and quality of Welsh maternity services. The dataset includes babies born at home, though they may not be identifiable in all health boards, but it does not include any baby born outside Wales, even if the mother resides in Wales.

The dataset **only includes records where the initial assessment and birth took place in the same health board**. This is required to improve the matching process between initial assessments and births, but results in limitations in use of the data. The primary issue is that the same mother can have multiple initial assessment records because of the way in which health boards record data on initial assessments. This can happen for a number of reasons; for example, it is often the case that when a mother receives maternity services in her resident health board, but then gets referred to a different health board for additional maternity services, an 'initial' assessment gets generated in both health boards. This might mean that the mother's actual initial assessment took place earlier than it is recorded in the Maternity Indicators dataset. Furthermore, if a mother's initial assessment took place in a different health board to where she gave birth, this will not be included in the Maternity Indicators dataset. This may mean that the dataset is statistically biased, if the characteristics of the mother and babies not included in the dataset are different to those who are included. The methodology NWIS use for matching initial assessments and birth records is detailed in the [Key Quality Information](#).

As a result of the limitations of the data and as the Maternity Indicators dataset is still a relatively new and complex dataset, any statistics published from it are [experimental statistics](#).

Previous [maternity statistical releases](#) using data from the Maternity Indicators dataset were based on financial years (2015-16, 2016-17 and 2017-18). However, in order to bring maternity data in line with births data from the National Community Child Health Database (NCCHD), maternity data is now published on calendar years too, which means that the whole back series is revised; data for 2016, 2017 and 2018 will be published in this release and added to [StatsWales](#) in due course. As data has been newly extracted for all previous years, any resubmissions of data from health boards will be present in all years, so trends may have changed from previously published data.

The database is maintained by the NHS Wales Informatics Service (NWIS) which extracts data from local health board systems on a daily basis. More information on the data items collected is available through the [NWIS Data Dictionary](#).

The dataset includes all services provided in Wales, that is, antenatal care provided in Welsh maternity units and care of deliveries which occurred in Wales. This release profiles these services and therefore relates to any woman, wherever resident, who received care at delivery in Wales and the associated antenatal care. The local health boards referred to, therefore, are those where the care was provided (either antenatal or at delivery); the analyses are based on health board provider rather than health board of residence, unless stated otherwise.

The new Welsh Government maternity vision: [Maternity Care in Wales, A Five Year Vision for the Future \(2019-2024\)](#) was published in July 2019.

## **National Community Child Health Database (NCCHD)**

The National Community Child Health Database consists of anonymised records for all children born, resident or treated in Wales and born after 1987. The database combines data from local Community Child Health System databases which are held by local health boards and used by them to administer child immunisation and health surveillance programmes.

The well-established database was built in 2004 is maintained by the NHS Wales Informatics Service (NWIS). Statistics published from this source are official statistics, and full information on the data fields contained in the database are available through the [NWIS Data Dictionary](#).

The statistics relate to live births born to Welsh residents during the relevant calendar year. The analyses are for live births only and do not include stillbirths.

In this release, no changes have been made to statistics previously published from the National Community Child Health Database.

## What does the data show?

The number of births recorded on the National Community Child Health Database aligns closely to the number of births published by ONS birth registration statistics. There are fewer births recorded in the Maternity Indicators dataset, largely because some records are unable to be matched to the mothers' initial assessment record and are therefore not present on the dataset.

At least 73% of women received their initial antenatal assessment before the end of their 10<sup>th</sup> week of pregnancy. ([Chart 2](#))

Nearly a quarter of mothers reported that they had a mental health condition at their initial assessment, while just over a quarter of mothers were obese (recorded as having a BMI of 30 or more). ([Table 4](#))

Obesity rates at initial assessment varied greatly between health boards: the rate in Cwm Taf was three times greater than the rate in Powys. ([Table 4](#))

Obesity rates were similar for most age groups but much lower in the youngest mothers (aged 19 or younger), and the percentage of women who reported mental health conditions at initial assessment was higher in younger mothers (aged 24 or younger). ([Chart 4b](#) and [Chart 4c](#))

Just under one in five mothers were recorded as smokers at initial assessment. Smoking rates showed a clear trend of being higher in younger mothers and lower in older mothers, with a third of women aged under 20 smoked while only a tenth of women aged over 35 smoked. ([Table 6](#))

Of the mothers who were smoking at initial assessment, 17% were recorded as not being a smoker at birth. The percentage of women who 'stopped smoking' during pregnancy varied between 1 in 20 women in Abertawe Bro Morgannwg to just over 1 in 4 women in Cwm Taf. ([Table 7](#))

This meant that in total around one in six mothers were recorded as being smokers at birth. ([Table 6](#))

Half of all labours began spontaneously, while a further third were induced. Induction rates were highest in Cwm Taf, where induction was slightly more common than spontaneous onset. ([Table 8](#))

More than 6 out of 10 births arrived spontaneously, with nearly 3 out of 10 arriving via caesarean section. ([Table 10](#))

There was close to an even number of elective caesarean and emergency caesarean sections across Wales, with some small variation across health boards. Cwm Taf had the highest rate of elective caesarean section while Hywel Dda had the highest rate of emergency caesarean section. ([Chart 13](#))

Just over a fifth of all mothers had an epidural administered. This varied between health boards with the percentage of mothers receiving an epidural in Aneurin Bevan more than twice as high as in Abertawe Bro Morgannwg and Cwm Taf. ([Table 9](#))

The recent downward trend (since 2010) in the number of live births in Wales has continued; the number of live births has decreased every year since 2010. ([Chart 1](#))

Most births occurred in Betsi Cadwaladr health board, but the hospitals where the largest number of births occurred were the University Hospital of Wales (Cardiff and Vale) and Royal Gwent Hospital (Aneurin Bevan). ([Table 3](#))

The percentage of births to younger mothers (under 20) reached the lowest on record and has fallen every year since 2004. ([Chart 10](#))

The percentage of home births fell in 2018, continuing the recent downward trend in birthing at home. The percentage of home births in Powys were more than double any other health board area. ([Chart 15](#) and [Chart 16](#))

Half of births occurred within one week either side of the expected due date (gestational age 39 to 40 weeks); while 1 in 12 births arrived with a gestational age of 36 weeks or less and 1 in 25 births arrived where gestational age was 42 weeks or more. ([Chart 17](#))

The percentage of singleton live births with a birthweight (less than 2.5kg) has remained stable at the Wales level over the longer and shorter term, but has some variation at health board level. There was a higher percentage of singleton low birthweight babies in Cwm Taf than in Cardiff and Vale. ([Chart 20](#) and [Chart 21](#))

The percentage of singleton low birthweight babies was slightly lower in babies from ethnic minority groups than babies from white ethnic groups. ([Table 12](#))

Nearly two thirds of babies born in multiple births (twins and triplets) weighed less than 2.5kg. ([Table 12](#))

Low birthweights are closely linked to gestational age; the percentage of low birthweight babies decreased as gestational age increased. ([Chart 26](#))

Both gestational age and low birthweight differed by age group, with a lower percentage of pre-term and low birthweight babies being born to mothers in 'middle age groups' (20 to 39). ([Chart 27](#))

The percentage of healthy births (meeting all ten criteria under the [Welsh Government clinical definition](#)) remained at a similar level to the previous year. ([Table 13](#))

A higher percentage of mothers were recorded as intending to breastfeed than in any previous year, and the percentage of mothers actually breastfeeding at birth was at its highest level on record (just over 6 out of 10 mothers breastfeeding). ([Chart 28](#))

Breastfeeding rates at 10 days continued to improve slightly, while breastfeeding at 6 weeks continued to decline slightly. Breastfeeding at 6 months is affected by low data coverage but remained at around 1 in 5 mothers using any breastfeeding. ([Chart 28](#))

A greater proportion of first-time mothers intended to breastfeed than mothers who had one previous child, who in turn had a greater proportion of mothers who intended to breastfeed than mothers who has two or more previous children. ([Chart 30](#))

Older mothers (aged 30 and above) had higher breastfeeding rates than younger mothers and mothers who gave birth at home had higher breastfeeding rates than those with hospital births. ([Chart 31](#))

Breastfeeding rates at birth varied by health board from just over three quarters of mothers in Powys compared to just over half of mothers in Cwm Taf. ([Chart 33](#))

The majority of babies (over 98%) had an APGAR score of 7 or over at 5 minutes. ([Chart 35](#))

## Context

The official source of births data in Wales is published by the [ONS](#), which counts birth registrations. This release focusses on statistics for births using data sourced from Maternity Indicators dataset and the National Community Child Health Database, which allow for more detailed analysis than the ONS data. The number of births will differ between these sources as they are collected on a different basis.

Table 1 and Chart 1 shows how birth data in Wales compares across the three main data sources. Chart 1 emphasises the high level of coverage and completeness of the National Community Child Health Database data, with the number of births closely aligning to birth [registration statistics](#) by ONS. Maternity Indicators dataset offers data from 2016 and differs for reasons outlined in the [Key Quality Information](#).

Maternity Indicators dataset set recorded 29,132 pregnancies with deliveries in Welsh hospitals in 2018. These resulted in, 29,567 births, of which 29,433 were live births.

National Community Child Health Database recorded 31,329 live births in 2018 to Welsh residents.

ONS recorded 31,274 live birth registrations in 2018 to Welsh residents.

All births occurring in Wales (whether to Welsh or non-Welsh residents) can be counted from the National Community Child Health Database and these are shown in Table 2 and also by maternity unit on [StatsWales](#).

**Table 1: Antenatal records, live births and still births by health board providing the service, 2018**

	MI dataset (a)				NCCHD (b)			ONS (b)		
	Antenatal records / deliveries (c) (d)	Live births (d)	Still births (e)	Total births (f)	Live births (g)	Still births (e)	Total births (g)	Live births (b)	Still births (e)	Total births (b)
Betsi Cadwaladr	6,110	6,180	26	6,208	6,734	28	6,762	6,740	27	6,767
Powys Teaching	216	216	0	216	1,094	3	1,097	1,114	3	1,117
Hywel Dda	2,984	2,989	18	3,007	3,368	22	3,390	3,362	21	3,383
Abertawe Bro Morgannwg	5,084	5,145	23	5,168	5,270	24	5,294	5,291	23	5,314
Cwm Taf	3,576	3,606	17	3,623	3,198	19	3,217	3,212	18	3,230
Aneurin Bevan	5,695	5,752	30	5,782	6,189	29	6,218	6,206	31	6,237
Cardiff and Vale	5,467	5,545	18	5,563	5,394	16	5,410	5,349	15	5,364
<b>Wales</b>	<b>29,132</b>	<b>29,433</b>	<b>132</b>	<b>29,567</b>	<b>31,329</b>	<b>141</b>	<b>31,470</b>	<b>31,274</b>	<b>138</b>	<b>31,412</b>

Source: Maternity Indicators dataset (MI ds), National Community Child Health Database (NCCHD), Office for National Statistics (ONS)

(a) Deliveries / births in Welsh hospitals.

(b) Births to Welsh residents.

(c) This relates to deliveries in 2018. Note the initial assessment may have taken place in 2017. Pregnancies resulting in multiple births are counted once in this total.

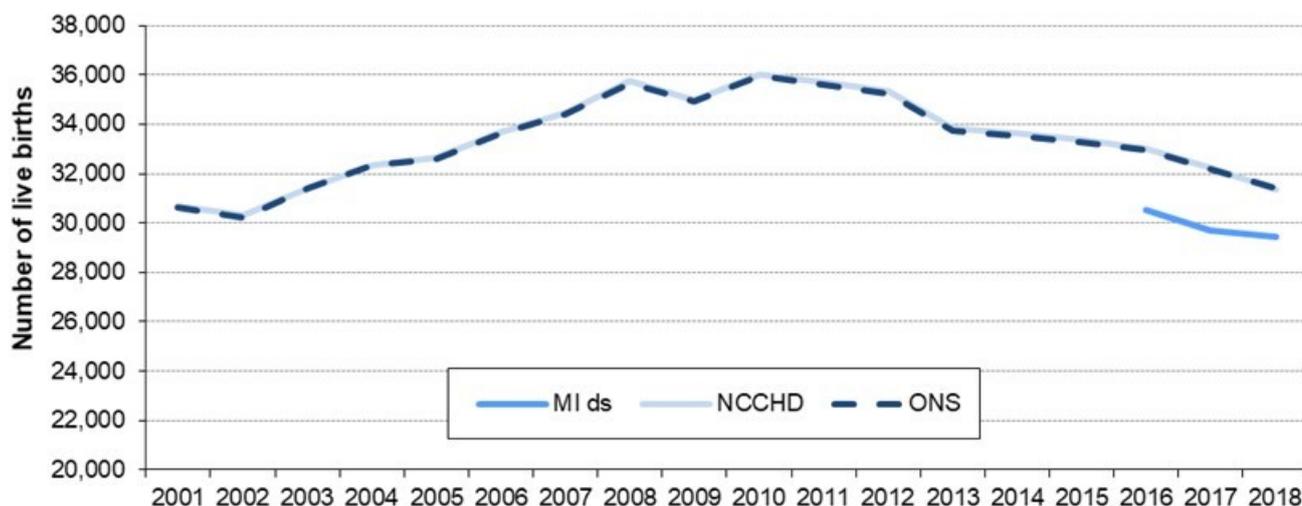
(d) Includes delivery of live and still births.

(e) Note that the pattern of still births across health boards may be affected by the location of the tertiary referral centre for foetal medicine in Cardiff.

(f) Includes 2 births with no stated outcome.

(g) Includes 82 births where health board was not stated.

**Chart 1: Live births in Wales**



Source: Maternity Indicators dataset (MI ds), National Community Child Health Database (NCCHD), Office for National Statistics (ONS)

**Table 2: Live births to Welsh and non-Welsh residents by place of birth, 2018**

	Births in Wales				Births outside Wales		<b>All births</b>
	Hospital	Home	Ambulance	Not stated	English Hospital		
Births to Welsh residents	29,531	712	75	130	881		<b>31,329</b>
Births to non-Welsh residents	338	0	0	0	..		<b>338</b>

Source: National Community Child Health Database

.. Data item not available.

More information about births in English hospitals is available at: [Maternity statistics for England](#).

Table 2 shows that the vast majority of live births to Welsh residents took place in Welsh hospitals in 2018 but 881 (or 3% of) live births to Welsh residents were delivered in English hospitals. A further 338 babies whose mothers were non-Welsh residents were delivered in Welsh hospitals.

See [Table 15](#) for a breakdown by health board.

## Deliveries and births at maternity units

**Table 3: Delivery and birth (a) records by health board providing the service and maternity unit, 2018**

	MI dataset		NCCHD
	Deliveries (c)	Births (a)(c)	Births (a)(d)
<b>Betsi Cadwaladr</b>	<b>6,110</b>	<b>6,208</b>	<b>6,461</b>
Wrexham Maelor Hospital	2,474	2,513	2,528
Ysbyty Glan Clwyd	1,949	1,980	1,999
Ysbyty Gwynedd	1,687	1,715	1,931
<b>Powys Teaching</b>	<b>216</b>	<b>216</b>	<b>143</b>
Powys Maternity Units (b)	216	216	143
<b>Hywel Dda</b>	<b>2,984</b>	<b>3,007</b>	<b>3,083</b>
Bronglais General Hospital	415	415	442
Glangwili General Hospital	2,431	2,454	2,528
Withybush General Hospital	137	137	113
<b>Abertawe Bro Morgannwg</b>	<b>5,084</b>	<b>5,168</b>	<b>5,588</b>
Neath Port Talbot Hospital	423	423	399
Princess Of Wales Hospital	1,973	2,005	2,114
Singleton Hospital	2,688	2,740	3,075
<b>Cwm Taf</b>	<b>3,576</b>	<b>3,623</b>	<b>3,583</b>
Prince Charles Hospital	1,729	1,748	1,743
The Royal Glamorgan Hospital	1,804	1,832	1,839
<b>Aneurin Bevan</b>	<b>5,695</b>	<b>5,782</b>	<b>5,672</b>
Nevill Hall Hospital	1,939	1,960	1,932
Royal Gwent Hospital	3,469	3,535	3,481
Ysbyty Aneurin Bevan	4	4	3
Ysbyty Ystrad Fawr	283	283	254
<b>Cardiff and Vale</b>	<b>5,467</b>	<b>5,563</b>	<b>5,467</b>
University Hospital of Wales	5,467	5,563	5,464
<b>Wales</b>	<b>29,132</b>	<b>29,567</b>	<b>29,998</b>

Source: Maternity Indicators dataset, National Community Child Health Database (NCCHD)

- (a) Includes live and still births.
- (b) Powys Maternity Units consists of: Breconshire War Memorial Hospital, Bro Ddyfi Community Hospital, Builth Wells Cottage Hospital, Knighton Hospital, Llandrindod Wells Hospital, Llanidloes and District War Memorial Hospital, Montgomeryshire County Infirmary, Victoria Memorial Hospital and Ystradgynlais Community Hospital.
- (c) Total for Hywel Dda includes 1 delivery and 1 birth, and total for Cwm Taf includes 43 deliveries and 43 births for which maternity unit was not stated.
- (d) Total for Betsi Cadwaladr includes 3 births, total for Cwm Taf includes 1 birth, total for Aneurin Bevan includes 2 births, total for Cardiff and Vale includes 3 births, total for Wales includes 1 birth for which maternity unit was not stated.

The most number of births occurred in University Hospital of Wales, Cardiff while the fewest occurred in Ysbyty Aneurin Bevan, Ystrad Mynach. A map showing all maternity units, highlighting all areas of Wales within a 20 mile driving distance is included at [Map 1](#) and a second map showing all areas within a 40 minute drive-time is at [Map 2](#) in [Annex 4](#). Births by local authority area are included at [Table 15](#).

## Antenatal care 2018

Data presented here refers to the 29,132 pregnancies recorded in the Maternity Indicators dataset in 2018.

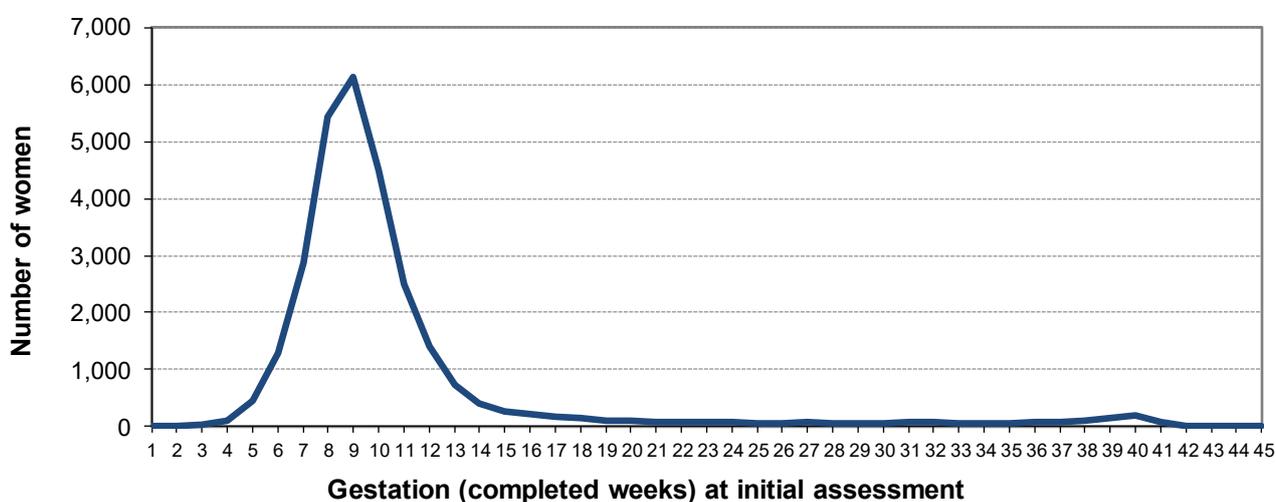
### Initial assessments

The 'proportion of women whose initial assessment has been carried out by 10 completed weeks of pregnancy' was one of the original Welsh Government Maternity Indicators. The rationale for this indicator is that early access to maternity services increases the opportunity to promote and improve the health and well-being of pregnant women through early sign-posting to appropriate services and provision of evidence based information.

In 2018, at least 73% of women who had an initial assessment ('booked in') with maternity services had received it on the 10<sup>th</sup> completed week of pregnancy or earlier. One percentage point higher than in 2017.

Note that some women may have had their first initial assessment before the date that has been recorded in the Maternity Indicators dataset. This is because the merging methodology for the initial assessment and birth record is based on when these occur in the same health board; so a mother could have an initial assessment in one health board, early in the pregnancy, but then if she goes into labour in another health board for any reason (for example, unexpected complications, or in a different health board area at the time) she will have another initial assessment record generated at the second health board where she gives birth.

**Chart 2: Number of women having their initial assessment by week of gestation, Wales, 2018**



Source: Maternity Indicators dataset, excludes 649 records where the gestation at initial assessment was not recorded

The large majority of initial assessments (85%) took place between 6 and 12 completed weeks gestation.

### Characteristics of women at initial assessment

In addition to the percentage of women who had an initial assessment before the 10th completed week of pregnancy, [Table 4](#) and [Table 5](#) and [Chart 3](#) and [Chart 4](#) show some key statistics for women at initial assessment. These include the proportion who have a Body Mass Index (BMI) of 30+ and the proportion of women who reported a mental health condition.

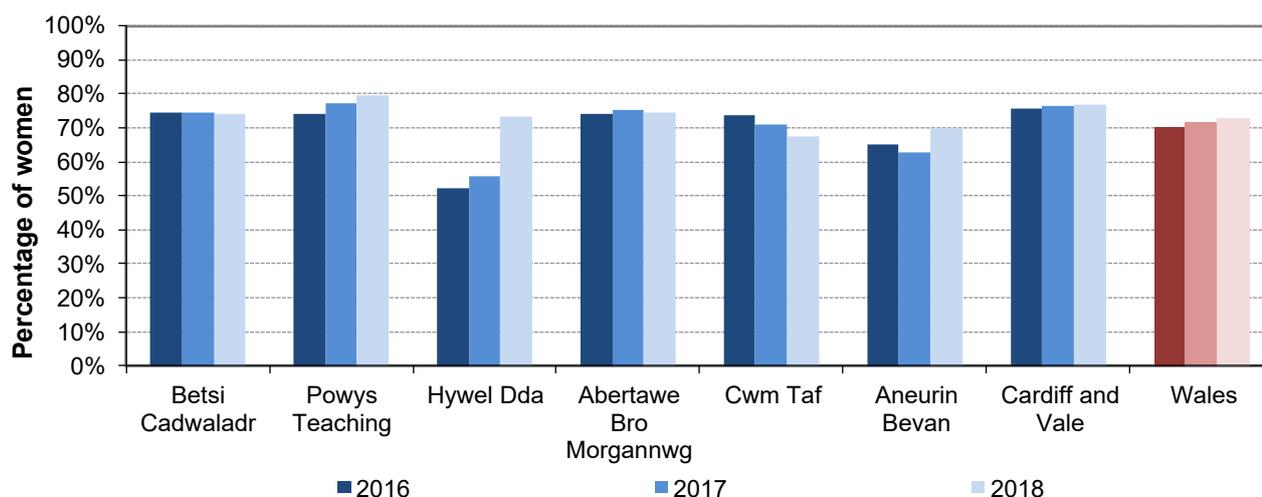
**Table 4: Antenatal care: key statistics by health board providing the service, 2018**

Percentage (a) of women at initial assessment who:	Per cent		
	Had an initial assessment carried out by 10 completed weeks of pregnancy	Had reported a mental health condition (b)(c)	Had a BMI 30+
Betsi Cadwaladr	74.2	..	27.0
Powys Teaching	79.6	29.2	11.6
Hywel Dda	73.4	19.5	28.3
Abertawe Bro Morgannwg	74.7	32.5	28.6
Cwm Taf	67.4	..	34.3
Aneurin Bevan	69.9	17.8	29.5
Cardiff and Vale	76.8	24.6	23.9
<b>Wales</b>	<b>73.1</b>	<b>24.1</b>	<b>28.0</b>

Source: Maternity Indicators dataset

- (a) The percentages for each indicator are of the total records less records with a 'not stated' value. In 2018, 649 records had no stated gestation at booking, 1,057 records had no stated mental health status, 1,245 records had no stated BMI or if BMI value was less than 10 or greater than 100.
- (b) Data for Cwm Taf and Betsi Cadwaladr is very unreliable and is unlikely to be accurate. While 99% of records had valid data, the overwhelming majority (more than 95%) of their records were recorded as having no mental health condition which is unlikely to reflect the actual position in these health boards.
- (c) Wales percentage excludes data from Betsi Cadwaladr and Cwm Taf because of their low reliability.

**Chart 3a: Percentage (a) of women at initial assessment, by health board providing the service, who had an initial Assessment by 10 completed weeks of pregnancy**



Source: Maternity Indicators dataset

- (a) The percentages for each indicator are of the total records less records with a 'not stated' value:
- records with no stated gestation at booking (includes gestation stated as 0 weeks): 1,800 in 2016, 705 in 2017, 649 in 2018.

## Summary

Data completeness for this data item has been high throughout the three years of data, with over 90% completeness in all health boards in all years apart from Betsi Cadwaladr (79%) in 2016 and Aneurin Bevan (89%) in 2018. However analysis of this data item is limited by the merging methodology outline in the [Key Quality Information](#).

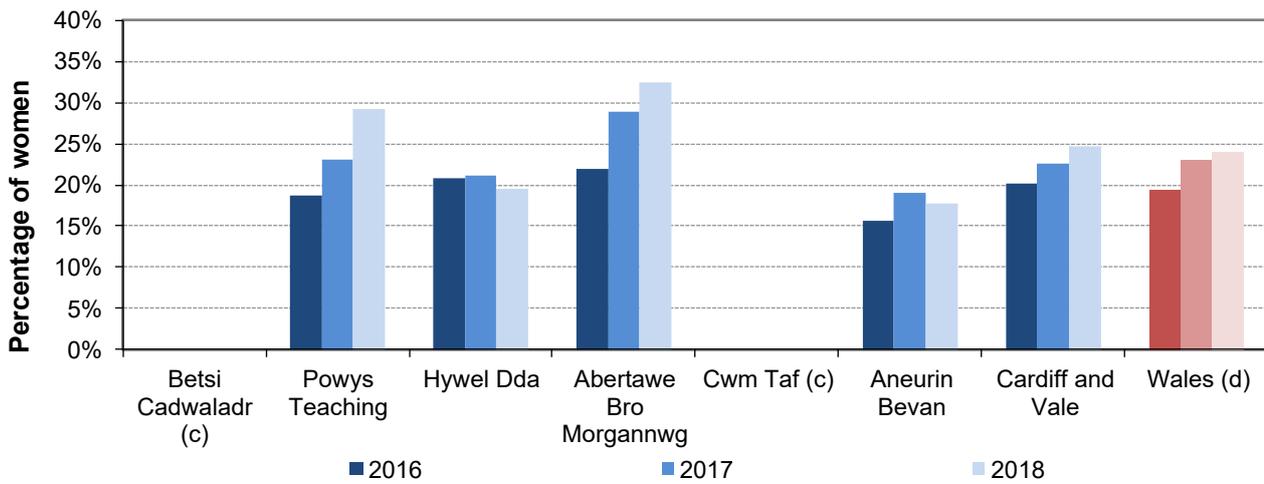
## Latest data

The proportion of women who had received an initial assessment with maternity services before the 10<sup>th</sup> completed week of pregnancy was 73% in Wales, and varied across health boards from 67% at Cwm Taf to 80% in Powys.

## Annual change

The percentage of women receiving their initial assessment before the end of the 10<sup>th</sup> completed week increased by one percentage point in Wales and in four of the health boards between 2017 and 2018. The largest percentage point increase was in Hywel Dda (56% to 73%) and the largest percentage point decrease was in Cwm Taf (71% to 67%).

**Chart 3b: Percentage (a) of women at initial assessment, by health board providing the service, who had reported a mental health condition (b)**



Source: Maternity Indicators dataset

- (a) The percentages for each indicator are of the total records less records with a 'not stated' value:
  - records with no stated mental health status: 3,730 in 2016, 1,354 in 2017, 1,057 in 2018.
- (b) For a list of conditions which are included see [glossary](#).
- (c) Data for Cwm Taf and Betsi Cadwaladr is very unreliable and is unlikely to be accurate. In 2018, while 99% of records had valid data, the overwhelming majority (more than 95%) of their records were recorded as having no mental health condition which is unlikely to reflect the actual position in these health boards.
- (d) Wales percentage excludes data from Betsi Cadwaladr and Cwm Taf because of their low reliability for all three years.

## Summary

Data completeness was 53% for Cardiff in 2016, and 88% in Hywel Dda for all three years. While data completeness was greater than 90% for all other health boards across all three years, there are reliability issues with how this data has been recorded in Betsi Cadwaladr and Cwm Taf.

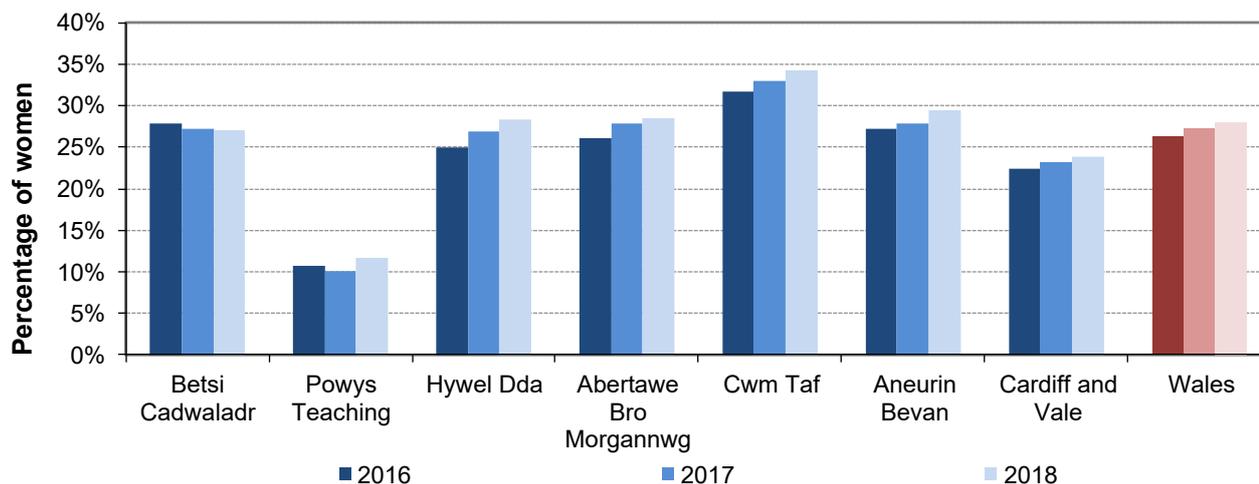
## Latest data

24.1% of mothers reported a mental health condition at their initial assessment. Excluding Cwm Taf and Betsi Cadwaladr data, this varied between 33% in Abertawe Bro Morgannwg and 18% in Aneurin Bevan.

## Annual change

The proportion of women who reported having a mental health condition at their initial assessment increased by one percentage point in Wales and in three of the five health boards that returned more reliable data, between 2017 and 2018. The largest percentage point increase was in Powys (23% to 29%).

**Chart 3c: Percentage (a) of women at initial assessment, by health board providing the service who had a BMI of 30+**



Source: Maternity Indicators dataset

(a) The percentages for each indicator are of the total records less records with a 'not stated' value:

- records with no stated BMI (includes BMI values of less than 10 or greater than 100): 2,254 in 2016, 1,399 in 2017, 1,245 in 2018.
- records where weight was below 30kg and above 250kg and/or where height was under 120cm or above 200cm were classed as 'not stated'

## Summary

Completeness was above 90% for BMI in all health boards, across all years except for Cwm Taf in 2016 (77%) and 2018 (87%). Data for BMI is calculated based on heights and weights of the mother, however some of the records for these data items had unrealistic values and were excluded from the analysis.

## Latest data

Just under a third (28%) of mothers had a BMI of 30 or more at their initial assessment. This varied by health board, from 12% in Powys to 34% in Cwm Taf.

## Annual change

The percentage of women who were recorded with a BMI of 30 or more also increased slightly between 2017 and 2018 (from 27% to 28%). The rate increased in six out of seven of the health boards; the only health board not to change was Betsi Cadwaladr.

A similar pattern of health board differences exist between smoking and BMI rates, suggesting a greater proportion of healthier lifestyle choices are being made by expectant mothers in Powys compared to those in Cwm Taf.

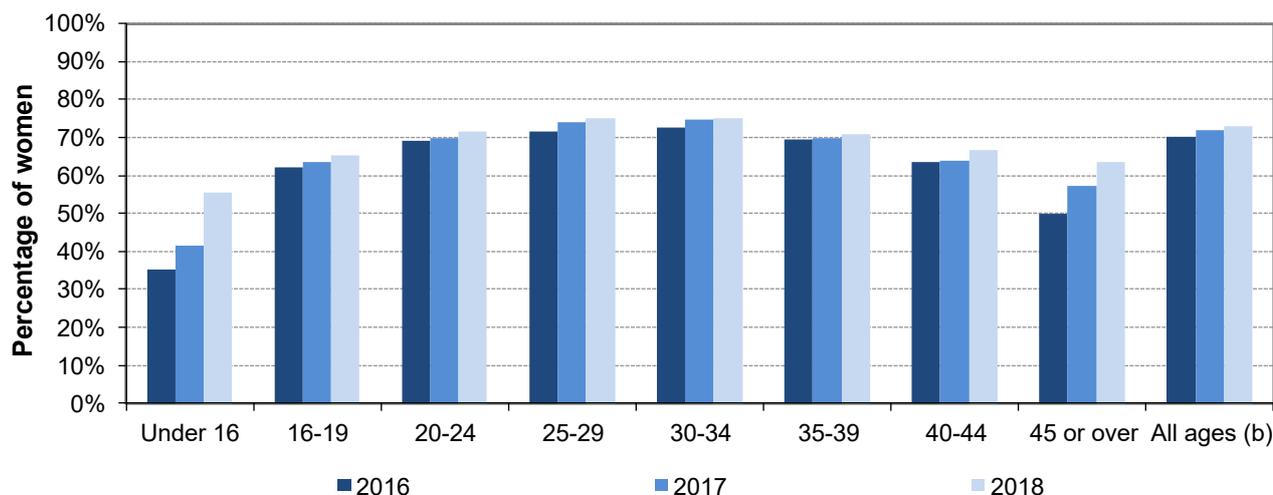
**Table 5: Antenatal care: key statistics by age of mother at initial assessment, Wales, 2018**

Age	Percentage (a) of women at initial assessment who:		
	Had an initial assessment carried out by 10 completed weeks of pregnancy	Had reported a mental health condition (b)	Had a BMI 30+
Under 16	55.6	21.7	11.1
16-19	65.3	29.1	20.0
20-24	71.4	27.1	29.8
25-29	75.0	24.1	28.9
30-34	75.2	21.7	27.5
35-39	71.1	23.1	27.7
40-44	66.7	25.0	28.6
45 or over	63.6	20.0	25.0
<b>All ages (c)</b>	<b>73.1</b>	<b>24.1</b>	<b>28.0</b>

Source: Maternity Indicators dataset

- (a) The percentages for each indicator are of the total records less records with a 'not stated' value. In 2018, 649 records had no stated gestation at booking, 1,057 records had no stated mental health status, 1,245 records had no stated BMI (includes BMI values of less than 10 or greater than 100).
- (b) Cwm Taf and Betsi Cadwaladr did not provide correctly recorded data for this data item so have been excluded from the analysis. Data for 'All ages' represents the remaining 6 health boards.
- (c) 'All ages' includes records where mother's age was not stated.

**Chart 4a: Percentage (a) of women at initial assessment, by age of mother (at initial assessment), 2017-18, who had an initial assessment by 10 completed weeks of pregnancy**



Source: Maternity Indicators dataset

- (a) The percentages for each indicator are of the total records less records with a 'not stated' value:
- records with no stated gestation at booking (includes gestation stated as 0 weeks): 1,800 in 2016, 705 in 2017, 649 in 2018.
- (b) 'All ages' includes records where mother's age was not stated.

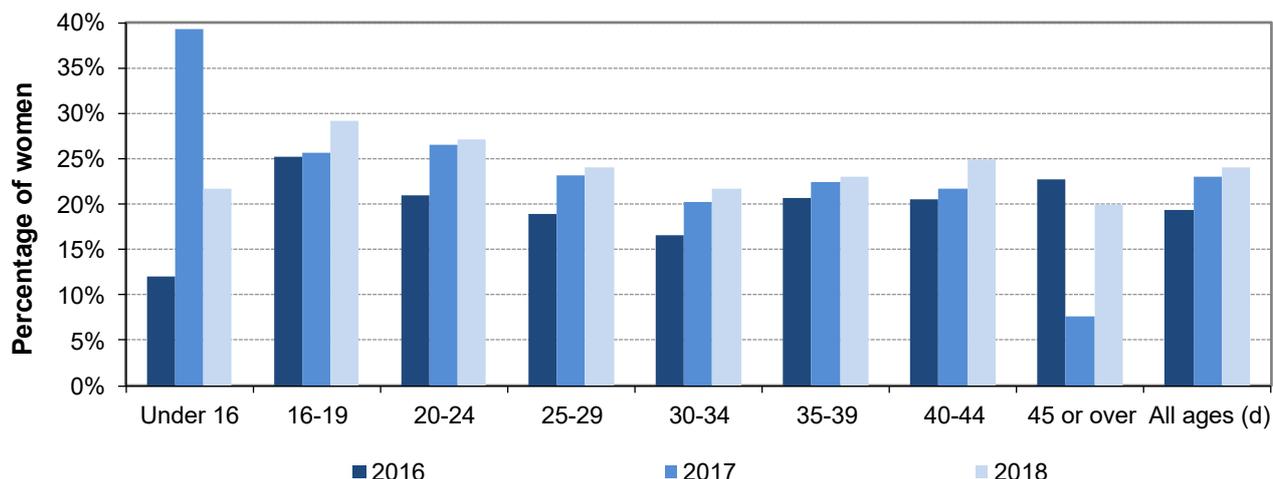
### Latest data

The proportion of women who had received an initial assessment with maternity services before the 10<sup>th</sup> completed week of pregnancy varied across age groups from just over half (56%) for the Under 16 age group to three-quarters (75%) in the middle age groups (25-29 and 30-34).

### Annual change

The proportion increased between 2017 and 2018 in all of the age groups. The greatest percentage point increase was seen in the Under 16 age group (from 41% to 51%), but note this age group has very few births every year.

**Chart 4b: Percentage (a) of women at initial assessment, by age of mother (at initial assessment), 2017-18, who had reported a mental health condition (b)(c)**



Source: Maternity Indicators dataset

(a) The percentages for each indicator are of the total records less records with a 'not stated' value:

- records with no stated mental health status: 3,730 in 2016, 1,354 in 2017, 1,057 in 2018.

(b) For a list of conditions which are included see [glossary](#).

(c) Data for Cwm Taf and Betsi Cadwaladr is very unreliable and is unlikely to be accurate. In 2018, while 99% of records had valid data, the overwhelming majority (more than 95%) of their records were recorded as having no mental health condition which is unlikely to reflect the actual position in these health boards. 'All ages' percentage excludes data from Betsi Cadwaladr and Cwm Taf because of their low reliability for all three years.

(d) 'All ages' includes records where mother's age was not stated.

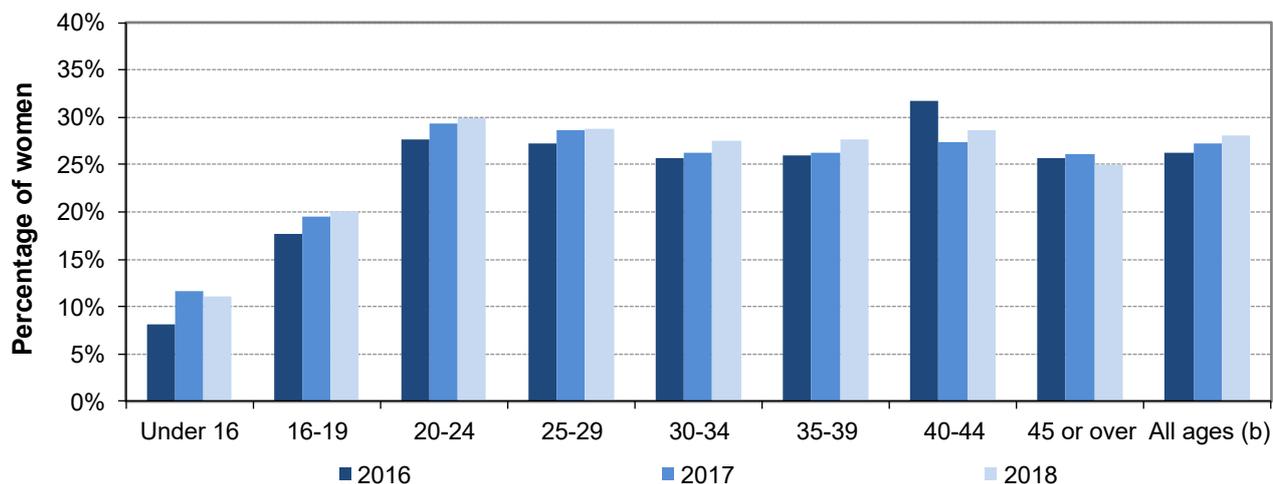
## Latest data

The proportion of women who reported a mental health condition at their initial assessment varied between age groups: considering only age groups where more than 100 births occurred, younger mothers (aged 16 to 24) had the highest rate of mental health conditions being recorded; while mothers aged 30 to 34 had the lowest rate. Note as there are so few mothers aged under 16 and 45 or over, there may be large year-to-year changes due to natural volatility.

## Annual change

For most age groups, the proportion of women who reported a mental health condition increased slightly between 2017 and 2018.

**Chart 4c: Percentage (a) of women at initial assessment, by age of mother (at initial assessment), 2017-18, who had a BMI of 30+**



Source: Maternity Indicators dataset

(a) The percentages for each indicator are of the total records less records with a 'not stated' value:

- records with no stated BMI (includes BMI values of less than 10 or greater than 100): 2,254 in 2016, 1,399 in 2017, 1,245 in 2018.

(b) 'All ages' includes records where mother's age was not stated.

### Latest data

The percentage of mothers whose BMI was 30 or more did not vary widely between age groups; all age groups between 20 and 44 had rates between 27% and 30%. The youngest mothers aged 19 or less had the lowest rates of BMI 30 plus.

### Annual change

The percentage of mothers whose BMI was 30 or more increased slightly across most age groups between 2017 and 2018.

## Smoking at initial assessment and birth

During a woman's initial assessment and at birth, women are either asked if they are a smoker or they are tested with a carbon monoxide (CO) monitor. Table 6 shows the percentage of women in 2018 that were recorded as either smoking 'self-reported' or smoking 'CO confirmed' at the initial assessment and those recorded as smoking at birth.

**Table 6: Percentage (a) of women who were smoking at initial assessment and at birth, by health board providing the service and age of mother (at initial assessment and birth), 2018 (b)**

Percentage (a) of women who were smoking:		
	At initial assessment	At birth
<i>Health Board</i>		<i>Per cent</i>
Betsi Cadwaladr	19.7	18.5
Powys Teaching	10.3	6.7
Hywel Dda	16.6	19.1
Abertawe Bro Morgannwg	18.0	14.2
Cwm Taf	23.0	18.6
Aneurin Bevan	17.9	15.0
Cardiff and Vale	13.1	12.5
<b>Wales</b>	<b>17.9</b>	<b>16.0</b>
<i>Age</i>		
Under 16	36.1	18.8
16-19	33.3	30.3
20-24	27.4	25.0
25-29	18.0	16.5
30-34	12.4	11.8
35-39	10.5	10.2
40-44	11.1	8.9
45 or over	4.7	3.7
<b>All ages</b>	<b>17.9</b>	<b>16.0</b>

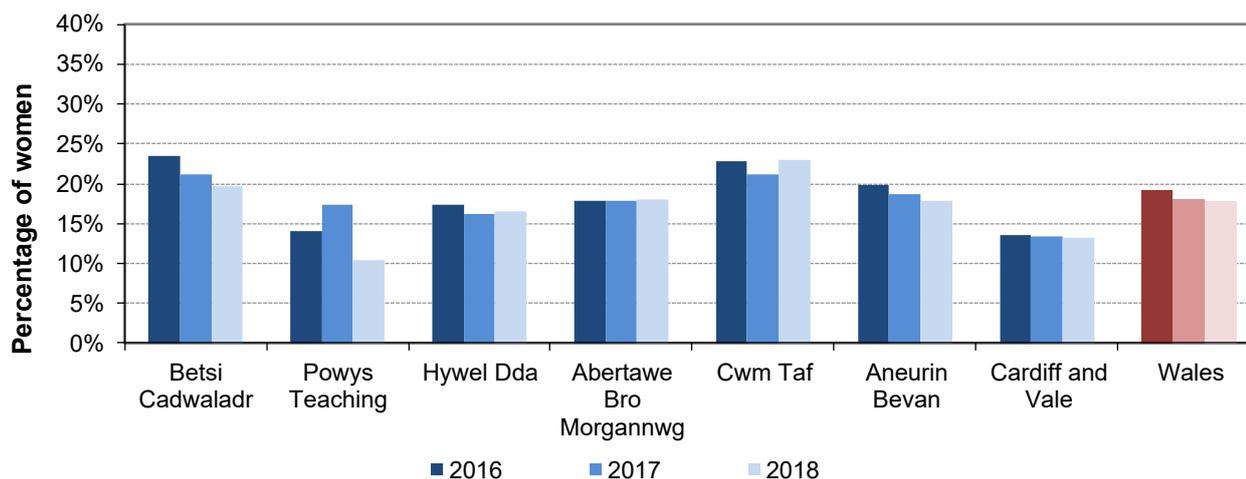
Source: Maternity Indicators dataset

- (a) The percentages for each indicator are of the total records less records with a 'not stated' value:  
 - records with no stated smoking status in 2018: 935 at initial assessment and 512 at birth.
- (b) Hywel Dda: Smoking rate is higher at birth than initial assessment; 10% of records did not have a valid smoking status at initial assessment compared to 1% of records at birth. Of those with a valid smoking status at both initial assessment and birth: 100 women were smokers at initial assessment but not at birth, while 169 were smokers at birth but not at initial assessment. All smoking statuses were self-reported at this health board.

## Note

Statistics on smoking at initial assessment and birth are limited by the way in which the data is collected. If CO monitoring is not available, data reliability is dependent on the mother giving accurate information. Some mothers may also include smoking of e-cigarettes in their self-report; however e-cigarette use will not be detected by the CO monitor.

**Chart 5: Percentage (a) of women who were smoking at initial assessment, by health board providing the service**



Source: Maternity Indicators dataset

(a) The percentages for each indicator are of the total records less records with a 'not stated' value:

- records with no stated smoking status: 1,010 in 2016, 1,040 in 2017, 935 in 2018.

## Summary

Data completeness is high for this both smoking at initial assessment and at birth; all health boards have 90% or over completeness across all years for both measures. Note that smoking statistics are limited by the way they are collected and rates may be substantially different to those reported in previous years following health boards resubmitting data.

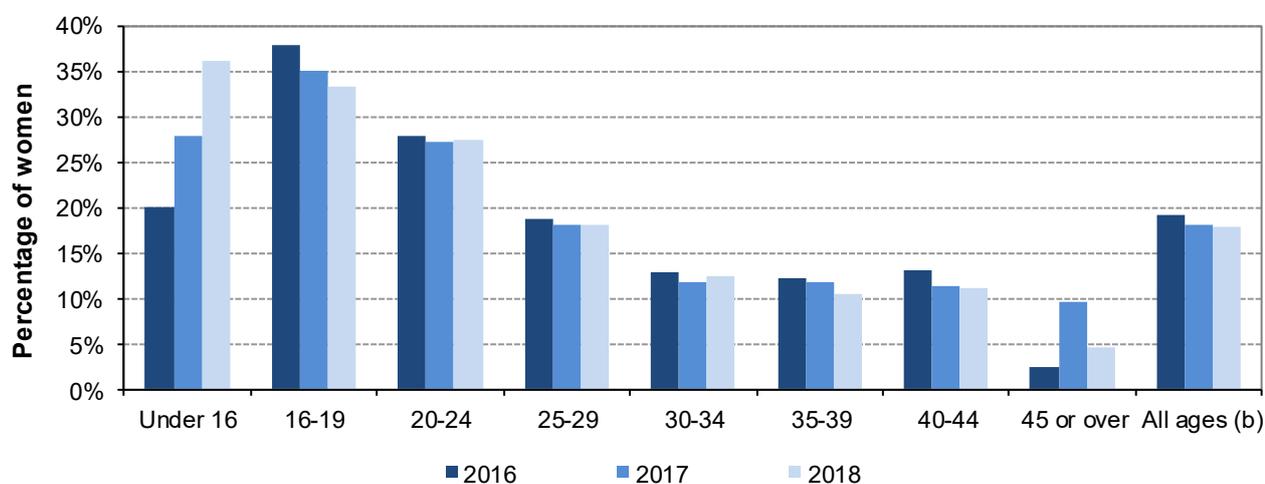
## Latest data

18 per cent of women were recorded as being a smoker at their initial assessment. This varied between health boards from 10% in Powys to 23% in Cwm Taf.

## Annual change

The percentage of women who were recorded as smoking at their initial assessment showed little change between 2017 and 2018, although the rate decreased in four out of the seven health boards. The largest increase was in Cwm Taf (21% to 23%), while the largest decrease was in Powys (17% to 10%).

**Chart 6: Percentage (a) of women who were recorded as smoking at initial assessment, by age of mother (at initial assessment)**



Source: Maternity Indicators dataset

(a) The percentages for each indicator are of the total records less records with a 'not stated' value:

- records with no stated smoking status: 1,010 in 2016, 1,040 in 2017, 935 in 2018.

(b) 'All ages' includes records where mother's age was not stated.

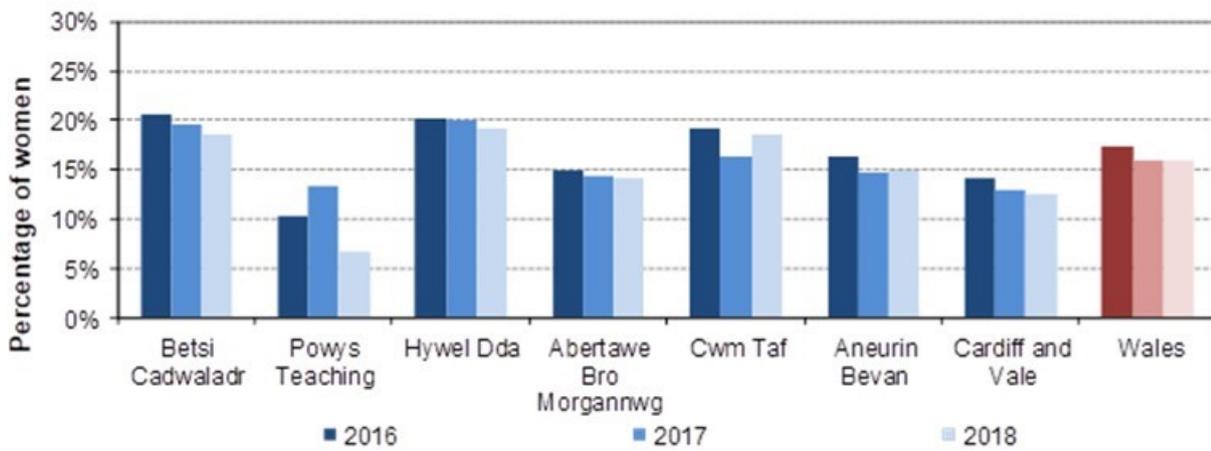
### Latest data

The proportion of women who smoked at initial assessment was higher for younger women, with one-third (33%) of women aged 16 to 19 smoking at initial assessment compared to just under one-fifth (18%) of women aged 25 to 29, and one in ten (11%) women aged 40 to 44.

### Annual change

For the middle age groups, the proportion of women who smoked at initial assessment remained broadly the same between 2017 and 2018. Smoking rates fell by two percentage points in the 16 to 19 year old age group, while the under 16 and 45 or over age groups saw more marked changes, but there were a small number of mothers in these age groups.

**Chart 7: Percentage (a) of women who were recorded as smoking at birth, by health board providing the service**



Source: Maternity Indicators dataset

(a) The percentage is of the total records less records with a 'not stated' value:

- records with no stated smoking status at birth: 906 in 2016, 854 in 2017, 512 in 2018.

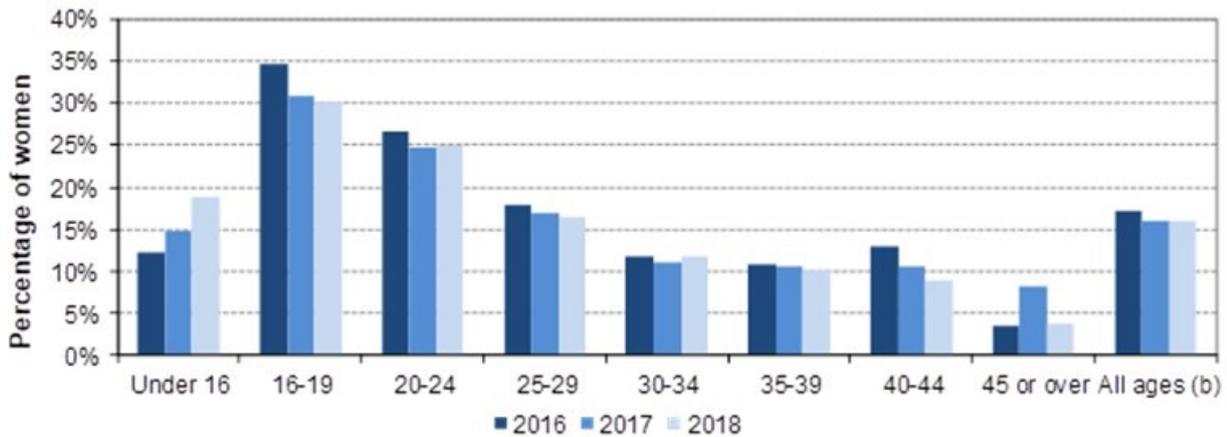
### Latest data

Around one in six mothers (16%) were recorded as being smokers at the time of birth in 2018. This varied between health boards from 7% in Powys to 19% in Hywel Dda and Cwm Taf.

### Annual change

The percentage of women who were recorded as smoking at the time of birth remained the same between 2017 and 2018 although the rate decreased in five out of the seven health boards. The largest decrease was in Powys where the percentage of mothers smoking at birth fell from 13% to 7%, but note this health board has far fewer mothers giving birth there than all other health boards.

**Chart 8: Percentage (a) of women who were recorded as smoking at birth, by age of mother (at birth)**



Source: Maternity Indicators dataset

(a) The percentage is of the total records less records with a 'not stated' value:

- records with no stated smoking status at birth: 906 in 2016, 854 in 2017, 512 in 2018.

(b) 'All ages' includes records where mother's age was not stated.

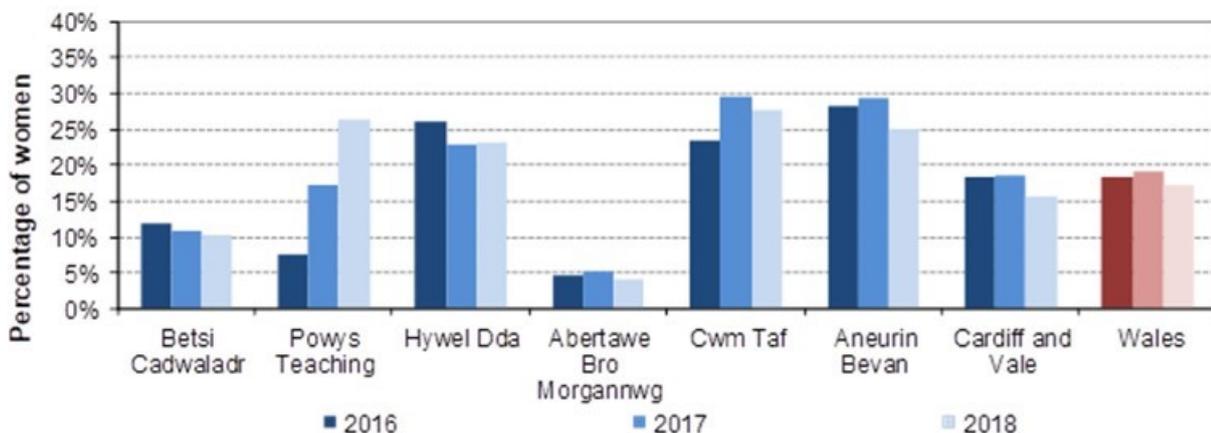
### Latest data

The proportion of women who smoked at the time of birth was much higher for younger mothers than older mothers. Around one-third (30%) of women aged 16 to 19) were smoking at birth compared to one-sixth (16%) of women aged 25 to 29 and just under one tenth (9%) of women aged 40 to 44.

### Annual change

For the middle age groups, the proportion of women who smoked at initial assessment remained roughly the same between 2017 and 2018. Of the age groups where there were more than 100 births, the largest changes were in the 40 to 45 age group (two percentage point decrease) and the 16 to 19 age group (one percentage point decrease). The under 16 and 45 or over age groups saw more marked changes, but there were a small number of mothers in these age groups.

**Chart 9: Percentage (a) of women who 'stopped smoking' during pregnancy, by health board providing the service**



Source: Maternity Indicators dataset

(a) The percentage is of the total records less records with a 'not stated' value at either initial assessment, birth or both:

- records with no stated smoking status at: 1,308 in 2018, 1,619 in 2017, and 1,571 in 2016.

## Summary

This analysis is based on women who had valid smoking data at both initial assessment and birth for each year. Data was over 94% complete for records in all the years at the Wales level and over 85% complete across each health board area. As smoking status is recorded at two points in time only, we do not know if the mothers were smoking throughout the duration of their pregnancy, or how frequently they smoked. For the purpose of the analysis, those mothers who were recorded as smoking at initial assessment, but not smoking at birth are classed as mothers who 'stopped smoking' during pregnancy.

## Latest data

In 2018, 17% of women who smokers at the initial assessment were not smokers at birth. The percentage varies greatly between health boards, ranging from around 1 in 20 women (4%) at Abertawe Bro Morgannwg to just over 1 in 4 women (28%) at Cwm Taf.

## Annual change

The percentage of women who gave up smoking decreased by two percentage points between 2017 and 2018 (from 19% to 17%), although the rate did increase in two out of the seven health boards. The largest increase was in Powys where the percentage of mothers who gave up smoking rose from 17% to 26%.

**Table 7: Summary of smoking status changes between initial assessment and birth, 2018**

	Percentage of women who were smoking at initial assessment who:		Percentage of women who were NOT smoking at initial assessment who:		Completeness of data (a)
	Were smoking at birth	Were not smoking at birth	Were not smoking at birth	Were smoking at birth	
Betsi Cadwaladr	89.7%	10.3%	99.1%	0.9%	98.4%
Powys Teaching	73.7%	26.3%	100.0%	0.0%	97.2%
Hywel Dda	76.7%	23.3%	92.4%	7.6%	89.3%
Abertawe Bro Morgannwg	95.8%	4.2%	100.0%	0.0%	94.9%
Cwm Taf	72.5%	27.5%	97.5%	2.5%	99.1%
Aneurin Bevan	75.0%	25.0%	97.7%	2.3%	96.1%
Cardiff and Vale	84.0%	16.0%	98.1%	1.9%	93.3%
<b>Wales</b>	<b>82.7%</b>	<b>17.3%</b>	<b>98.0%</b>	<b>2.0%</b>	<b>95.5%</b>

Source: Maternity Indicators dataset

(a) The percentage is of the total records less records with a 'not stated' value at either initial assessment, birth or both: records with no stated smoking status at: 1,308 in 2018.

## Care at delivery: Delivery characteristics

Data here refers to the 29,132 deliveries recorded in the Maternity Indicators dataset which took place in 2018.

### Onset of labour

Onset of labour is the method by which the process of labour began and includes methods that are used to induce labour, such as surgical or medical induction or a combination of the two. Methods that are used to accelerate labour are not included. For more information see [glossary](#).

Data was recorded in the Maternity Indicators dataset for every health board, however Hywel Dda and Aneurin Bevan health boards labour onset was not recorded as 'caesarean' when an elective caesarean sections birth occurred. As a result of this data quality issue, these health boards have been excluded from the analysis and as a result data for Wales represents the 20,453 deliveries which took place at the remaining five health boards.

**Table 8: Mode of onset of labour by health board providing the service 2018**

Mode of onset:					<i>Number</i>
	Spontaneous	Caesarean section (a)	Induction (b)	Not stated	<b>Total women</b>
Betsi Cadwaladr	3,028	876	2,191	15	<b>6,110</b>
Powys Teaching	215	0	0	1	<b>216</b>
Hywel Dda (c)	.	.	.	.	.
Abertawe Bro Morgannwg	2,675	911	1,495	3	<b>5,084</b>
Cwm Taf	1,404	641	1,431	100	<b>3,576</b>
Aneurin Bevan (c)	.	.	.	.	.
Cardiff and Vale	2,928	835	1,693	11	<b>5,467</b>
<b>Wales</b>	<b>10,250</b>	<b>3,263</b>	<b>6,810</b>	<b>130</b>	<b>20,453</b>
					<i>Per cent (d)</i>
Betsi Cadwaladr	49.7	14.4	35.9		<b>100</b>
Powys Teaching	100.0	0.0	0.0		<b>100</b>
Hywel Dda	.	.	.		.
Abertawe Bro Morgannwg	52.6	17.9	29.4		<b>100</b>
Cwm Taf	40.4	18.4	41.2		<b>100</b>
Aneurin Bevan	.	.	.		.
Cardiff and Vale	53.7	15.3	31.0		<b>100</b>
<b>Wales</b>	<b>50.4</b>	<b>16.1</b>	<b>33.5</b>		<b>100</b>

Source: Maternity Indicators dataset

- (a) Any caesarean section carried out before the onset of labour; or a planned elective caesarean section carried out immediately following the onset of labour, when the decision was made before labour.
- (b) Includes medical induction, surgical induction and cases where a combination of both was used.
- (c) Hywel Dda and Aneurin Bevan did not provide correctly recorded data for this data item so have been excluded from the analysis. Data for Wales represents the remaining 5 health boards.
- (d) The percentages are of the total records less records with a 'not stated' value. In 2018, 1,181 of all records had no stated mode of onset of labour; 130 records (or 0.6%) had not stated mode of onset when only counted the 5 health boards used for Wales totals

Half (50%) of deliveries in Wales in 2018 began with a spontaneous onset of labour. This proportion varied across health boards, ranging from 40% in Cwm Taf to 54% in Cardiff and Vale. All deliveries in Powys Teaching, as would be expected, started with a spontaneous onset of labour. Just over a third (34%) of deliveries in Wales were induced. This proportion ranged from 29% in Abertawe Bro Morgannwg to 41% in Cwm Taf.

## Pain relief

An Epidural is a method of pain relief used for mothers in labour. It involves an injection of a local anaesthetic into the space outside the dura mater of the spinal cord in the lower back region to produce a loss of sensation especially in the abdomen or pelvic region.

Table 9 shows the number of deliveries in which an epidural was administered by health board.

**Table 9: Epidurals, by health board providing the service, 2018**

Epidural				<i>Number</i>
	Epidural administered	Epidural not administered	Not stated	<b>Total deliveries (a)</b>
Betsi Cadwaladr	1,284	4,811	15	<b>6,110</b>
Powys Teaching	0	216	0	<b>216</b>
Hywel Dda	608	2,376	0	<b>2,984</b>
Abertawe Bro Morgannwg	792	4,292	0	<b>5,084</b>
Cwm Taf	654	2,924	0	<b>3,578</b>
Aneurin Bevan	809	1,361	3,525	<b>5,695</b>
Cardiff and Vale	1,425	3,188	854	<b>5,467</b>
<b>Wales</b>	<b>5,572</b>	<b>19,168</b>	<b>4,394</b>	<b>29,134</b>
				<i>Per cent (b)</i>
Betsi Cadwaladr ULHB	21.1	78.9		<b>100</b>
Powys Teaching LHB	0.0	100.0		<b>100</b>
Hywel Dda ULHB	20.4	79.6		<b>100</b>
Abertawe Bro Morgannwg ULHB	15.6	84.4		<b>100</b>
Cwm Taf ULHB	18.3	81.7		<b>100</b>
Aneurin Bevan ULHB	37.3	62.7		<b>100</b>
Cardiff and Vale ULHB	30.9	69.1		<b>100</b>
<b>Wales</b>	<b>22.5</b>	<b>77.5</b>		<b>100</b>

Source: Maternity Indicators dataset

- (a) In the case of a delivery of a multiple birth, any mention of an epidural is counted.
- (b) The percentages are of the total records less records with a 'not stated' value. In 2018, 4,394 records had no stated epidural status.
- (c) Percentages for Aneurin Bevan are based on data which is only 38% complete and therefore may be unreliable.

In 2018, almost a quarter (23%) of women had an epidural for pain relief before or during delivery.

The proportion of women who had an epidural ranged from 16% in Abertawe Bro Morgannwg to 31% in Cardiff and Vale.

Note that 37% of women had an epidural in Aneurin Bevan; however only 38% of deliveries in this health board had valid data, so it should not be compared directly with other health boards for which there are good data completeness.

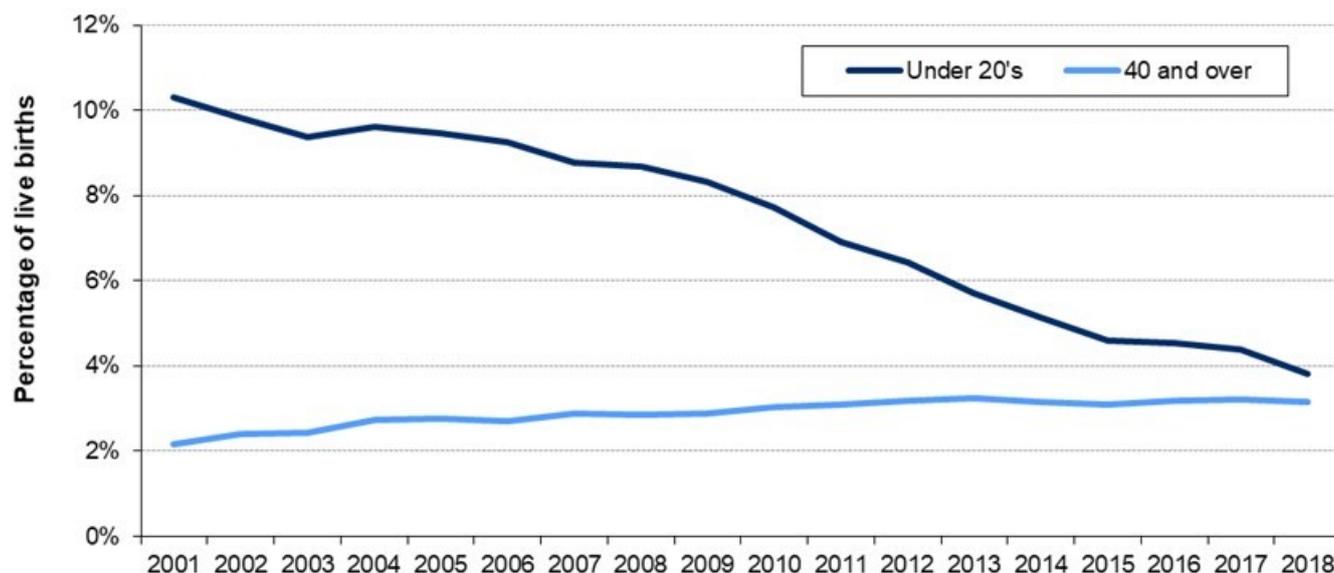
## Care at delivery: Birth characteristics

Data presented in this section focusses on the 29,567 births (live and still) recorded in the Maternity Indicators dataset which took place in 2018, as well as the 31,329 births recorded in the National Community Child Health Database. Births are analysed rather than deliveries, since twins or triplets could be delivered by different means.

### Births by age of mother

Data for the following chart are available in [Table 19](#) and on [StatsWales](#). Data for teenage conceptions is published by [ONS](#).

**Chart 10: Percentage of live births by age of mother, 2001-2018 (a)**



Source: National Community Child Health Database

(a) The percentages are of the total live births minus births with no stated mother's age. These are very few however with only 4 births having no mother's age stated in 2018.

**Summary:** The percentage of live births to mothers aged under 20 has fallen every year since 2004, while the percentage of live births to older mothers has increased slightly over the longer term. The vast majority of live births are born to women aged 20 to 39 (93% in 2018).

**Latest data:** 3.8% (or 1,197) of live births in 2018 were to mothers aged under 20.

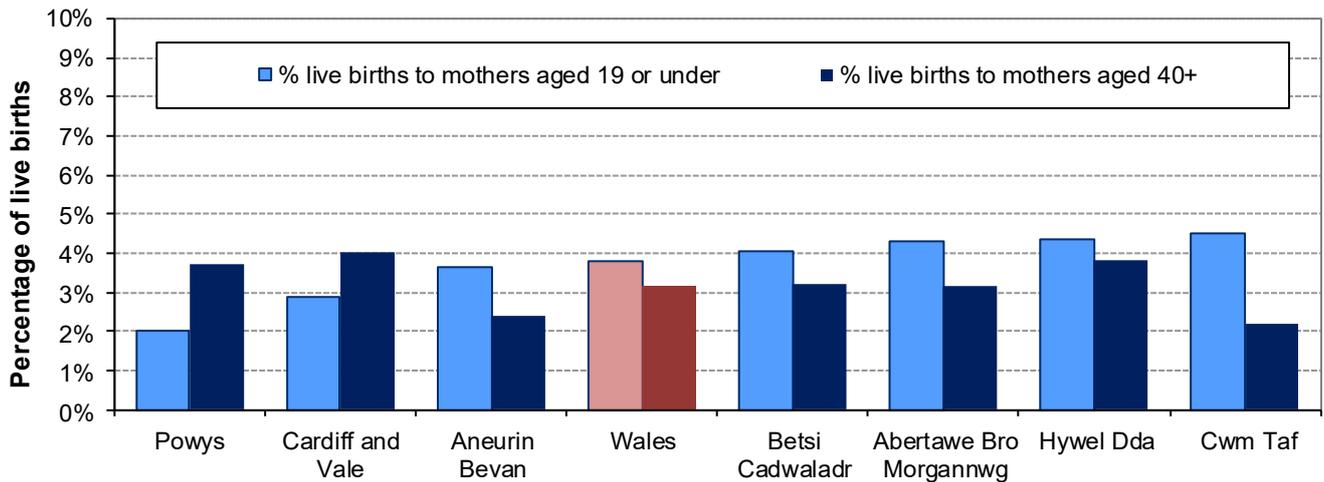
3.2% (or 989) of all live births in 2018 were to mothers aged 40 or older.

**Annual change:** The percentage of live births to younger mothers fell by 0.6 percentage points since 2017 and the number of live births to younger mothers fell by 213. The percentage of live births to older mothers remained unchanged since 2017 but the number of live births to older mothers fell by 49.

**10 year change:** The percentage of live births to younger mothers fell by 4.5 percentage points since 2009, and the number of live births to younger mothers fell by 1,716. The percentage of live births to older mothers increased by 0.3 percentage points since 2009, but the number of live births to older mothers decreased by 22.

**Change since first year of data:** The percentage of live births to younger mothers fell by 6.5 percentage points since 2001, and the number of live births to younger mothers fell by 1,960. The percentage of live births to older mothers increased by 1.0 percentage points since 2001, and the number of live births to older mothers increased by 324.

**Chart 11: Percentage of live births to mothers aged under 20 years and 40 years or over, by local health board, 2018**



Source: National Community Child Health Database

The percentages are of the total live births minus births with no stated mother's age. These are very few however with only 4 births having no mother's age stated in 2018.

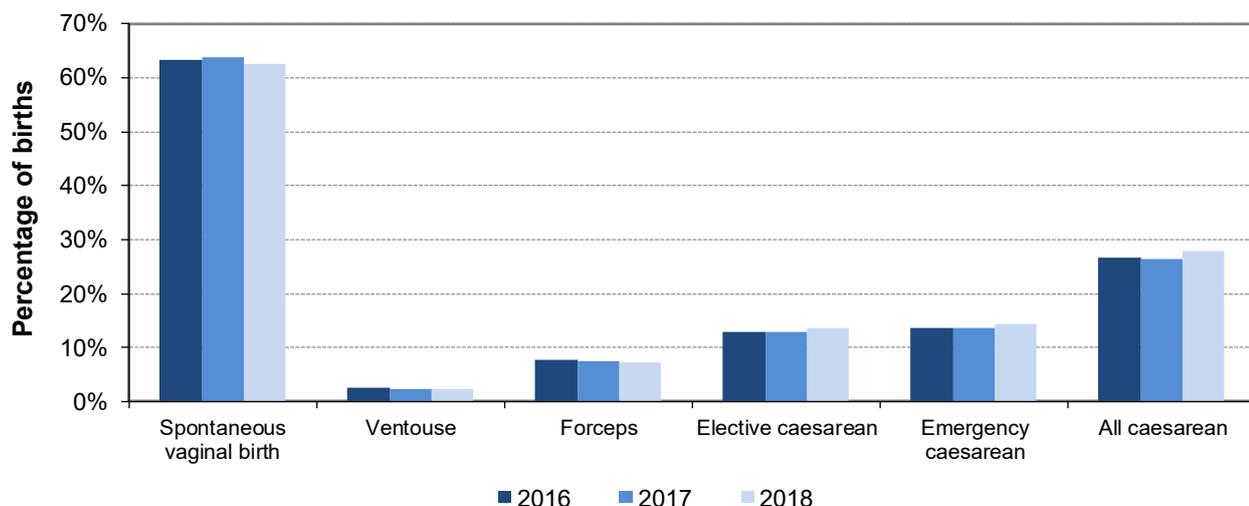
Chart 11 shows that Cwm Taf had the highest percentage of births to mothers under 20 years old (5%) and Powys the lowest (2%). The opposite was true for older mothers aged 40 or older, with Powys having one of the highest (along with Cardiff and Vale) percentages of births to older mothers (4%) and Cwm Taf having the lowest (2%). No adjustments are made for different age distributions in health board areas.

### Mode of birth

The three categories of mode of birth are defined as:

- caesarean section - elective and emergency caesarean section deliveries;
- instrumental - forceps cephalic deliveries and ventouse (vacuum) deliveries; and
- spontaneous vaginal - baby born by maternal effort.

**Chart 12: Percentage (a) of births (live and still) by mode of birth, Wales**



Source: Maternity Indicators dataset

(a) The percentages are of the total records less records with a 'not stated' value. 175 records in 2018, 172 in 2017, and 162 in 2016 had no stated mode of birth.

**Table 10: Mode of birth, by health board providing the service, Wales, 2018**

Mode of birth:							Number
	Spontaneous vaginal birth	Ventouse	Forceps	Elective caesarean	Emergency caesarean	Not stated	Total births
Betsi Cadwaladr	3,804	277	409	773	945	0	<b>6,208</b>
Powys Teaching	216	0	0	0	0	0	<b>216</b>
Hywel Dda	1,800	118	164	406	519	0	<b>3,007</b>
Abertawe Bro Morgannwg	3,232	58	410	758	710	0	<b>5,168</b>
Cwm Taf	2,194	82	218	619	510	0	<b>3,623</b>
Aneurin Bevan	3,672	135	371	708	856	40	<b>5,782</b>
Cardiff and Vale	3,469	0	550	717	692	135	<b>5,563</b>
<b>Wales</b>	<b>18,387</b>	<b>670</b>	<b>2,122</b>	<b>3,981</b>	<b>4,232</b>	<b>175</b>	<b>29,567</b>
							<i>Per cent (a)</i>
Betsi Cadwaladr	61.3	4.5	6.6	12.5	15.2		<b>100</b>
Powys Teaching	100.0	0.0	0.0	0.0	0.0		<b>100</b>
Hywel Dda	59.9	3.9	5.5	13.5	17.3		<b>100</b>
Abertawe Bro Morgannwg	62.5	1.1	7.9	14.7	13.7		<b>100</b>
Cwm Taf	60.6	2.3	6.0	17.1	14.1		<b>100</b>
Aneurin Bevan	63.9	2.4	6.5	12.3	14.9		<b>100</b>
Cardiff and Vale	63.9	0.0	10.1	13.2	12.7		<b>100</b>
<b>Wales</b>	<b>62.6</b>	<b>2.3</b>	<b>7.2</b>	<b>13.5</b>	<b>14.4</b>		<b>100</b>

Source: Maternity Indicators dataset

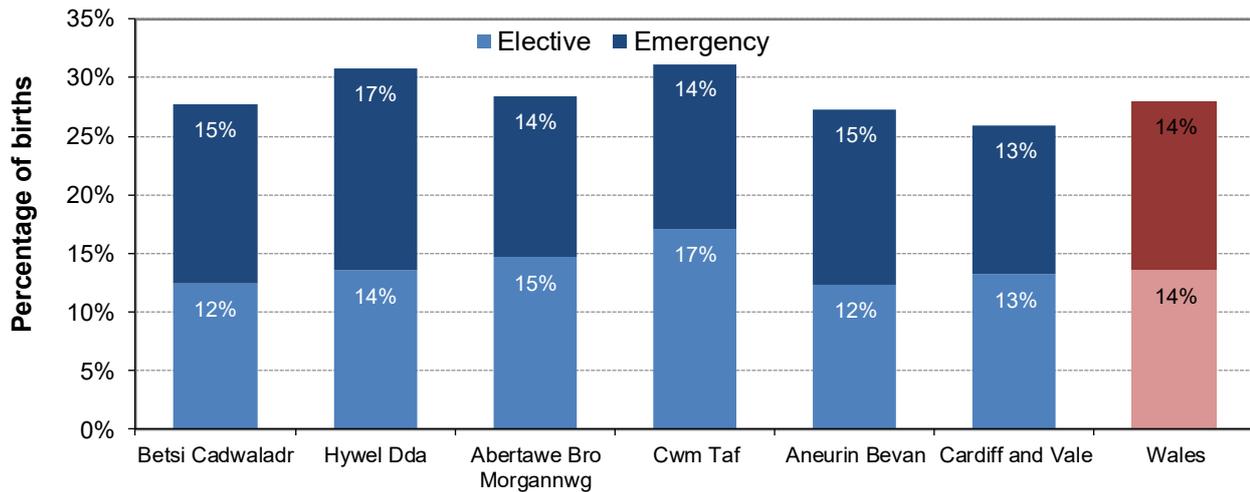
(a) The percentages are of the total records less records with a 'not stated' value. 175 records in 2018 had no stated mode of birth.

[Chart 12](#) and [Table 10](#) show that share of different modes of birth has not changed much over the three years for which there is data. In 2018, the majority (63%) of births were spontaneous (unassisted) births, while 28% births were delivered by caesarean section.

There are some variations across health boards, with the spontaneous birth rate being four percentage points higher in Aneurin Bevan and Cardiff and Vale than Hywel Dda. All babies born in Powys were spontaneous as the health board only has hospitals with small maternity units suitable for low risk pregnancies only. Any pregnancy considered high risk would normally be delivered in a District General Hospital in a neighbouring health board.

There are also variations between instrumental and caesarean births at health board level, as well as the proportion of caesareans that are elective and emergency.

**Chart 13: Percentage (a) of births (live and still) by caesarean section by health board, 2018**



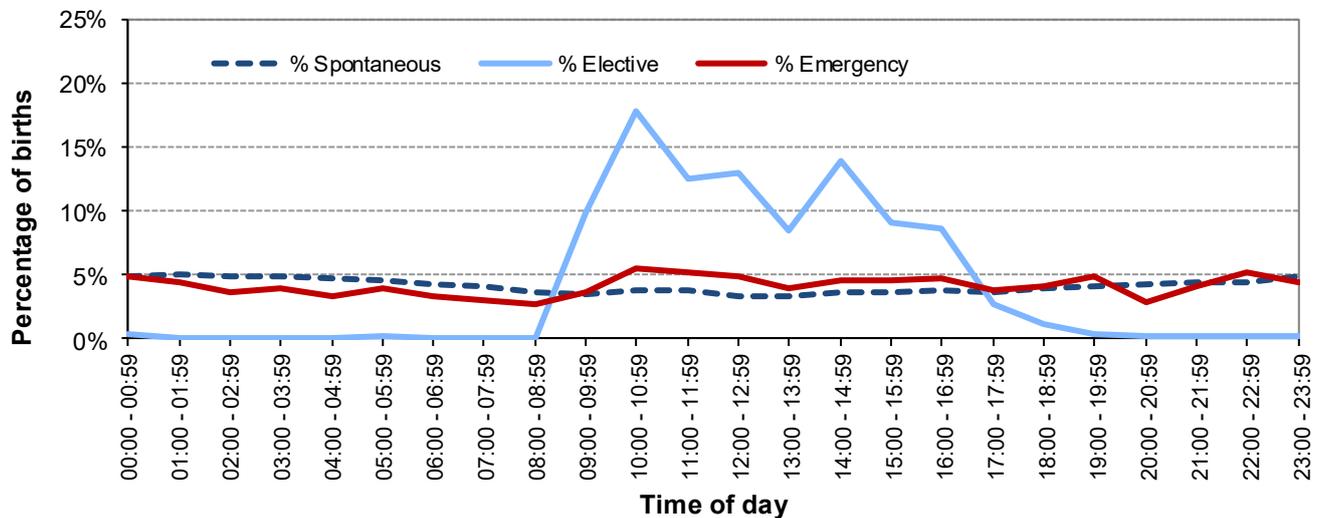
Source: Maternity Indicators dataset

(a) The percentages are of the total records less records with a 'not stated' value. In 2018, 175 records had no stated mode of birth.

Cwm Taf and Hywel Dda both had the largest rate of overall caesarean sections (31%), while Cardiff and Vale has the lowest overall caesarean section rate (26%). The majority of health boards had a higher rate of elective caesarean sections, than emergency, with Cwm Taf having the highest elective caesarean section rate (17%).

### Time of birth

**Chart 14: Births (live and still) by time of birth and mode of birth (a), Wales, 2018**



Source: Maternity Indicators dataset

(a) The percentages are of the total records less records with a 'not stated' value. In 2018, 175 records had no stated mode of birth.

The distribution of live births by hour of the day is shown in [Chart 14](#). For births by spontaneous vaginal delivery, most births in 2018 occurred between 1am and 2am and fewest between 1pm and 2pm.

Slightly more emergency caesareans happened between the hours of 10am and 1pm than other parts of the day. However, nearly all elective caesarean sections occurred between 9am and 5pm, with over half occurring between 9am and 1pm.

## Outcomes for baby

Data presented in this section focusses on the 29,567 births (live and still) recorded in the Maternity Indicators dataset which took place in 2018, as well as the 31,329 births recorded in the National Community Child Health Database. Births are analysed rather than deliveries, since twins or triplets could be delivered by different means.

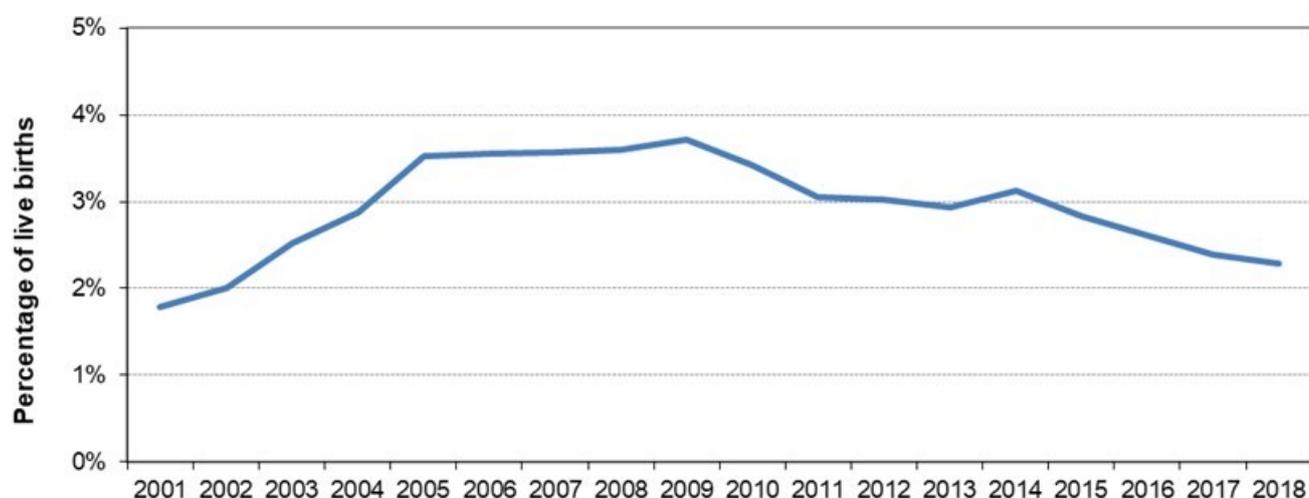
**Table 11: Live births, still births and number of babies by health board providing the service, 2018**

	Live births		Total live births	Still births	Not stated	Total all births
	Singletons	Multiples				
Betsi Cadwaladr	5,989	191	<b>6,180</b>	26	2	<b>6,208</b>
Powys Teaching	216	0	<b>216</b>	0	0	<b>216</b>
Hywel Dda	2,944	45	<b>2,989</b>	18	0	<b>3,007</b>
Abertawe Bro Morgannwg	4,981	164	<b>5,145</b>	23	0	<b>5,168</b>
Cwm Taf	3,512	94	<b>3,606</b>	17	0	<b>3,623</b>
Aneurin Bevan	5,580	172	<b>5,752</b>	30	0	<b>5,782</b>
Cardiff and Vale	5,358	187	<b>5,545</b>	18	0	<b>5,563</b>
<b>Wales</b>	<b>28,580</b>	<b>853</b>	<b>29,433</b>	<b>132</b>	<b>2</b>	<b>29,567</b>

Source: Maternity Indicators dataset

Of the 29,567 births in Wales in 2018, over 99.5% of them (29,443) were live births. Of these live births, 2.9% (853) were multiple births (twins, triplets or higher order). Of those health boards where a multiple birth took place, the rate varied from 1.5% in Hywel Dda to 3.4% in Cardiff and Vale.

**Chart 15: Percentage of live births born at home, 2001-2018**



Source: National Community Child Health Database

The percentages are of the total live births minus births with no stated place of birth: 130 (0.4% of) births had no stated place of birth in 2018.

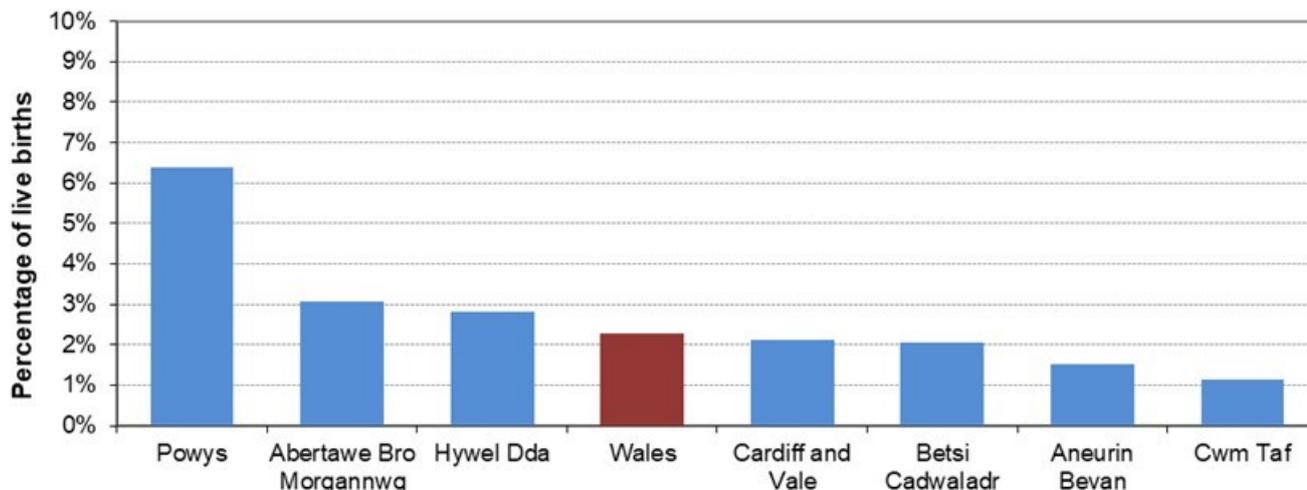
**Summary:** Health boards in Wales are expected to provide access to a range of services for women to give birth including home births. The proportion of all live births born at home has been decreasing in recent years following a period of higher homebirth rates in the mid to late 2000's.

**Latest data:** 2.3% (or 712) of all live births in 2018 were born at home.

**Annual change:** The percentage of all live births born at home fell by 0.1 percentage points since 2017 and the number of live births born at home decreased by 58.

**10 year change:** The proportion of all live births born at home has generally fallen in the last decade, from 3.7% in 2009 to 2.3% in 2018 and the number of births born at home decreased by 579.

**Chart 16: Percentage (a) of live births born at home by local health board, 2018**



Source: National Community Child Health Database

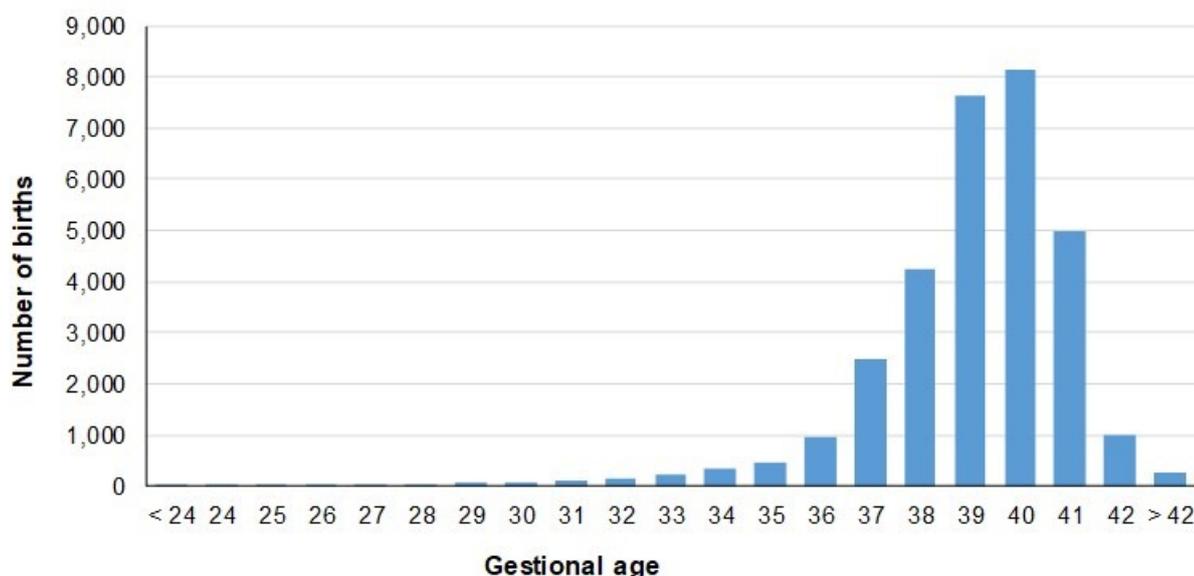
(a) The percentages are of the total live births minus births with no stated place of birth: For 75 births, the place of birth recorded was "ambulance" and 130 births had "not stated" place of birth in 2018.

[Chart 16](#) shows the proportion of births born at home in 2018 by mother's resident local health board. Home birth rates ranged from 1.1% in Cwm Taf to 6.4% in Powys (where there are no major hospitals). Overall in Wales 2.3% of births were born at home.

### Gestational age

It is known that babies born prematurely or "pre-term" (before 37 weeks of pregnancy) may have a higher risk of immediate or longer-term health problems.

**Chart 17: Distribution of live births by gestational age, 2018**



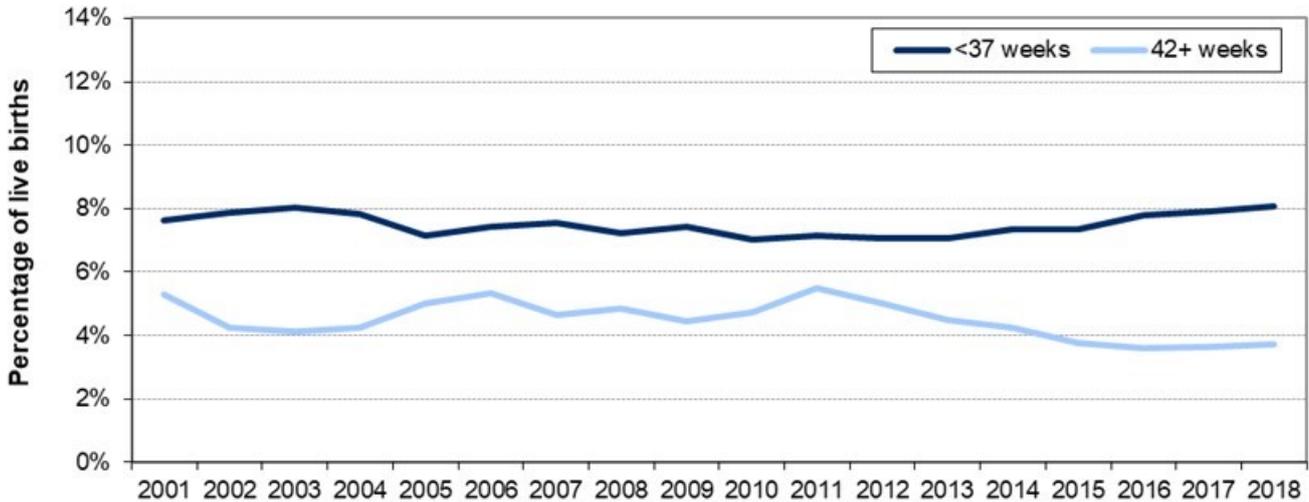
Source: National Community Child Health Database

Note: Chart based on 31,809 births, it does not include the 94 births where the gestational age was not known.

## Summary

Half (50.4%) of births occurred when the gestational ages was 39 or 40 completed weeks (one week either side of the expected due date); while 8.2% of births occurred when the gestational age was 36 weeks or fewer and 4.0% of births when the gestational age was 42 weeks or more.

**Chart 18: Percentage (a) of live births by gestational age (b), 2001-2018**



Source: National Community Child Health Database

- (a) The percentages are of the total live births minus births with no stated gestational age: 92 births had no stated gestational age in 2018 (includes gestations of less than 20 weeks and more than 45 weeks).
- (b) Best estimate available: based on either date of last menstrual period or from an ultrasound scan.

**Summary:** The proportion of live births born prematurely has fluctuated over the years, around 7 and 8 per cent, with a gradual increase being apparent in more recent years. Conversely the proportion of live births being born at 42 weeks or more has decreased over the past 6 years.

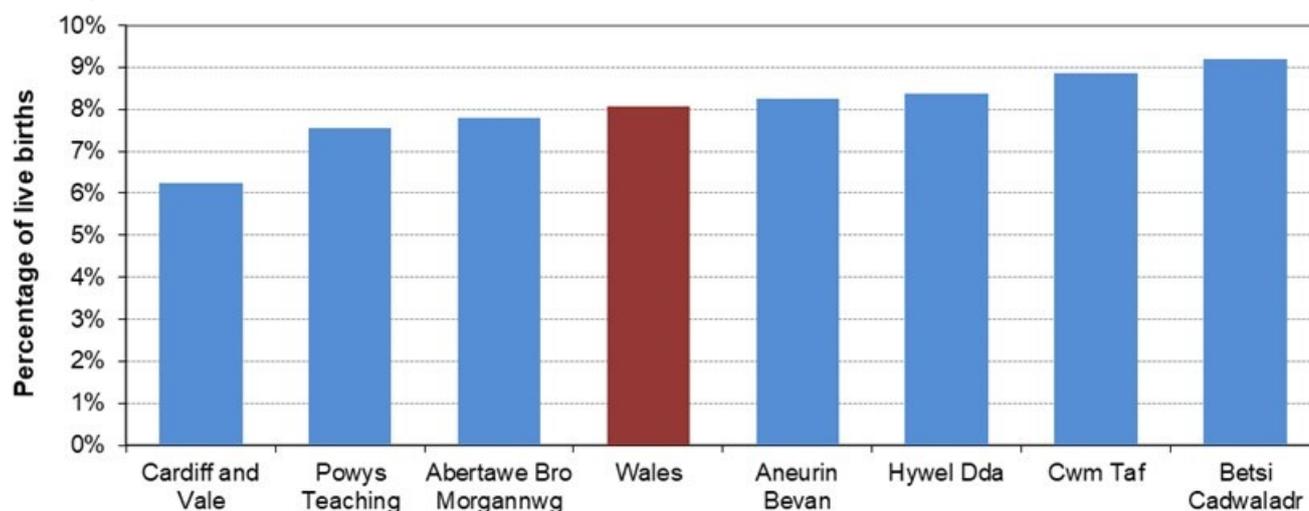
**Latest data:** 88% (or 27,546) of live births in 2018 were born at 37 to 41 weeks gestation. 8% (or 2,524) of live births were pre-term and 4% (or 1,167) of live births were born at 42 weeks or more.

**Annual change:** There was little change over the year. The percentage of live births born pre-term increased by 0.2 percentage points since 2017 but the number of live births born pre-term decreased by 9 births. The percentage of live births born at 42 weeks or more increased by 0.1 percentage points since 2017 but the number of live births born at 42 weeks or more fell by 4 births.

**10 year change:** There has been a small amount of change over the last 10 years. The percentage of live births born pre-term increased by 0.7 percentage points since 2009 but the number of live births born pre-term decreased by 53 births. The percentage of live births born at 42 weeks or more decreased by 0.7 percentage points since 2009 and the number of live births born at 42 weeks or more fell by 379 births. Completeness of gestation data has generally improved since 2007, with the proportion of live births with no stated gestation having fallen from 0.8% in 2008 to 0.3% in 2018.

**Change since first year of data:** The percentage of live births born pre-term increased slightly by 0.4 percentage points since 2001, and the number of live births born pre-term increased by 323. The percentage of live births born at 42 weeks or more fell by 1.6 percentage points since 2001, and the number of live births born at 42 weeks or more fell by 360.

**Chart 19: Percentage (a) of live births less than 37 weeks gestational age by local health board, 2018**



Source: National Community Child Health Database

(a) The percentages are of the total live births less births with no stated gestational age: 92 births had no stated gestational age in 2018 (includes gestations of less than 20 weeks and more than 45 weeks).

[Chart 19](#) shows the proportion of births born at less than 37 weeks gestation by local health board.

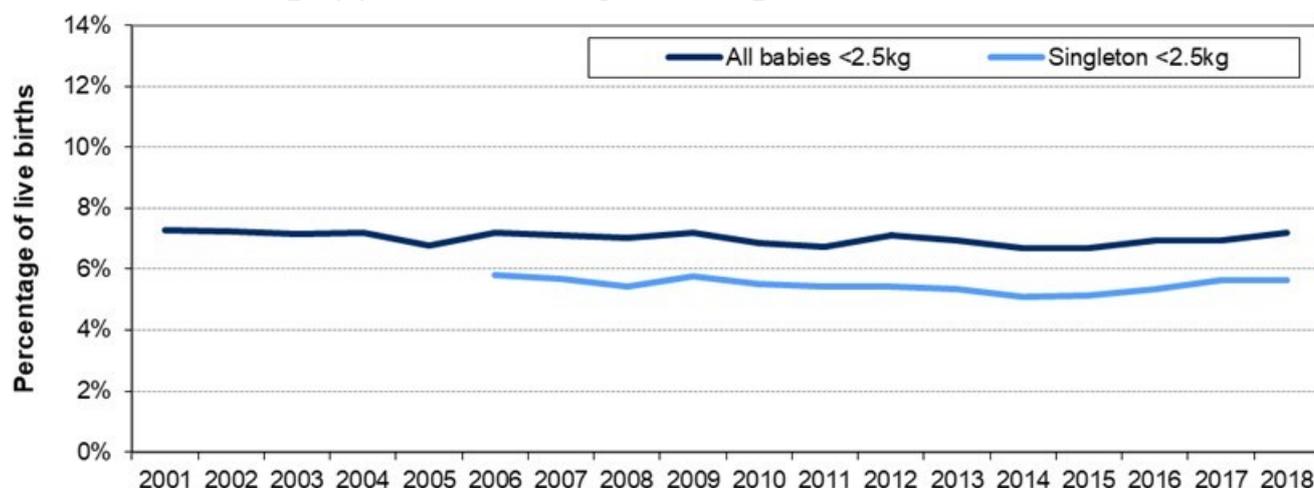
Cardiff and Vale had the lowest percentage with 6.2%, while Betsi Cadwaladr had the highest percentage with 9.2%. Overall in Wales, 8.1% of births were born before 37 weeks gestation.

## Birthweight

Low birthweight (less than 2.5kg) is associated with health risks in an infant's first year of life.

The percentage of live single births with a birthweight of under 2.5kg is one of [46 national indicators](#) used to measure progress against the Well-being goals under the Well-being of Future Generations Act. Data for this National indicator is available on [StatsWales](#) by local authority area and local health board. Low birthweights are often linked to low gestational age (i.e. where the baby is born before 37 weeks of gestation).

**Chart 20: Percentage (a) of live births by birthweight, 2001-2018**



Source: National Community Child Health Database

(a) The percentages are of the total live births minus births with no stated birthweight: 81 (or 0.3% of) births had no stated birthweight in 2018 (includes birthweights of less than 0.5kg or more than 6kg).

**Summary:** The proportion of all live births (including both singleton and multiple births) born with low birthweight has remained fairly steady over the long term, fluctuating at around 7%.

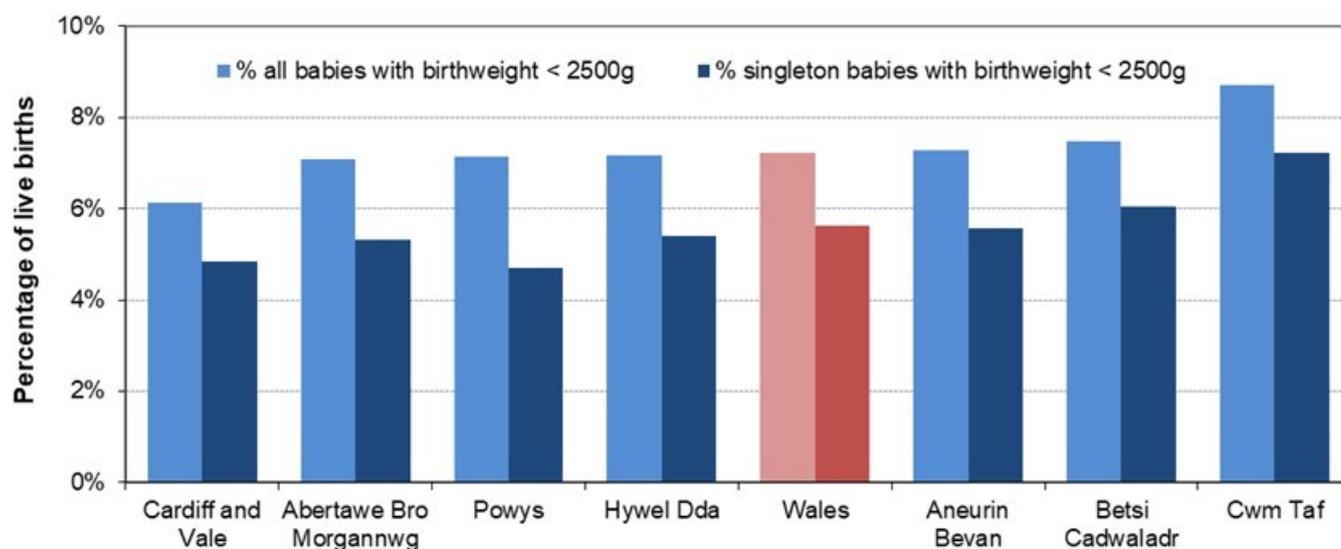
**Latest data:** 81.1% (or 25,345) of all live births in 2018 were born with healthy birthweights of between 2500-3999g. 7.2% of all live births (or 2,254) and 5.6% of singleton live births (or 1,713) were of low birthweight.

**Annual change:** The percentage of all live births born with low birthweight increased by 0.3 percentage points since 2017 and the number of live births born with low birthweight increased by 22. The percentage of singleton live births born with low birthweight remained the same since 2017 but the number of singleton live births born with low birthweight fell by 50.

**10 year change:** There has been little change in the distribution of births by birthweight over the last 10 years. The proportion of all low birthweight babies has remained unchanged since 2009, while the proportion of low birthweight singleton babies has decreased by 0.1 percentage points since 2009.

**Change since first year of data:** Since 2001 the percentage of all low birthweight babies has remained unchanged. Since 2006 (the first year there is comparable data for singleton babies) the percentage of singleton low birthweight babies has decreased by 0.2 percentage points.

**Chart 21: Percentage (a) of live births less than 2,500g birthweight by local health board, 2017**



Source: National Community Child Health Database

(a) The percentages are of the total live births minus births with no stated birthweight: 75 (single) births and 81 (all live) births had no stated birthweight in 2018 (includes birthweights of less than 0.5kg or more than 6kg).

[Chart 21](#) shows the proportion of all live births and singleton live births weighing less than 2.5kg at birth by local health board of residence in 2018. The proportions (of all live births) varied from 6.1% in Cardiff and Vale (4.6% of singletons) to 8.7% in Cwm Taf (7.1% of singletons).

Giving birth to twins or triplets can be associated with increased health risks. There has been little change in the distribution of births by number of babies born over the last 10 years ([Table 20](#) in Annex). In 2018, 2.8% of all births were multiple births (twins, triplets or higher order multiple births). [Table 12](#), [Chart 22](#) and [Chart 23](#) show how the spread of birthweights differ between singleton births and multiple births (twins and triplets).

**Table 12: Birthweight by number of babies and ethnicity, 2018**

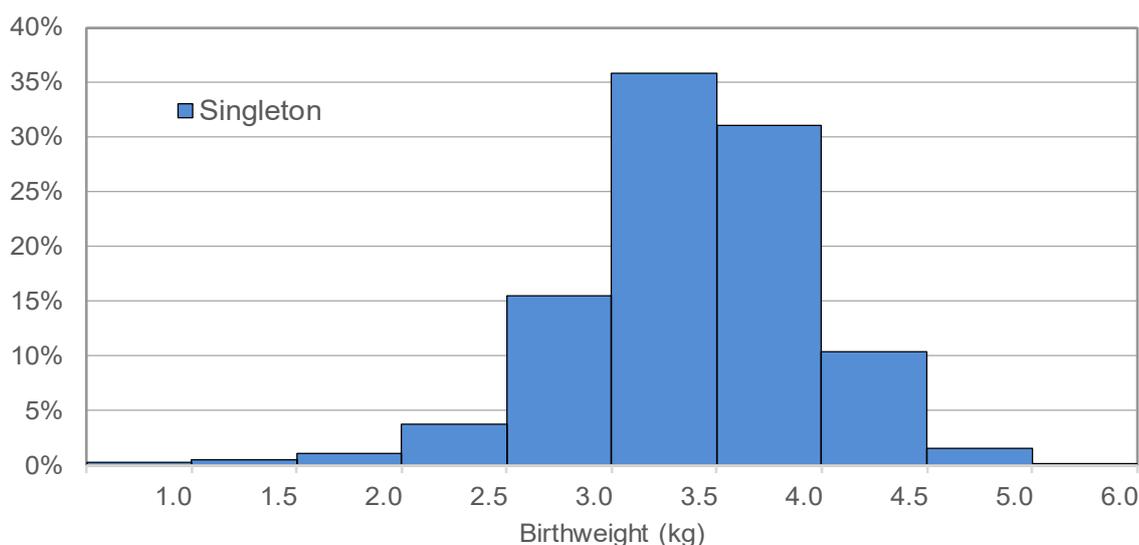
Birthweight	<i>Per cent</i>			
	Singleton	Multiple	Singleton white	Singleton non-white
Below 2.5kg (%)	5.6%	62.2%	5.6%	4.9%
Between 2.5kg and 4kg (%)	82.3%	37.8%	82.2%	87.5%
Over 4kg (%)	12.0%	0.0%	12.0%	7.6%
Mean (kg)	3.38	2.28	3.38	3.29
Median (kg)	3.40	2.34	3.42	3.31

Source: National Community Child Health Database

Singleton and Multiple births based on 31,248 live, Welsh births with a valid birthweight.

Ethnicity data based on 21,188 live, Welsh births with valid birthweight and ethnicity data items.

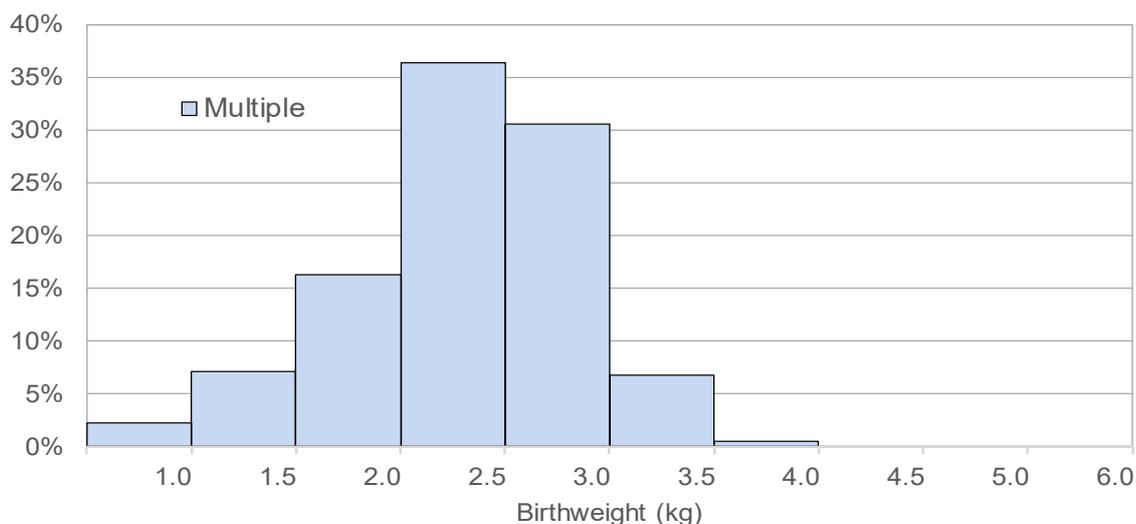
**Chart 22: Spread of singleton birthweights, 2018**



Source: National Community Child Health Database

The percentages are of the total live births minus births with no stated birthweight: 75 singleton births had no stated birthweight in 2018 (includes birthweights of less than 0.5kg or more than 6kg).

**Chart 23: Spread of multiples (twins and triplets) birthweights, 2018**



Source: National Community Child Health Database

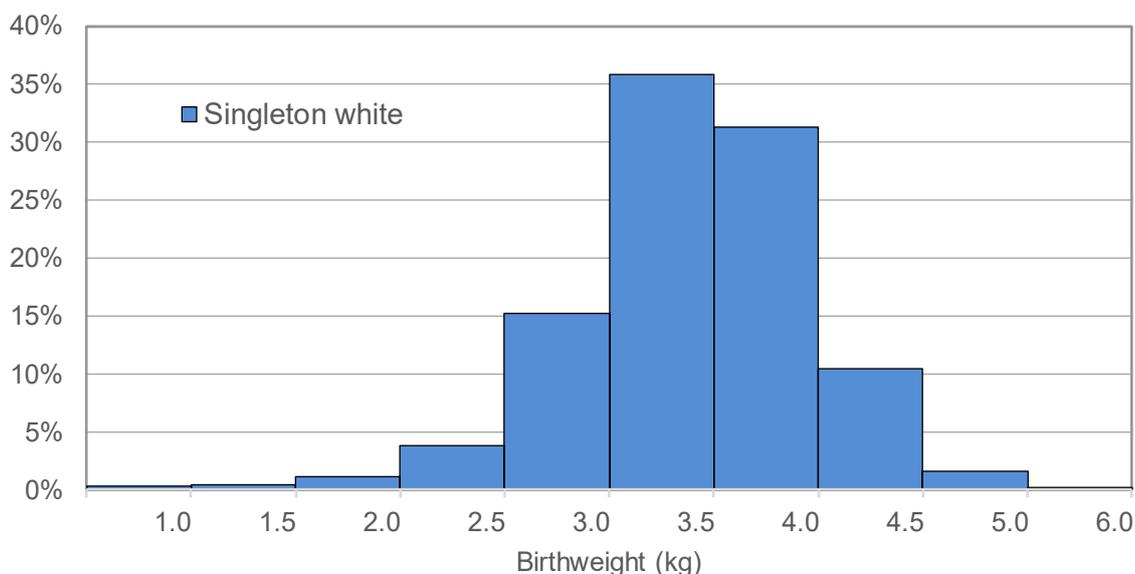
The percentages are of the total live births minus births with no stated birthweight: 6 multiple births had no stated birthweight in 2018 (includes birthweights of less than 0.5kg or more than 6kg).

The average (mean) birthweight for singleton births was 3.38 kg (7 lb and 7 oz) and 2.28 kg (5 lb and 0 oz) for multiple births. The median birthweight, which is less affected by extreme values than the mean, was 3.40 kg (7 lb and 8 oz) for singleton births and 2.34 kg (5 lb and 3 oz) for multiple births.

Over 4 out of 5 singleton babies weighed between 2.5 kg and 4 kg compared to less than 2 out of 5 for multiple births.

[Chart 24](#) and [Chart 25](#) show how the spread of birthweights differ between singleton births from white ethnic groups and singleton births from ethnic minority groups.

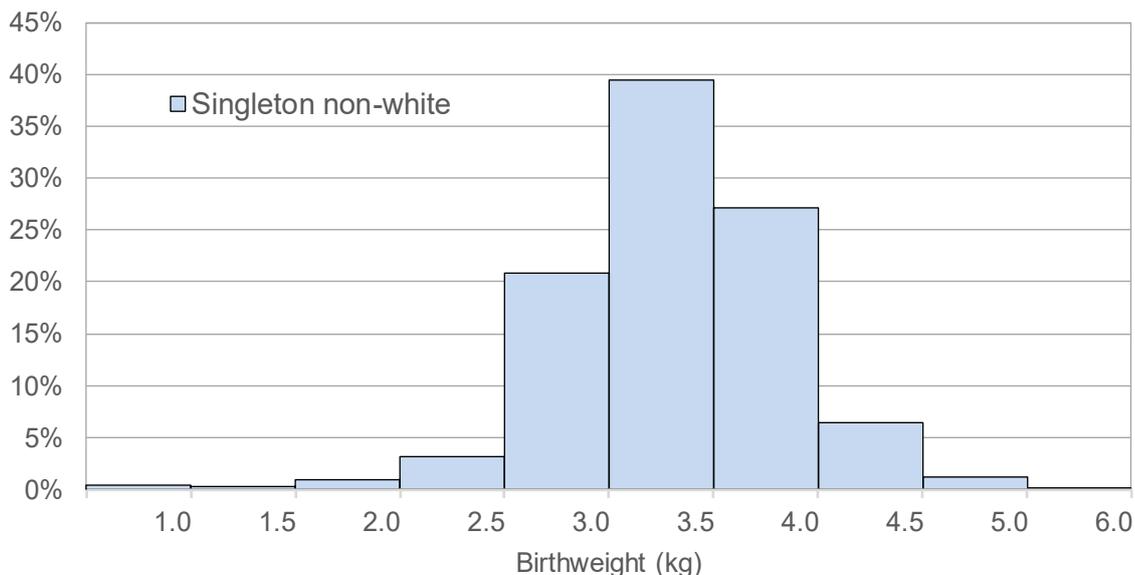
**Chart 24: Spread of birthweights for babies from white ethnic groups**



Source: National Community Child Health Database

The percentages are of the total live births minus births with no stated birthweight: x singleton white births had no stated birthweight in 2018 (includes birthweights of less than 0.5kg or more than 6kg).

**Chart 25: Spread of birthweights for babies from ethnic minority groups**



Source: National Community Child Health Database

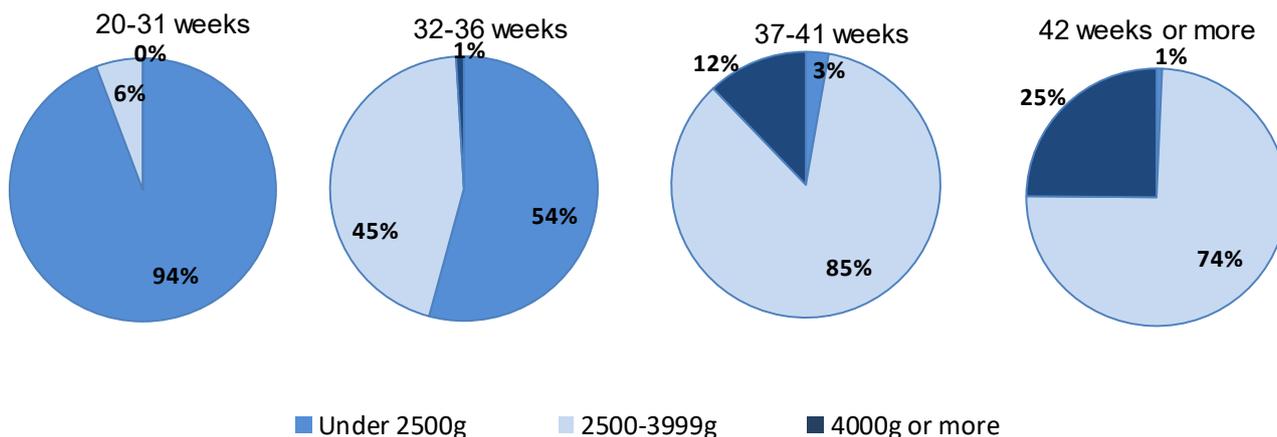
The percentages are of the total live births minus births with no stated birthweight: x singleton ethnic minority births had no stated birthweight in 2018 (includes birthweights of less than 0.5kg or more than 6kg).

Of those babies born with their ethnicity stated in 2018, 90% were from white ethnic groups and 10% from ethnic minority groups.

While the spread of birthweights is broadly similar between the two backgrounds, birthweights tended to be slightly higher for those from white ethnic groups. Mean birthweight was 0.09 kg higher and median birthweight was 0.11 kg higher in babies from white ethnic groups than ethnic minority groups; while babies weighing 4 kg or greater was 4.4 percentage points higher in babies from white ethnic groups.

However, the percentage of low birthweight babies was also higher in those from white ethnic groups (5.6%) compare to those from ethnic minority groups (4.9%).

**Chart 26: Live births by birthweight and gestational age, 2018**



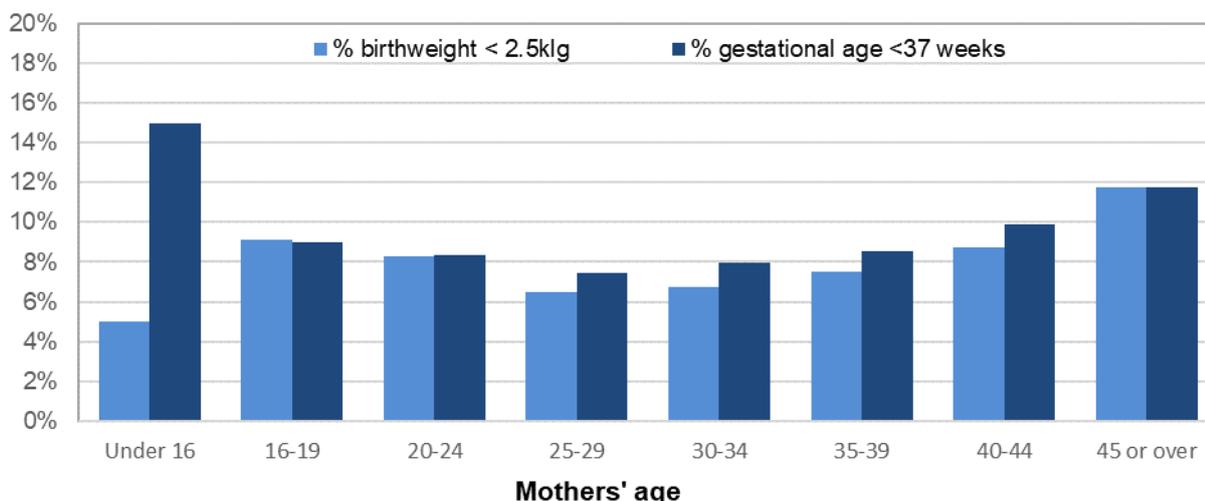
Source: National Community Child Health Database (NCCHD) 2018

81 births had no birthweight stated, 92 births had no gestation stated and are not included in the charts.

[Chart 26](#) shows how birthweights can be affected by gestational age.

94% of births (or 332 babies) born at gestations less than 32 weeks and 54% (or 1,155 babies) born at 32-36 weeks had low birthweights (less than 2.5kg). Conversely, 1% (or 8 babies) born at gestations 42 weeks or more had low birthweights, but 25% (or 289 babies) weighed more than 4kg.

**Chart 27: Percentage (a) of live births by mother’s age: low birthweight and low gestational age, 2018**



Source: National Community Child Health Database (NCCHD)

(a) The percentages are of the total live births minus births with no stated birthweight: 81 births had no stated birthweight in 2018 (includes birthweights of less than 0.5kg or more than 6kg), 92 births had no stated gestational age in 2018 (includes gestations of less than 20 weeks and more than 45 weeks).

[Chart 27](#) shows that the proportion of low birthweight (less than 2.5kg) live births is greater for mothers aged under 20, or aged 40 or over. Similarly, the proportion of babies born at less than 37 weeks gestation is greater in mothers aged under 20 or aged 40 or over.

Note this data can be volatile from year-to-year for mothers aged under 16 as there are so few live births to mothers of this age.

## Healthy births

Data presented is sourced from the 29,567 total births which were recorded in the Maternity Indicators dataset in 2018.

The 'percentage of births considered to be healthy births' was an original Welsh Government Maternity Indicator. Only complete records are included in the healthy births analysis i.e. each record must have valid entries to all the fields related to the criteria below to be included in the denominator.

Any of the following criteria exclude the birth from being considered as 'healthy':

- an onset of labour other than spontaneous;
- augmentation in labour;
- caesarean section, use of forceps or ventouse;
- gestational age of less than 37 weeks;
- still birth;
- epidural in labour;
- 3rd or 4th degree perineal trauma or episiotomy;
- birthweight of less than 2500g or greater than 4000g;
- blood loss of greater than 500ml; and
- apgar score at 5 minutes less than 7.

In 2018, 28% of births in Wales were classed as 'healthy births' (using 77% records with complete data). Completeness of the component fields was mixed and only four health boards returned reliable data (90% or more complete). In these health boards, the percentage of healthy births was highest in Powys (65%) and Abertawe Bro Morgannwg (30%) and lowest in Cwm Taf (28%) and Betsi Cadwaladr (15%).

**Table 13: Percentage (a) of births considered to be healthy births, and completeness of healthy births denominator by health board providing the service**

	<i>Percentage of live births:</i>					
	2016		2017		2018	
	Healthy births denominator completeness	% Healthy births	Healthy births denominator completeness	% Healthy births	Healthy births denominator completeness	% Healthy births
Betsi Cadwaladr	70.1	11.7	93.4	13.6	98.4	15.1
Powys Teaching	79.1	72.5	77.3	70.6	90.3	65.1
Hywel Dda	78.7	33.5	75.8	32.0	71.7	30.5
Abertawe Bro Morgannwg	92.3	31.1	90.7	31.7	90.0	30.2
Cwm Taf	99.0	30.2	99.0	27.5	99.1	27.9
Aneurin Bevan	21.1	43.3	32.7	32.3	35.7	33.7
Cardiff and Vale	76.2	36.8	74.5	38.5	70.3	40.3
<b>Wales</b>	<b>70.5</b>	<b>29.4</b>	<b>75.9</b>	<b>27.9</b>	<b>76.7</b>	<b>22.0</b>

Source: Maternity Indicators dataset

(a) Wales data based on 22,677 records for 2018, 22,637 records for 2017, and 21,647 records for 2016.

## Breastfeeding

Breastfeeding is recognised as being of crucial importance for the health of babies and their mothers.

The Maternity Indicators dataset records the mother’s intention to breastfeed rather than whether breastfeeding at birth actually occurred. Since the indicator is about the mother, data presented refers to the 29,132 deliveries (mothers who delivered) in 2018.

Data on breastfeeding at birth, 10 days, 6 weeks and 6 months are recorded in the National Community Child Health Database, and data presented here refers to the 31,329 live births in 2018 where there was any mention of breastfeeding.

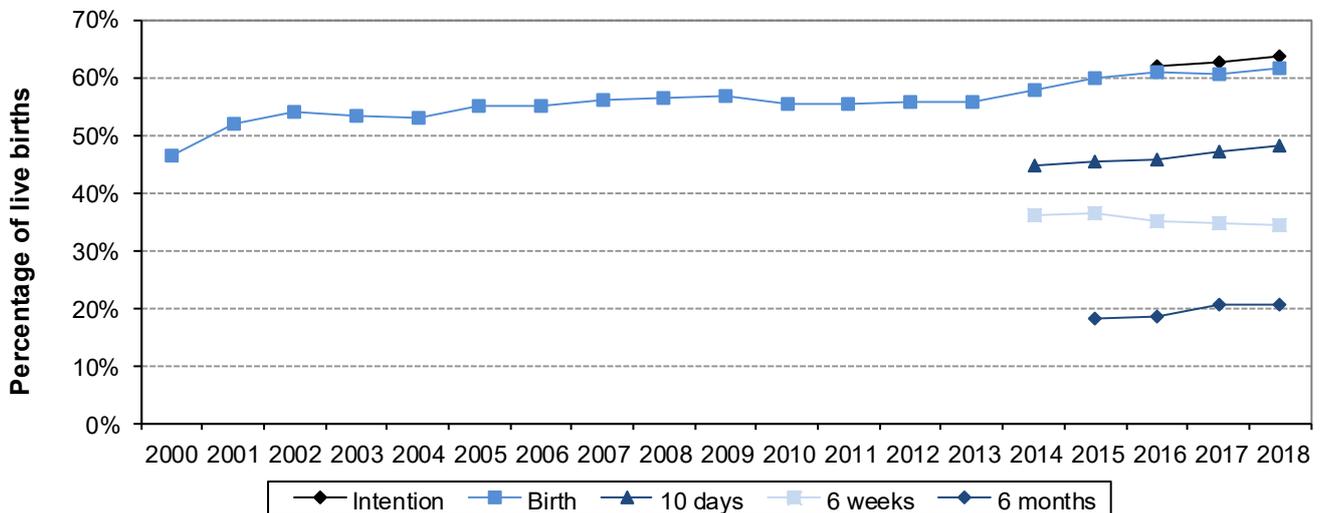
**Table 14: Intention to breastfeed and breastfeeding at birth, 10 days, 6 weeks, 6 months, by health board, 2018 (a)**

	MI ds	NCCHD, Breastfeeding at:			
	Intention to breastfeed	Birth	10 days	6 weeks	6 months
Betsi Cadwaladr	60%	53%	42%	33%	24%
Powys Teaching	91%	77%	63%	46%	31%
Hywel Dda	71%	70%	50%	39%	27%
Abertawe Bro Morgannwg	65%	66%	46%	34%	22%
Cwm Taf	51%	52%	37%	22%	14%
Aneurin Bevan	64%	58%	44%	27%	8%
Cardiff and Vale	70%	71%	64%	53%	37%
<b>Wales</b>	<b>63.7%</b>	<b>61.6%</b>	<b>48.2%</b>	<b>34.2%</b>	<b>20.4%</b>

Source: Maternity Indicators dataset, National Community Child Health Database

(a) The percentages are of the total records less records with no stated breastfeeding status: 750 records for intention to breastfeed, 1,425 records at birth, 2,509 records at 10 days, 6,435 records at 6 weeks, 15,322 records at 6 months.

**Chart 28: Intention to breastfeed and breastfeeding at birth, 10 days, 6 weeks, 6 months, 2001-2018 (a)**



Source: Maternity Indicators dataset, National Community Child Health Database

(a) The percentages are of the total records less records with a ‘not stated’ value, note that data completeness is low for 6 weeks and very low for 6 months.

## Summary

Breastfeeding data at all points in time is subject to data quality issues as not all records are complete. Completeness at birth has been improving in recent years. In the National Community Child Health Database, 2018 is the first year over 95% of births have a valid breastfeeding status. The levels of data completeness must be considered when analysing changes over time. Note, of all the births in Wales

without a known breastfeeding status at birth, 50% occurred in Abertawe Bro Morgannwg health board. Completeness of breastfeeding data has been an issue in this health board since 2014, but has been improving every year. In the Maternity Indicators dataset, data completeness for this item is very good across most health boards with 1% or less missing data in 6 out of the 7 health boards in 2018. Cardiff and Vale had 10% missing data for this item.

Note that breastfeeding data after birth is collected when children have health visitor appointments through the [Health Child Wales Programme](#). If a child does not receive a contact, their breastfeeding data will be missing at that contact point.

### **Latest data**

Intention: At least 18,069 mothers intended to breastfeed their babies at birth in 2018. This is a rate of 63.7% of all mothers with a known breastfeeding status. Note data completeness in 2018 was 97.4%.

Birth: At least 18,433 children were breastfed at birth in 2018. This is a rate of 61.6% of all births with a known breastfeeding status. Note data completeness in 2018 was 95.5%.

10 days: At least 13,888 children were breastfed at 10 days in 2018. This is a rate of 48.2% of all births with a known breastfeeding status. Note data completeness in 2018 was 92.0%.

6 weeks: At least 8,516 children were breastfed at 6 weeks in 2018. This is a rate of 34.2% of all births with a known breastfeeding status. Note data completeness in 2018 was 79.5%.

6 months: At least 3,265 children were breastfed at 6 months in 2018. This is a rate of 20.4% of all births with a known breastfeeding status. Note data completeness in 2018 was 51.1% so breastfeeding statistics at 6 months are of low reliability.

### **Annual change**

Intention: 105 more mothers said they intended to breastfeed their babies at birth in 2018 compared to 2017. This is an increase of 1.0 percentage point comparing all mothers with a known breastfeeding status. Note data completeness in 2017 was 97.4%.

Birth: 157 more babies were breastfed at birth in 2018 compared to 2017. This is an increase of 1.1 percentage points comparing all births with a known breastfeeding status. Note data completeness in 2017 was 93.7%.

10 days: 123 more babies were breastfed at 10 days in 2018 compared to 2017. This is an increase of 1.1 percentage points comparing all births with a known breastfeeding status. Note data completeness in 2017 was 90.7%.

6 weeks: 941 fewer babies were breastfed at 6 weeks in 2018 compared to 2017. This is a decrease of 0.5 percentage points comparing all births with a known breastfeeding status. Note data completeness in 2017 was 84.5%.

6 months: 341 fewer babies were breastfed at 6 months in 2018 compared to 2017. This is a decrease of 0.2 percentage points comparing all births with a known breastfeeding status. Note data completeness in 2017 was 54.3% so breastfeeding statistics at 6 months are of low reliability.

## **5 year change**

Intention: 120 more mothers said they intended to breastfeed their babies at birth in 2018 compared with 2016 (only 3 years of data available). This is an increase of 1.6 percentage points comparing births with a known breastfeeding status. Note that data completeness in 2016 was 95.7%.

Birth: 3,231 more babies were breastfed at birth in 2018 compared with 2014. This is an increase of 3.7 percentage points comparing births with a known breastfeeding status. Note that data completeness in 2014 was 78.0%, meaning that nearly 6,000 more babies did not have valid data in 2014 compared with 2018.

10 days: 940 fewer babies were breastfed at birth in 2018 compared with 2014. This is an increase of 3.6 percentage points comparing births with a known breastfeeding status. Note that data completeness in 2014 was 86.4%.

6 weeks: 2,070 fewer babies were breastfed at birth in 2018 compared with 2014. This is a decrease of 2.0 percentage points comparing births with a known breastfeeding status. Note that data completeness in 2014 was 87.0% meaning that 2,000 more babies did not have a breastfeeding status in 2018, compared with 2014.

6 months: 195 fewer babies were breastfed at birth in 2018 compared with 2015 (only 4 years of data available). This is an increase of 2.3 percentage points comparing births with a known breastfeeding status. Note that data completeness in 2015 was 57.3% so breastfeeding statistics at 6 months are of low reliability.

## **Change since first year of data**

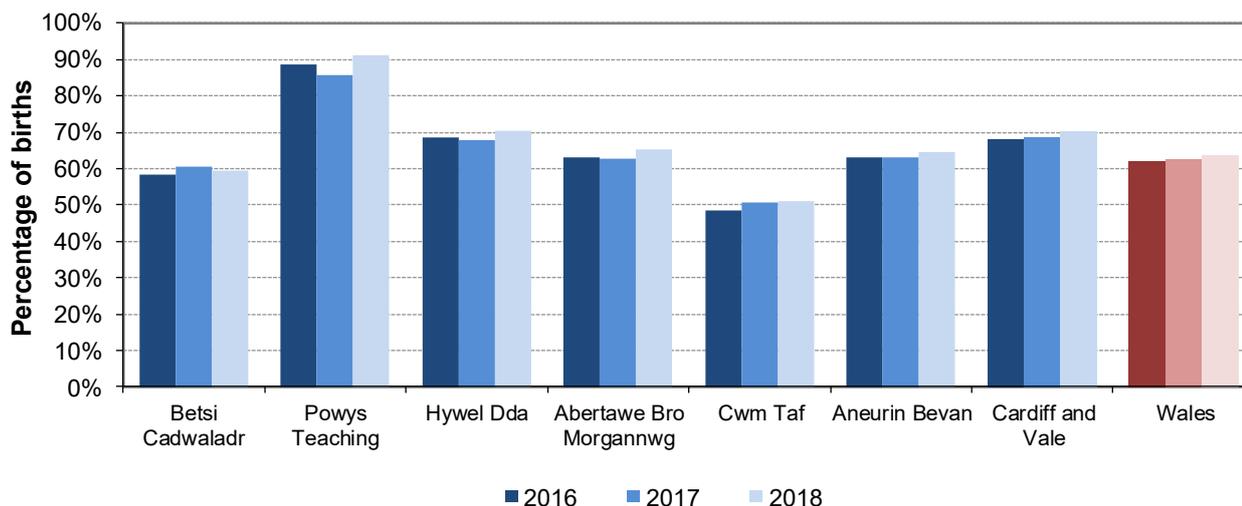
The current method of collecting breastfeeding data at birth and onwards began towards the end of 2012, and was introduced at different stages in different health boards. As data was collected on a broadly similar basis, high level data can be compared before and after this point, to give an indication of changes over time.

Birth: The percentage of all live births breastfed at birth increased by 15.3 percentage points since 2000, and the number of all live births breastfed at birth, with a known breastfeeding status increased by 13,473.

Data is only available for the last five years or less for intention and at 10 days, 6 weeks and 6 months.

## Intention to breastfeed

**Chart 29: Intention to breastfeed by health board providing the service (a)**



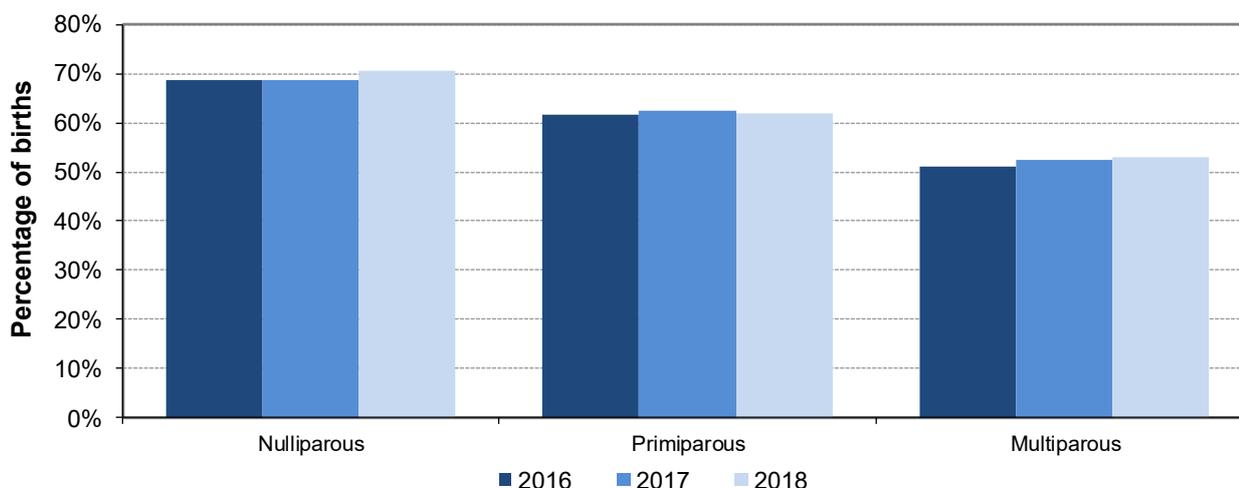
Source: Maternity Indicators dataset

(b) The percentages are of the total deliveries less births with no stated intention to breastfeed status: 1,311 births in 2016, 770 births in 2017 and 750 births in 2018 had no stated intention to breastfeed status.

**Latest data:** Across all health boards in 2018, 64% mothers were recorded as intending to breastfeed. This varied between health boards, with the percentage ranging from 51% of mothers delivering in Cwm Taf to 91% of mothers delivering in Powys.

**Annual change:** Across Wales the percentage of mothers recorded as intending to breastfeed increased slightly (by one percentage point) over the year between 2017 and 2018. Six health boards recorded increases over the year with the largest being a 5 percentage point improvement in Powys, though note that there are much fewer deliveries in Powys compared to the other health boards, so there is likely to be more year-to-year variation in their data. The only decrease in rate was in Betsi Cadwaladr (1 percentage point decrease).

**Chart 30: Intention to breastfeed by parity (a)(b), Wales**



Source: Maternity Indicators dataset

(a) The percentages are of the total deliveries less births with no stated intention to breastfeed status: 1,311 births in 2016, 770 births in 2017 and 750 births in 2018 had no stated intention to breastfeed status

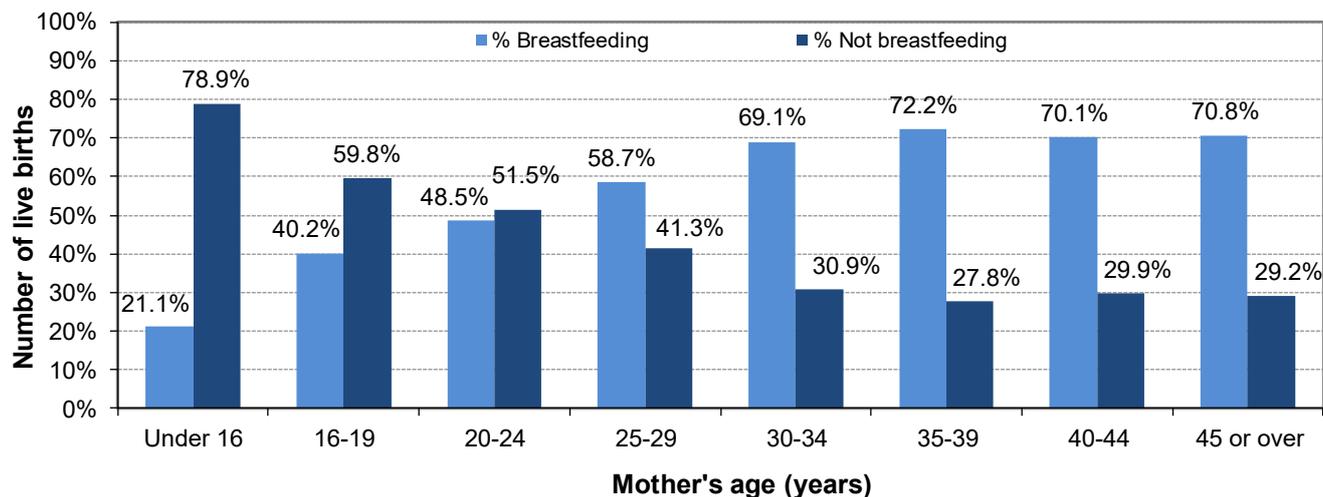
(b) Nulliparous – the mother has never previously given birth  
 Primiparous – the mother has previously given birth once only  
 Multiparous – the mother has previously given birth more than once

[Chart 30](#) shows that first time mothers have a greater intention to breastfeed their babies than mothers who have given birth more than once. In 2018, 71% of first time mothers (nulliparous) intended to breastfeed, 62% of mothers who had given birth once previously (primiparous) intended to breastfeed, and 53% of mothers who had given birth more than once (multiparous) intended to breastfeed. There is little change over the last three years for any category.

## Breastfeeding at birth

Data for these charts are available in [Table 18](#) and on [StatsWales](#).

**Chart 31: Breastfeeding at birth by mother's age, 2018**



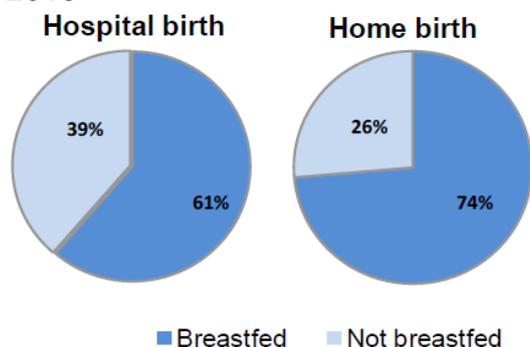
Source: National Community Child Health Database

The percentages are of the total live births minus births with no stated breastfeeding status: 5% (1,425 records) had no stated breastfeeding status at birth in 2018.

[Chart 31](#) shows the percentage of babies who were breastfed at birth by age of mother.

Babies of older mothers were more likely to be breastfed than those with younger mothers; the highest rates of breastfeeding at birth were in the 35-39 age group where 72.2% of babies with a known breastfeeding status were breastfed, while the highest rate of not breast fed at birth was in the under 16 age group where 78.9% of babies with a known breastfeeding status were not breastfed.

**Chart 32: Percentage of live births by breastfeeding status at birth and place of birth, 2018**



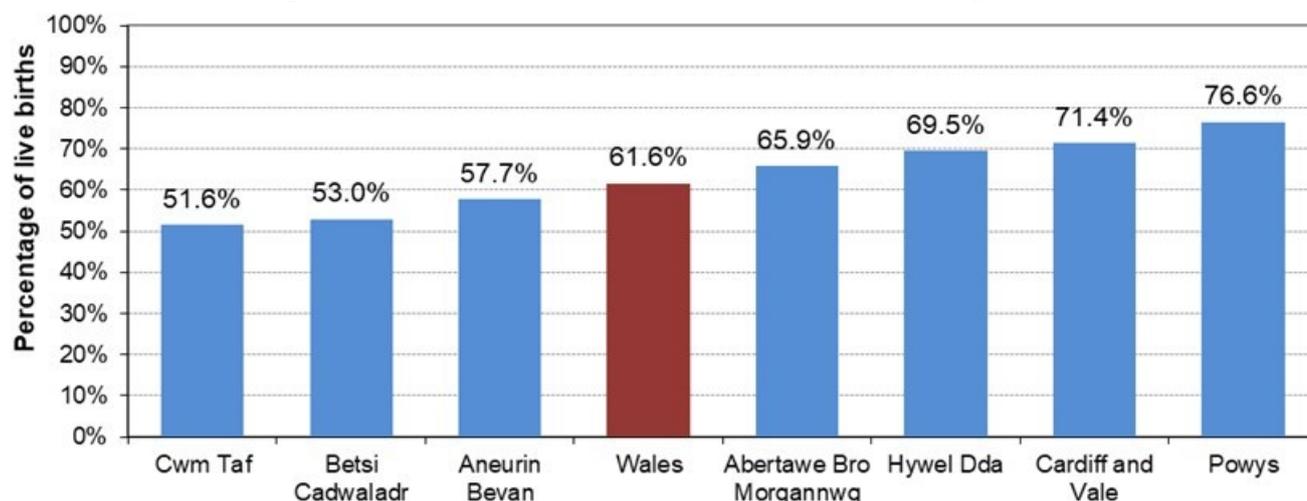
Source: National Community Child Health Database

The percentages are of the total live births minus births with no stated breastfeeding status: 4% (1,356) had no stated breastfeeding status for hospital births; 6% (41) had no stated breastfeeding status at birth for home births in 2018.

[Chart 32](#) shows the percentage of babies breastfed at birth, by place of birth. Of those with a place of birth recorded, babies born at home were more likely to be breastfed than those born in hospitals.

In 2018, 712 babies were born at home, 75 babies' place of birth was recorded was 'ambulance' while 130 had no stated place of birth.

**Chart 33: Percentage of live births that were breastfed at birth by local health board, 2018**



Source: National Community Child Health Database

The percentages are of the total live births minus births with no stated breastfeeding status: 5% (1,425 records) had no stated breastfeeding status at birth in 2018.

There is considerable variation in breastfeeding rates between local health boards in Wales. The highest breastfeeding rates were for babies of women resident in Powys (76.6%) and lowest for those in Cwm Taf (51.6%).

### **Breastfeeding at 10 days and 6 weeks**

Current guidelines advise that babies should be exclusively breastfed until 6 months of age.

Data for breastfeeding at 10 days and 6 weeks is collected as part of the Healthy Child Wales Programme and is recorded on health board's Child Health Systems. Data completeness is varied from year-to-year and between health board areas, but analyses are presented to give a broad indication of trends.

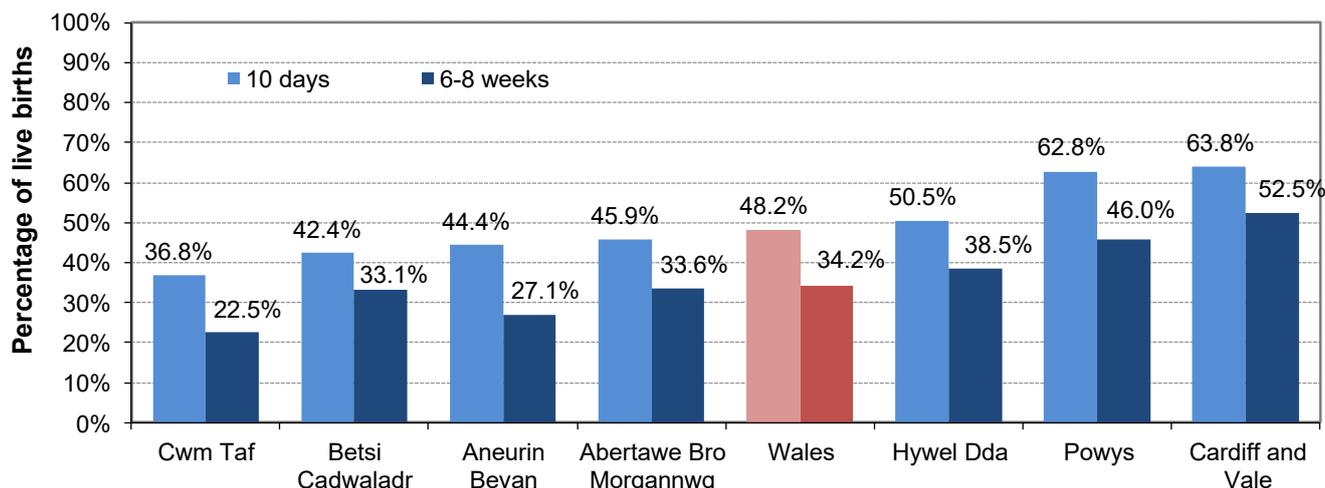
Note as data completeness is only around 50% for breastfeeding at 6 months, no analyses below the [high level time series summary](#) are presented.

Data recorded on Child Health Systems data includes the following categories of infant feeding:

- Artificial Milk Feeding;
- Combined Milk Feeding - Partially Breast;
- Combined Milk Feeding - Predominantly Breast; and
- Exclusive Milk

Data is published at health board level both annually and quarterly for these breakdowns on [StatsWales](#).

**Chart 34: Percentage of babies receiving any breast milk at 10 days and 6-8 weeks by local health board, 2018**



Source: National Community Child Health Database

The percentages are of the total live births minus births with no stated breastfeeding status: 8% had no stated breastfeeding status at 10 days and 21% had no stated breastfeeding at 6-8 weeks in 2018.

[Chart 34](#) shows the percentages of babies who were recorded as receiving *any* breast milk at 10 days and 6-8 weeks. This includes combined milk feeding which includes breast milk plus artificial milk, and those who receive exclusively breast milk (and nothing else except water).

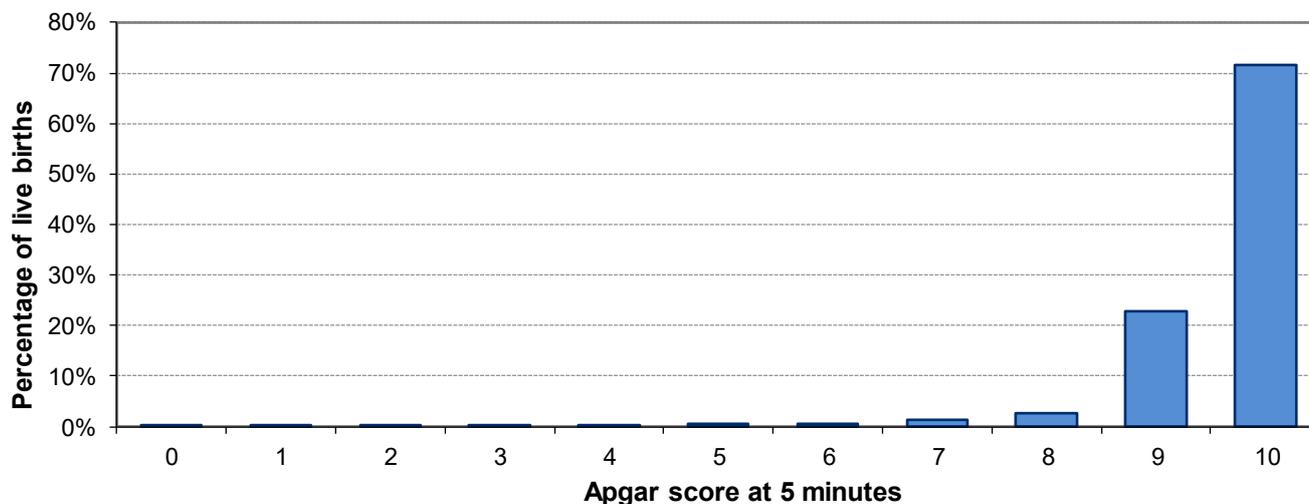
At health board level, the pattern is similar to breastfeeding at birth: Cardiff and Vale and Powys have the highest rates, while Cwm Taf and Betsi Cadwaladr have the lowest.

Additional breastfeeding data for babies born in Neonatal Units (born at less than 33 weeks gestation) is published in the [National Neonatal Audit Programme \(NNAP\) 2018 Annual Report](#).

### APGAR scores

APGAR is a quick test performed on a baby at 1 and 5 minutes after birth. The 1-minute score determines how well the baby tolerated the birthing process. The 5-minute score tells the doctor how well the baby is doing outside the mother's womb. A score of 7 or above is a sign that the new born is in good health.

**Chart 35: Percentage of live births by APGAR score at 5 minutes, 2018**



Source: National Community Child Health Database

The percentages are of the total live births minus births with no stated Apgar score: For 1,652 births (5% of all live births), the Apgar score at 5 minutes was recorded as "not stated" in 2018.

[Chart 35](#) shows that for the majority of births (98.3%), babies had high Apgar scores (7 or over) recorded at 5 minutes.

## Key Quality Information

### Accuracy and reliability

#### Sources

There are two main sources of data for this statistical release.

The Maternity Indicators dataset (MI ds) which was established by [Data Standards Change Notice \(DSCN\) 2016/02](#) and official letter WHC/2016/020 on 28th June 2016.

The National Community Child Health Database (NCCHD) which draws data from the Operational Child Health System (CCH2000) databases held by local health boards (LHBs).

Please see the 'Maternity and Births in Wales: Quality Report' for further quality information, including a description of the main strengths and limitations of the data sources.

The Maternity Indicators dataset is recently established and data quality is mixed. Welsh Government and NWIS are working with health boards to improve completeness and quality. In comparison with other sources of births and maternity data, overall counts and key statistics align reasonably well, given the limitations created by the complex merging process.

There are however specific issues with a few of the data items where the data provided does not wholly align with the Data Dictionary specification and where some health boards have difficulties providing the required data. Only a selection of the available data items has been included in this statistical release but as the data quality improves we hope to expand its scope and depth.

A comparison of the total number of records per year is shown in Table XX.

Annex 1 and Annex 2 show how complete individual data items are across both sources.

Data from the Maternity Indicators dataset only includes data on mothers and babies where the initial assessment and birth occurred in the same health board.

Data from the National Community Child Health Database includes data on children born to Welsh residents and on children born in Welsh hospitals to non-Welsh residents. Statistics in this release are generally filtered on those children born in Wales to Welsh residents.

#### Accessibility

The statistics are published in an accessible, orderly, pre-announced manner on the Welsh Government website at 9:30am on the day of publication. An RSS feed alerts registered users to this publication. Simultaneously the releases are also published on the National Statistics Publication Hub.

Statistical releases are publicised on [Twitter](#) and all releases are available to download for free.

Alt text is provided for all charts and tables so that they can be read with a screen-reader.

Data from NCCHD is published on [StatsWales](#) and data from MI ds will be added in due course. This allows users to download and link data in an open data format.

The statistical release in 2019 combines two previous statistical releases on maternity and birth statistics and aims to improve on data clarity to users, providing clearer messages about the strengths and limitations of data sources and puts all statistics on maternity and births in one place.

Plain English is used in our outputs as much as possible and all outputs adhere to the Welsh Government's [accessibility policy](#).

All our webpage headlines are published in Welsh and English.

### **Timeliness and punctuality**

Data is published as soon as is practicable.

The data provider (NWIS) extracted both datasets in April 2019, for the reference year 2018. This allows some tolerance for health board's late recording of maternity and birth information. Health boards are informed when data will be extracted and they endeavour to keep information accurate at this point in time.

Data for calendar year 2018 is currently published in the autumn 2019; this allows the necessary time to perform validation checks on both datasets before publishing.

Publication dates are announced well in advance and any delays are communicated via notices on our [website](#). Any revisions or postponements to outputs follow the [Revisions, Errors and Postponements](#) policies published online.

### **Coherence and comparability**

Data from the Maternity Indicators dataset for each calendar year refers to when the baby was born for both birth and initial assessment statistics. Initial assessments may have taken place in the previous year, but would be counted in the year in which the birth occurred.

Information is provided on why the number of births between sources is different. Comparisons of births between different parts of the UK should be made using ONS data which is collected on a comparable basis.

Maternity and birth statistics for other UK countries are available:

[Scotland: Births in Scottish hospitals](#)

[Northern Ireland: Birth statistics](#)

[England: NHS maternity statistics](#)

### **Relevance**

The statistics provide an overview of maternity services and birth characteristics in Wales. The statistics support the new Welsh Government maternity vision: [Maternity Care in Wales, A Five Year Vision for the Future \(2019-2024\)](#) and the previous Maternity Indicators, which preceded the new vision is available in this document at [Annex 1](#).

Statistics also support analysis of key public health topics like breastfeeding and smoking and obesity in pregnancy.

Background information about statistics and sources is published for users and encourage users of the statistics to contact us to let us know how they use the data.

We consult with key users prior to making changes, and where possible publicise changes on the internet, at committees and other networks to consult with users more widely. We aim to respond quickly to policy changes to ensure our statistics remain relevant.

## What are the potential uses of these statistics?

These statistics will be used in a variety of ways. Some examples of these are:

- advice to ministers
- to inform debate in the National Assembly for Wales and beyond
- to make publicly available data on child health statistics in Wales
- monitoring service delivery
- policy development
- providing advice on birth choices

## Who are the key potential users of this data?

The main users are:

- ministers, policy officials and the Members Research Service in the National Assembly for Wales
- local health boards
- the research community
- students, academics and universities
- those concerned with child health, individual citizens and private hospitals
- NHS organisations
- voluntary birth organisations

## Revisions

In 2019, data from the Maternity Indicators dataset has been published on a calendar year basis, therefore the full back series which was previously published on a calendar year basis has been revised.

Both the Maternity Indicators dataset and the National Community Child Health Database are live databases and are refreshed quarterly. If data extracts are taken at future points in time for previous time periods, it is possible that counts will differ from published figures if a health board has resubmitted information. Historical data is not routinely revised unless errors are discovered.

## Data access, confidentiality and disclosure control

Both the Maternity Indicators dataset and the National Community Child Health Database contain information about individual mothers and children in Wales and it is paramount that their confidentiality be protected. Therefore all data is pseudonymised by NWIS before being shared with Welsh Government, so that there are no personal identifiable data.

Users may request tabulated data from the Information Services Department in NHS Wales Informatics Service (NWIS). In order to ensure the correct data is supplied users will be asked to refine the request and describe the use they intend to make of the data. They also may be asked to collapse groups if the team fear that the resulting table may be disclosive e.g. aggregated age groups rather than single years of age. Any requests for data (including individual record level data) that the team feels may be potentially disclosive will be referred to the database Caldicott Guardian and, if necessary, to the Welsh Information Governance Board (WIGB). An extract of micro-data (individual record level data) will only be available in a limited way and only when sufficient reassurance has been received that access, confidentiality and disclosure issues have been fully addressed by the potential user, including the completion a Data Access Agreement.

Our statistics take into account our disclosure control guidance and follow ONS confidentiality guidelines for Health statistics available from: [ONS best-practice guidelines](#).

## Maternity Indicators dataset merging methodology

NHS Wales Informatics Service (NWIS) provide both maternity and births data to Welsh Government. While data from the National Community Child Health Database is a relatively straight forward data extract, data for the Maternity Indicators dataset involves a far more complex process largely because there can be multiple initial assessment data and records for both initial assessments and births are not always complete. In merging initial assessment data with birth record data, NWIS take the following steps:

- initial assessment and birth records where the mother's NHS number is missing are removed
- birth records where the baby has no NHS number are removed
- data from the initial assessment is merged with the birth record using the mother's NHS number, which should be a unique identifier on both records
- records where the health board providing the initial assessment and where the birth occurred are retained, all others are removed
- records where the number of days between the initial assessment and date of birth between -1 and 315 are retained
- where there are still multiple initial assessment records for a birth, checks are performed to establish the most complete merged record; that record is then retained and any remaining duplicates are removed

## National Statistics status

The [United Kingdom Statistics Authority](#) designates National Statistics status, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the [Code of Practice for Official Statistics](#).

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

Data from the **National Community Child Health Database** are **Official Statistics**, but have not been assessed for National Statistics status.

## Experimental statistics

This statistical release makes available data from the recently established **Maternity Indicators dataset**; data and analysis presented from this source are badged as [experimental statistics](#). This is to inform users that the dataset is still in a developmental phase and the resultant statistics may have issues pertaining to data quality. However both the analysis and data are still of value provided that users view them in the context of the data quality information provided.

## Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural well-being of Wales. The Act puts in place seven well-being goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers

must (a) publish indicators (“national indicators”) that must be applied for the purpose of measuring progress towards the achievement of the Well-being goals, and (b) lay a copy of the national indicators before the National Assembly. The 46 national indicators were laid in March 2016 and this release includes data relating to one of the national indicators namely

- Percentage of live single births with a birthweight of under 2,500g.

Low birthweight is associated with health risks in an infant's first year of life. The indicator will be based on singleton births and will be calculated as the percentage of births that are less than 2,500 grams.

Numerator: Singleton live births with a birthweight less than 2500g.

Denominator: All singleton live births.

The usual source for this indicator is the National Community Child Health Database (NCCHD) and the indicator relates to births to Welsh residents rather than births occurring in Welsh maternity units.

Information on the indicators, along with narratives for each of the well-being goals and associated technical information is available in the [Well-being of Wales report](#).

As a national indicator under the Act they must be referred to in the analyses of local well-being produced by public services boards when they are analysing the state of economic, social, environmental and cultural well-being in their areas.

Further information on the [Well-being of Future Generations \(Wales\) Act 2015](#).

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local well-being assessments and local well-being plans.

## Further details

This report is available at: <https://gov.wales/maternity-and-birth-statistics-2018>

## Next update

September 2020 (provisional)

## We want your feedback

We welcome any feedback on any aspect of these statistics which can be provided by email to [stats.healthinfo@gov.wales](mailto:stats.healthinfo@gov.wales)

## Open Government Licence

All content is available under the [Open Government Licence v3.0](#), except where otherwise stated.



## Annex 1: Data completeness Maternity Indicators Dataset 2016-2018

Data Item Name	Data Item Term	% Completeness		
		2016	2017	2018
Provider Code IA	Local Health Board code for the site where the initial assessment occurs	100%	100%	100%
Treatment Site Code IA	Hospital providing the service at initial assessment	100%	100%	100%
Gestation IA	Best estimate of gestation (in completed weeks) at time of initial assessment, normally based on post menstrual age but may be modified on the basis of ultrasound scan	94%	98%	98%
Age of Mother IA	Mother's age at time of initial assessment	100%	100%	100%
Ethnicity	Ethnicity group as defined by monther	93%	98%	99%
Mental Health Condition IA	The woman reports that she has a mental health condition at initial assessment	88%	95%	96%
Height of Mother IA	Mother's height (in cm) at initial assessment	94%	96%	97%
Weight of Mother IA	Mother's weight (in kg, to the nearest 100g) at initial assessment	96%	97%	98%
BMI IA	Body Mass Index of mother at initial assessment	93%	95%	96%
Smoking IA	Mother's smoking status at the time of initial assessment	97%	96%	97%
Provider Code Birth	Local Health Board code for the site where the birth occurs	100%	100%	100%
Treatment Site Code Birth	Hospital providing the service at birth	100%	100%	100%
Age of Mother Birth	Mother's age at time of birth	100%	100%	100%
Parity	Number of times the woman has given birth	89%	94%	96%
Mode of Onset of Labour	The method by which the process of labour began	96%	96%	96%
Mode of Birth	The procedure by which the mother is delivered of the baby	99%	99%	99%
Perineal Trauma	Weather the woman experienced a 3rd or 4th degree tear during childbirth	89%	95%	96%
Augmentation Code	Whether medical or surgical augmentation of labour was undertaken in order to accelerate labour	88%	88%	88%
Epidural Code	Whether epidural was administered for pain relief	85%	84%	85%
Episiotomy Code	Whether the woman had an episiotomy during childbirth	94%	98%	99%
Estimated Blood Loss	The estimated post-partum blood loss (measured in ml)	97%	100%	99%
Mother's Intention to Breastfeed	Intention of the mother to breatsfeed her baby at birth	95%	97%	97%
Smoking Birth	Mother's smoking status at the time of birth	97%	97%	98%
Birth Outcome	Outcome of the birth, live birth or still birth	100%	100%	100%
Apgar 5 min	The total apgar score for a baby at 5 minutes after birth.	98%	99%	99%
Gestation at Birth	Best estimate of gestation (in completeed weeks) at time of delivery, normally based on post menstrual age but may be modified on the basis of ultrasound scan	99%	98%	98%
Birth Weight	Firth weight of baby following delivery, preferably in the first hour of life	99%	100%	100%

Note that when making comparisons between data items, whether it is between health boards or over different years, it is important to be aware of the data completeness because **any differences might be attributed to the increased/decreased data availability**, rather than actual differences.

## Annex 2: Data completeness National Community Child Health Database 2009-2018

Data Item Name	Data ItemTerm	% Completeness										
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Trust Number	Unique number identifying the Trust	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Date of Birth	Date of Birth of Child	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Time of Birth	Time of Birth of Child	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Sex	Gender of the Child	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Ward Code	Electoral and Census	99%	100%	100%	99%	99%	99%	100%	100%	100%	100%	100%
LHB	The Local Health Board with responsibility for the Child based on residence	99%	99%	99%	99%	99%	99%	100%	100%	100%	100%	100%
Initial Status	The reason why the record was initially created and the date of creation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Current Status	The reason why the child has reached its current status and the date it reached this status	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
GP Practice	The OCS code for the current GP practice of the child	99%	99%	99%	98%	99%	99%	99%	99%	99%	99%	99%
HV Code	The current Health Visitor code for the child	99%	99%	99%	98%	99%	98%	98%	99%	99%	99%	99%
Number Born	The number of births resulting from the pregnancy	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Birth Order	The order of the birth where more than one birth resulted from the pregnancy	100%	93%	99%	99%	100%	100%	100%	100%	100%	100%	100%
Birth Weight	First weight of baby following delivery, preferably in the first hour of life	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Age of Mother	Mother's age at time of birth	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Ethnic Group	The ethnicity of the child as defined by the mother	100%	100%	100%	100%	100%	100%	100%	100%	98%	100%	100%
Mode of Delivery	The procedure by which the mother is delivered of the baby	65%	69%	70%	70%	63%	63%	62%	62%	61%	61%	61%
Onset of Labour	The method by which the process of labour began	69%	69%	69%	69%	62%	61%	61%	61%	60%	60%	60%
Breast Feeding at Birth (a)	Indicator of mother's intention to breast or bottle feed, baby being breast or bottle fed at birth	89%	89%	90%	92%	82%	77%	82%	90%	93%	95%	95%
Breast Feeding at 6 weeks. (a)	Indicator of mother's actual feeding, either breast or bottle age of 6 weeks	61%	63%	62%	71%	65%	86%	93%	88%	85%	80%	80%
Smoking History	The number of cigarettes that the mother smokes each day	65%	65%	65%	66%	60%	57%	59%	60%	59%	58%	58%
Maternal Care	The type of maternal care	58%	58%	60%	60%	60%	56%	58%	56%	52%	52%	52%
Gestational Age	Best estimate of gestation at time of delivery, normally based on post menstrual age but may be modified on the basis of ultrasound scan	99%	100%	100%	100%	98%	100%	100%	100%	100%	100%	100%
Apgar Score 1 min	The total apgar score for a baby at 1 minute after birth.	70%	70%	70%	70%	94%	95%	95%	95%	94%	94%	94%
Apgar Score 5 min	The total apgar score for a baby at 5 minutes after birth.	91%	90%	93%	93%	94%	94%	94%	95%	94%	94%	94%
Place of Birth	Actual place of child's birth, i.e. hospital number or home	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

## Annex 3: Glossary of terms

### Data items relating to the Initial assessment

**Initial assessment:** This is the date on which a pregnant woman was first assessed by hospital staff and arrangements were made for antenatal care. This is not necessarily the occasion on which arrangements were made for delivery.

**Date of initial assessment / booking visit:** The date of the initial maternity assessment / booking visit where a full Health & Social Care Needs Assessment is undertaken and the antenatal sections of the maternity hand held record are completed.

**Gestation period at initial assessment / booking visit:** The gestation period at initial assessment / booking visit, in completed weeks (rounded down).

**Gravida:** Gravida indicates the number of times the woman has been pregnant, regardless of whether these pregnancies were carried to term. A current pregnancy, if any, is included in this count.

**Maternal height at initial assessment / booking visit:** The height of the woman (in cm) as measured at the Initial Assessment (Booking Visit), or within the 10-12 week gestation period (when not undertaken at Initial Assessment).

**Maternal weight at initial assessment / booking visit:** The weight of the woman (in kg, to the nearest 100g), as measured at the Initial Assessment (Booking Visit), or within the 10-12 week gestation period (when not undertaken at Initial Assessment).

**Smoker at initial assessment / booking visit:** The smoking status of the woman at the time of the Initial Assessment / Booking Visit – i.e. is the woman a smoker? Wherever possible, this should be validated via Carbon Monoxide testing (i.e. CO-validated). Where not CO-validated, this should be the self-reported smoking status of the mother.

**Existing mental health condition:** The woman reports that she has one of the following mental health conditions:

- Puerperal psychosis (severe postnatal depression)
- Bi-polar affective disorder/manic depression
- Psychosis
- Psychotic depression
- Schizophrenia
- Other

**Mental Health Care Plan:** To establish whether the woman has had a Mental Health Care Plan put in place within 4 weeks following the initial assessment.

A Mental Health Care and Treatment plan will:

- a) Be developed by a care coordinator in consultation with the service users and mental health providers (although the plan may be developed without the input of the patient where the outcomes cannot be agreed between all parties);

- b) Record the outcomes that the provision of mental health services for the relevant patient are designed to achieve;
- c) List these outcomes, record the services and/or actions that are to be provided to achieve each outcome, including when they will be provided, and state who is responsible for providing the service as well as where it will take place;
- d) Be kept under review and updated to reflect any changes in the type of care and treatment which may be required by the service user over time.

**Parity:** The parity group of the mother. Parity is the number of times a woman has given birth to a live neonate (any gestation) or at 24 weeks or more, regardless of whether the child was viable or non-viable (i.e. still births). Includes:

Nulliparous – the mother has never previously given birth

Primiparous – the mother has previously given birth once only

Multiparous – the mother has previously given birth more than once

**Previous caesarean sections:** The number of previous caesarean sections performed on the woman. A caesarean section is an operation to deliver a baby. It involves making a cut in the front wall of a woman's abdomen and womb. The operation can be a planned (elective) procedure – when a medical need for the operation becomes apparent during pregnancy or if it's requested by the mother in advance.

#### **Data items relating to labour and delivery**

**Maternal weight at 36-38 weeks or onset of labour:** The weight of the woman (in kg, to the nearest 100g), as measured at 36-38 weeks, or at onset of labour. The aim is that the information relates to a point as late in the pregnancy as is practically possible.

**Smoker at 36-38 weeks or onset of labour:** The smoking status of the woman at 36-38 weeks, or onset of labour – i.e. is the woman a smoker?

Wherever possible, this should be validated via Carbon Monoxide testing (i.e. CO-validated). Where not CO-validated, this should be the self-reported smoking status of the mother. The aim is that the information relates to a point as late in the pregnancy as is practically possible.

**Mode of onset of labour:** This is the method by which the process of labour began or delivery by a caesarean section occurred. Only those methods that are used to induce labour, such as surgical induction, medical induction or a combination of the two, should be recorded. Methods that are used to accelerate labour should not be recorded. Includes:

- Spontaneous; the onset of regular contractions whether or not preceded by spontaneous rupture of the membranes.
- Any caesarean section carried out before the onset of labour; or a planned elective caesarean section carried out immediately following the onset of labour, when the decision was made before labour.
- Surgical induction; by amniotomy
- Medical induction; including the administration of agents either orally, intravenously or intra vaginally with the intention of initiating labour.
- Combination of surgical induction and medical induction.

**Augmentation in labour:** Whether medical or surgical augmentation of labour was undertaken in order to accelerate labour. The augmentation of labour is an intervention that is intended to increase the intensity of labour, usually when the caregiver feels the labour is not 'progressing', or is progressing too slowly. Augmentation of labour differs from induction, in that the labour has already started in some way, but is not progressing, has slowed or stopped. This can also include interventions to stimulate contractions after the waters have broken on their own (although some caregivers will refer to this as an induction). Augmenting the labour involves artificial stimulation of the contractions. This may be needed if the contractions have become weak, not coordinated (or irregular), far apart, not lasting long enough or have ceased for a period. If the labour needs augmenting, it means the contractions are not efficient enough to dilate the cervix.

**Gestation at onset of labour:** The gestation period at onset of labour, in completed weeks (rounded down). Gestation is the carrying of an embryo or foetus inside a woman. The time interval of a gestation is known as the gestation period.

**Number of foetus at onset of labour:** The number of foetus at onset of labour.

**Estimated blood loss:** The estimated post-partum blood loss (measured in millilitres – ml)

**Epidural status:** Epidural administered for pain relief. An Epidural is an injection of a local anaesthetic into the space outside the dura mater of the spinal cord in the lower back region to produce a loss of sensation especially in the abdomen or pelvic region.

**Episiotomy:** Did the woman have an episiotomy during childbirth?

Episiotomy is a surgical cut made at the opening of the vagina during childbirth, to aid a difficult delivery and prevent rupture of tissues.

**Perineal trauma:** Did the woman experience a 3rd or 4th degree tear during childbirth? This can be recorded as 'not applicable', if for example the woman has had a caesarean section.

**Foetal lie at onset of labour:** The lie of the foetus at onset of labour including transverse, oblique, longitudinal and other. A foetal lie of transverse is compatible with a foetal presentation of other or not known only. It must not be used if the presentation is cephalic or breech. Conversely, a foetal lie of oblique or longitudinal may only be used where the foetal presentation is cephalic, breech or other

**Foetal presentation at onset of labour:** The presentation of the foetus at onset of labour including cephalic, breech, other – i.e. a transverse / other lie or not known. The reported presentation may be different for each baby born in a multiple birth.

**Mode of birth:** The mode of birth of a baby. Note that this may be different for different foetuses in the same delivery. Includes: spontaneous vaginal birth, ventouse, forceps, elective caesarean section - caesarean section before, or at onset of labour, emergency caesarean section.

**Outcome of birth:** An indicator of whether the birth was a live or a stillbirth (a birth on or after a gestation of 24 weeks (168 days) where the baby shows no identifiable signs of life at delivery).

**Birthweight:** The weight of the baby at birth, recorded in grams.

**Time of birth:** This is the time of birth of the child.

**Birth order:** The order of the birth where more than one birth resulted from pregnancy.

**Apgar score:** The apgar score is a measure of the physical condition of a new-born baby. It is obtained by adding points (2, 1, or 0) for heart rate, respiratory effort, muscle tone, response to stimulation and skin coloration; a score of ten represents the best possible condition. The Maternity Indicators dataset records the total Apgar score for a baby at 5 minutes after birth.

**Breast feeding:** Did the Mother intend to breastfeed the baby at birth?

**Healthy births:** the percentage of births considered to be healthy births. Any of the following criteria exclude the birth from being considered as 'healthy':

- an onset of labour other than spontaneous;
- augmentation in labour;
- caesarean section, use of forceps or ventouse;
- a gestational age of <37 weeks;
- still birth;
- epidural in labour;
- 3rd or 4th degree perineal trauma or episiotomy;
- a birthweight of <2500g or >4000g;
- blood loss of >500ml; and
- Apgar score at 5 minutes <7.

Only complete records were included in the healthy births analysis i.e. each record must have valid entries to all the fields related to the above criteria to be included. Some unhealthy births are identifiable from incomplete records but they have not been included in the analysis as a healthy birth can only be identified where the record is complete.

## Annex 4:

**Map 1: Maternity units in Wales – areas in blue are within a 20 mile driving distance of a unit**

# WALES

## MATERNITY UNITS



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**Map 2: Maternity units in Wales – areas in blue are within a 40 minute driving time of a unit**

# WALES

## MATERNITY UNITS



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**Table 15: Births by local authority and place of birth, 2018**

LHB / LA of residence	Number						Per cent (a)			
	Place of birth						Place of birth			
	Births in Wales			Births outside Wales			Births in Wales			Births outside Wales
	Welsh hospital	Ambulance	Home	Not stated	English hospital	All births	Welsh hospital	Ambulance	Home	English hospital
<b>Betsi Cadwaladr</b>										
<b>University LHB</b>	<b>6,027</b>	<b>20</b>	<b>138</b>	<b>13</b>	<b>536</b>	<b>6,734</b>	<b>90%</b>	<b>0%</b>	<b>2%</b>	<b>8%</b>
Isle of Anglesey	648	1	16	4	9	678	96%	0%	2%	1%
Gwynedd	1,099	6	38	0	5	1,148	96%	1%	3%	0%
Conwy	990	1	14	3	6	1,014	98%	0%	1%	1%
Denbighshire	871	1	21	6	4	903	97%	0%	2%	0%
Flintshire	1,058	6	27	0	471	1,562	68%	0%	2%	30%
Wrexham	1,361	5	22	0	41	1,429	95%	0%	2%	3%
<b>Powys Teaching LHB</b>	<b>708</b>	<b>4</b>	<b>69</b>	<b>15</b>	<b>298</b>	<b>1,094</b>	<b>66%</b>	<b>0%</b>	<b>6%</b>	<b>28%</b>
<b>Hywel Dda University</b>										
<b>LHB</b>	<b>3,242</b>	<b>19</b>	<b>95</b>	<b>3</b>	<b>9</b>	<b>3,368</b>	<b>96%</b>	<b>1%</b>	<b>3%</b>	<b>0%</b>
Ceredigion	523	3	11	0	0	537	97%	1%	2%	0%
Pembrokeshire	1,003	8	30	0	0	1,041	96%	1%	3%	0%
Carmarthenshire	1,716	8	54	3	9	1,790	96%	0%	3%	1%
<b>Abertawe Bro</b>										
<b>Morgannwg</b>										
<b>University LHB</b>	<b>5,089</b>	<b>9</b>	<b>162</b>	<b>10</b>	<b>0</b>	<b>5,270</b>	<b>97%</b>	<b>0%</b>	<b>3%</b>	<b>0%</b>
Swansea	2,253	6	89	7	0	2,355	96%	0%	4%	0%
Neath Port Talbot	1,398	1	39	3	0	1,441	97%	0%	3%	0%
Bridgend	1,438	2	34	0	0	1,474	98%	0%	2%	0%
<b>Cardiff and Vale</b>										
<b>University LHB</b>	<b>5,250</b>	<b>1</b>	<b>114</b>	<b>29</b>	<b>0</b>	<b>5,394</b>	<b>98%</b>	<b>0%</b>	<b>2%</b>	<b>0%</b>
Vale of Glamorgan	1,278	0	45	6	0	1,329	97%	0%	3%	0%
Cardiff	3,972	1	69	23	0	4,065	98%	0%	2%	0%
<b>Cwm Taf University</b>										
<b>LHB</b>	<b>3,145</b>	<b>0</b>	<b>36</b>	<b>10</b>	<b>7</b>	<b>3,198</b>	<b>99%</b>	<b>0%</b>	<b>1%</b>	<b>0%</b>
Rhondda Cynon Taf	2,478	0	29	8	4	2,519	99%	0%	1%	0%
Merthyr Tydfil	667	0	7	2	3	679	99%	0%	1%	0%
<b>Aneurin Bevan</b>										
<b>University LHB</b>	<b>6,026</b>	<b>22</b>	<b>93</b>	<b>39</b>	<b>9</b>	<b>6,189</b>	<b>98%</b>	<b>0%</b>	<b>2%</b>	<b>0%</b>
Caerphilly	1,836	8	26	7	3	1,880	98%	0%	1%	0%
Blaenau Gwent	704	1	5	2	2	714	99%	0%	1%	0%
Torfaen	931	6	23	3	2	965	97%	1%	2%	0%
Monmouthshire	694	3	14	17	2	730	97%	0%	2%	0%
Newport	1,861	4	25	10	0	1,900	98%	0%	1%	0%
Not stated	44	0	5	11	22	82	62%	0%	7%	31%
<b>Wales</b>	<b>29,531</b>	<b>75</b>	<b>712</b>	<b>130</b>	<b>881</b>	<b>31,329</b>	<b>95%</b>	<b>0%</b>	<b>2%</b>	<b>3%</b>
Not Welsh resident	338	..	..	..	..	338	100%	..	..	..

Source: National Community Child Health Database (NCCHD) 2018

(a) Percentage of records with a stated place of birth

.. Data item not available

**Table 16: Live births by gestational age and selected indicators, Wales 2018**

Birthweight	Number of weeks gestation:					Total
	20-31	32-36	37-41	42 or more	Not stated	
Under 2500g	332	1,155	751	8	8	2,254
2500-3999g	20	956	23,434	865	70	25,345
4000g or more	0	20	3,332	289	8	3,649
Not stated	22	19	29	5	6	81
<b>Total</b>	<b>374</b>	<b>2,150</b>	<b>27,546</b>	<b>1,167</b>	<b>92</b>	<b>31,329</b>

Mother's age (years)	Number of weeks gestation:					Total
	20-31	32-36	37-41	42 or more	Not stated	
Under 16	1	2	17	0	0	20
16-19	27	79	1,024	44	3	1,177
20-24	69	399	4,911	219	16	5,614
25-29	100	611	8,485	357	26	9,579
30-34	104	626	8,069	356	24	9,179
35-39	63	342	4,175	168	19	4,767
40-44	8	83	804	23	3	921
45 or over	2	6	60	0	0	68
Not stated	0	2	1	0	1	4
<b>Total</b>	<b>374</b>	<b>2,150</b>	<b>27,546</b>	<b>1,167</b>	<b>92</b>	<b>31,329</b>

Source: National Community Child Health Database

Gestations less than 20 weeks or more than 45 weeks included as "not stated"

Mother's age less than 10 and more than 54 included as "not stated"

Birthweight less than 0.5kg or more than 6kg included as "not stated"

**Table 17: Live births by birthweight and mother's age, Wales 2018**

Mother's age (years)	Birthweight					Not stated	Total
	Under 2000g	2000-2499g	2500-2999g	3000-3999g	4000g or more		
Under 16	1	0	7	11	1	0	20
16-19	40	67	256	721	89	4	1,177
20-24	155	308	1,025	3,583	532	11	5,614
25-29	197	420	1,517	6,290	1,137	18	9,579
30-34	237	383	1,294	6,074	1,169	22	9,179
35-39	140	217	717	3,059	613	21	4,767
40-44	28	52	147	588	101	5	921
45 or over	5	3	13	41	6	0	68
Not stated	0	1	1	1	1	0	4
<b>Total</b>	<b>803</b>	<b>1,451</b>	<b>4,977</b>	<b>20,368</b>	<b>3,649</b>	<b>81</b>	<b>31,329</b>

Source: National Community Child Health Database

Mother's age less than 10 and more than 54 included as "not stated"

Birthweight less than 0.5kg or more than 6kg included as "not stated"

**Table 18: Live births by breastfeeding (a) and selected indicators, Wales 2018**

<b>Mother's age (years)</b>	<b>Breastfeeding</b>	<b>Not breastfeeding</b>	<b>Not stated</b>	<b>Total</b>
<b>Under 16</b>	4	15	1	20
<b>16-19</b>	447	664	66	1,177
<b>20-24</b>	2,588	2,749	277	5,614
<b>25-29</b>	5,372	3,778	429	9,579
<b>30-34</b>	6,054	2,712	413	9,179
<b>35-39</b>	3,307	1,272	188	4,767
<b>40-44</b>	613	261	47	921
<b>45 or over</b>	46	19	3	68
<b>Not stated</b>	2	1	1	4
<b>Total</b>	<b>18,433</b>	<b>11,471</b>	<b>1,425</b>	<b>31,329</b>

<b>Gestational age (weeks)</b>	<b>Breastfeeding</b>	<b>Not breastfeeding</b>	<b>Not stated</b>	<b>Total</b>
<b>20-31</b>	195	94	85	374
<b>32-36</b>	1,082	936	132	2,150
<b>37-41</b>	16,389	10,000	1,157	27,546
<b>42 or more</b>	714	414	39	1,167
<b>Not stated</b>	53	27	12	92
<b>Total</b>	<b>18,433</b>	<b>11,471</b>	<b>1,425</b>	<b>31,329</b>

<b>Birthweight</b>	<b>Breastfeeding</b>	<b>Not breastfeeding</b>	<b>Not stated</b>	<b>Total</b>
<b>Under 2000g</b>	432	261	110	803
<b>2000-2499g</b>	735	646	70	1,451
<b>2500-2999g</b>	2,666	2,093	218	4,977
<b>3000-3999g</b>	12,246	7,273	849	20,368
<b>4000g or more</b>	2,319	1,175	155	3,649
<b>Not stated</b>	35	23	23	81
<b>Total</b>	<b>18,433</b>	<b>11,471</b>	<b>1,425</b>	<b>31,329</b>

<b>Place of birth</b>	<b>Breastfeeding</b>	<b>Not breastfeeding</b>	<b>Not stated</b>	<b>Total</b>
<b>Home</b>	494	177	41	712
<b>Hospital</b>	17,821	11,235	1,356	30,412
<b>Ambulance</b>	43	30	2	75
<b>Not stated</b>	75	29	26	130
<b>Total</b>	<b>18,433</b>	<b>11,471</b>	<b>1,425</b>	<b>31,329</b>

Source: National Community Child Health Database

- (a) Breastfeeding at birth data for 2012 onwards is based on new breastfeeding definitions introduced in September 2012. Gestations less than 20 weeks or more than 45 weeks included as "not stated".  
 Mother's age less than 10 and more than 54 included as "not stated".  
 Birthweight less than 0.5kg or more than 6kg included as "not stated".

**Table 19: Live births by selected indicators, Wales 2006-2018**

Place of birth	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Home</b>	1,144	1,224	1,281	1,291	1,227	1,080	1,063	987	1,048	944	858	770	712
<b>Hospital</b>	32,391	33,120	34,324	33,559	34,657	34,366	34,059	32,632	32,380	32,262	32,028	31,324	30,412
<b>Ambulance</b>	127	104	25	17	16	18	19	19	53	56	38	48	75
<b>Not stated</b>	28	21	125	135	133	218	209	184	167	99	80	94	130
<b>Total</b>	<b>33,690</b>	<b>34,469</b>	<b>35,755</b>	<b>35,002</b>	<b>36,033</b>	<b>35,682</b>	<b>35,350</b>	<b>33,822</b>	<b>33,648</b>	<b>33,361</b>	<b>33,004</b>	<b>32,236</b>	<b>31,329</b>
<b>Mother's age (years)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Under 16</b>	89	79	86	74	66	57	58	46	37	39	40	31	20
<b>16-19</b>	3,027	2,945	3,016	2,839	2,720	2,409	2,214	1,887	1,690	1,490	1,455	1,379	1,177
<b>20-24</b>	7,614	7,780	8,194	8,195	8,325	8,115	7,965	7,363	6,893	6,582	6,140	5,874	5,614
<b>25-29</b>	8,656	9,301	9,894	10,035	10,350	10,268	10,137	10,055	10,125	10,212	10,151	9,655	9,579
<b>30-34</b>	8,605	8,463	8,518	8,214	8,779	9,107	9,396	9,014	9,429	9,430	9,328	9,485	9,179
<b>35-39</b>	4,764	4,884	5,018	4,620	4,690	4,618	4,438	4,334	4,399	4,562	4,829	4,764	4,767
<b>40-44</b>	875	941	974	970	1,022	1,053	1,066	1,031	1,010	976	978	970	921
<b>45 or over</b>	40	49	46	41	72	51	63	69	54	55	73	68	68
<b>Not stated</b>	20	27	9	14	9	4	13	23	11	15	10	10	4
<b>Total</b>	<b>33,690</b>	<b>34,469</b>	<b>35,755</b>	<b>35,002</b>	<b>36,033</b>	<b>35,682</b>	<b>35,350</b>	<b>33,822</b>	<b>33,648</b>	<b>33,361</b>	<b>33,004</b>	<b>32,236</b>	<b>31,329</b>
<b>Gestational age (weeks)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>&lt;24</b>	22	24	25	25	29	32	21	20	21	22	22	29	27
<b>24-27</b>	117	127	104	132	126	132	130	125	100	120	91	95	103
<b>28-31</b>	292	265	333	300	305	279	305	273	248	248	272	282	244
<b>32-36</b>	2,048	2,168	2,094	2,120	2,067	2,094	2,031	1,917	2,092	2,057	2,171	2,127	2,150
<b>37-41</b>	29,122	30,072	31,199	30,592	31,654	31,036	30,946	29,264	29,697	29,616	29,112	28,391	27,546
<b>42+</b>	1,780	1,588	1,718	1,546	1,700	1,949	1,767	1,487	1,420	1,252	1,181	1,171	1,167
<b>Not stated</b>	309	225	282	287	152	160	150	736	70	46	155	141	92
<b>Total</b>	<b>33,690</b>	<b>34,469</b>	<b>35,755</b>	<b>35,002</b>	<b>36,033</b>	<b>35,682</b>	<b>35,350</b>	<b>33,822</b>	<b>33,648</b>	<b>33,361</b>	<b>33,004</b>	<b>32,236</b>	<b>31,329</b>
<b>Birth weight</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Under 2000g</b>	887	880	916	882	911	861	932	853	754	777	777	779	803
<b>2000-2499g</b>	1,524	1,563	1,591	1,623	1,552	1,542	1,580	1,492	1,488	1,455	1,499	1,453	1,451
<b>2500-2999g</b>	5,352	5,485	5,576	5,586	5,589	5,604	5,657	5,341	5,162	5,276	5,254	4,974	4,977
<b>3000-3999g</b>	21,915	22,358	23,334	22,811	23,557	23,387	23,010	22,081	22,091	21,822	21,525	21,166	20,368
<b>4000g or more</b>	3,909	4,055	4,271	4,023	4,345	4,249	4,138	4,010	4,095	3,956	3,809	3,787	3,649
<b>Not stated</b>	103	128	67	77	79	39	33	45	58	75	140	77	81
<b>Total (a)</b>	<b>33,690</b>	<b>34,469</b>	<b>35,755</b>	<b>35,002</b>	<b>36,033</b>	<b>35,682</b>	<b>35,350</b>	<b>33,822</b>	<b>33,648</b>	<b>33,361</b>	<b>33,004</b>	<b>32,236</b>	<b>31,329</b>
<b>Singleton birth &lt;2500g</b>	1,896	1,892	1,878	1,954	1,929	1,877	1,861	1,750	1,665	1,660	1,706	1,763	1,713
<b>Total singleton with stated birth weight</b>	<b>32,677</b>	<b>33,381</b>	<b>34,599</b>	<b>33,903</b>	<b>34,945</b>	<b>34,690</b>	<b>34,246</b>	<b>32,784</b>	<b>32,595</b>	<b>32,251</b>	<b>31,884</b>	<b>31,360</b>	<b>30,378</b>
<b>Breastfeeding (a)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Breastfeeding</b>	15,445	15,959	17,810	18,032	17,983	18,062	16,918	15,677	15,171	16,246	18,254	18,276	18,433
<b>Not breastfeeding</b>	12,580	12,551	13,777	13,793	14,524	14,469	13,406	12,367	11,041	10,956	11,722	11,931	11,471
<b>Not stated</b>	5,665	5,959	4,168	3,177	3,526	3,151	5,026	5,778	7,436	6,159	3,028	2,029	1,425
<b>Total</b>	<b>33,690</b>	<b>34,469</b>	<b>35,755</b>	<b>35,002</b>	<b>36,033</b>	<b>35,682</b>	<b>35,350</b>	<b>33,822</b>	<b>33,648</b>	<b>33,361</b>	<b>33,004</b>	<b>32,236</b>	<b>31,329</b>
<b>Number of Babies</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>1 Baby</b>	32,769	33,503	34,658	33,968	35,019	34,723	34,276	32,823	32,646	32,318	32,001	31,422	30,453
<b>More than 1 Baby</b>	916	966	1,097	1,034	1,014	959	1,074	999	1,002	1,043	1,003	814	876
<b>Not stated</b>	5	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>33,690</b>	<b>34,469</b>	<b>35,755</b>	<b>35,002</b>	<b>36,033</b>	<b>35,682</b>	<b>35,350</b>	<b>33,822</b>	<b>33,648</b>	<b>33,361</b>	<b>33,004</b>	<b>32,236</b>	<b>31,329</b>

Source: National Community Child Health Database

- (a) Breastfeeding at birth data for 2012 onwards is based on new breastfeeding definitions introduced in September 2012. Gestations less than 20 weeks or more than 45 weeks included as "not stated".  
 Mother's age less than 10 and more than 54 included as "not stated".  
 Birthweight less than 0.5kg or more than 6kg included as "not stated".

**Table 20: Key statistics for live births, Wales 2006-2018**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Live births</b>	33,690	34,469	35,755	35,002	36,033	35,682	35,350	33,822	33,648	33,361	33,004	32,236	31,329
<b>Homebirths</b>	3.4%	3.6%	3.6%	3.7%	3.4%	3.0%	3.0%	2.9%	3.1%	2.8%	2.6%	2.6%	2.3%
<b>Mothers aged under 20</b>	9.3%	8.8%	8.7%	8.3%	7.7%	6.9%	6.4%	5.7%	5.1%	4.6%	4.5%	4.4%	3.8%
<b>Gestational age &lt; 37 weeks</b>	7.4%	7.5%	7.2%	7.4%	7.0%	7.1%	7.1%	7.1%	7.3%	7.3%	7.8%	7.9%	8.1%
<b>All babies - Low birth weight (&lt;2500g)</b>	7.2%	7.1%	7.0%	7.2%	6.9%	6.7%	7.1%	6.9%	6.7%	6.7%	6.9%	6.9%	7.2%
<b>Singleton - Low birth weight (&lt;2500g)</b>	5.8%	5.7%	5.4%	5.8%	5.5%	5.4%	5.4%	5.3%	5.1%	5.1%	5.4%	5.6%	5.6%
<b>Breastfeeding (a)</b>	55.1%	56.0%	56.4%	56.7%	55.3%	55.5%	55.8%	55.9%	57.9%	59.7%	60.9%	60.9%	0.0%
<b>Multiple births</b>	2.7%	2.8%	3.1%	3.0%	2.8%	2.7%	3.0%	3.0%	3.0%	3.1%	3.0%	2.5%	2.8%

Source: National Community Child Health Database

(a) Breastfeeding at birth data for 2012 onwards is based on new breastfeeding definitions introduced in September 2012.

Percentages are of the total live births less births with no stated place of birth / mother's age / gestational age / birthweight / breastfeeding status. In addition:

Gestations less than 20 weeks or more than 45 weeks included as "not stated".

Mother's age less than 10 and more than 54 included as "not stated".

Birthweight less than 0.5kg or more than 6kg included as "not stated".