

# **Children's Health in Northern Ireland 2022/23**

**A statistical profile of births using data drawn from the  
Northern Ireland Child Health System,  
Northern Ireland Maternity System and  
Northern Ireland Statistics and Research Agency**

**Public Health Intelligence Unit  
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## Executive Summary

- There were 20,908 registered births to Northern Ireland residents in 2022 with a birth rate of 10.9 per thousand (2021=11.6, 2020=11.0, 2019=11.9). There were 71 registered still births to Northern Ireland residents in 2022. [Page 9]
- The live birth rate (crude) (10.9) was the highest across the four UK countries, but lower than the equivalent rate for Republic of Ireland (2022=11.3). [Page 8]
- In 2022, there were 90 registered births in Northern Ireland to non-Northern Ireland resident mothers. [Page 9]
- In 2022, the percentage of live births registered to mothers whose country of birth was not Northern Ireland was 18.5%. [Page 9]
- In the next twenty years, the number of registered resident births in Northern Ireland is projected to increase from 20,908 in 2022 to 22,015 in 2042 (+5.3%). The Southern Trust area is projected to have the largest increase (+12.5%), with the Western Trust showing a decrease of -3.0%. [Page 12]
- Of the four regions of the United Kingdom, Northern Ireland had the highest total fertility rate (1.71 in 2022). Scotland had the lowest at 1.28. [Page 14]
- In 2022/23, births to teenage mothers represented 2.1% of all births. [Page 20]
- In 2022/23, 7.2% of births were booked at 15 weeks or more gestation. [Page 34]
- There were substantial differences in the timescales of when women booked by ethnic group during 2022/23. Almost 30% of births to women from a 'non-white' ethnic group booked at 15+ weeks gestation, compared to 5.7% of those of a white ethnic group (all births = 7.2%). [Page 36]
- In 2022/23, 8.4% of infants were born pre-term to women living in the most deprived areas of Northern Ireland. This compared to 6.1% of infants born to women living in those areas considered least deprived (all births = 7.2%). [Page 40]
- In 2022/23, 10.6% of mothers smoked (2010/11 = 15.5%) and 12.6% of mothers had diabetes (2010/11 = 1.8%). [Page 44]
- Over 28% of mothers giving birth during 2022/23 were measured as obese (BMI = 30.00 or more) at time of antenatal booking appointment. This proportion has increased year on year since 2011/12. [Page 54]
- In 2022/23, 38.9% of infants were delivered by Caesarian section [Page 59]. Mothers under 30 years of age had a higher percentage of births by emergency Caesarian section (19.1%) than by elective Caesarian section (13.2%), but the opposite was seen when the mother was over 30 years of age, where 25.3% of births are by elective Caesarian section and 17.6% by emergency Caesarian section. [Page 61]
- In 2022/23, 6.2% of all births were measured as low birth weight i.e. less than 2,500g (6.0% of live and 68.5% of still births). 12.9% of live infants were born with a higher birth weight of 4,000g+ and 1.5% with a birth weight of 4,500g+. The proportion of infants born with a higher birth weight has been decreasing in recent years. [Page 67, 68]
- In 2022/23, just over half of live infants (51.8%) were breastfed (total/partial feeding) at discharge (where feeding status was known). [Page 77]. Only 27.4% of infants born to mothers under 20 were breastfed at discharge, compared to 62.2% of infants to mothers aged 40 and over. [Page 78].
- Of infants who were delivered in 2021/22, the proportion breastfed gradually decreased with time – 51.2% of infants in Northern Ireland were breastfed at discharge, falling to only 17.0% of infants at 12 months old. [Page 84]
- Of those children measured in Primary 1 in 2022/23, 20.4% were considered overweight or obese. (Based on IOTF classification) [Page 90]

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## Introduction

The **Child Health System (CHS)** is a patient centred community based operational system comprising seven modules:

- Module 1 – Child Register
- Module 2 – Preschool Vaccination and Immunisation
- Module 3 – Preschool Developmental Surveillance
- Module 4 – School Health
- Module 5 – Special Needs
- Module 6 – New-born Hearing
- Module 7 – Influenza

This report draws on the information in Modules 1 and 4 and is supplemented with information from the Registrar General's birth registrations and Northern Ireland Maternity System (NIMATS) to provide a statistical profile.

The **Northern Ireland Statistics and Research Agency (NISRA)**, which incorporates the **General Register Office (GRO)**, is an executive agency within the Department of Finance (NI) and was established on 1 April 1996. The administration of the marriage and civil partnership law in Northern Ireland is the responsibility of GRO, along with the registration of births, deaths, adoptions and gender recognition. GRO is also responsible for the maintenance of registration records. NISRA is the principal source of Official Statistics and social research on Northern Ireland.  
(Source: NISRA Corporate Plan, 2019-24)

The **Northern Ireland Maternity System (NIMATs)** contains a range of demographic and clinical information on mothers and infants. It captures data relating to the current complete maternity process, but also contains details about the mother's past medical and obstetric history. It is a key source for data on birth numbers, interventions, maternal risk factors, birth weights, maternal smoking, BMI and breastfeeding on discharge. NIMATs is available in all five Trust areas and is available through the data warehouse. As a result of ongoing work, data coverage and completeness on NIMATs has improved in recent years.

### Note:

1. Births are presented using all of the above sources, and therefore may not agree. For example, births provided by NISRA are based on the number of births registered with a District Registrar in any year. It is likely that some births occurring in a year may not be registered until the following year and therefore the reason for any differences.

## Comparative data (United Kingdom and Republic of Ireland)

				Year/Currency		England	Wales	Scotland	NI	RoI
1	Live Births <sup>1</sup>	2022 (n)		577,046		28,296	46,959	20,837	57,540	
		2021 (n)		595,948		28,781	47,786	22,071	58,443	
		2020 (n)		585,195		28,638	46,809	20,815	55,959	
2	Still births numbers and rates per 1,000 live and still births <sup>2</sup>	2022 (n)		2,276		126	176	71	N/A	
		2021 (n)		2,451		126	180	89	218	
		2020 (n)		2,231		127	198	69	219	
		2022 (rate)		3.9		4.4	3.7	3.4	N/A	
		2021 (rate)		4.1		4.4	3.8	4.0	3.6	
		2020 (rate)		3.8		4.4	4.2	3.3	3.8	
3	Infant mortality (deaths in first year) – numbers and rates per 1,000 live births <sup>3</sup>	2022 (n)		2,381		113	165	89	191	
		2021 (n)		2,374		115	186	100	180	
		2020 (n)		2,249		121	146	93	153	
		2022 (rate)		4.1		4.0	3.5	4.3	3.3	
		2021 (rate)		4.0		4.0	3.9	4.5	3.1	
		2020 (rate)		3.8		4.2	3.1	4.4	2.7	
4	Fertility rate (TPFR) <sup>4</sup>	2022 (rate)		1.49		1.46	1.28	1.71	1.7	
		2021 (rate)		1.55		1.50	1.30	1.79	1.7	
		2020 (rate)		1.59		1.47	1.29	1.68	1.6	
5	Live births to teenage mothers under twenty years <sup>5</sup>	2022 (n)		N/A		N/A	1,090	436	798	
		2021 (n)		12,928		809	1,043	474	699	
		2020 (n)		14,917		1,020	1,281	489	830	
		2022 (rate/1,000 aged 15-19 years)		N/A		N/A	7.47	7.75	4.8	
		2021 (rate/1,000 aged 15-19 years)		8.24		9.57	7.53	8.56	4.4	
		2020 (rate/1,000 aged 15-19 years)		9.85		12.16	9.29	9.03	5.2	
6	Multiple birth maternities (% of all maternities) <sup>6</sup>	2022		N/A		1.4	1.4	N/A		
		2021		1.37		1.4	1.3	1.7		
		2020		1.44		1.5	1.5	1.8		
7	Risk factors <sup>7</sup>	% women who smoked at time of booking appointment	2022/23	8.8	14.1	11.9 <sup>P</sup>	10.6	N/A		
				(at delivery)	(at initial assmt, 2022)	(2022, % of pregnancies booked, with a known smoking status)				
			2021/22	9.1	14.8	12.1	11.3	N/A		
				(at delivery)	(at initial assmt, 2021)	(2021, % of pregnancies booked, with a known smoking status)				
			2020/21	9.6	17.3	12.6	12.4	N/A		
				(at delivery)	(at initial assmt, 2020)	(2020, % of pregnancies booked, with a known smoking status)				
8	Maternal BMI <sup>8</sup>	% women who were obese (BMI ≥30.00) at time of antenatal booking appointment	2022/23	N/A	31.1	27.9 <sup>P</sup>	28.1	N/A		
				(% with a known BMI, at initial assessment, 2022)	(% maternities with a known BMI)	(% with a known BMI)				
			2021/22	N/A	29.7	27.2	27.4	N/A		
				(% with a known BMI, at initial assessment, 2021)	(% maternities with a known BMI)	(% with a known BMI)				
			2020/21	N/A	29.2	25.9	25.7	N/A		
				(% with a known BMI, at initial assessment, 2020)	(% maternities with a known BMI)	(% with a known BMI)				
9	Caesarean Sections (% of deliveries / births) <sup>8</sup>	2022/23		39.4	34.9	39.2 <sup>P</sup>	38.9	N/A		
		(deliveries, valid %)		(deliveries, 2022)	(live singleton births)	(births)				
		2021/22		36.0	31.4	37.5	35.7	37.1		
		(deliveries, valid %)		(deliveries, 2021)	(live singleton births)	(births)	(live births, 2021)			
		2020/21		33.5	29.0	35.9	33.5	35.8		
		(deliveries, valid %)		(deliveries, 2020)	(live singleton births)	(births)	(live births, 2020)			
10	Low Birth weight (live births only) <sup>9</sup>	% live births less than 2,500g	2022	N/A	7.2	N/A	6.0	N/A		
				(valid %)	(valid %)	(2021/22, singleton, valid %)	(valid %)			
			2021	6.4	6.8	5.2	5.9	5.6		
				(valid %)	(valid %)	(2020/21, singleton, valid %)	(valid %)			
			2020	6.5	7.1	5.2	5.6	5.5		
				(valid %)	(valid %)	(2020/21, singleton, valid %)	(valid %)			

P: provisional

N/A: not available

For references see over

## References

- <sup>1</sup> (Up to 2021) United Kingdom home countries: Office for National Statistics (ONS), Vital Statistics: Population and Health Reference Tables <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/vitalstatisticspopulationandhealthreferencetables>  
For the years shown, figures for Scotland represent country of occurrence. Figures for England, Wales and Northern Ireland represent the area of usual residence of the mother. Rates have been calculated using the most up-to-date population estimates when the statistics were published.
- 2022  
England and Wales: Office for National Statistics, Births in England and Wales, 2022 summary <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/datasets/birthsummarytables>  
Scotland: National Records of Scotland, Vital Events Reference Tables 2022 <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2022>  
Northern Ireland: Northern Ireland Statistics and Research Agency (NISRA) <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/births>  
Republic of Ireland: Central Statistics Office, Vital Statistics Annual Reports/Yearly Summaries <http://www.cso.ie/en/statistics/birthsdeathsandmarriages/>
- <sup>2</sup> Stillbirth rate is the number of stillbirths per 1,000 total births (live and still)  
UK countries - sources as <sup>1</sup>  
Republic of Ireland: National Perinatal Reporting System, Annual Reports, Healthcare Pricing Office <http://www.hpo.ie/> and ad hoc requests to HPO  
Still birth numbers cited by CSO vary substantially from those in NPRS. The CSO 2012 annual report on Vital Statistics for 2012 <http://www.cso.ie/en/media/csoie/releasespublications/documents/vitalstats/2012/annualreport2012.pdf> says 'In recent years, the numbers of stillbirths according to NPRS reports have been higher than the numbers published in these reports. This suggests that there is some non-registration of stillbirths and that caution should be taken in interpreting the statistics on stillbirths in these reports'. For this reason the NPRS data is shown.  
Stillbirth rates are calculated per 1,000 births (total births).
- <sup>3</sup> Infant mortality – death within the first year of life expressed as numbers registered in a specific year and as rate per 1000 live births that year.  
(Up to 2021) United Kingdom home countries: Office for National Statistics (ONS), Vital Statistics: Population and Health Reference Tables <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/vitalstatisticspopulationandhealthreferencetables>  
For the years shown, figures for Scotland represent country of occurrence. Figures for England, Wales and Northern Ireland represent the area of usual residence of the mother. Rates have been calculated using the most up-to-date population estimates when the statistics were published.
- 2022  
England and Wales: Office for National Statistics, Deaths registered in England and Wales by week, sex, age group and area of usual residence, 2015 to 2023 Deaths registered in England and Wales by week, sex, age group and area of usual residence, 2015 to 2023 - Office for National Statistics (ons.gov.uk)  
Scotland: National Records of Scotland, Vital Events Reference Tables 2022 <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2022>  
Northern Ireland: Northern Ireland Statistics and Research Agency (NISRA), Registrar General Annual Report 2022 <https://www.nisra.gov.uk/publications/registrar-general-annual-report-2022-stillbirths-and-infant-deaths>  
The infant mortality rates for Northern Ireland represent the rate per 1,000 live births including non-Northern Ireland resident births.
- <sup>4</sup> Total Period Fertility rate is defined as:  
UK: Total Fertility Rate (TFR) is the average number of live children that a group of women would bear if they experienced the age-specific fertility rates of the calendar year in question throughout their childbearing lifespan.  
RoI: Total Period Fertility Rate (TPFR) gives the theoretical average number of children who would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year.  
Sources as <sup>1</sup>
- <sup>5</sup> England: ONS  
Up to 2016: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/datasets/birthsbyareaofusualresidenceofmotheruk>  
2017 onwards: <https://www.nomisweb.co.uk/default.asp>  
Wales: Maternity and Birth Statistics, Welsh Government <https://gov.wales/maternity-and-birth-statistics>  
Scotland: National Records of Scotland <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events>  
Northern Ireland: Northern Ireland Statistics and Research Agency <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/registrar-general-annual-report>  
Republic of Ireland: As <sup>1</sup>  
Population Estimates (all UK countries): ONS <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>  
Population Estimates (Republic of Ireland): Central Statistics Office, RoI <https://data.cso.ie/>
- <sup>6</sup> England and Wales: ONS <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/datasets/birthcharacteristicsinenglandandwales>  
Scotland (up to 2021): National Records of Scotland <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events>  
Scotland (2022): National Records of Scotland, Vital Events Reference Tables 2022 <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2022>  
Northern Ireland: Northern Ireland Statistics and Research Agency, Registrar General Annual Reports <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/registrar-general-annual-report>  
Republic of Ireland: NPRS – as <sup>2</sup>  
Population Estimates (all UK countries): ONS <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>
- <sup>7</sup> England: NHS Digital, Statistics on Women's Smoking Status at Time of Delivery <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-women-s-smoking-status-at-time-of-delivery-england>  
Wales: Maternity and Birth Statistics, Welsh Government <https://gov.wales/maternity-and-birth-statistics>  
Scotland: "Births in Scotland", Public Health Scotland (for 2019/20 data only) <https://www.publichealthscotland.scot/publications/> Since 2020, data is provided from the Antenatal Booking Collection (ABC) publication "Antenatal Booking in Scotland" and is presented by calendar year rather than financial year.  
Data excludes women delivering at home or in non-NHS hospitals  
Northern Ireland: Child Health System data as per this document – see Section 6
- <sup>8</sup> Scotland: Public Health Scotland, "Births in Scotland" <https://www.publichealthscotland.scot/publications/>  
Wales: Maternity and Birth Statistics, Welsh Government <https://gov.wales/maternity-and-birth-statistics>  
Data only includes women whose initial assessment was completed at 14 completed weeks of pregnancy or earlier.  
Northern Ireland: Northern Ireland Maternity System data as per this document – see Section 7
- <sup>9</sup> Caesarean rates can be quoted using deliveries (i.e. mothers who delivered) or births. The impact is marginal but given that multiple births are more likely to be delivered by caesarean the percentage rate for births will be slightly higher than that for deliveries. The method used for each region is shown in the table. Within the UK, these rates are derived from hospital activity systems.  
England: NHS Digital, NHS HES Maternity Statistics, England <https://digital.nhs.uk/data-and-information/publications/statistical/nhs-maternity-statistics>  
Scotland: Public Health Scotland, "Births in Scotland" <https://www.publichealthscotland.scot/publications/>  
Wales: Maternity and Birth Statistics, Welsh Government <https://gov.wales/maternity-and-birth-statistics>  
Northern Ireland: Child Health System data as per this document – see Section 8  
Republic of Ireland: NPRS – as <sup>2</sup>
- <sup>10</sup> England: ONS <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/datasets/birthcharacteristicsinenglandandwales>  
Scotland: Public Health Scotland, <https://www.publichealthscotland.scot/publications/>  
Wales: Maternity and Birth Statistics, Welsh Government <https://gov.wales/maternity-and-birth-statistics>  
Northern Ireland: Child Health System data via Public Health Agency (Health Intelligence Unit)  
Republic of Ireland: NPRS – as <sup>2</sup>

Further information for European countries is available from reports produced by the Euro-Peristat Network: <https://www.europeristat.com/index.php/reports.html>

**PLEASE NOTE THAT THE QUALITY AND COVERAGE OF DATA ABOVE MAY HAVE BEEN AFFECTED BY THE COVID-19 PANDEMIC AND SO SHOULD BE INTERPRETED WITH CAUTION**

# Section 1: Trends in Births

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## Key Points

- There were 20,908 registered births to Northern Ireland residents in 2022 with a birth rate of 10.9 per thousand (2021=11.6, 2020=11.0, 2019=11.9). There were 71 registered still births to Northern Ireland residents in 2022. *[Page 9]*
- The live birth rate (crude) (10.9) was the highest across the four UK countries, but lower than the equivalent rate for Republic of Ireland (2022=11.3). *[Page 8]*
- In 2022, there were 90 registered births in Northern Ireland to non-Northern Ireland resident mothers. *[Page 9]*
- In 2022, the highest number of registered births was recorded to residents in the Northern Trust area (5,048), with the lowest number in the Western Trust (3,394). *[Page 10]*
- The number of registered births in the last ten years (2013 to 2022) showed a decrease in all Trust areas (NI decreased by 14.3%). *[Page 10]*
- In 2022, the percentage of live births registered to mothers whose country of birth was not Northern Ireland was 18.5%. *[Page 9]*
- In the next twenty years, the number of registered resident births in Northern Ireland is projected to increase from 20,908 in 2022 to 22,015 in 2042 (+5.3%). The Southern Trust area is projected to have the largest increase (+12.5%), with the Western Trust showing a decrease of -3.0%. *[Page 12]*



**Table 1.1: Trends in live births/birth rate across the United Kingdom and Republic of Ireland, 1982 - 2022**

Year	Number of Live Births					Crude Birth Rate (Live Births per 1,000 population)				
	Northern Ireland	England	Scotland	Wales	Republic of Ireland	Northern Ireland	England	Scotland	Wales	Republic of Ireland
2022	20,837	577,046	46,959	28,296	57,540	10.9	10.1	8.6	9.0	11.3
2017	23,075	646,794	52,861	32,176	62,490	12.3	11.6	9.7	10.3	12.9
2012	25,269	694,241	58,027	35,238	72,225	13.9	13.0	10.9	11.5	15.6
2007	24,451	655,357	57,781	34,414	70,620	13.9	12.8	11.2	11.4	16.3
2002	21,385	565,709	51,270	30,205	60,521	12.6	11.4	10.1	10.3	15.4
1997	24,087	608,202	59,440	34,520	52,311	14.4	12.5	11.7	11.9	14.4
1992	25,354	651,784	65,789	37,523	51,584	15.6	13.6	12.9	13.0	14.4
1987	27,653	643,330	66,241	37,816	58,864	17.5	13.6	13.0	13.4	16.5
1982	26,872	589,711	66,196	35,720	70,933	17.4	12.6	12.8	12.7	20.4

Source (until 2017):

For United Kingdom: Office for National Statistics, Vital Statistics in the UK: births, deaths and marriages

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/vitalstatisticspopulationandhealthreferencetables>

For the years shown, figures for Scotland represent country of occurrence. Figures for England, Wales and Northern Ireland represent the area of usual residence of the mother

Live birth figures from 1981 for Northern Ireland represent resident births only

Rates have been calculated using the most up-to-date population estimates when the statistics were published

For Republic of Ireland: Central Statistics Office, StatBank database <https://data.cso.ie/>

2022 data is provisional

Source (2022):

Births

Northern Ireland: Northern Ireland Statistics and Research Agency (NISRA) <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/births>

Scotland: National Records of Scotland, Vital Events Reference Tables 2022

<https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2022>

England and Wales: Office for National Statistics, Births in England and Wales, 2022 summary

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/datasets/birthsummarytables>

Population counts

Office for National Statistics, Population estimates for the UK, England, Wales, Scotland, and Northern Ireland: mid-2022

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2022>

For Republic of Ireland: Central Statistics Office, StatBank database <https://data.cso.ie/>

2022 data is provisional



**Table 1.2: Trends in births (live and still) registered in Northern Ireland, 2013 – 2022**

		Year of birth (registered)									
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total resident births (live and still)		<b>24,387</b>	<b>24,475</b>	<b>24,291</b>	<b>24,158</b>	<b>23,177</b>	<b>22,908</b>	<b>22,514</b>	<b>20,884</b>	<b>22,160</b>	<b>20,908</b>
Total resident crude birth rate / 1,000 population		<b>13.3</b>	<b>13.3</b>	<b>13.1</b>	<b>12.9</b>	<b>12.3</b>	<b>12.1</b>	<b>11.9</b>	<b>11.0</b>	<b>11.6</b>	<b>10.9</b>
Birth status (NI maternal residents)	Live	24,277	24,394	24,215	24,076	23,075	22,829	22,447	20,815	22,071	20,837
	Still	110	81	76	82	102	79	67	69	89	71
	<b>All infants</b>	<b>24,387</b>	<b>24,475</b>	<b>24,291</b>	<b>24,158</b>	<b>23,177</b>	<b>22,908</b>	<b>22,514</b>	<b>20,884</b>	<b>22,160</b>	<b>20,908</b>
Born to NI-resident / non-resident mothers	Resident	24,387	24,475	24,291	24,158	23,177	22,908	22,514	20,884	22,160	20,908
	Non-resident	261	221	210	186	173	152	140	115	87	90
	<b>All infants</b>	<b>24,648</b>	<b>24,696</b>	<b>24,501</b>	<b>24,344</b>	<b>23,350</b>	<b>23,060</b>	<b>22,654</b>	<b>20,999</b>	<b>22,247</b>	<b>20,998</b>
Country of birth of mother (live births only)	NI	19,937	20,129	19,968	19,882	19,031	18,804	18,374	17,172	18,235	16,972
	Rest of UK	1,271	1,170	1,186	1,052	1,051	985	1,072	956	956	909
	Republic of Ireland	626	626	635	618	572	608	597	548	596	554
	A8 countries	1,257	1,258	1,205	1,184	1,041	995	986	754	731	632
	All other countries	1,186	1,211	1,221	1,340	1,380	1,437	1,418	1,385	1,553	1,770
	Not stated	0	0	0	0	0	0	0	0	0	0
	<b>All infants</b>	<b>24,277</b>	<b>24,394</b>	<b>24,215</b>	<b>24,076</b>	<b>23,075</b>	<b>22,829</b>	<b>22,447</b>	<b>20,815</b>	<b>22,071</b>	<b>20,837</b>
Place of birth (live births only)	Altnagelvin	2,554	2,695	2,675	2,588	2,528	2,496	2,422	2,333	2,379	2,221
	Antrim	2,638	2,820	2,953	2,970	2,910	2,816	2,933	3,164	2,896	2,877
	Causeway	1,362	1,204	1,086	1,033	943	903	895	532	862	863
	Craigavon	3,993	4,015	4,040	4,150	4,028	3,911	3,876	3,233	3,240	3,096
	Daisy Hill	1,701	1,806	1,794	1,760	1,745	1,624	1,656	1,803	1,956	2,006
	Downe	86	57	81	46	42	30	13	2	2	0
	Lagan Valley	206	178	193	170	107	87	96	75	97	20
	Mater	437	191	196	237	262	291	303	93	0	1
	Royal Victoria	5,927	5,995	5,748	5,630	5,137	5,126	4,861	4,546	5,051	4,551
	SWAH/Erne	1,217	1,233	1,220	1,252	1,233	1,252	1,197	1,136	1,258	1,120
	Ulster	4,036	4,119	4,131	4,140	4,028	4,183	4,059	3,760	4,153	3,895
	Other hospitals	0	1	5	2	3	1	3	2	5	2
	Home	105	67	75	82	89	93	111	117	154	168
	Other locations	15	13	18	16	20	16	22	19	18	17
	<b>All places of birth</b>	<b>24,277</b>	<b>24,394</b>	<b>24,215</b>	<b>24,076</b>	<b>23,075</b>	<b>22,829</b>	<b>22,447</b>	<b>20,815</b>	<b>22,071</b>	<b>20,837</b>

**Table 1.2 continued: Trends in births (live and still) registered in Northern Ireland, 2013 - 2022**

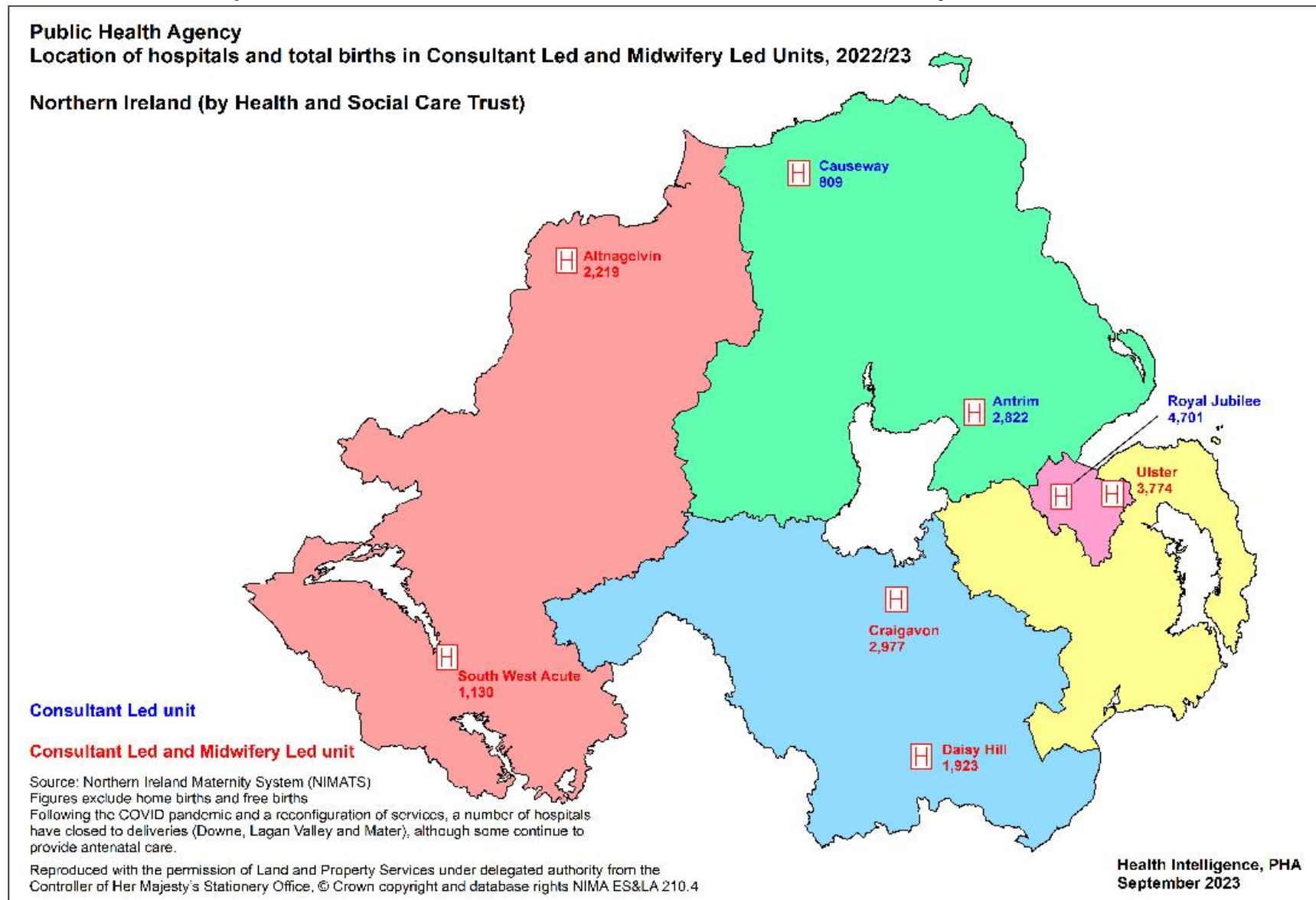
		Year of birth (registered)									
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total resident births (live and still)		<b>24,387</b>	<b>24,475</b>	<b>24,291</b>	<b>24,158</b>	<b>23,177</b>	<b>22,908</b>	<b>22,514</b>	<b>20,884</b>	<b>22,160</b>	<b>20,908</b>
Total resident crude birth rate / 1,000 population		<b>13.3</b>	<b>13.3</b>	<b>13.1</b>	<b>12.9</b>	<b>12.3</b>	<b>12.1</b>	<b>11.9</b>	<b>11.0</b>	<b>11.6</b>	<b>10.9</b>
Local Government District of residence of mother (NI resident mothers only)	Antrim and Newtownabbey	1,744	1,779	1,799	1,767	1,674	1,634	1,670	1,563	1,592	1,525
	Ards and North Down	1,739	1,748	1,756	1,657	1,566	1,537	1,537	1,372	1,486	1,479
	Armagh City, Banbridge and Craigavon	2,884	2,931	2,990	2,947	2,877	2,849	2,751	2,511	2,647	2,694
	Belfast	4,743	4,641	4,601	4,612	4,212	4,277	4,216	3,668	4,185	3,672
	Causeway Coast and Glens	1,771	1,712	1,726	1,663	1,632	1,524	1,514	1,461	1,479	1,440
	Derry City and Strabane	2,066	2,104	2,067	2,009	1,912	1,906	1,872	1,769	1,883	1,717
	Fermanagh and Omagh	1,461	1,513	1,418	1,517	1,508	1,500	1,421	1,338	1,403	1,275
	Lisburn and Castlereagh	1,740	1,757	1,722	1,752	1,727	1,798	1,727	1,659	1,764	1,596
	Mid and East Antrim	1,535	1,596	1,513	1,577	1,522	1,452	1,469	1,377	1,357	1,379
	Mid Ulster	2,219	2,142	2,181	2,155	2,133	2,060	2,092	1,991	2,051	1,960
	Newry, Mourne and Down	2,485	2,552	2,518	2,502	2,414	2,371	2,245	2,175	2,313	2,171
	<b>All infants</b>	<b>24,387</b>	<b>24,475</b>	<b>24,291</b>	<b>24,158</b>	<b>23,177</b>	<b>22,908</b>	<b>22,514</b>	<b>20,884</b>	<b>22,160</b>	<b>20,908</b>
Trust of residence of mother (NI resident mothers only)	Belfast	4,786	4,718	4,665	4,663	4,345	4,435	4,347	3,864	4,339	3,804
	Northern	5,901	5,895	5,776	5,764	5,565	5,308	5,400	5,124	5,189	5,048
	South Eastern	4,374	4,338	4,333	4,249	4,033	4,074	3,911	3,597	3,953	3,708
	Southern	5,384	5,477	5,547	5,527	5,376	5,265	5,159	4,797	5,010	4,954
	Western	3,942	4,047	3,970	3,955	3,858	3,826	3,697	3,502	3,669	3,394
	<b>All infants</b>	<b>24,387</b>	<b>24,475</b>	<b>24,291</b>	<b>24,158</b>	<b>23,177</b>	<b>22,908</b>	<b>22,514</b>	<b>20,884</b>	<b>22,160</b>	<b>20,908</b>

Source: Northern Ireland Statistics and Research Agency <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/births>

A8 countries are the eight central and eastern European countries that joined the EU in May 2004 - Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

**Figure 1.1: Location of hospitals and number of births in Consultant Led Units/Midwifery Led Units, Northern Ireland, 2022/23**



## Projected births

**Table 1.3: Resident registered births by Health Trust and Local Government District, 2020 - 2022 and projected to 2042**

		Registered births			2018 based projections			
No. of resident births		2020	2021	2022	2027/28	2032/33	2037/38	2042/43
Northern Ireland		20,884	22,160	20,908	20,995	20,727	21,341	22,015
Health Trust of residence	Belfast	3,864	4,339	3,804	4,086	4,009	4,104	4,211
	Northern	5,124	5,189	5,048	4,927	4,798	4,876	4,983
	South Eastern	3,597	3,953	3,708	3,765	3,722	3,829	3,957
	Southern	4,797	5,010	4,954	4,915	4,996	5,289	5,573
	Western	3,502	3,669	3,394	3,302	3,202	3,243	3,291
	<b>Northern Ireland</b>	<b>20,884</b>	<b>22,160</b>	<b>20,908</b>	<b>20,995</b>	<b>20,727</b>	<b>21,341</b>	<b>22,015</b>
Local Government District	Antrim and Newtownabbey	1,563	1,592	1,525	1,511	1,478	1,509	1,548
	Ards and North Down	1,372	1,486	1,479	1,429	1,398	1,421	1,447
	Armagh City, Banbridge and Craigavon	2,511	2,647	2,694	2,667	2,708	2,868	3,027
	Belfast	3,668	4,185	3,672	3,961	3,880	3,962	4,047
	Causeway Coast and Glens	1,461	1,479	1,440	1,376	1,305	1,300	1,308
	Derry City and Strabane	1,769	1,883	1,717	1,699	1,639	1,651	1,669
	Fermanagh and Omagh	1,338	1,403	1,275	1,245	1,219	1,245	1,271
	Lisburn and Castlereagh	1,659	1,764	1,596	1,671	1,680	1,765	1,874
	Mid and East Antrim	1,377	1,357	1,379	1,373	1,344	1,363	1,391
	Mid Ulster	1,991	2,051	1,960	1,884	1,895	1,989	2,083
	Newry, Mourne and Down	2,175	2,313	2,171	2,179	2,181	2,268	2,350
	<b>Northern Ireland</b>	<b>20,884</b>	<b>22,160</b>	<b>20,908</b>	<b>20,995</b>	<b>20,727</b>	<b>21,341</b>	<b>22,015</b>

Source:

Northern Ireland Statistics and Research Agency

2018-based Population Projections for Areas within Northern Ireland | Northern Ireland Statistics and Research Agency

<https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/births>

NISRA (Components of Change) <https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/SNPP18-Methodology.pdf>

**Table 1.4: Main providers of delivery services by Local Government District of residence of mother, 2022/23**

Local Government District	Main provider	Second provider	Third provider	All other providers
Antrim and Newtownabbey	Antrim (55.5%)	Royal Victoria (38.5%)	Ulster (4.2%)	1.8%
Ards and North Down	Ulster (94.9%)	Royal Victoria (4.3%)	-	<1%
Armagh City, Banbridge and Craigavon	Craigavon (71.1%)	Daisy Hill (23.3%)	Royal Victoria (3.5%)	2.2%
Belfast	Royal Victoria (76.5%)	Ulster (22.6%)	-	<1%
Causeway Coast and Glens	Causeway (47.6%)	Altnagelvin (28.8%)	Antrim (21.4%)	2.2%
Derry City and Strabane	Altnagelvin (95.5%)	SWAH (3.0%)	-	1.5%
Fermanagh and Omagh	SWAH (80.0%)	Altnagelvin (11.0%)	Craigavon (5.3%)	3.7%
Lisburn and Castlereagh	Ulster (53.9%)	Royal Victoria (36.2%)	Craigavon (7.3%)	2.6%
Mid and East Antrim	Antrim (70.2%)	Royal Victoria (21.2%)	Ulster (4.0%)	4.7%
Mid Ulster	Craigavon (41.6%)	Antrim (36.6%)	Daisy Hill (7.9%)	13.9%
Newry, Mourne and Down	Daisy Hill (56.7%)	Ulster (28.1%)	Craigavon (9.2%)	6.1%

Source: Northern Ireland Maternity System

Data excludes home births and births where mother's Local Government District of residence is unknown

Percentages may not add to 100% due to rounding

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

**Table 1.5: Main providers of delivery services by Trust of residence of mother, 2022/23**

Trust	Main provider	Second provider	Third provider	All other providers
Belfast	Royal Victoria (68.2%)	Ulster (31.0%)	-	<1%
Northern	Antrim (56.6%)	Royal Victoria (18.4%)	Causeway (16.5%)	8.4%
South Eastern	Ulster (67.1%)	Royal Victoria (26.2%)	Craigavon (3.7%)	3.1%
Southern	Craigavon (55.2%)	Daisy Hill (38.4%)	Royal Victoria (3.2%)	3.2%
Western	Altnagelvin (63.5%)	SWAH (31.8%)	Craigavon (2.1%)	2.5%

Source: Northern Ireland Maternity System

Data excludes home births and births where mother's Trust of residence is unknown

Percentages may not add to 100% due to rounding

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

# Section 2: Fertility

## Key Points

- Total Period Fertility Rates (TPFR) show that fertility has not been at replacement level (2.10 children per “average woman”) since 1992. Replacement level is taken to be the level at which the population would replace itself, ignoring migration. In 2022 fertility levels were below replacement level at 1.71 children. [Page 15]
- Of the four regions of the United Kingdom, Northern Ireland had the highest total fertility rate (1.71 in 2022). Scotland had the lowest at 1.28. [Page 14]
- Age specific fertility rates show overall decreases in younger age groups (women aged 15-19, 20-24 and 25-29) in the last twenty years. Increases are noted in older age groups, in particular those women aged 30-34 and 35-39. This shift to women having children later in life is clearly shown in Figure 2.4. [Page 16]
- The teenage fertility rate (less than twenty years old) has been decreasing to 7.8 in 2022. (The lowest number of registered live teenage births on record occurred during 2022, NI = 436). The primary driver in this reduction in births is the decline in the fertility rate in this age group e.g. 25.6 per 1,000 population in 2000 to 7.8 in 2022. [Page 17]

**Table 2.1: United Kingdom/Republic of Ireland fertility rates 1992 - 2022, and projections 2027 – 2042**

Total Fertility Rate												2020 based projections			
	1992	1997	2002	2007	2012	2017	2018	2019	2020	2021	2022	2027/28	2032/33	2037/38	2042/43
Northern Ireland	2.16	1.95	1.81	1.90	2.03	1.85	1.83	1.80	1.68	1.79	1.71	1.68	1.68	1.70	1.73
England	1.79	1.73	1.64	1.88	1.94	1.76	1.70	1.66	1.59	1.55	1.49	1.56	1.56	1.58	1.61
Wales	1.87	1.81	1.64	1.86	1.88	1.69	1.63	1.54	1.47	1.50	1.46	1.44	1.44	1.45	1.46
Scotland	1.67	1.58	1.47	1.70	1.67	1.47	1.42	1.37	1.29	1.30	1.28	1.26	1.26	1.27	1.30
UK	1.79	1.72	1.63	1.87	1.92	1.74	1.68	1.63	1.56	1.53	N/A	1.53	1.54	1.55	1.58
<b>Total Period Fertility Rate</b>															
Republic of Ireland	1.99	1.94	1.98	2.03	1.98	1.77	1.75	1.71	1.63	1.72	1.70	-	-	-	-

Source:

United Kingdom home countries:

Up to 2021: Office for National Statistics (ONS), Vital statistics in the UK: births, deaths and marriages, February 2023

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/vitalstatisticspopulationandhealthreferencetables>

2022 data:

Northern Ireland: NISRA, Registrar General Annual Report 2022 (Births)

<https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/registrars-general-annual-report>

England and Wales: Office for National Statistics, Births in England and Wales, 2022 summary

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/datasets/birthsummarytables>

The Total Fertility Rate (TFR) is the average number of live children that a group of women would bear if they experienced the age-specific fertility rates of the calendar year throughout their childbearing lifespan.

Scotland: National Records of Scotland, Vital Events Reference Tables 2022 <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2022>

The Total Fertility Rate (TFR) is the average number of children per woman that would be born to a cohort of women who experienced, throughout their childbearing years, the fertility rates of the calendar year in question.

Republic of Ireland: Central Statistics Office, Vital Statistics Annual Reports/Yearly Summaries

<http://www.cso.ie/en/statistics/birthsdeathsandmarriages/>

2020 based projections are fertility rates per 1,000 females (principal projection)

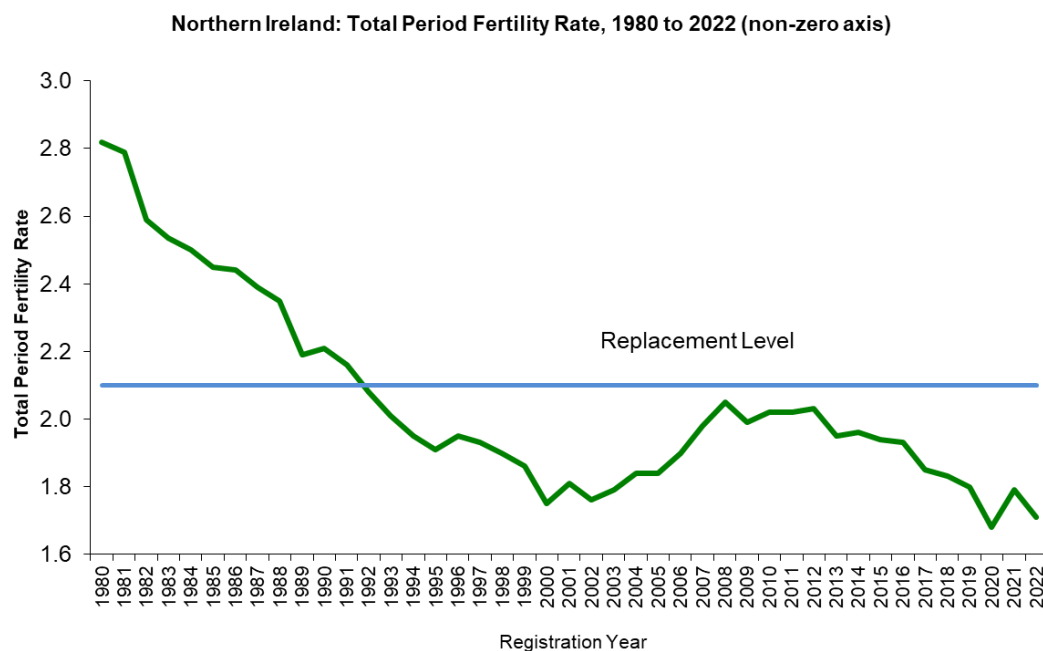
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datalist?filter=datasets>

UK: Total Fertility Rate (TFR) is the average number of live children that a group of women would bear if they experienced the age-specific fertility rates of the calendar year in question throughout their childbearing lifespan

RoI: The Total Period Fertility Rate (TPFR) gives the theoretical average number of children who would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year

RoI projections data not produced in this format

**Figure 2.1: Total Period Fertility Rate (TPFR), Northern Ireland, 1980 – 2022**

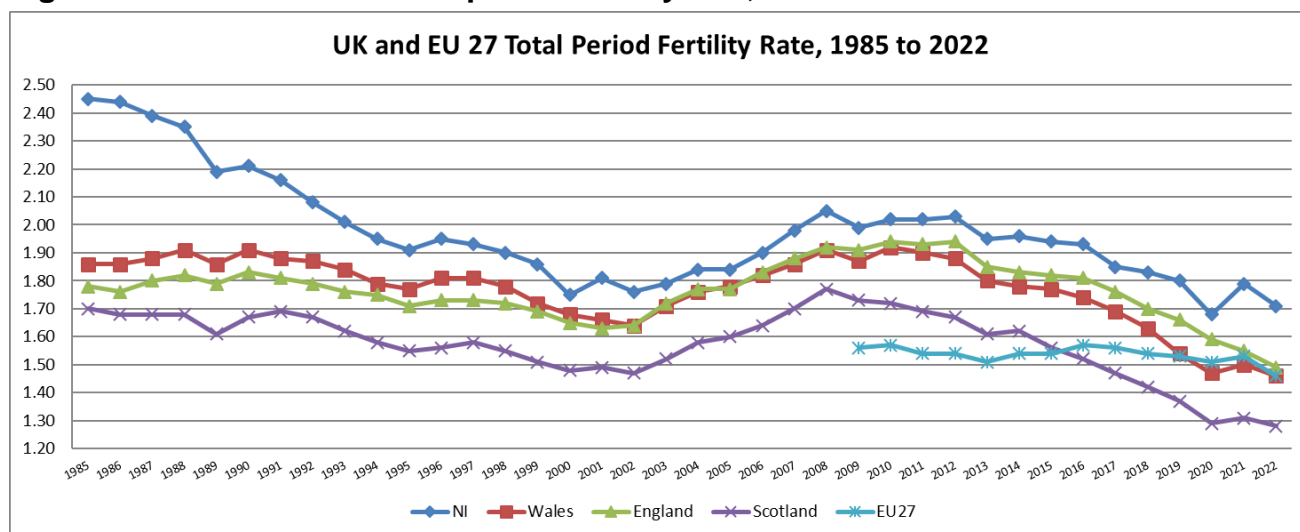


Source: NISRA <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/registrars-general-annual-report>

The line at a TPFR of 2.1 represents the 'replacement level' which is the number of births that are required to maintain a steady Northern Ireland population taking account of this population's mortality rates but ignoring any outside effects of population movement.

Rates for 2015 to 2021 have been revised using rebased population estimates

**Figure 2.2: UK and EU27 total period fertility rate, 1985 to 2022**



Source:

United Kingdom home countries:

Up to 2021: Office for National Statistics (ONS), Vital statistics in the UK: births, deaths and marriages, February 2023

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/vitalstatisticspopulationandhealthreferencetables>

2022 data:

Northern Ireland: NISRA, Registrar General Annual Report 2022 (Births) <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/registrars-general-annual-report>

England and Wales: Office for National Statistics, Births in England and Wales, 2022 summary

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/datasets/birthsummarytables>

The Total Fertility Rate (TFR) is the average number of live children that a group of women would bear if they experienced the age-specific fertility rates of the calendar year throughout their childbearing lifespan.

Scotland: National Records of Scotland, Vital Events Reference Tables 2022 <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2022>

The Total Fertility Rate (TFR) is the average number of children per woman that would be born to a cohort of women who experienced, throughout their childbearing years, the fertility rates of the calendar year in question.

Eurostat (European Commission) - <https://ec.europa.eu/eurostat/web/main/data/database>

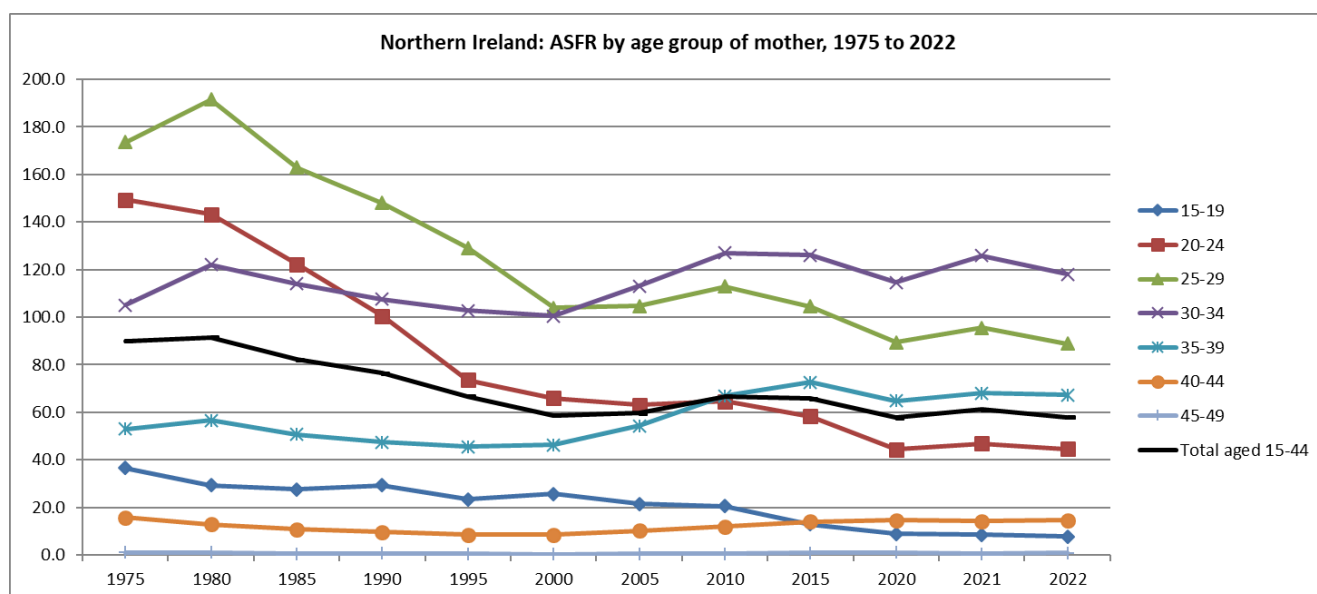
Data for EU27 from 2018 is still provisional

EU 27 refers to the 27 member states of the European Union as at 1 February 2020 (excluding United Kingdom). Data only available from 2009.

Rate refers to the mean number of children that would be born alive to a woman during her lifetime if she were to survive and pass through her childbearing years conforming to the fertility rates by age of a given year.



**Figure 2.3: Age-Specific Fertility Rates by age-group of mother, Northern Ireland, 1975 to 2022**



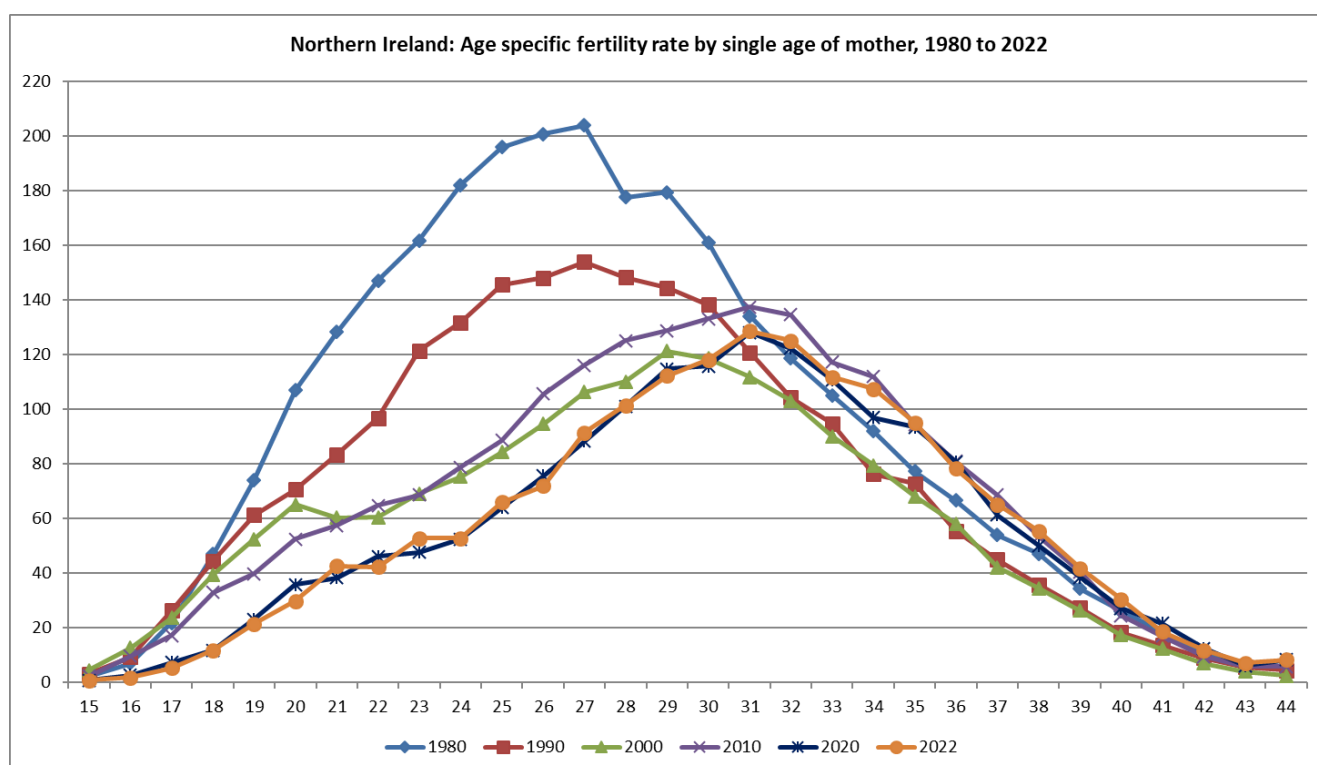
Source: NISRA <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/registrar-general-annual-report>

Age-specific fertility rate is the number of live births occurring to a particular woman of a particular age or age group per year, normally expressed per 1,000 women

Rate for 15-44 includes births for those aged under 15 and over 49

Rates for 2015 to 2021 have been revised using rebased population estimates

**Figure 2.4: Fertility by age of mother 1980 to 2022**



Source: NISRA <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/registrar-general-annual-report>

Age-specific fertility rate is the number of live births occurring to a particular woman of a particular age or age group per year, normally expressed per 1,000 women

Rate for age 15 includes births at younger ages and for age 44 includes births at older ages

Rates for 2020 have been revised using rebased population estimates

**Table 2.2: Age-Specific Fertility Rates by age-group of mother, 1975 to 2022**

Age Group of Mother	Registration Year											
	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2021	2022
15-19	36.5	29.2	27.6	29.2	23.4	25.6	21.5	20.5	12.9	8.8	8.6	7.8
20-24	149.3	143.2	122.3	100.4	73.5	66.0	63.0	64.6	58.4	44.3	46.9	44.5
25-29	173.5	191.6	162.9	148.0	129.1	103.9	104.7	112.8	104.5	89.3	95.6	88.8
30-34	105.1	122.1	114.0	107.6	102.7	100.4	113.1	127.1	126.2	114.6	125.9	118.0
35-39	52.9	56.6	50.7	47.4	45.5	46.2	54.3	66.8	72.6	64.8	68.0	67.3
40-44	15.7	12.9	10.8	9.6	8.4	8.5	10.1	12.0	14.0	14.5	14.1	14.6
45-49	1.0	1.0	0.5	0.6	0.4	0.3	0.5	0.4	0.9	1.0	0.5	0.8
Total aged 15-44	90.0	91.6	82.1	76.5	66.6	58.7	59.6	66.7	65.7	57.7	61.2	57.9

Source: NISRA <https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/registrar-general-annual-report>

Age-specific fertility rate is the number of live births occurring to a particular woman of a particular age or age group per year, normally expressed per 1,000 women

Rate for 15-44 includes births for those aged under 15 and over 49

Rates for 2015 to 2021 have been revised using rebased population estimates

# Section 3: Age Profile of Mother

## TEENAGERS

### Why should we be concerned?

For some young people, teenage parenthood is planned and a positive experience. However, many pregnancies in women aged 16-19 years are unplanned. For example, findings from the National Survey of Sexual Attitudes and Lifestyles (Natsal-3) for Great Britain reported that 11.6% of women aged 16-19 years with a pregnancy in the last year reported that it was planned, 45.2% reported that it was unplanned with 43.2% stating that they were ambivalent.<sup>1</sup> Young people, particularly those under 16, may be considered a group at high-risk for unplanned pregnancy as they are less likely to use or have access to contraceptives or condoms.<sup>2</sup> Those in younger age groups (16-17 years) are also most likely to be using less effective methods to prevent pregnancy.<sup>3</sup>

Unplanned pregnancy has been associated with negative social and psychological consequences for both young parents and their children.<sup>4,5,6,7,8</sup> For young parents these include:

- Poor physical and mental health;
- Poverty - reliance on state benefits or part-time work (if at all), typically lower paid;
- Poorer quality housing;
- Poor educational achievement/career prospects e.g. education may be interrupted as a result of pregnancy or having to withdraw from education completely;
- Social isolation; and
- Further teenage pregnancies i.e. conceiving again relatively quickly.

While the children of teenage parents are at increased risk of:

- Premature birth and low birthweight;
- Stillbirth and infant mortality;
- Hospitalisation for accidental injury;
- Poverty; and
- Poor educational attainment and unemployment in later life.

There is also evidence that the social determinants of health influence adverse adolescent pregnancy outcomes with a 'higher prevalence of poor pregnancy outcomes among socio-economically deprived adolescents compared to their well-off counterparts'.<sup>9</sup> This may contribute to inter-generational inequalities.

In recent years the number of births to teenage mothers in Northern Ireland has declined. In 2022, 436 live births to mothers under 20 years of age were recorded, a 60% decrease from that recorded a decade ago in 2012 (1,100).<sup>10</sup> Health Inequalities and Making Life Better indicators highlight regional improvement in the rates of births to teenage mothers under 20 years and under 17 years respectively.<sup>11,12</sup> However, while data for 2021 shows a narrowing of the inequality gap between the most and least deprived areas, birth rates to mothers under 20 living in the most deprived areas are still more than four and a half times that of those living in the least deprived areas (11.0 vs 2.4 per 1,000).<sup>13</sup>

The 2022 Young Person's Behaviour and Attitudes Survey (YPBAS) found that 4.1% of young people (4.7% boys and 2.3% girls) reported having had sexual intercourse compared to 3.5% in 2019 and 11.7% in 2000.<sup>14</sup> More young

<sup>1</sup> Wellings, Kaye et al. The prevalence of unplanned pregnancy and associated factors in Britain: findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3) The Lancet, 2013 Volume 382, Issue 9907, 1807 – 1816 [http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(13\)62071-1.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(13)62071-1.pdf)

<sup>2</sup> Mason-Jones AJ et al. School-based interventions for preventing HIV, sexually transmitted infections, and pregnancy in adolescents. Cochrane Database of Systematic Reviews 2016, Issue 11. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5461872/pdf/CD006417\\_0001.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5461872/pdf/CD006417_0001.pdf)

<sup>3</sup> French RS et al. Changes in the prevalence and profile of users of contraception in Britain 2000-2010: evidence from two National Surveys of Sexual Attitudes and Lifestyles. BMJ Sex Reprod Health. 2020 Jul;46(3):200-209. <https://srh.bmi.com/content/familyplanning/46/3/200.full.pdf>

<sup>4</sup> Whitaker R et al. Intervention now to eliminate repeat unintended pregnancy in teenagers (INTERUPT): a systematic review of intervention effectiveness and cost-effectiveness, and qualitative and realist synthesis of implementation factors and user engagement. Health Technology Assessment 2016;20(16) <https://njl-admin.nihr.ac.uk/document/download/2003397>

<sup>5</sup> Public Health England (PHE). A framework for supporting teenage mothers and young fathers. London: PHE, 2019.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/796582/PHE\\_Young\\_Parents\\_Support\\_Framework\\_April2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/796582/PHE_Young_Parents_Support_Framework_April2019.pdf)

<sup>6</sup> Department for Children, Schools and Families (DCSF). Teenage parents: who cares? A guide to commissioning and delivering maternity services for young parents. Nottingham: DCSF, 2008. <http://webarchive.nationalarchives.gov.uk/20130102182314/http://www.education.gov.uk/publications/eOrderingDownload/Teenage%20parents.pdf>

<sup>7</sup> Oringanje C et al. Interventions for preventing unintended pregnancies among adolescents. Cochrane Database of Systematic Reviews 2016, Issue 2.

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD005215.pub3/epdf/full>

<sup>8</sup> Nelson HD et al. Associations of unintended pregnancy with maternal and infant health outcomes: a systematic review and meta-analysis. JAMA. 2022 Nov 1;328(17):1714-1729. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9627416/>

<sup>9</sup> Amjad S et al. Social determinants of health and adverse maternal and birth outcomes in adolescent pregnancies: A systematic review and meta-analysis. Paediatr Perinat Epidemiol. 2019 Jan;33(1):88-99.

<sup>10</sup> Northern Ireland Statistics and Research Agency (NISRA). Registrar General Annual Report 2022. Belfast: NISRA, 2023.

<https://www.nisra.gov.uk/publications/registrar-general-annual-report-2022-births>

<sup>11</sup> Information Analysis Directorate. Health inequalities annual report 2023. Belfast: Department of Health, 2023.

<https://www.health-ni.gov.uk/sites/default/files/publications/health/hscims-report-2023.pdf>

<sup>12</sup> Making life better - key indicators progress update 2023. <https://www.health-ni.gov.uk/publications/making-life-better-key-indicators-progress-update-2023>

<sup>13</sup> Information Analysis Directorate. Health inequalities annual report 2023. Belfast: Department of Health, 2023.

<https://www.health-ni.gov.uk/sites/default/files/publications/health/hscims-report-2023.pdf>

<sup>14</sup> Department of Health. Young Persons' Behaviour and Attitudes Survey 2022. Belfast: Northern Ireland Statistics and Research Agency (NISRA), 2022. <https://www.health-ni.gov.uk/sites/default/files/publications/health/tables-22-ypbas-sh.xlsx>

people in the oldest year group (Year 12) and living in the most deprived areas reported having had sexual intercourse (11.3% and 5.8% respectively). More than three quarters (78.7%) of young people who reported having had sexual intercourse had used contraception; most commonly, condoms (64%) followed by both a condom and the pill (26.3%), the pill (6.2%) and some other contraceptive (3.5%). However, when asked if they would find it easy to get contraceptives more than half (58.0%; 52.7% boys, 63.6% girls) of the young people from Years 11 and 12 said "No" or "Don't know".

Research suggests that receiving sex education mainly from a school-based source is associated with reduced likelihood of unplanned pregnancy and conceptions in young women under 18 years.<sup>15</sup> Relationships and Sexuality Education (RSE) is a statutory component of the primary and post primary curriculum for schools in Northern Ireland.<sup>16,17</sup> In 2022, young people in Years 11 and 12 most commonly reported learning about sexual matters and relationships from lessons at school (56.4%).<sup>18</sup> Young people also reported learning about sexual matters and relationships from visitors at school (29.1%). However, while around one in ten (11.1%) young people said the RSE they had been taught in school was 'Very useful', more than two thirds (66.5%) reported it was 'A little useful' (47.1%) or 'Not at all useful' (19.5%), while more than one fifth (22.3%) said they had not been taught RSE at school.

Following lessons at school, young people most commonly report learning about sexual matters and relationships from mother/female guardian (45.0%; girls 56.1%, boys 34.2%) and friends (44.4%; girls, 50.2%, boys 38.6%). However, while parents are a source of learning for young people, some report finding it 'difficult' or 'don't discuss' sexual matters with their mother (10.5%, 44.7%) or father (15.1%, 54.3%).

### What can be done?

Building on progress from the Sexual Health Promotion and Action Plan 2008-2013 and the subsequent addendum, a new Sexual Health Action Plan for 2023-2026 was published by the Department of Health in December 2023.<sup>19</sup> The action plan includes seven Strategic Objectives and priorities, including those to support young people develop safe, healthy relationships and prevent unintended pregnancy, for example:

- Strategic Objective 3: Support choice over reproductive health and minimise the number of unintended pregnancies, with particular attention on teenage pregnancy.
- Strategic Objective 5: Create a culture of openness about sexual and reproductive health and empower people with the information they need to make informed choices.

## OLDER MOTHERS

### Why should we be concerned?

Fertility rates in Northern Ireland show that women are postponing having children until later in life (Sections 2 and 3). This is likely due to advances in assisted conception technologies e.g. IVF allowing older women to conceive, improvements in women's educational/professional outlook and the availability of contraception.

However, pregnancies in older women can be complicated by:

- Greater risk of problems in pregnancy e.g. diabetes, hypertension, pre-eclampsia
- General age-related health conditions affecting pregnancy e.g. diabetes, obesity
- Higher rate of multiple births

The health conditions above can cause other problems:

- Risk of miscarriage or stillbirth
- Risk of having a premature birth
- Infant born with a low birthweight
- Increased risk of complications during labour/delivery e.g. needing to deliver by Caesarean Section
- Birth defects in infants.

### What can be done?

The Royal College of Obstetricians and Gynaecologists<sup>20</sup> suggest that women be advised of the increased risk of delaying pregnancy, whether that be the possible complications to mother and infant or increased infertility in older women.

<sup>15</sup> Wellings K et al. Changes in conceptions in women younger than 18 years and the circumstances of young mothers in England in 2000–12: an observational study. The Lancet 2016, Volume 388, Issue 10044, 586 – 595. [http://thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(16\)30449-4.pdf](http://thelancet.com/pdfs/journals/lancet/PIIS0140-6736(16)30449-4.pdf)

<sup>16</sup> Department of Health. Relationship and Sexuality Education (RSE) <https://www.education-ni.gov.uk/articles/relationship-and-sexuality-education-rse>

<sup>17</sup> Council for the Curriculum, Examinations and Assessments (CCEA) <https://ccea.org.uk/learning-resources/relationships-and-sexuality-education-rse>

<sup>18</sup> Department of Health. Young Persons' Behaviour and Attitudes Survey 2022. Belfast: Northern Ireland Statistics and Research Agency (NISRA), 2022. <https://www.health-ni.gov.uk/sites/default/files/publications/health/tables-22-vpbas-sh.xlsx>

<sup>19</sup> Department of Health (DoH). Sexual Health Action Plan (2023 – 2026). Belfast: DoH, 2023. <https://www.health-ni.gov.uk/articles/sexual-health-promotion>

<sup>20</sup> Royal College of Obstetricians and Gynaecologists, "Reproductive Ageing" (Scientific Impact Paper No. 24 January 2011, updated March 2022)

[https://www.rcog.org.uk/globalassets/documents/guidelines/scientific-impact-papers/sip\\_24.pdf](https://www.rcog.org.uk/globalassets/documents/guidelines/scientific-impact-papers/sip_24.pdf)

## Key Points

- In 2022/23, births to teenage mothers represented 2.1% of all births. [Page 20]
- Following a year on year increase in the proportion of births to older mothers (aged 40+), the percentage decreased slightly in 2016/17 and 2017/18, with small increases again since 2018/19. In 2022/23, 4.7% of all births were to older mothers. [Page 20]
- Based on 2017 NI deprivation measures, the proportion of births to teenage mothers ranged from 3.9% in the most deprived areas (2021/22 = 3.7%, 2020/21 = 4.7%, 2019/20 = 5.2%) to 0.8% in the least deprived (2021/22 = 0.8%, 2020/21 = 0.8%, 2019/20 = 1.1%). The opposite can be seen in the proportion of births to older mothers (40+), increasing from 3.9% in the most deprived areas (2021/22 = 3.4%, 2020/21 = 3.8%, 2019/20 = 3.3%) to 5.7% in the least deprived areas (2021/22 = 6.2%, 2020/21 = 5.0%, 2019/20 = 6.3%). [Page 23]
- Data for 2020/21–2022/23, at District Electoral Area level, revealed that Court DEA (Belfast LGD) had the highest proportion of teenage mothers (5.5%). Lisnasharragh DEA (Belfast LGD) had the highest proportion of older mothers (aged 40+) (9.8%).  
*Note that when providing data at this geographic level, numbers of births can be small and so caution is advised.* [Page 24]

**Table 3.1: Births to Northern Ireland residents, by age of mother, 2010/11 – 2022/23**

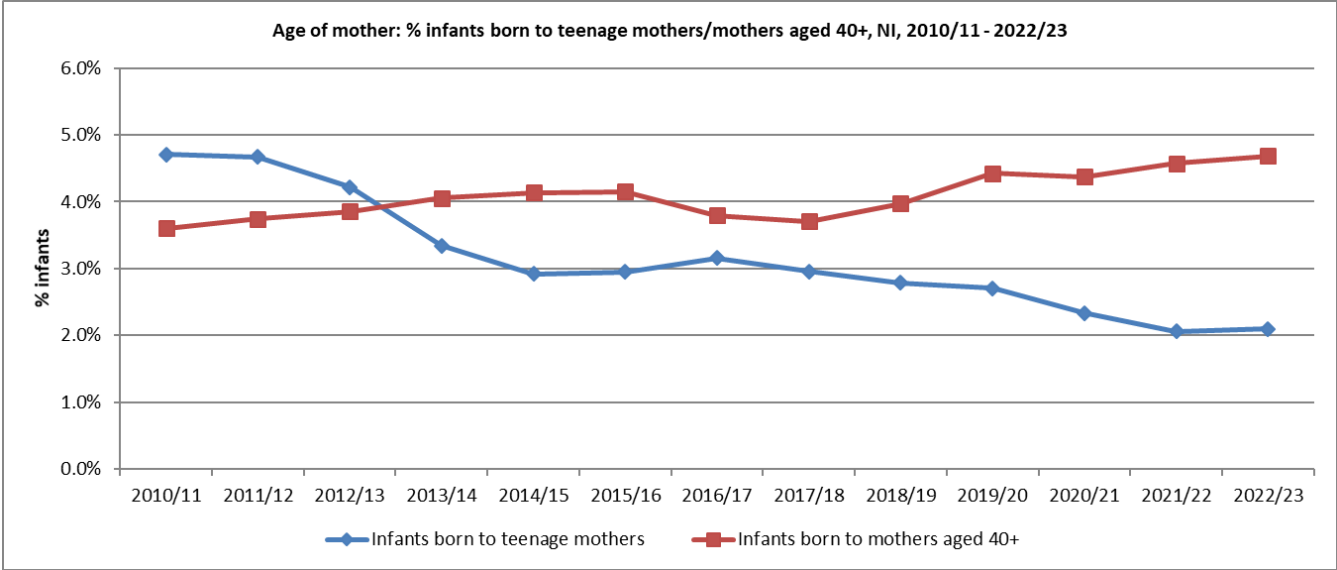
Year of birth		Infants born by age of mother								Total	Infants born to teenage mothers
		≤ 17	18-19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	Not known		
2010/11	n	343	864	4,103	7,177	7,902	4,308	923	39	25,659	1,207
	%	1.3%	3.4%	16.0%	28.0%	30.8%	16.8%	3.6%	-	-	4.7%
2011/12	n	318	863	4,098	7,196	7,706	4,172	947	9	25,309	1,181
	%	1.3%	3.4%	16.2%	28.4%	30.5%	16.5%	3.7%	-	-	4.7%
2012/13	n	263	793	3,737	6,891	8,211	4,164	965	4	25,028	1,056
	%	1.1%	3.2%	14.9%	27.5%	32.8%	16.6%	3.9%	-	-	4.2%
2013/14	n	187	624	3,466	6,780	7,955	4,280	984	1	24,277	811
	%	0.8%	2.6%	14.3%	27.9%	32.8%	17.6%	4.1%	-	-	3.3%
2014/15	n	170	542	3,441	6,619	8,220	4,396	1,009	3	24,400	712
	%	0.7%	2.2%	14.1%	27.1%	33.7%	18.0%	4.1%	-	-	2.9%
2015/16	n	165	555	3,305	6,605	8,160	4,629	1,015	2	24,436	720
	%	0.7%	2.3%	13.5%	27.0%	33.4%	18.9%	4.2%	-	-	2.9%
2016/17	n	174	586	3,060	6,584	8,267	4,492	914	2	24,079	760
	%	0.7%	2.4%	12.7%	27.3%	34.3%	18.7%	3.8%	-	-	3.2%
2017/18	n	157	523	2,835	6,274	7,963	4,395	853	4	23,004	680
	%	0.7%	2.3%	12.3%	27.3%	34.6%	19.1%	3.7%	-	-	3.0%
2018/19	n	141	498	2,879	6,062	8,002	4,420	910	3	22,915	639
	%	0.6%	2.2%	12.6%	26.5%	34.9%	19.3%	4.0%	-	-	2.8%
2019/20	n	148	456	2,759	5,705	7,848	4,450	990	6	22,362	604
	%	0.7%	2.0%	12.3%	25.5%	35.1%	19.9%	4.4%	-	-	2.7%
2020/21	n	113	384	2,443	5,479	7,686	4,283	933	2	21,323	497
	%	0.5%	1.8%	11.5%	25.7%	36.0%	20.1%	4.4%	-	-	2.3%
2021/22	n	112	337	2,420	5,385	7,940	4,590	996	2	21,782	449
	%	0.5%	1.5%	11.1%	24.7%	36.5%	21.1%	4.6%	-	-	2.1%
2022/23	n	88	340	2,236	4,972	7,472	4,319	955	2	20,384	428
	%	0.4%	1.7%	11.0%	24.4%	36.7%	21.2%	4.7%	-	-	2.1%

Source: Child Health System

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

Teenage refers to those aged less than twenty years

**Figure 3.1: % infants born to teenage/older mothers, Northern Ireland, 2010/11 – 2022/23**



Source: Child Health System  
Teenage refers to those aged less than twenty years

**Table 3.2: Births to Northern Ireland residents, by age of mother, 2022/23**

		Infants born by age of mother									% infants born to teenage mothers	% infants born to mothers aged 40+
		≤ 17	18-19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	Not known	Total		
Multiple births	Single	88	330	2,191	4,816	7,287	4,133	915	2	19,762	2.1%	4.6%
	Multiple	0	10	45	156	185	186	40	0	622	1.6%	6.4%
	<b>All infants</b>	<b>88</b>	<b>340</b>	<b>2,236</b>	<b>4,972</b>	<b>7,472</b>	<b>4,319</b>	<b>955</b>	<b>2</b>	<b>20,384</b>	<b>2.1%</b>	<b>4.7%</b>
First time mothers	First time mother	83	305	1,416	2,456	2,652	939	225	0	8,076	4.8%	2.8%
	Not a first time mother	<5	<40	814	2,506	4,811	3,372	730	0	12,271	<2.1%	5.9%
	Not known	<5	<5	6	10	9	8	0	2	37	>2.1%	0.0%
	<b>All infants</b>	<b>88</b>	<b>340</b>	<b>2,236</b>	<b>4,972</b>	<b>7,472</b>	<b>4,319</b>	<b>955</b>	<b>2</b>	<b>20,384</b>	<b>2.1%</b>	<b>4.7%</b>
Ethnic group of mother (NIMATS)	White	82	314	2,119	4,662	7,015	4,089	894	0	19,175	2.1%	4.7%
	Non-white	6	25	100	284	439	246	70	0	1,170	2.6%	6.0%
	Not stated / Blank	0	0	4	5	15	2	5	0	31	0.0%	16.1%
	<b>All infants</b>	<b>88</b>	<b>339</b>	<b>2,223</b>	<b>4,951</b>	<b>7,469</b>	<b>4,337</b>	<b>969</b>	<b>0</b>	<b>20,376</b>	<b>2.1%</b>	<b>4.8%</b>
Ethnic group of infant	White	74	306	2,077	4,621	6,950	4,020	870	0	18,918	2.0%	4.6%
	Non-white	10	33	154	345	510	290	82	0	1,424	3.0%	5.8%
	Not stated / Blank	4	1	5	6	12	9	3	2	42	12.5%	7.5%
	<b>All infants</b>	<b>88</b>	<b>340</b>	<b>2,236</b>	<b>4,972</b>	<b>7,472</b>	<b>4,319</b>	<b>955</b>	<b>2</b>	<b>20,384</b>	<b>2.1%</b>	<b>4.7%</b>
Place of birth	Altnagelvin	6	30	265	576	759	443	108	0	2,187	1.6%	4.9%
	Antrim	12	51	287	748	1,043	569	111	0	2,821	2.2%	3.9%
	Causeway	<5	<20	112	213	293	138	33	0	807	>2.1%	4.1%
	Craigavon	7	40	276	747	1,109	666	150	0	2,995	1.6%	5.0%
	Daisy Hill	<5	<20	175	422	775	447	89	0	1,927	<2.1%	4.6%
	Royal Victoria	36	116	640	1,153	1,575	942	234	0	4,696	3.2%	5.0%
	SWAH	<5	<20	99	256	433	269	47	0	1,118	<2.1%	4.2%
	Ulster	18	61	377	845	1,472	832	179	0	3,784	2.1%	4.7%
	Home	0	0	<5	5	<20	8	<5	0	29	0.0%	>4.7%
	Freebirth/Other location	0	0	<5	7	<5	5	<5	2	20	0.0%	<4.7%
	<b>All infants</b>	<b>88</b>	<b>340</b>	<b>2,236</b>	<b>4,972</b>	<b>7,472</b>	<b>4,319</b>	<b>955</b>	<b>2</b>	<b>20,384</b>	<b>2.1%</b>	<b>4.7%</b>



**Table 3.2 continued: Births to Northern Ireland residents, by age of mother, 2022/23**

		Infants born by age of mother									% infants born to teenage mothers	% infants born to mothers aged 40+
		≤ 17	18-19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	Not known	Total		
Trust of residence of mother	Belfast	35	102	501	856	1,339	821	203	1	<b>3,858</b>	3.6%	5.3%
	Northern	17	83	533	1,285	1,820	966	205	0	<b>4,909</b>	2.0%	4.2%
	South Eastern	17	61	401	848	1,342	755	153	0	<b>3,577</b>	2.2%	4.3%
	Southern	11	55	435	1,150	1,777	1,047	235	0	<b>4,710</b>	1.4%	5.0%
	Western	8	39	366	833	1,194	730	159	1	<b>3,330</b>	1.4%	4.8%
	<b>All infants</b>	<b>88</b>	<b>340</b>	<b>2,236</b>	<b>4,972</b>	<b>7,472</b>	<b>4,319</b>	<b>955</b>	<b>2</b>	<b>20,384</b>	<b>2.1%</b>	<b>4.7%</b>
Local Government District	Antrim and Newtownabbey	6	25	154	375	567	297	60	0	<b>1,484</b>	2.1%	4.0%
	Ards and North Down	10	28	133	362	522	292	62	0	<b>1,409</b>	2.7%	4.4%
	Armagh City, Banbridge and Craigavon	6	31	260	668	932	492	124	0	<b>2,513</b>	1.5%	4.9%
	Belfast	36	108	541	846	1,235	755	198	1	<b>3,720</b>	3.9%	5.3%
	Causeway Coast and Glens	<5	<25	146	367	487	258	60	0	<b>1,343</b>	<2.1%	4.5%
	Derry City and Strabane	<5	<25	221	460	565	342	82	1	<b>1,697</b>	<2.1%	4.8%
	Fermanagh and Omagh	<5	<15	102	276	485	314	66	0	<b>1,257</b>	<2.1%	5.3%
	Lisburn and Castlereagh	<5	<25	132	333	635	391	61	0	<b>1,576</b>	<2.1%	3.9%
	Mid and East Antrim	7	31	175	380	486	247	52	0	<b>1,378</b>	2.8%	3.8%
	Mid Ulster	<5	<30	154	457	748	453	86	0	<b>1,926</b>	<2.1%	4.5%
	Newry, Mourne and Down	5	18	218	448	810	478	104	0	<b>2,081</b>	1.1%	5.0%
	<b>All infants</b>	<b>88</b>	<b>340</b>	<b>2,236</b>	<b>4,972</b>	<b>7,472</b>	<b>4,319</b>	<b>955</b>	<b>2</b>	<b>20,384</b>	<b>2.1%</b>	<b>4.7%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	40	127	758	1,184	1,300	707	169	1	<b>4,286</b>	3.9%	3.9%
	2	12	83	539	1,082	1,485	857	173	0	<b>4,231</b>	2.2%	4.1%
	3	15	66	450	1,081	1,625	878	206	0	<b>4,321</b>	1.9%	4.8%
	4	12	46	311	941	1,544	929	206	0	<b>3,989</b>	1.5%	5.2%
	Least deprived	9	18	178	684	1,518	948	201	1	<b>3,557</b>	0.8%	5.7%
	<b>All infants</b>	<b>88</b>	<b>340</b>	<b>2,236</b>	<b>4,972</b>	<b>7,472</b>	<b>4,319</b>	<b>955</b>	<b>2</b>	<b>20,384</b>	<b>2.1%</b>	<b>4.7%</b>

Source: Child Health System and Northern Ireland Maternity System (ethnic group of mother)

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017 <https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Teenage refers to those aged less than twenty years

Due to small numbers, it is not possible to show data by individual ethnic group

Disclosure controls have been applied to this table. As a result, for some places of birth and Local Government Districts, it is not possible to show the exact percentage values in the final two columns and so a comparison to the Northern Ireland value has been provided

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

**Table 3.3: Births to Northern Ireland residents, by age of mother, District Electoral Area, 2020/21 to 2022/23**

Local Government District	District Electoral Area	Infants born by age of mother								% infants born to teenage mothers	% infants born to mothers aged 40+	Total births (all ages), by year		
		<20	20 - 24	25 - 29	30 - 34	35 - 39	40 +	Not known	Total			2020/21	2021/22	2022/23
Antrim and Newtownabbey	Airport	9	55	182	274	168	37	0	725	1.2%	5.1%	267	239	219
	Antrim	25	117	253	275	132	30	0	832	3.0%	3.6%	263	291	278
	Ballyclare	<10	65	176	243	109	<20	0	618	<2.2%	<4.0%	207	196	215
	Dunsilly	<5	44	124	256	132	<25	0	583	<2.2%	>4.0%	203	193	187
	Glengormley Urban	16	66	153	236	149	29	0	649	2.5%	4.5%	213	241	195
	Macedon	27	100	191	200	93	25	0	636	4.2%	3.9%	227	197	212
	Three Mile Water	15	66	152	223	103	22	0	581	2.6%	3.8%	202	201	178
	<b>Total</b>	<b>102</b>	<b>513</b>	<b>1,231</b>	<b>1,707</b>	<b>886</b>	<b>185</b>	<b>0</b>	<b>4,624</b>	<b>2.2%</b>	<b>4.0%</b>	<b>1,582</b>	<b>1,558</b>	<b>1,484</b>
Ards and North Down	Ards Peninsula	11	73	177	220	130	29	0	640	1.7%	4.5%	200	236	204
	Bangor Central	25	80	193	272	144	26	0	740	3.4%	3.5%	270	244	226
	Bangor East and Donaghadee	<10	<35	116	195	101	18	0	472	<2.5%	3.8%	155	170	147
	Bangor West	14	56	125	203	122	28	0	548	2.6%	5.1%	169	188	191
	Comber	16	48	133	239	108	22	0	566	2.8%	3.9%	180	195	191
	Hollywood and Clandeboyne	<5	<25	82	208	121	35	0	470	<2.5%	7.4%	158	150	162
	Newtownards	30	135	254	290	159	28	0	896	3.3%	3.1%	285	323	288
	<b>Total</b>	<b>109</b>	<b>445</b>	<b>1,080</b>	<b>1,627</b>	<b>885</b>	<b>186</b>	<b>0</b>	<b>4,332</b>	<b>2.5%</b>	<b>4.3%</b>	<b>1,417</b>	<b>1,506</b>	<b>1,409</b>
Armagh, Banbridge and Craigavon	Armagh	25	122	310	415	259	58	0	1,189	2.1%	4.9%	388	426	375
	Banbridge	21	77	278	436	242	54	1	1,109	1.9%	4.9%	356	392	361
	Craigavon	19	125	299	391	174	49	1	1,058	1.8%	4.6%	347	366	345
	Cusher	<15	91	265	381	193	<35	0	973	<1.7%	<4.2%	337	315	321
	Lagan River	<5	55	247	318	181	<30	0	834	<1.7%	<4.2%	270	293	271
	Lurgan	35	208	388	538	256	55	0	1,480	2.4%	3.7%	469	556	455
	Portadown	20	144	327	414	205	55	0	1,165	1.7%	4.7%	379	401	385
	<b>Total</b>	<b>136</b>	<b>822</b>	<b>2,114</b>	<b>2,893</b>	<b>1,510</b>	<b>331</b>	<b>2</b>	<b>7,808</b>	<b>1.7%</b>	<b>4.2%</b>	<b>2,546</b>	<b>2,749</b>	<b>2,513</b>

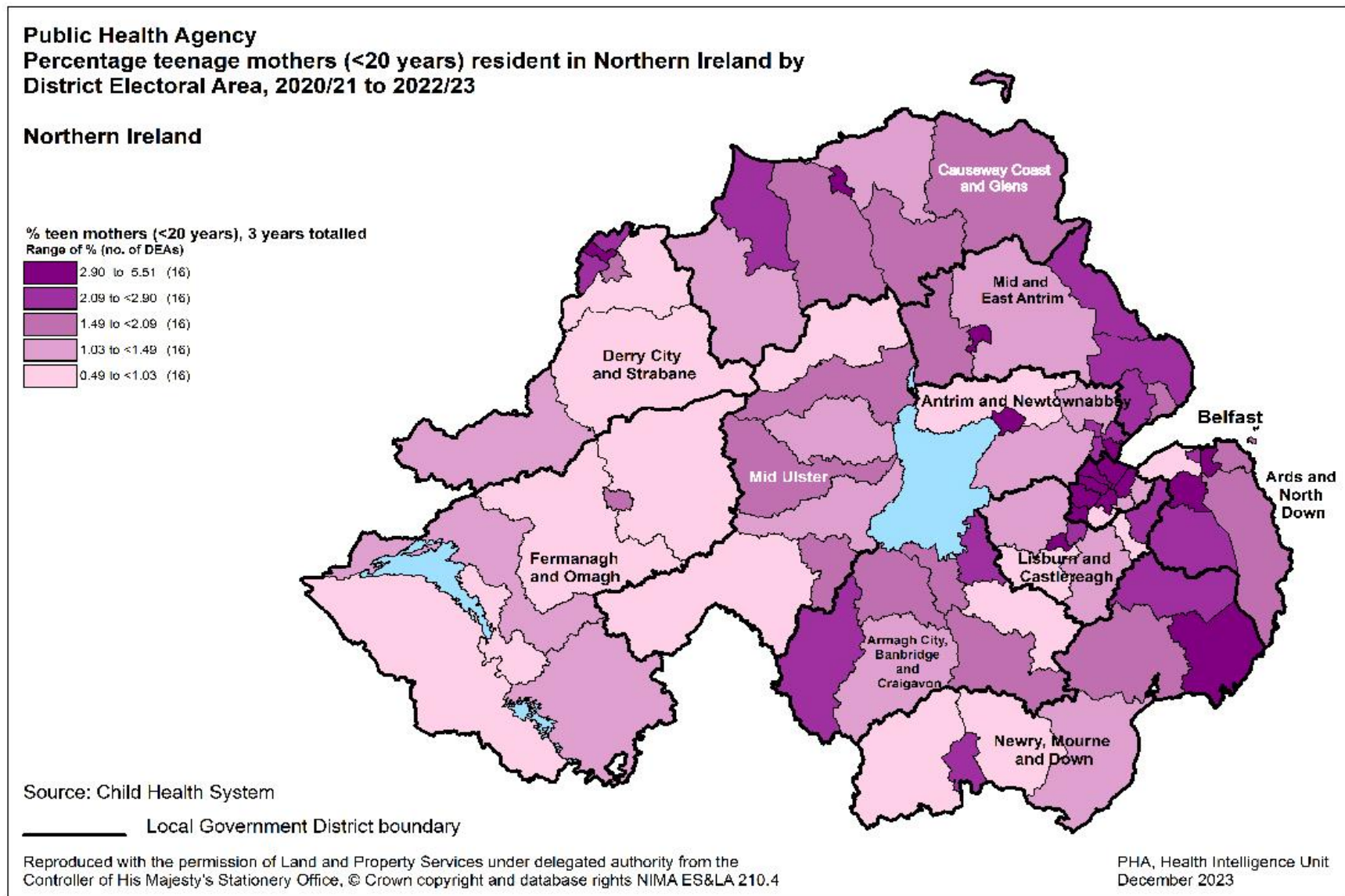
Local Government District	District Electoral Area	Infants born by age of mother								% infants born to teenage mothers	% infants born to mothers aged 40+	Total births (all ages), by year		
		<20	20 - 24	25 - 29	30 - 34	35 - 39	40 +	Not known	Total			2020/21	2021/22	2022/23
Belfast	Balmoral	6	44	114	276	207	58	1	706	0.9%	8.2%	247	227	232
	Black Mountain	50	250	356	453	244	49	0	1,402	3.6%	3.5%	509	471	422
	Botanic	48	148	271	380	267	66	0	1,180	4.1%	5.6%	379	381	420
	Castle	39	146	246	307	243	55	0	1,036	3.8%	5.3%	363	357	316
	Collin	56	225	299	454	239	47	0	1,320	4.2%	3.6%	465	428	427
	Court	74	288	425	361	166	32	0	1,346	5.5%	2.4%	457	455	434
	Lisnasharragh	9	57	140	331	259	86	1	883	1.0%	9.8%	325	284	274
	Oldpark	78	284	429	408	168	55	0	1,422	5.5%	3.9%	495	483	444
	Ormiston	14	60	154	441	291	71	0	1,031	1.4%	6.9%	369	317	345
	Titanic	49	231	303	419	227	52	0	1,281	3.8%	4.1%	414	461	406
	<b>Total</b>	<b>423</b>	<b>1,733</b>	<b>2,737</b>	<b>3,830</b>	<b>2,311</b>	<b>571</b>	<b>2</b>	<b>11,607</b>	<b>3.6%</b>	<b>4.9%</b>	<b>4,023</b>	<b>3,864</b>	<b>3,720</b>
Causeway Coast and Glens	Ballymoney	12	100	240	273	149	35	0	809	1.5%	4.3%	294	288	227
	Bann	10	55	120	212	119	29	0	545	1.8%	5.3%	186	180	179
	Benbradagh	7	70	185	259	125	28	0	674	1.0%	4.2%	243	214	217
	Causeway	8	59	140	188	122	35	0	552	1.4%	6.3%	181	208	163
	Coleraine	31	117	215	201	95	18	0	677	4.6%	2.7%	238	234	205
	Limavady	11	50	140	172	86	17	0	476	2.3%	3.6%	139	179	158
	The Glens	11	63	136	211	122	26	0	569	1.9%	4.6%	193	182	194
	<b>Total</b>	<b>90</b>	<b>514</b>	<b>1,176</b>	<b>1,516</b>	<b>818</b>	<b>188</b>	<b>0</b>	<b>4,302</b>	<b>2.1%</b>	<b>4.4%</b>	<b>1,474</b>	<b>1,485</b>	<b>1,343</b>
Derry City and Strabane	Ballyarnett	25	153	278	330	153	43	0	982	2.5%	4.4%	335	337	310
	Derg	<10	78	190	224	125	<30	0	650	<1.7%	<4.6%	221	229	200
	Faughan	<5	69	168	214	137	<35	0	625	<1.7%	>4.6%	210	215	200
	Foyleside	19	115	144	198	122	28	0	626	3.0%	4.5%	210	214	202
	Sperrin	6	103	251	287	193	46	0	886	0.7%	5.2%	318	300	268
	The Moor	14	117	179	179	79	22	1	591	2.4%	3.7%	198	206	187
	Waterside	19	112	264	388	199	51	0	1,033	1.8%	4.9%	363	340	330
	<b>Total</b>	<b>94</b>	<b>747</b>	<b>1,474</b>	<b>1,820</b>	<b>1,008</b>	<b>249</b>	<b>1</b>	<b>5,393</b>	<b>1.7%</b>	<b>4.6%</b>	<b>1,855</b>	<b>1,841</b>	<b>1,697</b>
Fermanagh and Omagh	Enniskillen	3	56	122	191	132	22	0	526	0.6%	4.2%	169	182	175
	Erne East	8	50	106	214	137	32	0	547	1.5%	5.9%	189	188	170
	Erne North	<10	46	155	186	119	<20	0	529	<1.1%	<5.7%	182	172	175
	Erne West	<5	22	70	185	175	<40	1	493	<1.1%	>5.7%	180	170	143
	Mid Tyrone	6	39	140	238	208	47	1	679	0.9%	6.9%	238	235	206
	Omagh	11	74	138	221	135	32	0	611	1.8%	5.2%	206	213	192
	West Tyrone	5	31	129	255	144	42	0	606	0.8%	6.9%	219	191	196
	<b>Total</b>	<b>43</b>	<b>318</b>	<b>860</b>	<b>1,490</b>	<b>1,050</b>	<b>228</b>	<b>2</b>	<b>3,991</b>	<b>1.1%</b>	<b>5.7%</b>	<b>1,383</b>	<b>1,351</b>	<b>1,257</b>

Local Government District	District Electoral Area	Infants born by age of mother								% infants born to teenage mothers	% infants born to mothers aged 40+	Total births (all ages), by year		
		<20	20 - 24	25 - 29	30 - 34	35 - 39	40 +	Not known	Total			2020/21	2021/22	2022/23
Lisburn and Castlereagh	Castlereagh East	17	67	210	302	157	31	0	784	2.2%	4.0%	276	255	253
	Castlereagh South	<10	<25	101	357	257	39	0	781	<1.7%	5.0%	280	260	241
	Downshire East	6	34	105	188	119	32	0	484	1.2%	6.6%	161	172	151
	Downshire West	<5	<35	107	254	133	31	0	561	<1.7%	5.5%	179	181	201
	Killultagh	9	32	188	295	187	32	0	743	1.2%	4.3%	221	299	223
	Lisburn North	16	86	201	283	167	22	0	775	2.1%	2.8%	274	265	236
	Lisburn South	27	113	208	246	157	24	0	775	3.5%	3.1%	236	268	271
	<b>Total</b>	<b>84</b>	<b>386</b>	<b>1,120</b>	<b>1,925</b>	<b>1,177</b>	<b>211</b>	<b>0</b>	<b>4,903</b>	<b>1.7%</b>	<b>4.3%</b>	<b>1,627</b>	<b>1,700</b>	<b>1,576</b>
Mid and East Antrim	Ballymena	40	136	187	259	111	23	0	756	5.3%	3.0%	237	264	255
	Bannside	10	53	180	252	136	27	0	658	1.5%	4.1%	242	208	208
	Braid	8	93	233	293	123	24	0	774	1.0%	3.1%	259	265	250
	Carrick Castle	9	53	133	179	78	17	0	469	1.9%	3.6%	153	154	162
	Coast Road	14	66	142	152	81	12	0	467	3.0%	2.6%	154	155	158
	Knockagh	14	62	133	187	81	25	0	502	2.8%	5.0%	143	166	193
	Larne Lough	13	52	140	172	89	26	0	492	2.6%	5.3%	185	155	152
	<b>Total</b>	<b>108</b>	<b>515</b>	<b>1,148</b>	<b>1,494</b>	<b>699</b>	<b>154</b>	<b>0</b>	<b>4,118</b>	<b>2.6%</b>	<b>3.7%</b>	<b>1,373</b>	<b>1,367</b>	<b>1,378</b>
Mid Ulster	Carntogher	6	56	161	249	159	36	0	667	0.9%	5.4%	235	233	199
	Clogher Valley	7	49	203	398	239	35	0	931	0.8%	3.8%	306	326	299
	Cookstown	15	89	244	362	192	25	0	927	1.6%	2.7%	322	294	311
	Dungannon	21	99	285	372	246	47	0	1,070	2.0%	4.4%	376	350	344
	Magherafelt	9	75	169	305	175	29	0	762	1.2%	3.8%	242	267	253
	Moyola	12	45	203	272	162	25	0	719	1.7%	3.5%	227	254	238
	Torrent	12	80	222	338	212	38	0	902	1.3%	4.2%	320	300	282
	<b>Total</b>	<b>82</b>	<b>493</b>	<b>1,487</b>	<b>2,296</b>	<b>1,385</b>	<b>235</b>	<b>0</b>	<b>5,978</b>	<b>1.4%</b>	<b>3.9%</b>	<b>2,028</b>	<b>2,024</b>	<b>1,926</b>
Newry, Mourne and Down	Crotlieve	7	70	167	417	278	65	0	1,004	0.7%	6.5%	334	357	313
	Downpatrick	20	113	166	236	123	41	0	699	2.9%	5.9%	211	267	221
	Newry	23	114	245	380	215	55	0	1,032	2.2%	5.3%	393	335	304
	Rowallane	20	83	174	282	119	29	0	707	2.8%	4.1%	247	242	218
	Slieve Croob	10	55	167	243	163	37	0	675	1.5%	5.5%	211	273	191
	Slieve Gullion	11	111	262	582	371	74	0	1,411	0.8%	5.2%	462	491	458
	The Mournes	16	105	287	426	218	51	0	1,103	1.5%	4.6%	352	375	376
	<b>Total</b>	<b>107</b>	<b>651</b>	<b>1,468</b>	<b>2,566</b>	<b>1,487</b>	<b>352</b>	<b>0</b>	<b>6,631</b>	<b>1.6%</b>	<b>5.3%</b>	<b>2,210</b>	<b>2,340</b>	<b>2,081</b>
Northern Ireland	<b>All infants</b>	<b>1,378</b>	<b>7,137</b>	<b>15,895</b>	<b>23,164</b>	<b>13,216</b>	<b>2,890</b>	<b>7</b>	<b>63,687</b>	<b>2.2%</b>	<b>4.5%</b>	<b>21,518</b>	<b>21,785</b>	<b>20,384</b>

Source: Child Health System. Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for this table is the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal. Teenage refers to those aged less than twenty years.

Disclosure controls have been applied to this table. As a result, for some percentages, it is not possible to show the exact percentage values in the percentage teenage and percentage aged 40+ columns and so a comparison to the Northern Ireland value has been provided.

**Figure 3.2: Percentage teenage mothers (<20 years) resident in Northern Ireland, by District Electoral Area, Northern Ireland, 2020/21 to 2022/23**



# Section 4: Multiple Births

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## Why should we be concerned?

The incidence of multiple births (mainly twin births) has increased over the last 30 years from 1.05% of mothers in 1992 to 1.43% of mothers in 2022 in Northern Ireland<sup>21</sup>.

This increase in the last few decades may be due to the rise in fertility treatments (especially when multiple embryos were transferred) and the increase in the average age of a mother giving birth (older women are more likely to have a multiple pregnancy)<sup>22</sup>. The rise in women giving birth who are obese may be a factor in this increase also.

However, having a multiple pregnancy increases the risk of:

- Maternal mortality
- Miscarriage
- Post-partum haemorrhage
- Anaemia
- Gestational diabetes
- Hypertensive disorders
- Pre-eclampsia
- Minor health problems e.g. more severe morning sickness, heartburn, tiredness
- Preterm birth and
- Intervention during delivery e.g. Caesarean Section.

Infants are at risk of complications if the placenta is shared e.g. possible stillbirth. Other risks to infants born as part of a multiple birth include premature birth (<37 weeks gestation), low birth weight, congenital abnormalities, physical/learning disabilities, needing extra care e.g. admission to neonatal unit, and perinatal mortality<sup>23,24,25</sup>

## What can be done?

NICE recommends quality standard “Multiple Pregnancy: twin and triplet pregnancies (QS46)<sup>26</sup>” which should be considered by health professionals to ensure high quality care for those women with a twin or triplet pregnancy.

Providers of infertility services such as IVF should follow Human Fertilisation and Embryology Authority (HFEA) and NICE guidance on embryo transfer strategies.

<sup>21</sup> Northern Ireland Statistics and Research Agency, Registrar General Annual Reports, 2021 and 1992

<https://www.nisra.gov.uk/statistics/births-deaths-and-marriages/registrars-general-annual-report>  
<https://www.nisra.gov.uk/statistics/registrars-general-annual-report/registrars-general-historical-reports>

<sup>22</sup> Smith LK, Manktelow BN, Draper ES, et al. “Trends in the incidence and mortality of multiple births by socioeconomic deprivation and maternal age in England: population-based cohort study”. BMJ Open 2014;4:e004514. doi:10.1136/bmjopen-2013-004514 <http://bmjopen.bmj.com/content/4/4/e004514.full.pdf+html>

<sup>23</sup> National Institute for Health and Care Excellence (NICE) “Multiple pregnancy: twin and triplet pregnancies”, Quality standard, September 2013  
<http://www.nice.org.uk/guidance/qs46/resources/multiple-pregnancy-twin-and-triplet-pregnancies-2098670068933>

<sup>24</sup> National Institute for Health and Care Excellence (NICE) “Multiple pregnancy: antenatal care for twin and triplet pregnancies”, Clinical guideline, September 2011  
<https://www.nice.org.uk/guidance/cg129/resources/multiple-pregnancy-antenatal-care-for-twin-and-triplet-pregnancies-35109458300869>

<sup>25</sup> Royal College of Obstetricians and Gynaecologists, “Multiple Pregnancy: having more than one baby”, Nov 2016 <https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-multiple-pregnancy.pdf>

<sup>26</sup> National Institute for Health and Care Excellence (NICE) “Multiple Pregnancy: twin and triplet pregnancies”, Quality Standard QS46, September 2013 (updated September 2019)  
[Overview | Multiple pregnancy: twin and triplet pregnancies | Quality standards | NICE](#)

## Key Points

- The proportion of infants born within a multiple birth has remained fairly steady since 2010/11 (2022/23 = 3.1%). *[Page 29]*
- In general, the incidence of multiple births increased with mother's age. In 2022/23, across Northern Ireland, 2.3% of births to mothers aged less than twenty years were multiple births, compared to 4.2% of births to mothers aged 40 and over (note that numbers are small in both age groups). *[Page 30]*

**Table 4.1: Births to Northern Ireland residents, by singleton/multiple, 2010/11 – 2022/23**

Year of birth		Infants born by singleton/multiple birth				Infants born as multiples
		Single	Twin	Triplet / Other	Total	
2010/11	n	24,854	784	21	25,659	805
	%	96.9%	3.1%	0.08%	-	3.1%
2011/12	n	24,552	748	9	25,309	757
	%	97.0%	3.0%	0.04%	-	3.0%
2012/13	n	24,228	782	18	25,028	800
	%	96.8%	3.1%	0.07%	-	3.2%
2013/14	n	23,523	742	12	24,277	754
	%	96.9%	3.1%	0.05%	-	3.1%
2014/15	n	23,687	698	15	24,400	713
	%	97.1%	2.9%	0.06%	-	2.9%
2015/16	n	23,720	686	30	24,436	716
	%	97.1%	2.8%	0.12%	-	2.9%
2016/17	n	23,327	716	36	24,079	752
	%	96.9%	3.0%	0.15%	-	3.1%
2017/18	n	22,328	664	12	23,004	676
	%	97.1%	2.9%	0.05%	-	2.9%
2018/19	n	22,172	730	13	22,915	743
	%	96.8%	3.2%	0.06%	-	3.2%
2019/20	n	21,710	640	12	22,362	652
	%	97.1%	2.9%	0.05%	-	2.9%
2020/21	n	20,705	606	12	21,323	618
	%	97.1%	2.8%	0.06%	-	2.9%
2021/22	n	21,189	584	9	21,782	593
	%	97.3%	2.7%	0.04%	-	2.7%
2022/23	n	19,762	610	12	20,384	622
	%	96.9%	3.0%	0.06%	-	3.1%

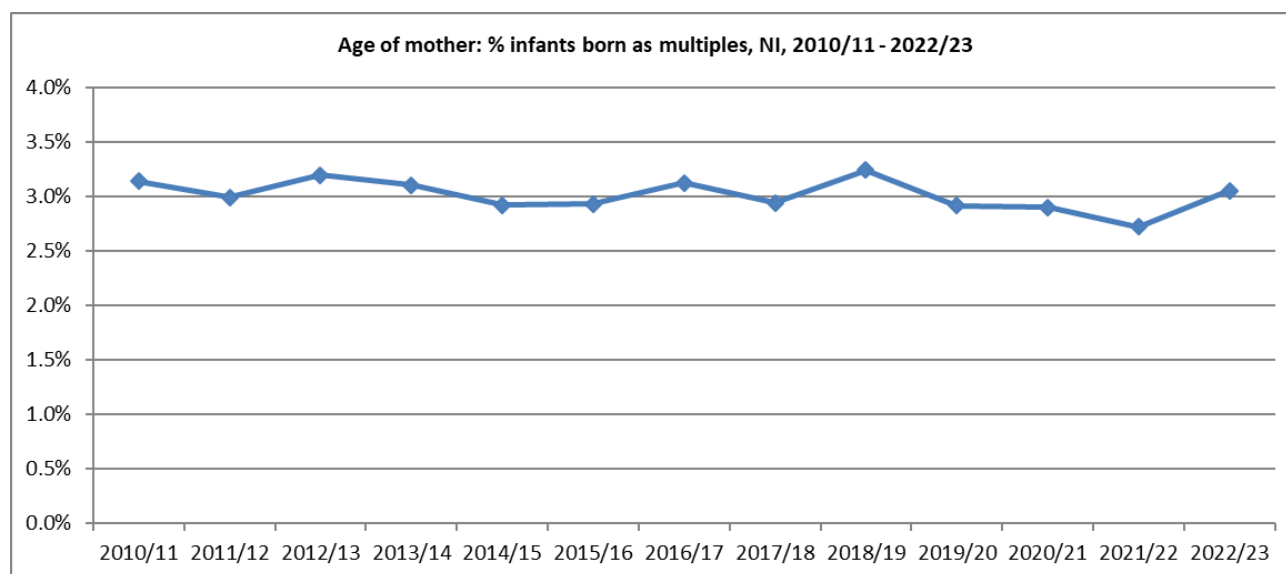
Source: Child Health System

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

Figures for multiple births show the number of infants born



**Figure 4.1: % infants born as multiples, Northern Ireland, 2010/11 – 2022/23**



**Table 4.2: Births to Northern Ireland residents, by singleton/multiple, 2022/23**

		Infants born by singleton/multiple birth			% infants born as multiples
		Single	Multiple	Total	
Age Group of mother	Under 20	418	10	<b>428</b>	2.3%
	20 - 24	2,191	45	<b>2,236</b>	2.0%
	25 - 29	4,816	156	<b>4,972</b>	3.1%
	30 - 34	7,287	185	<b>7,472</b>	2.5%
	35 - 39	4,133	186	<b>4,319</b>	4.3%
	40 +	915	40	<b>955</b>	4.2%
	Not known	2	0	<b>2</b>	0.0%
	<b>All infants</b>	<b>19,762</b>	<b>622</b>	<b>20,384</b>	<b>3.1%</b>
First time mothers	First time mother	7,820	256	<b>40,340</b>	0.6%
	Not a first time mother	11,905	366	<b>78,444</b>	0.5%
	Not known	37	0	<b>151,916</b>	0.0%
	<b>All infants</b>	<b>19,762</b>	<b>622</b>	<b>296,360</b>	<b>0.2%</b>
Ethnic group of mother (NIMATS)	White	18,594	581	<b>19,175</b>	3.0%
	Non-white	1,132	38	<b>1,170</b>	3.2%
	Not stated / Blank	31	0	<b>31</b>	0.0%
	<b>All infants</b>	<b>19,757</b>	<b>619</b>	<b>20,376</b>	<b>3.0%</b>
Ethnic group of infant	White	18,340	578	<b>18,918</b>	3.1%
	Non-white	1,380	44	<b>1,424</b>	3.1%
	Not stated / Blank	42	0	<b>42</b>	0.0%
	<b>All infants</b>	<b>19,762</b>	<b>622</b>	<b>20,384</b>	<b>3.1%</b>

**Table 4.2 continued: Births to Northern Ireland residents, by singleton/multiple, 2022/23**

		Infants born by singleton/multiple birth			% infants born as multiples
		Single	Multiple	Total	
Place of birth	Altnagelvin	2,117	70	<b>2,187</b>	3.2%
	Antrim	2,721	100	<b>2,821</b>	3.5%
	Causeway	807	0	<b>807</b>	0.0%
	Craigavon	2,897	98	<b>2,995</b>	3.3%
	Daisy Hill	1,889	38	<b>1,927</b>	2.0%
	Royal Victoria	4,496	200	<b>4,696</b>	4.3%
	SWAH	1,100	18	<b>1,118</b>	1.6%
	Ulster	3,686	98	<b>3,784</b>	2.6%
	Home	29	0	<b>29</b>	0.0%
	Freebirth/Other location	20	0	<b>20</b>	0.0%
	<b>All infants</b>	<b>19,762</b>	<b>622</b>	<b>20,384</b>	<b>3.1%</b>
Trust of residence of mother	Belfast	3,705	153	<b>3,858</b>	4.0%
	Northern	4,759	150	<b>4,909</b>	3.1%
	South Eastern	3,471	106	<b>3,577</b>	3.0%
	Southern	4,587	123	<b>4,710</b>	2.6%
	Western	3,240	90	<b>3,330</b>	2.7%
	<b>All infants</b>	<b>19,762</b>	<b>622</b>	<b>20,384</b>	<b>3.1%</b>
Local Government District	Antrim and Newtownabbey	1,462	22	<b>1,484</b>	1.5%
	Ards and North Down	1,381	28	<b>1,409</b>	2.0%
	Armagh City, Banbridge and Craigavon	2,445	68	<b>2,513</b>	2.7%
	Belfast	3,569	151	<b>3,720</b>	4.1%
	Causeway Coast and Glens	1,295	48	<b>1,343</b>	3.6%
	Derry City and Strabane	1,647	50	<b>1,697</b>	2.9%
	Fermanagh and Omagh	1,225	32	<b>1,257</b>	2.5%
	Lisburn and Castlereagh	1,530	46	<b>1,576</b>	2.9%
	Mid and East Antrim	1,332	46	<b>1,378</b>	3.3%
	Mid Ulster	1,870	56	<b>1,926</b>	2.9%
	Newry, Mourne and Down	2,006	75	<b>2,081</b>	3.6%
	<b>All infants</b>	<b>19,762</b>	<b>622</b>	<b>20,384</b>	<b>3.1%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	4,131	155	<b>4,286</b>	3.6%
	2	4,101	130	<b>4,231</b>	3.1%
	3	4,213	108	<b>4,321</b>	2.5%
	4	3,869	120	<b>3,989</b>	3.0%
	Least deprived	3,448	109	<b>3,557</b>	3.1%
	<b>All infants</b>	<b>19,762</b>	<b>622</b>	<b>20,384</b>	<b>3.1%</b>

Source: Child Health System and Northern Ireland Maternity System (ethnic group of mother)

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Due to small numbers, it is not possible to show data by individual ethnic group

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

# Section 5: Infant Gestation

## AT BOOKING

### Why should we be concerned?

Antenatal care is beneficial in improving outcomes for women and their infants. Women are encouraged to attend for antenatal care (booking appointment) by 10 weeks gestation<sup>27,28</sup>. At these early stages, potential risks to the pregnancy can be identified. Appropriate lifestyle advice can be given on healthy eating, physical activity etc. and help and support can be provided e.g. to help a mother stop smoking. Although most women have uncomplicated pregnancies, some will experience difficulties perhaps as a result of e.g. smoking, obesity or diabetes (Sections 6 and 7). Early antenatal care ensures women are provided with the correct advice, support, screening and interventions to promote positive experiences and outcomes for both mother and baby.

Although it is recognised that the earlier a mother attends for antenatal care, the better the outcome for her and her baby, there are some groups of women e.g. young mothers, women from a non-white ethnic group, those with low income or educational level, and those living in more deprived areas who do not attend early in pregnancy (Table 5.2, page 36). One study<sup>29</sup> also associated late booking with those women who have had numerous prior births or those who were migrants to the UK or who had limited English language skills.

### What can be done?

The current Maternity Strategy for Northern Ireland<sup>30</sup> outlines the type of care women should receive: *“When a woman becomes pregnant she will be facilitated to make early direct contact with a midwife”*. The Strategy emphasises that it *“is particularly important to make maternity services accessible to those groups of women who tend to book late, who often are the very women who would benefit most from earlier booking. Direct access to midwives as the first point of contact in the community is intended to increase the number of women making early contact with maternity services”*.

See also:

National Institute for Health and Care Excellence guideline, “Antenatal Care”, August 2021

<https://www.nice.org.uk/guidance/ng201/resources/antenatal-care-pdf-66143709695941>

World Health Organisation, “WHO recommendations on antenatal care for a positive pregnancy experience”, November 2016

<https://www.who.int/publications/i/item/9789241549912>

## AT DELIVERY

### Why should we be concerned?

This report shows that 7.2% of infants born in 2022/23 in Northern Ireland were pre-term i.e. less than 37 weeks gestation at birth (Table 5.3, page 38). WHO states that *“Preterm birth is the leading cause of death in newborns less than 28 days old with more than a million preterm infants dying each year. Those that do survive risk a range of disabilities throughout their lives. Alarming, in almost all countries with reliable data, preterm birth rates are increasing”*.<sup>31</sup> An infant born pre-term is at greater risk of neonatal death, infection, long term intellectual/developmental disabilities, visual/hearing impairment, feeding problems/poor growth and respiratory illness.

### What can be done?

World Health Organisation guidelines<sup>32</sup> states: *“Infant death and morbidity following preterm birth can be reduced through interventions provided to the mother before or during pregnancy, and to the preterm infant after birth. Interventions can be directed at all women for primary prevention and reduction of the risk of preterm birth (e.g. smoking cessation programmes) or used to minimize the risk in pregnant women with known risk factors (e.g. progesterone agents, cervical cerclage). However, the most beneficial set of maternal interventions are those that could improve survival chances and health outcomes of preterm infants when preterm birth is inevitable. These interventions are provided to the mother shortly before or during the birth process with the aim of overcoming immediate and future health challenges of the preterm infant, such as lung immaturity, susceptibility to infection, and neurological complications. Essential and additional care of the preterm newborn to prevent or treat potential complications is also critical to newborn survival without disability”*.

<sup>27</sup> National Institute for Health and Care Excellence (NICE) “Antenatal care”, Quality Standard QS22, September 2012 (updated February 2023)

<http://www.nice.org.uk/guidance/gs22/resources/antenatal-care-2098542418117>

<sup>28</sup> Department of Health “A Strategy for Maternity Care in Northern Ireland, 2012 – 2018 <https://www.health-ni.gov.uk/articles/maternity-strategy-northern-ireland-2012-2018>

<sup>29</sup> Cresswell et al, BMC Pregnancy and Childbirth “Predictors of the timing of initiation of antenatal care in an ethnically diverse urban cohort in the UK”, 2012

<http://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/1471-2393-13-103>

<sup>30</sup> Department of Health “A Strategy for Maternity Care in Northern Ireland, 2012 – 2018 <https://www.health-ni.gov.uk/articles/maternity-strategy-northern-ireland-2012-2018>

<sup>31</sup> World Health Organisation, “New recommendations from WHO to help improve the health of preterm infants”, September 2022

<https://www.who.int/news/item/30-09-2022-new-recommendations-from-who-to-help-improve-the-health-of-preterm-birth>

<sup>32</sup> World Health Organisation, “WHO recommendations on interventions to improve preterm birth outcomes” 2015 <https://www.who.int/publications/i/item/9789241508988>

## Key Points

- In 2022/23, 7.2% of births were booked at 15 weeks or more gestation. Although fluctuating, the proportion booking at 15+ weeks gestation in 2022/23 was less than the equivalent figure for 2011/12 (9.1%). *[Page 34]*
- There were 320 (1.6%) infants born to women who were estimated to be 28 weeks or more gestation at booking. In general, this proportion had been falling year on year since 2011/12. *[Page 34]*
- There were substantial differences in the timescales of when women booked by ethnic group during 2022/23. Almost 30% of births to women from a 'non-white' ethnic group booked at 15+ weeks gestation, compared to 5.7% of those of a white ethnic group (all births = 7.2%). *[Page 36]*
- In 2022/23, and based on 2017 deprivation quintiles, data revealed that more women booked at 15+ weeks gestation from the most deprived areas of Northern Ireland (10.8% of births), compared to births to those women from least deprived areas (4.9%). All births = 7.2%. *[Page 37]*
- Since 2011/12, there has been little variation in the proportion of infants born pre-term (<37 weeks gestation) (2022/23 = 7.2%) *[Page 38]*. For births during 2022/23, the figures differed considerably by type of birth: 7.0% of live births, 78.9% of still births (all births = 7.2%). *[Page 39]*
- In 2022/23, 8.4% of infants were born pre-term to women living in the most deprived areas of Northern Ireland. This compared to 6.1% of infants born to women living in those areas considered least deprived (all births = 7.2%). *[Page 40]*

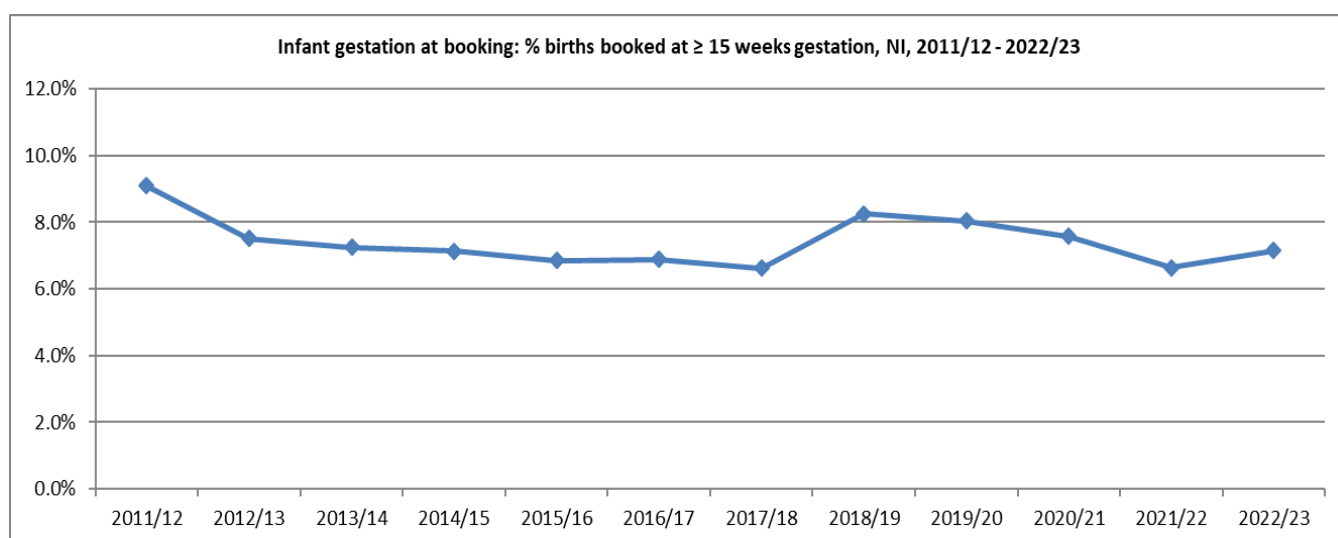
## GESTATION AT BOOKING

**Table 5.1: Gestation at booking, for births to Northern Ireland residents, by completed weeks, 2011/12 – 2022/23**

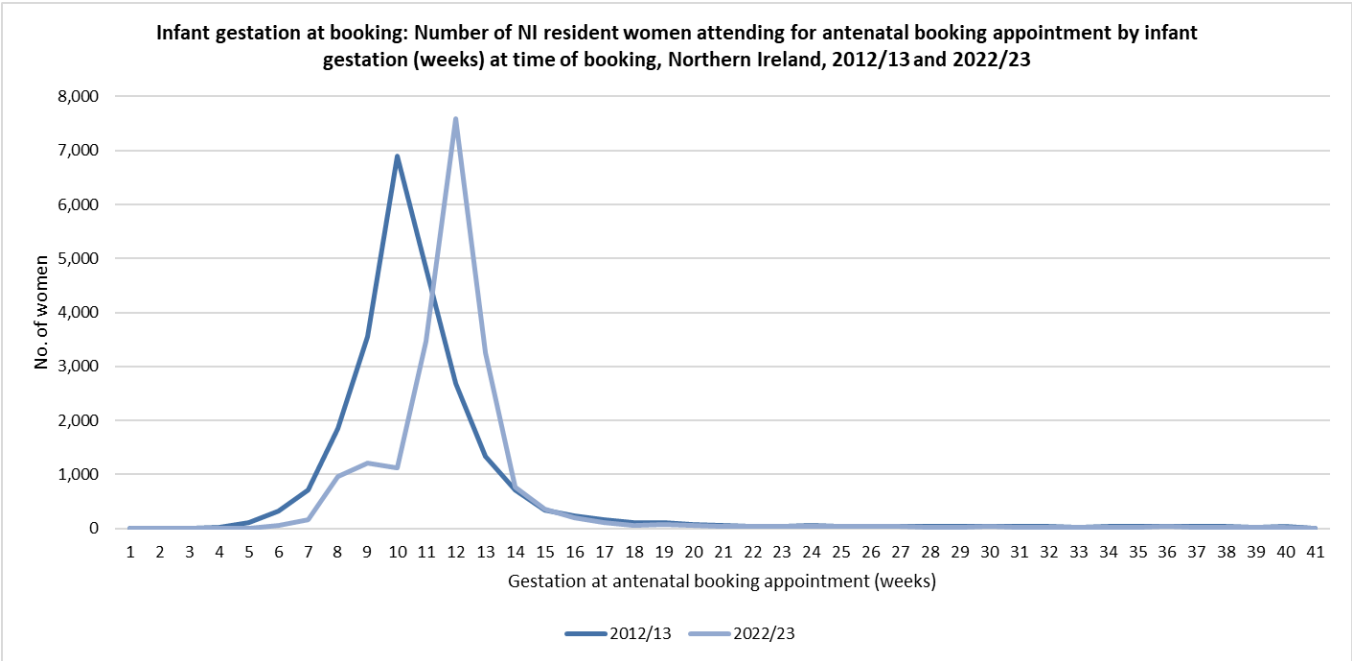
Year of birth		Infants born by gestation at booking								Booking at ≥ 15 weeks
		≤ 14 weeks	15 - 20 weeks	21 - 27 weeks	28 - 32 weeks	33 - 36 weeks	37+ weeks	Not known	Total	
2011/12	n	22,106	1,317	364	212	177	141	26	24,343	2,211
	%	90.9%	5.4%	1.5%	0.9%	0.7%	0.6%	-	-	9.1%
2012/13	n	23,050	1,050	325	200	159	138	20	24,942	1,872
	%	92.5%	4.2%	1.3%	0.8%	0.6%	0.6%	-	-	7.5%
2013/14	n	22,444	1,020	329	171	144	89	11	24,208	1,753
	%	92.8%	4.2%	1.4%	0.7%	0.6%	0.4%	-	-	7.2%
2014/15	n	22,585	1,001	316	197	160	58	5	24,322	1,732
	%	92.9%	4.1%	1.3%	0.8%	0.7%	0.2%	-	-	7.1%
2015/16	n	22,729	998	287	180	136	72	3	24,405	1,673
	%	93.1%	4.1%	1.2%	0.7%	0.6%	0.3%	-	-	6.9%
2016/17	n	22,427	1,013	280	156	141	67	0	24,084	1,657
	%	93.1%	4.2%	1.2%	0.6%	0.6%	0.3%	-	-	6.9%
2017/18	n	21,517	881	278	149	135	81	4	23,045	1,524
	%	93.4%	3.8%	1.2%	0.6%	0.6%	0.4%	-	-	6.6%
2018/19	n	21,061	1,230	291	166	138	70	1	22,957	1,895
	%	91.7%	5.4%	1.3%	0.7%	0.6%	0.3%	-	-	8.3%
2019/20	n	20,608	1,189	272	157	130	53	1	22,410	1,801
	%	92.0%	5.3%	1.2%	0.7%	0.6%	0.2%	-	-	8.0%
2020/21	n	19,844	1,038	276	167	100	45	1	21,471	1,626
	%	92.4%	4.8%	1.3%	0.8%	0.5%	0.2%	-	-	7.6%
2021/22	n	20,321	917	247	109	112	60	1	21,767	1,445
	%	93.4%	4.2%	1.1%	0.5%	0.5%	0.3%	-	-	6.6%
2022/23	n	18,919	875	262	143	119	58	0	20,376	1,457
	%	92.8%	4.3%	1.3%	0.7%	0.6%	0.3%	-	-	7.2%

Source: Northern Ireland Maternity System

**Figure 5.1: % births booked at ≥ 15 weeks gestation, Northern Ireland residents, 2011/12 – 2022/23**



**Figure 5.2: Women resident in Northern Ireland attending for antenatal booking appointment by infant gestation (weeks) at time of booking, Northern Ireland, 2012/13 and 2022/23**



Source: Northern Ireland Maternity System

**Table 5.2: Gestation at booking, for births to Northern Ireland residents, by completed weeks, 2022/23**

		Infants born by gestation at booking								% booking at ≥ 15 weeks
		≤ 14 weeks	15 - 20 weeks	21 - 27 weeks	28 - 32 weeks	33 - 36 weeks	37+ weeks	Not known	Total	
Age Group of mother	Under 20	332	55	17	12	<10	<5	0	427	>7.2%
	20 - 24	2,022	119	29	26	15	12	0	2,223	9.0%
	25 - 29	4,615	192	72	34	28	10	0	4,951	6.8%
	30 - 34	7,030	265	84	39	35	16	0	7,469	5.9%
	35 - 39	4,038	186	48	24	28	13	0	4,337	6.9%
	40 +	882	58	12	8	<10	<5	0	969	>7.2%
	All infants	18,919	875	262	143	119	58	0	20,376	7.2%
Ethnic group of mother	White	18,075	718	177	85	83	37	0	19,175	5.7%
	Non-white	824	156	80	56	34	20	0	1,170	29.6%
	Not stated / Blank	20	1	5	2	2	1	0	31	35.5%
	All infants	18,919	875	262	143	119	58	0	20,376	7.2%
First time mothers	First time mother	5,954	237	88	72	46	14	0	6,411	7.1%
	Not a first time mother	12,965	638	174	71	73	44	0	13,965	7.2%
	All infants	18,919	875	262	143	119	58	0	20,376	7.2%
Place of birth	Altnagelvin	2,088	51	18	11	10	8	0	2,186	4.5%
	Antrim	2,682	81	15	18	16	8	0	2,820	4.9%
	Causeway	766	22	11	<10	<5	<5	0	809	<7.2%
	Craigavon	2,702	177	54	19	8	10	0	2,970	9.0%
	Daisy Hill	1,780	91	25	<10	12	<5	0	1,921	>7.2%
	Royal Victoria	4,169	315	99	52	43	15	0	4,693	11.2%
	SWAH	1,074	18	11	9	<10	<5	0	1,121	<7.2%
	Ulster	3,579	114	29	18	19	8	0	3,767	5.0%
	Home/Freebirth	79	6	0	<5	<5	0	0	89	>7.2%
	All infants	18,919	875	262	143	119	58	0	20,376	7.2%



**Table 5.2 continued: Gestation at booking, for births to Northern Ireland residents, by completed weeks, 2022/23**

		Infants born by gestation at booking								% booking at ≥ 15 weeks
		≤ 14 weeks	15 - 20 weeks	21 - 27 weeks	28 - 32 weeks	33 - 36 weeks	37+ weeks	Not known	Total	
Trust of residence of mother	Belfast	3,453	254	86	49	38	12	0	<b>3,892</b>	11.3%
	Northern	4,618	163	42	29	21	13	0	<b>4,886</b>	5.5%
	South Eastern	3,354	137	33	18	21	10	0	<b>3,573</b>	6.1%
	Southern	4,310	248	72	28	20	14	0	<b>4,692</b>	8.1%
	Western	3,184	73	29	19	19	9	0	<b>3,333</b>	4.5%
	<b>All infants</b>	<b>18,919</b>	<b>875</b>	<b>262</b>	<b>143</b>	<b>119</b>	<b>58</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>
Local Government District	Antrim and Newtownabbey	1,379	48	10	13	<10	<5	0	<b>1,459</b>	<7.2%
	Ards and North Down	1,328	54	6	6	8	5	0	<b>1,407</b>	5.6%
	Armagh City, Banbridge and Craigavon	2,301	134	45	13	9	6	0	<b>2,508</b>	8.3%
	Belfast	3,292	271	91	49	38	12	0	<b>3,753</b>	12.3%
	Causeway Coast and Glens	1,280	35	12	6	<5	<5	0	<b>1,341</b>	<7.2%
	Derry City and Strabane	1,619	42	14	9	9	6	0	<b>1,699</b>	4.7%
	Fermanagh and Omagh	1,205	23	12	9	<10	<5	0	<b>1,258</b>	<7.2%
	Lisburn and Castlereagh	1,490	47	14	10	<15	<5	0	<b>1,574</b>	<7.2%
	Mid and East Antrim	1,300	45	12	9	6	6	0	<b>1,378</b>	5.7%
	Mid Ulster	1,783	95	22	8	11	6	0	<b>1,925</b>	7.4%
	Newry, Mourne and Down	1,942	81	24	11	10	6	0	<b>2,074</b>	6.4%
	<b>All infants</b>	<b>18,919</b>	<b>875</b>	<b>262</b>	<b>143</b>	<b>119</b>	<b>58</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	3,846	275	96	53	22	19	0	<b>4,311</b>	10.8%
	2	3,928	188	43	21	28	13	0	<b>4,221</b>	6.9%
	3	4,021	178	51	24	30	12	0	<b>4,316</b>	6.8%
	4	3,764	131	46	29	17	7	0	<b>3,994</b>	5.8%
	Least deprived	3,360	103	26	16	22	7	0	<b>3,534</b>	4.9%
	<b>All infants</b>	<b>18,919</b>	<b>875</b>	<b>262</b>	<b>143</b>	<b>119</b>	<b>58</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>

Source: Northern Ireland Maternity System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Due to small numbers, it is not possible to show data by individual ethnic group

Disclosure controls have been applied to the data

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

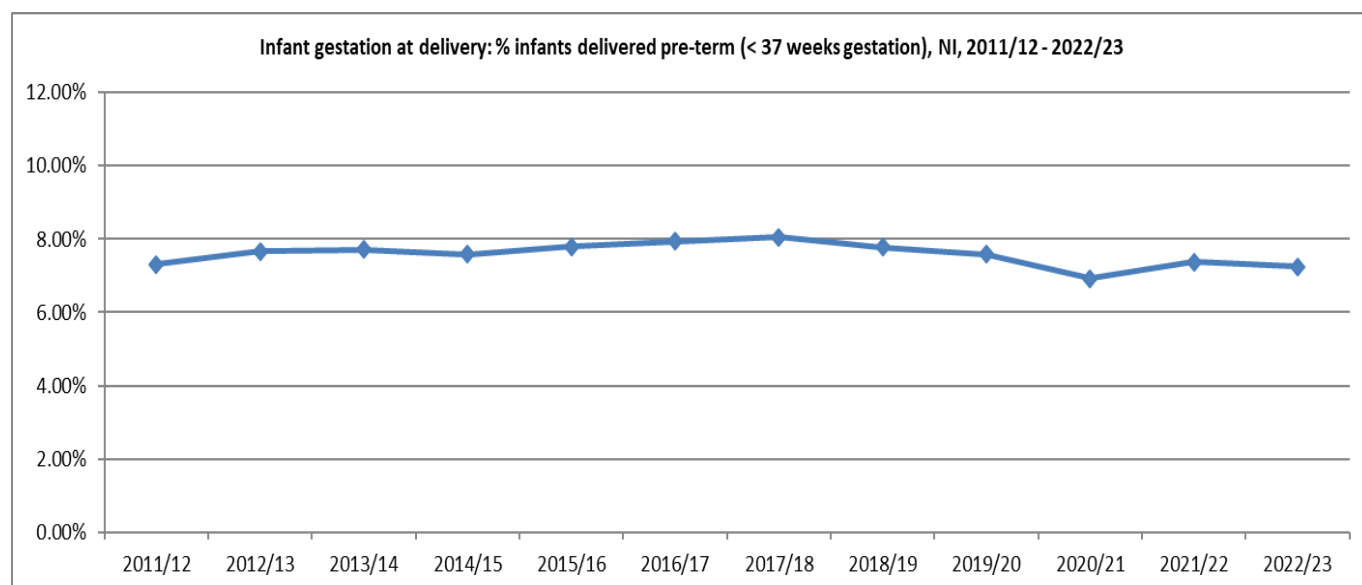
## GESTATION AT DELIVERY

**Table 5.3: Gestation at delivery, for births (live and still) to Northern Ireland residents, by completed weeks, 2011/12 – 2022/23**

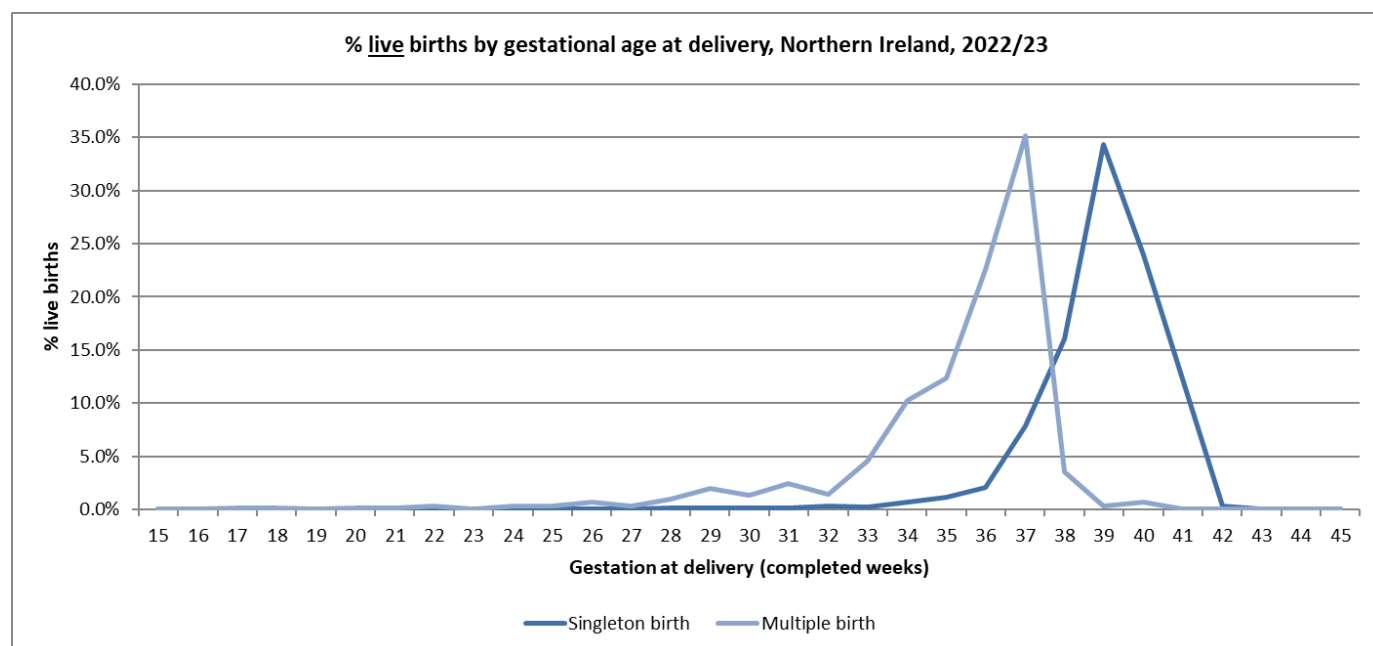
Year of birth		Infants born by gestation at delivery							Infants born pre-term (< 37 wks)
		< 28 weeks	28 - 31 weeks	32 - 36 weeks	37 - 38 weeks	39+ weeks	Not known	Total	
2011/12	n	118	192	1,470	4,493	18,067	3	24,343	1,780
	%	0.48%	0.79%	6.04%	18.46%	74.23%	-	-	7.31%
2012/13	n	116	203	1,593	4,570	18,459	1	24,942	1,912
	%	0.47%	0.81%	6.39%	18.32%	74.01%	-	-	7.67%
2013/14	n	105	212	1,551	4,472	17,868	0	24,208	1,868
	%	0.43%	0.88%	6.41%	18.47%	73.81%	-	-	7.72%
2014/15	n	101	226	1,517	4,658	17,820	0	24,322	1,844
	%	0.42%	0.93%	6.24%	19.15%	73.27%	-	-	7.58%
2015/16	n	106	186	1,612	4,985	17,516	0	24,405	1,904
	%	0.43%	0.76%	6.61%	20.43%	71.77%	-	-	7.80%
2016/17	n	123	192	1,598	5,410	16,761	0	24,084	1,913
	%	0.51%	0.80%	6.64%	22.46%	69.59%	-	-	7.94%
2017/18	n	105	162	1,588	5,186	16,004	0	23,045	1,855
	%	0.46%	0.70%	6.89%	22.50%	69.45%	-	-	8.05%
2018/19	n	113	177	1,496	5,042	16,129	0	22,957	1,786
	%	0.49%	0.77%	6.52%	21.96%	70.26%	-	-	7.78%
2019/20	n	110	153	1,438	5,057	15,652	0	22,410	1,701
	%	0.49%	0.68%	6.42%	22.57%	69.84%	-	-	7.59%
2020/21	n	115	147	1,224	4,620	15,365	0	21,471	1,486
	%	0.54%	0.68%	5.70%	21.52%	71.56%	-	-	6.92%
2021/22	n	113	178	1,313	5,039	15,123	1	21,767	1,604
	%	0.52%	0.82%	6.03%	23.15%	69.48%	-	-	7.37%
2022/23	n	109	164	1,202	4,950	13,951	0	20,376	1,475
	%	0.53%	0.80%	5.90%	24.29%	68.47%	-	-	7.24%

Source: Northern Ireland Maternity System

**Figure 5.3: % infants delivered pre-term (<37 weeks), Northern Ireland, 2011/12 – 2022/23**



**Figure 5.4: % live infants by gestational age at delivery, Northern Ireland, 2022/23**



Source: Northern Ireland Maternity System

**Table 5.4: Gestation at delivery for births to Northern Ireland residents by completed weeks, 2022/23**

		Infants born by gestation at delivery							% infants born pre-term (< 37 wks)
		< 28 weeks	28 - 31 weeks	32 - 36 weeks	37 - 38 weeks	39+ weeks	Not known	Total	
Age Group of mother	Under 20	5	6	30	74	312	0	427	9.6%
	20 - 24	7	26	136	532	1,522	0	2,223	7.6%
	25 - 29	25	46	297	1,110	3,473	0	4,951	7.4%
	30 - 34	33	49	387	1,761	5,239	0	7,469	6.3%
	35 - 39	26	31	276	1,192	2,812	0	4,337	7.7%
	40 +	13	6	76	281	593	0	969	9.8%
	<b>All infants</b>	<b>109</b>	<b>164</b>	<b>1,202</b>	<b>4,950</b>	<b>13,951</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>
Multiple births	Single	93	121	887	4,711	13,945	0	19,757	5.6%
	Multiple	16	43	315	239	6	0	619	60.4%
	<b>All infants</b>	<b>109</b>	<b>164</b>	<b>1,202</b>	<b>4,950</b>	<b>13,951</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>
Birth status	Live	84	151	1,180	4,943	13,942	0	20,300	7.0%
	Still	25	13	22	7	9	0	76	78.9%
	<b>All infants</b>	<b>109</b>	<b>164</b>	<b>1,202</b>	<b>4,950</b>	<b>13,951</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>
Ethnic group of mother	White	95	157	1,133	4,586	13,204	0	19,175	7.2%
	Non-white	12	7	68	356	727	0	1,170	7.4%
	Not stated / Blank	2	0	1	8	20	0	31	9.7%
	<b>All infants</b>	<b>109</b>	<b>164</b>	<b>1,202</b>	<b>4,950</b>	<b>13,951</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>

**Table 5.4 continued: Gestation at delivery for births to Northern Ireland residents by completed weeks, 2022/23**

		Infants born by gestation at delivery							% infants born pre-term (< 37 wks)
		< 28 weeks	28 - 31 weeks	32 - 36 weeks	37 - 38 weeks	39+ weeks	Not known	Total	
Place of birth	Altnagelvin	10	20	137	540	1,479	0	2,186	7.6%
	Antrim	10	26	181	765	1,838	0	2,820	7.7%
	Causeway	<5	<5	<15	150	642	0	809	<7.2%
	Craigavon	13	22	226	775	1,934	0	2,970	8.8%
	Daisy Hill	<10	<5	70	343	1,498	0	1,921	<7.2%
	Royal Victoria	57	61	306	1,238	3,031	0	4,693	9.0%
	SWAH	<5	0	<50	204	868	0	1,121	<7.2%
	Ulster	10	28	222	926	2,581	0	3,767	6.9%
	Home/Freebirth	0	0	0	9	80	0	89	0.0%
	<b>All infants</b>	<b>109</b>	<b>164</b>	<b>1,202</b>	<b>4,950</b>	<b>13,951</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>
Trust of residence of mother	Belfast	26	36	236	1,005	2,589	0	3,892	7.7%
	Northern	23	49	278	1,213	3,323	0	4,886	7.2%
	South Eastern	15	27	229	898	2,404	0	3,573	7.6%
	Southern	29	26	273	1,072	3,292	0	4,692	7.0%
	Western	16	26	186	762	2,343	0	3,333	6.8%
	<b>All infants</b>	<b>109</b>	<b>164</b>	<b>1,202</b>	<b>4,950</b>	<b>13,951</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>
Local Government District	Antrim and Newtownabbey	10	13	69	363	1,004	0	1,459	6.3%
	Ards and North Down	7	10	83	350	957	0	1,407	7.1%
	Armagh City, Banbridge and Craigavon	16	12	153	588	1,739	0	2,508	7.2%
	Belfast	27	35	239	984	2,468	0	3,753	8.0%
	Causeway Coast and Glens	<5	<15	77	320	931	0	1,341	<7.2%
	Derry City and Strabane	11	16	96	391	1,185	0	1,699	7.2%
	Fermanagh and Omagh	<5	<10	73	275	898	0	1,258	<7.2%
	Lisburn and Castlereagh	<5	<15	88	383	1,089	0	1,574	<7.2%
	Mid and East Antrim	10	17	91	380	880	0	1,378	8.6%
	Mid Ulster	7	14	102	451	1,351	0	1,925	6.4%
	Newry, Mourne and Down	11	18	131	465	1,449	0	2,074	7.7%
	<b>All infants</b>	<b>109</b>	<b>164</b>	<b>1,202</b>	<b>4,950</b>	<b>13,951</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	31	59	273	1,170	2,778	0	4,311	8.4%
	2	21	38	274	1,016	2,872	0	4,221	7.9%
	3	18	25	247	968	3,058	0	4,316	6.7%
	4	20	23	232	969	2,750	0	3,994	6.9%
	Least deprived	19	19	176	827	2,493	0	3,534	6.1%
	<b>All infants</b>	<b>109</b>	<b>164</b>	<b>1,202</b>	<b>4,950</b>	<b>13,951</b>	<b>0</b>	<b>20,376</b>	<b>7.2%</b>

Source: Northern Ireland Maternity System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Due to small numbers, it is not possible to show data by individual ethnic group

Disclosure controls have been applied to the data

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

# Section 6: Maternal Risk Factors

## SMOKING

### Why should we be concerned?

Giving up smoking is one of the best things a mother-to-be can do to improve her own health and the health of her baby. Giving up at any stage of the pregnancy provides benefits. The Public Health Agency<sup>33 34</sup> provides information on the effects of smoking while pregnant.

Smoking in pregnancy is linked to:

- Pregnancy complications e.g. three times more likely to have problems with the placenta
- Premature delivery, still birth and miscarriage
- Low birth weight/small for gestational age – increased risk of infection, other health problems and neonatal death
- Higher carbon monoxide levels can reduce the amount of oxygen available to the infant, while nicotine from cigarettes can narrow the blood vessels, restricting the blood flow and reducing the supply of nutrients and oxygen to the infant.

An infant born to a mother who smoked is at greater risk of<sup>35</sup>:

- Sudden or unexplained death (SIDS)
- Developing respiratory conditions such as asthma, chest infections
- Developing behavioural problems e.g. Attention Deficit Hyperactivity Disorder (ADHD).

### What can be done?

From September 2016, all women across Northern Ireland, attending for their antenatal booking appointment, are screened for carbon monoxide levels in the body. New NICE guidelines published in 2021 recommend that routine carbon monoxide testing is also carried out at the 36-week gestation appointment<sup>36</sup>. Where levels indicate that the woman is being exposed to sources of carbon monoxide, either by smoking, or environmentally, then appropriate advice is given and women are provided with an opt-out referral to receive stop-smoking support with a trained specialist from a local PHA Stop Smoking Service. Further information on interventions during pregnancy is available in guidance from NICE “Smoking: stopping in pregnancy and after childbirth”<sup>37</sup> and useful information, in general, on how to stop smoking is available from the Public Health Agency<sup>38</sup>.

## DIABETES

### Why should we be concerned?

The prevalence of diabetes in the population is increasing and the same trend can be seen among pregnant women. There are additional risks to mother and baby associated with Type 1 and Type 2 diabetes. Women with diabetes are more likely to deliver an infant that is large for gestational age (with induced labour and increased need for a Caesarean Section). Women

<sup>33</sup> Public Health Agency, Stop Smoking <https://www.stopsmokingni.info/why-quit/smoking-pregnancy>

<sup>34</sup> Public Health Agency, “Give your baby a breather - help and advice on giving up smoking during pregnancy”

[http://www.publichealth.hscni.net/sites/default/files/Give%20your%20baby%20a%20breather%20booklet%2001\\_17.pdf](http://www.publichealth.hscni.net/sites/default/files/Give%20your%20baby%20a%20breather%20booklet%2001_17.pdf)

<sup>35</sup> Institute of Public Health, “A Tobacco-Free Future: An All-Island Report on Tobacco, Inequalities and Childhood”, 2013 <http://www.publichealth.ie/sites/default/files/A%20Tobacco-free%20Future.%20An%20All-island%20report%20on%20Tobacco.%20inequalities%20and%20childhood%202013.pdf>

<sup>36</sup> National Institute for Health and Care Excellence (NICE) ‘Tobacco: preventing uptake, promoting quitting and treating dependence’, NICE guideline. November 2021 <https://www.nice.org.uk/guidance/ng209/resources/tobacco-preventing-uptake-promoting-quitting-and-treating-dependence-pdf-66143723132869>

<sup>37</sup> National Institute for Health and Care Excellence (NICE) “Smoking: stopping in pregnancy and after childbirth”, public health guidance, June 2010 <http://www.nice.org.uk/guidance/ph26>

<sup>38</sup> Public Health Agency, Stop Smoking <https://www.stopsmokingni.info/why-quit/smoking-pregnancy>

may have an increased risk of pre-eclampsia or miscarriage. Women may experience problems with blood glucose control as a result of e.g. morning sickness<sup>39</sup>.

Infants born to mothers with diabetes are at greater risk of <sup>40,41</sup>:

- Stillbirth / born pre-term (<37 weeks gestation)
- Neonatal death
- Congenital abnormality
- Birth injury in higher weight infants e.g. shoulder dystocia
- The increased risk of obesity and diabetes in later life.

Gestational diabetes is diabetes which develops during pregnancy. Pregnancy places a heavy demand on the body and some women are less able to produce enough insulin, resulting in high blood glucose levels. It is becoming more prevalent in women of child bearing age, possibly due to increasing maternal age and obesity levels which brings additional risk to the mother and her baby. Mothers with gestational diabetes are more likely to develop Type 2 diabetes in later life<sup>42</sup>.

### What can be done?

Type 1 diabetes cannot be prevented. Type 2 diabetes is becoming more common in women of child bearing age. Risk factors for developing gestational diabetes include<sup>43</sup>:

- Being overweight or obese
- Coming from an African-Caribbean, South Asian, Chinese or Middle Eastern background
- Having a close relative e.g. parent, brother or sister with diabetes
- Having had gestational diabetes before
- Having had a very large baby in a previous pregnancy ( $\geq 4.5$ kg)

A document published by the Royal College of Midwives in September 2022, states<sup>44</sup>:

*"The care provided to women with diabetes should nurture their independence, self-management and control over their health. Maternity services must offer prompt access to the right services at the right time. This includes implementing prevention services, weight management clinics and supporting women and their families through radical lifestyle changes. This, in conjunction with recognition of the role health technologies, can help women to achieve more independence and improved outcomes in glycaemic control".*

NICE<sup>45</sup> guidance "*Diabetes in pregnancy: management from preconception to the postnatal period*" focuses on the additional/different care that a woman with diabetes should be offered, providing advice on best practice prior to conception as well as care of the mother and infant.

See also:

"Diabetes in Pregnancy" NICE Quality Standard QS109. Published: January 2016, updated January 2023

<https://www.nice.org.uk/guidance/qs109>

National Pregnancy in Diabetes (NPID) Audit, NHS England, 2014 onwards

<https://digital.nhs.uk/data-and-information/publications/statistical/national-pregnancy-in-diabetes-audit>

<sup>39</sup> "Type 1 diabetes and pregnancy", British Medical Journal 334 (7596). Sourced from: US National Library of Medicine (National Institutes of Health), 2007

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1847857/>

<sup>40</sup> Diabetes UK, Pregnancy and diabetes, <https://www.diabetes.org.uk/guide-to-diabetes/life-with-diabetes/pregnancy>

<sup>41</sup> Royal College of Obstetricians and Gynaecologists, March 2013 <https://www.rcog.org.uk/globalassets/documents/patient-information-leaflets/pregnancy/pi-gestational-diabetes.pdf>

<sup>42</sup> R Dennison, E Chen, ME Green, C Legard, D Kotecha, G Farmer, S Sharp, RJ Ward, JA Usher-Smith, SJ Griffin, The absolute and relative risk of type 2 diabetes after gestational diabetes: A systematic review and meta-analysis of 129 studies, in Diabetes Research and Clinical Practice, 15 December 2020

<https://www.phpc.cam.ac.uk/pcu/33-of-women-who-have-gestational-diabetes-will-develop-type-2-diabetes-within-15-years-new-research-shows/>

<sup>43</sup> Diabetes UK, <https://www.diabetes.org.uk/diabetes-the-basics/gestational-diabetes>

<sup>44</sup> The Royal College of Midwives, "Caring for pregnant women with pre-existing and gestational diabetes", September 2022

[https://www.rcm.org.uk/media/6337/caring-for-pregnant-with-pre-existing-and-gestational-diabetes\\_digital.pdf](https://www.rcm.org.uk/media/6337/caring-for-pregnant-with-pre-existing-and-gestational-diabetes_digital.pdf)

<sup>45</sup> National Institute for Health and Care Excellence (NICE) "Diabetes in pregnancy: management from preconception to the postnatal period", February 2015, updated December 2020 <http://www.nice.org.uk/guidance/ng3>

## Key Points

### Smoking

- In 2022/23, 10.6% of mothers smoked at time of antenatal booking appointment (2010/11 = 15.5%) [Page 44].
- Of those mothers who lived in the most deprived areas of Northern Ireland at time of birth, 20.7% smoked, compared to 4.0% of those who lived in the least deprived areas. [Page 46]
- Mothers who had previously given birth were more likely to smoke (11.8%), compared to first time mothers (7.9%). [Page 45]
- Smoking rates were higher amongst those women who were of a white ethnic background (11.0%), compared to those of a non-white background (4.7%). [Page 45]
- At District Electoral Area level, the proportion of mothers who smoked ranged from 2.1% (Downshire East DEA, Lisburn and Castlereagh LGD) to 24.6% (Court DEA, Belfast LGD). *Note that when providing data at this geographic level, numbers of births can be small and so caution is advised.* [Page 48]

### Diabetes

- In 2022/23, 12.6% of mothers had diabetes (2010/11 = 1.8%) [Page 44]
- The percentage of mothers with diabetes increased with age, 6.6% of those aged less than 20 years, compared to 21.6% of mothers aged 40 and over. [Page 47]
- A higher proportion of mothers from a non-white ethnic background had diabetes (26.2%), compared to those from a white ethnic background – 11.7%. (All mothers =12.6%). [Page 47]
- Across Health and Social Care Trusts, the proportion of mothers with diabetes ranged from 10.8% in Southern Trust to 14.1% in Belfast Trust. [Page 47]
- At District Electoral Area level, the proportion of mothers who were recorded as diabetic ranged from 8.4% (Causeway DEA, Causeway Coast and Glens LGD) to 20.1% (Coast Road DEA, Mid and East Antrim LGD). *Note that when providing data at this geographic level, numbers of births can be small and so caution is advised.* [Page 48]



**Table 6.1: Mothers resident in Northern Ireland, by maternal risk factor, 2010/11 – 2022/23**

Year of birth	Maternal risk factor							
	Mothers (n)	Smoking (at antenatal booking)	Diabetes	Pregnancy induced hypertension	Anaemia	Alcohol use	Antepartum haemorrhage (APH)	History of psychiatric illness
2010/11	25,253	3,923	444	1,136	940	22	563	
	-	15.5%	1.8%	4.5%	3.7%	0.09%	2.2%	
2011/12	24,929	4,087	575	1,199	863	27	743	
	-	16.4%	2.3%	4.8%	3.5%	0.11%	3.0%	
2012/13	24,625	3,959	890	1,138	1,069	26	719	
	-	16.1%	3.6%	4.6%	4.3%	0.11%	2.9%	
2013/14	23,898	3,544	1,230	1,207	989	21	682	
	-	14.8%	5.1%	5.1%	4.1%	0.09%	2.9%	
2014/15	24,041	3,497	1,361	1,034	787	19	623	
	-	14.5%	5.7%	4.3%	3.3%	0.08%	2.6%	
2015/16	24,073	3,389	1,517	1,063	850	20	574	
	-	14.1%	6.3%	4.4%	3.5%	0.08%	2.4%	
2016/17	23,697	3,194	1,822	1,029	779	12	514	1,668
	-	13.5%	7.7%	4.3%	3.3%	0.05%	2.2%	7.0%
2017/18	22,705	3,134	2,114	1,109	735	83	417	1,711
	-	13.8%	9.3%	4.9%	3.2%	0.37%	1.8%	7.5%
2018/19	Mothers giving birth (n)	22,582	22,582	22,582	22,582	22,582	22,582	22,582
	Valid responses (n) (smoking only)	21,637	-	-	-	-	-	-
	Risk factor (n)	2,862	2,180	1,106	967	85	381	1,751
	%	13.2%	9.7%	4.9%	4.3%	0.38%	1.7%	7.8%
2019/20	Mothers giving birth (n)	22,084	22,084	22,084	22,084	22,084	22,084	22,084
	Valid responses (n) (smoking only)	21,400	-	-	-	-	-	-
	Risk factor (n)	2,801	2,253	1,039	1,057	70	368	1,829
	%	13.1%	10.2%	4.7%	4.8%	0.32%	1.7%	8.3%
2020/21	Mothers giving birth (n)	21,163	21,163	21,163	21,163	21,163	21,163	21,163
	Valid responses (n) (smoking only)	18,851	-	-	-	-	-	-
	Risk factor (n)	2,329	2,461	1,049	973	31	357	1,766
	%	12.4%	11.6%	5.0%	4.6%	0.15%	1.7%	8.3%
2021/22	Mothers giving birth (n)	21,469	21,469	21,469	21,469	21,469	21,469	21,469
	Valid responses (n) (smoking only)	20,012	-	-	-	-	-	-
	Risk factor (n)	2,261	2,697	1,033	1,086	29	374	1,851
	%	11.3%	12.6%	4.8%	5.1%	0.14%	1.7%	8.6%
2022/23	Mothers giving birth (n)	20,064	20,064	20,064	20,064	20,064	20,064	20,064
	Valid responses (n) (smoking only)	19,415	-	-	-	-	-	-
	Risk factor (n)	2,058	2,521	993	1,036	39	346	1,176
	%	10.6%	12.6%	4.9%	5.2%	0.19%	1.7%	5.9%

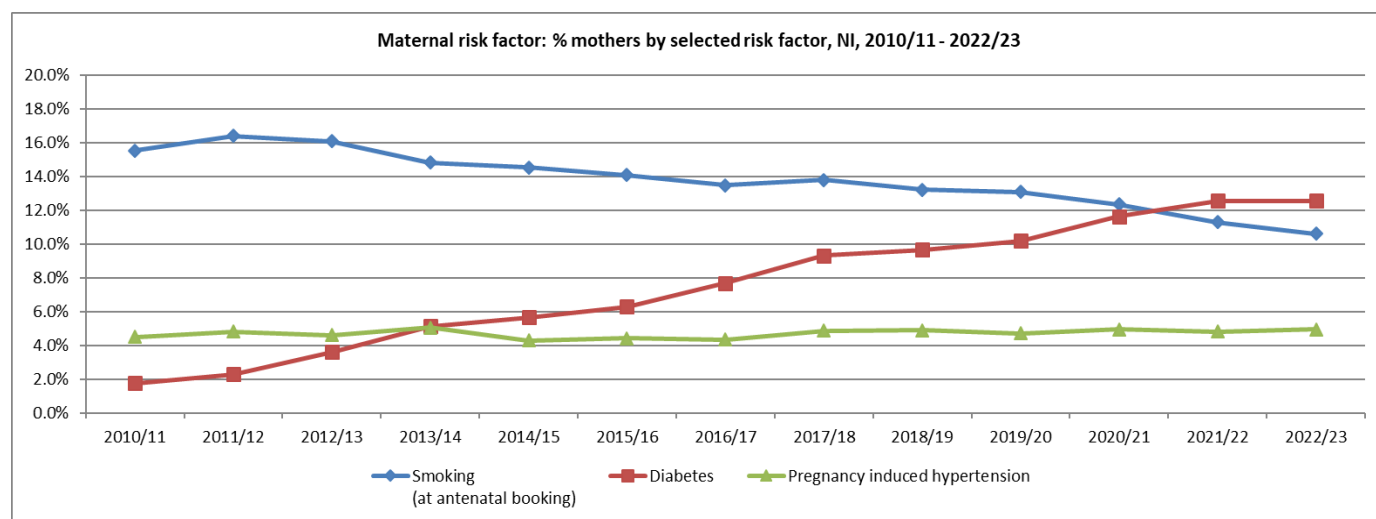
Source: Child Health System (2010/11 - 2016/17), Northern Ireland Maternity System (2017/18 onwards)

Following a change in the interface between Northern Ireland Maternity System and Child Health System during 2017/18, fields containing information on ante-natal risk factors, which had usually transferred from Northern Ireland Maternity System to Child Health System are not now available on Child Health System. As a result, the data must be sourced from Northern Ireland Maternity System. However, on Child Health System, only four ante-natal risk factors are recorded and so e.g. history of psychiatric of illness may not have been recorded on Child Health System (but would be recorded on Northern Ireland Maternity System), therefore this may account for lower figures when comparing Child Health System data to Northern Ireland Maternity System data. The data from both sources were analysed and the impact of changing the source of the data was considered minimal. History of psychiatric illness - coverage prior to 2016/17 was not regarded as sufficient.

In September 2016, new screens were added to Northern Ireland Maternity System to collect more detailed data on the mother's smoking habits. Initially, this data could not be used due to the large number of incomplete records, however from 2018/19, CO levels, the proportion of mothers who smoked and the number of cigarettes smoked per day will be presented using this new data. As a result of this change in source of smoking data, how the percentage of mothers who smoked is calculated will change from 2018/19 onwards. The percentage is now a valid percentage i.e. the % calculation is based on those records where smoking status was known and blank data has been removed from the denominator value. Percentage calculations for all other ante natal risk factors remain the same i.e. as a % of ALL mothers giving birth

Carbon monoxide (CO) monitoring ceased April 2020 and recommenced November 2021 (due to COVID-19 pandemic). CO monitoring is recorded at the same time as smoking status and so it is possible that some women will not have had a smoking status recorded. During 2022 and 2023, a validation exercise was completed on data being recorded on Northern Ireland Maternity System for women with diabetes. As a result, data sourced from Northern Ireland Maternity System for women with diabetes has been amended and is still considered provisional at this time.

**Figure 6.1: % mothers by selected risk factor, Northern Ireland residents, 2010/11 - 2022/23**



Source: Child Health System (2010/11 - 2016/17), Northern Ireland Maternity System (2017/18 onwards)

**Table 6.2: Mothers resident in Northern Ireland, by smoking status at antenatal booking, 2022/23**

		Smoking status at time of booking appointment						% who smoked (valid percentage)
		Smoked	Never smoked	No stopped smoking prior to this pregnancy	No stopped smoking this pregnancy	Not known	All mothers	
Age Group of mother	Under 20	80	238	39	51	14	422	19.6%
	20 - 24	470	1,217	233	203	77	2,200	22.1%
	25 - 29	570	3,328	531	282	162	4,873	12.1%
	30 - 34	563	5,657	666	260	229	7,375	7.9%
	35 - 39	311	3,236	442	118	139	4,246	7.6%
	40 +	64	710	127	19	28	948	7.0%
	<b>All mothers</b>	<b>2,058</b>	<b>14,386</b>	<b>2,038</b>	<b>933</b>	<b>649</b>	<b>20,064</b>	<b>10.6%</b>
Multiple births	Single	2,020	14,175	2,005	918	639	19,757	10.6%
	Multiple	38	211	33	15	10	307	12.8%
	<b>All mothers</b>	<b>2,058</b>	<b>14,386</b>	<b>2,038</b>	<b>933</b>	<b>649</b>	<b>20,064</b>	<b>10.6%</b>
First time mothers	First time mother	481	4,589	613	413	216	6,312	7.9%
	Not a first time mother	1,577	9,797	1,425	520	433	13,752	11.8%
	<b>All mothers</b>	<b>2,058</b>	<b>14,386</b>	<b>2,038</b>	<b>933</b>	<b>649</b>	<b>20,064</b>	<b>10.6%</b>
Ethnic group of mother	White	2,004	13,358	1,998	916	606	18,882	11.0%
	Non-white	52	1,004	39	16	40	1,151	4.7%
	Not stated / Blank	2	24	1	1	3	31	7.1%
	<b>All mothers</b>	<b>2,058</b>	<b>14,386</b>	<b>2,038</b>	<b>933</b>	<b>649</b>	<b>20,064</b>	<b>10.6%</b>

**Table 6.2 continued: Mothers resident in Northern Ireland, by smoking status, 2022/23**

		Smoking status at time of booking appointment						
		Smoked	Never smoked	No stopped smoking prior to this pregnancy	No stopped smoking this pregnancy	Not known	All mothers	% who smoked (valid percentage)
Place of birth	Altnagelvin	252	1,549	219	114	17	<b>2,151</b>	11.8%
	Antrim	276	1,880	277	148	189	<b>2,770</b>	10.7%
	Causeway	102	528	101	46	32	<b>809</b>	13.1%
	Craigavon	275	2,231	273	99	43	<b>2,921</b>	9.6%
	Daisy Hill	129	1,446	179	80	68	<b>1,902</b>	7.0%
	Royal Victoria	644	3,137	399	192	221	<b>4,593</b>	14.7%
	SWAH	<90	853	108	<60	6	<b>1,112</b>	<10.6%
	Ulster	290	2,688	477	195	68	<b>3,718</b>	7.9%
	Home/Freebirth	<5	74	5	<5	5	<b>88</b>	<10.6%
	<b>All mothers</b>	<b>2,058</b>	<b>14,386</b>	<b>2,038</b>	<b>933</b>	<b>649</b>	<b>20,064</b>	<b>10.6%</b>
Trust of residence of mother	Belfast	504	2,655	343	160	155	<b>3,817</b>	13.76%
	Northern	513	3,327	484	241	246	<b>4,811</b>	11.24%
	South Eastern	313	2,482	437	183	102	<b>3,517</b>	9.17%
	Southern	389	3,504	437	180	121	<b>4,631</b>	8.63%
	Western	339	2,418	337	169	25	<b>3,288</b>	10.39%
	<b>All mothers</b>	<b>2,058</b>	<b>14,386</b>	<b>2,038</b>	<b>933</b>	<b>649</b>	<b>20,064</b>	<b>10.6%</b>
Local Government District	Antrim and Newtownabbey	143	1,025	135	71	75	<b>1,449</b>	10.4%
	Ards and North Down	122	971	192	82	26	<b>1,393</b>	8.9%
	Armagh City, Banbridge and Craigavon	237	1,876	219	91	52	<b>2,475</b>	9.8%
	Belfast	544	2,462	345	163	163	<b>3,677</b>	15.5%
	Causeway Coast and Glens	146	897	156	75	43	<b>1,317</b>	11.5%
	Derry City and Strabane	216	1,178	181	92	7	<b>1,674</b>	13.0%
	Fermanagh and Omagh	89	962	120	58	13	<b>1,242</b>	7.2%
	Lisburn and Castlereagh	83	1,221	144	55	48	<b>1,551</b>	5.5%
	Mid and East Antrim	181	871	118	67	117	<b>1,354</b>	14.6%
	Mid Ulster	154	1,450	193	76	24	<b>1,897</b>	8.2%
	Newry, Mourne and Down	143	1,473	235	103	81	<b>2,035</b>	7.3%
	<b>All mothers</b>	<b>2,058</b>	<b>14,386</b>	<b>2,038</b>	<b>933</b>	<b>649</b>	<b>20,064</b>	<b>10.6%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	845	2,521	467	258	142	<b>4,233</b>	20.7%
	2	488	2,847	483	220	117	<b>4,155</b>	12.1%
	3	344	3,195	403	195	126	<b>4,263</b>	8.3%
	4	247	2,989	397	164	136	<b>3,933</b>	6.5%
	Least deprived	134	2,834	288	96	128	<b>3,480</b>	4.0%
	<b>All mothers</b>	<b>2,058</b>	<b>14,386</b>	<b>2,038</b>	<b>933</b>	<b>649</b>	<b>20,064</b>	<b>10.6%</b>

Source: Northern Ireland Maternity System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

In September 2016, new screens were added to Northern Ireland Maternity System to collect more detailed data on the mother's smoking habits. Initially, this data could not be used due to the large number of incomplete records, however from 2018/19, CO levels, the proportion of mothers who smoked and the number of cigarettes smoked per day will be presented using this new data. As a result of this change in source of smoking data, how the percentage of mothers who smoked is calculated will change from 2018/19 onwards and so the smoking information presented in this report has been separated out to a new table. The percentage is now a valid percentage i.e. the % calculation is based on those records where smoking status was known and blank data has been removed from the denominator value.

Disclosure controls have been applied to the data

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

**Table 6.3: Mothers resident in Northern Ireland, by selected maternal risk factor, 2022/23**

			% mothers by risk factor				
		Total mothers	Diabetes	Pregnancy induced hypertension	Anaemia	Antepartum haemorrhage (APH)	History of psychiatric illness
Age Group of mother	Under 20	422	6.6%	5.9%	10.4%	0.5%	8.5%
	20 - 24	2,200	8.8%	5.0%	7.1%	1.5%	8.2%
	25 - 29	4,873	12.0%	5.2%	5.5%	1.5%	6.1%
	30 - 34	7,375	11.7%	4.5%	4.2%	1.7%	5.0%
	35 - 39	4,246	15.3%	5.2%	4.9%	2.0%	5.4%
	40 +	948	21.6%	5.9%	5.5%	3.1%	6.8%
	All mothers	20,064	12.6%	4.9%	5.2%	1.7%	5.9%
Multiple births	Single	19,757	12.6%	4.9%	5.1%	1.7%	5.9%
	Multiple	307	12.4%	9.8%	12.1%	2.3%	6.2%
	All mothers	20,064	12.6%	4.9%	5.2%	1.7%	5.9%
First time mothers	First time mother	6,312	10.6%	7.3%	4.1%	1.4%	4.3%
	Not a first time mother	13,752	13.4%	3.9%	5.7%	1.9%	6.6%
	All mothers	20,064	12.6%	4.9%	5.2%	1.7%	5.9%
Ethnic group of mother	White	18,882	11.7%	5.0%	5.1%	1.7%	6.1%
	Non-white	1,151	26.2%	4.2%	6.3%	1.8%	1.8%
	Not stated / Blank	31	16.1%	6.5%	3.2%	6.5%	6.5%
	All mothers	20,064	12.6%	4.9%	5.2%	1.7%	5.9%
Place of birth	Altnagelvin	2,151	13.5%	3.1%	6.4%	1.4%	4.8%
	Antrim	2,770	16.8%	4.9%	5.0%	1.8%	5.6%
	Causeway	809	1.0%	2.1%	2.7%	1.4%	3.7%
	Craigavon	2,921	17.2%	4.7%	3.4%	1.8%	4.3%
	Daisy Hill	1,902	0.7%	3.3%	3.5%	1.3%	3.2%
	Royal Victoria	4,593	15.7%	6.7%	6.1%	1.9%	8.0%
	SWAH	1,112	7.7%	3.9%	2.0%	0.9%	4.9%
	Ulster	3,718	11.6%	6.0%	7.2%	2.1%	7.5%
	Home/Free	88	5.8%	0.0%	7.0%	0.0%	5.8%
	All mothers	20,064	12.6%	4.9%	5.2%	1.7%	5.9%
Trust of residence of mother	Belfast	3,817	14.1%	6.1%	6.7%	1.7%	7.5%
	Northern	4,811	13.4%	4.8%	4.3%	1.8%	5.8%
	South Eastern	3,517	13.0%	6.3%	6.9%	2.2%	7.6%
	Southern	4,631	10.8%	4.2%	3.6%	1.6%	4.0%
	Western	3,288	11.5%	3.5%	4.8%	1.4%	4.7%
	All mothers	20,064	12.6%	4.9%	5.2%	1.7%	5.9%
Local Government District	Antrim and Newtownabbey	1,449	15.0%	4.8%	4.4%	1.9%	8.0%
	Ards and North Down	1,393	12.7%	6.4%	7.2%	2.4%	8.2%
	Armagh City, Banbridge & Craigavon	2,475	10.7%	4.0%	4.2%	1.2%	4.6%
	Belfast	3,677	14.8%	6.1%	7.0%	1.8%	7.8%
	Causeway Coast and Glens	1,317	11.0%	3.5%	4.3%	1.7%	4.6%
	Derry City and Strabane	1,674	12.2%	3.2%	6.9%	1.7%	4.7%
	Fermanagh and Omagh	1,242	10.9%	3.9%	2.1%	0.9%	4.8%
	Lisburn and Castlereagh	1,551	11.7%	6.2%	5.9%	1.5%	7.4%
	Mid and East Antrim	1,354	14.2%	5.5%	3.5%	2.1%	6.0%
	Mid Ulster	1,897	12.4%	4.5%	4.2%	1.9%	3.4%
	Newry, Mourne and Down	2,035	11.0%	5.0%	4.7%	2.0%	4.1%
All mothers	20,064	12.6%	4.9%	5.2%	1.7%	5.9%	
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	4,233	15.0%	4.7%	7.4%	1.7%	8.6%
	2	4,155	11.7%	4.3%	4.8%	1.7%	5.9%
	3	4,263	11.0%	4.7%	4.6%	1.7%	4.8%
	4	3,933	12.9%	5.5%	4.3%	1.5%	4.7%
	Least deprived	3,480	12.3%	5.7%	4.5%	2.0%	4.9%
	All mothers	20,064	12.6%	4.9%	5.2%	1.7%	5.9%

Source: Northern Ireland Maternity System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

**Table 6.4: Mothers resident in Northern Ireland, by maternal risk factor (smoking and diabetes), by District Electoral Area, 2022/23**

Local Government District	District Electoral Area	Total mothers	Total mothers with a valid smoking status	% mothers by risk factor	
				Smoking at antenatal booking (% of mothers with valid smoking status)	Diabetes (% of all mothers)
Antrim and Newtownabbey	Airport	214	200	6.5%	14.0%
	Antrim	275	254	10.6%	16.4%
	Ballyclare	206	193	10.9%	13.6%
	Dunsilly	183	172	6.4%	9.8%
	Glengormley Urban	194	188	9.0%	17.0%
	Macedon	203	199	17.6%	16.7%
	Three Mile Water	174	168	11.3%	16.7%
	<b>Total</b>	<b>1,449</b>	<b>1,374</b>	<b>10.4%</b>	<b>15.0%</b>
Ards and North Down	Ards Peninsula	204	198	10.1%	13.2%
	Bangor Central	225	220	8.6%	12.9%
	Bangor East and Donaghadee	145	143	6.3%	13.1%
	Bangor West	190	187	7.0%	14.7%
	Comber	184	179	6.1%	9.8%
	Hollywood and Clandeboye	158	156	3.8%	10.1%
	Newtownards	287	284	15.5%	13.9%
	<b>Total</b>	<b>1,393</b>	<b>1,367</b>	<b>8.9%</b>	<b>12.7%</b>
Armagh, Banbridge and Craigavon	Armagh	370	356	9.6%	10.8%
	Banbridge	351	339	10.0%	12.3%
	Craigavon	343	340	10.3%	11.4%
	Cusher	319	312	7.4%	9.4%
	Lagan River	260	253	6.3%	11.5%
	Lurgan	451	445	12.8%	10.4%
	Portadown	381	378	10.1%	9.4%
	<b>Total</b>	<b>2,475</b>	<b>2,423</b>	<b>9.8%</b>	<b>10.7%</b>
Belfast	Balmoral	232	216	8.3%	11.6%
	Black Mountain	419	393	16.5%	14.8%
	Botanic	414	395	11.1%	16.9%
	Castle	314	299	17.4%	13.1%
	Collin	421	394	16.5%	16.4%
	Court	431	407	24.6%	18.8%
	Lisnasharragh	267	262	4.2%	13.5%
	Oldpark	444	424	23.8%	13.3%
	Ormiston	340	335	5.1%	12.1%
	Titanic	395	389	18.3%	14.9%
	<b>Total</b>	<b>3,677</b>	<b>3,514</b>	<b>15.5%</b>	<b>14.8%</b>
Causeway Coast and Glens	Ballymoney	223	215	14.0%	9.4%
	Bann	177	169	8.3%	12.4%
	Benbradagh	216	214	5.1%	10.2%
	Causeway	155	147	11.6%	8.4%
	Coleraine	202	195	21.5%	13.4%
	Limavady	154	151	15.2%	11.0%
	The Glens	190	183	4.9%	12.1%
	<b>Total</b>	<b>1,317</b>	<b>1,274</b>	<b>11.5%</b>	<b>11.0%</b>
Derry City and Strabane	Ballyarnett	309	309	16.5%	14.9%
	Derg	198	198	10.6%	11.6%
	Faughan	191	190	8.9%	13.1%
	Foyleside	202	202	17.3%	11.9%
	Sperrin	265	264	10.6%	10.6%
	The Moor	185	184	15.8%	10.8%
	Waterside	324	320	10.9%	12.0%
	<b>Total</b>	<b>1,674</b>	<b>1,667</b>	<b>13.0%</b>	<b>12.2%</b>

**Table 6.4 continued: Mothers resident in Northern Ireland, by maternal risk factor - smoking and diabetes, by District Electoral Area, 2022/23**

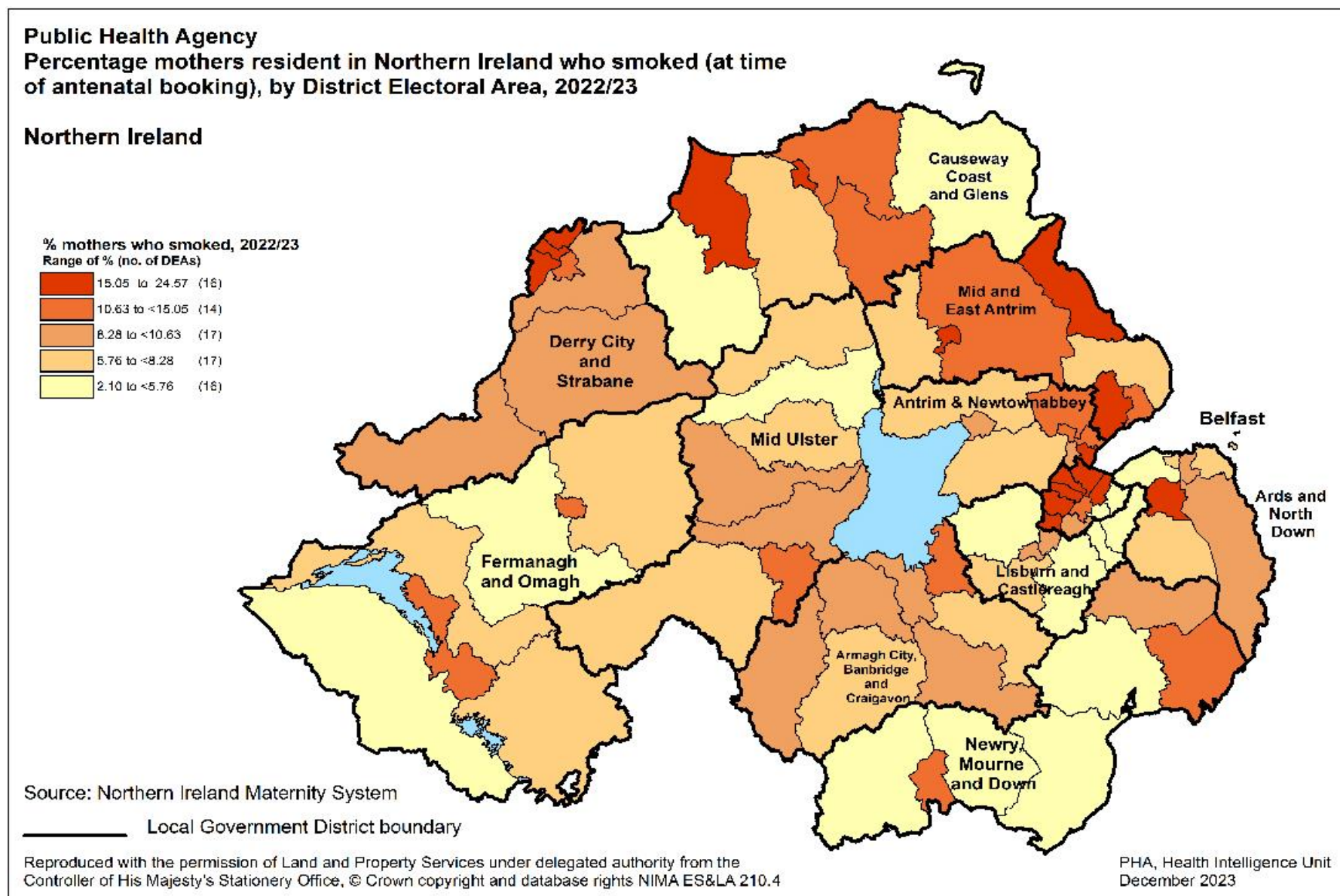
Local Government District	District Electoral Area	Total mothers	Total mothers with a valid smoking status	% mothers by risk factor	
				Smoking at antenatal booking (% of mothers with valid smoking status)	Diabetes (% of all mothers)
Fermanagh and Omagh	Enniskillen	176	174	11.5%	10.8%
	Erne East	172	172	7.6%	9.9%
	Erne North	170	167	6.0%	13.5%
	Erne West	141	141	4.3%	9.9%
	Mid Tyrone	202	199	6.5%	10.4%
	Omagh	187	185	11.4%	12.8%
	West Tyrone	194	191	3.1%	8.8%
	<b>Total</b>	<b>1,242</b>	<b>1,229</b>	<b>7.2%</b>	<b>10.9%</b>
Lisburn and Castlereagh	Castlereagh East	256	252	4.4%	9.0%
	Castlereagh South	233	225	2.7%	10.3%
	Downshire East	146	143	2.1%	13.0%
	Downshire West	200	191	5.8%	12.0%
	Killultagh	217	210	3.8%	11.5%
	Lisburn North	233	224	9.4%	13.7%
	Lisburn South	266	258	8.9%	13.2%
	<b>Total</b>	<b>1,551</b>	<b>1,503</b>	<b>5.5%</b>	<b>11.7%</b>
Mid and East Antrim	Ballymena	254	213	23.0%	11.4%
	Bannside	207	185	7.6%	13.5%
	Braid	243	206	15.0%	9.5%
	Carrick Castle	160	158	13.3%	16.9%
	Coast Road	154	147	17.7%	20.1%
	Knockagh	187	184	15.8%	17.1%
	Larne Lough	149	144	7.6%	14.8%
	<b>Total</b>	<b>1,354</b>	<b>1,237</b>	<b>14.6%</b>	<b>14.2%</b>
Mid Ulster	Carntogher	196	194	6.2%	12.8%
	Clogher Valley	294	293	6.1%	9.5%
	Cookstown	303	299	9.7%	9.9%
	Dungannon	341	338	11.2%	14.4%
	Magherafelt	253	251	7.6%	13.8%
	Moyola	232	225	4.9%	14.7%
	Torrent	278	273	9.9%	12.2%
	<b>Total</b>	<b>1,897</b>	<b>1,873</b>	<b>8.2%</b>	<b>12.4%</b>
Newry, Mourne and Down	Crotlieve	301	286	2.8%	8.6%
	Downpatrick	220	213	14.6%	15.0%
	Newry	304	288	11.1%	10.9%
	Rowallane	211	207	9.2%	10.4%
	Slieve Croob	188	183	5.5%	14.4%
	Slieve Gullion	445	428	5.4%	10.8%
	The Mournes	366	349	5.7%	9.3%
	<b>Total</b>	<b>2,035</b>	<b>1,954</b>	<b>7.3%</b>	<b>11.0%</b>
Northern Ireland	<b>All mothers</b>	<b>20,064</b>	<b>19,415</b>	<b>10.6%</b>	<b>12.6%</b>

Source: Northern Ireland Maternity System

In September 2016, new screens were added to Northern Ireland Maternity System to collect more detailed data on the mother's smoking habits. Initially, this data could not be used due to the large number of incomplete records, however from 2018/19, CO levels, the proportion of mothers who smoked and the number of cigarettes smoked per day will be presented using this new data. As a result of this change in source of smoking data, how the percentage of mothers who smoked is calculated will change from 2018/19 onwards and so the smoking information presented in this report is now shown as a valid percentage i.e. the % calculation is based on those records where smoking status was known and blank data has been removed from the denominator value.



**Figure 6.2: Percentage mothers' resident in Northern Ireland who smoked (at booking), by District Electoral Area, Northern Ireland, 2022/23**



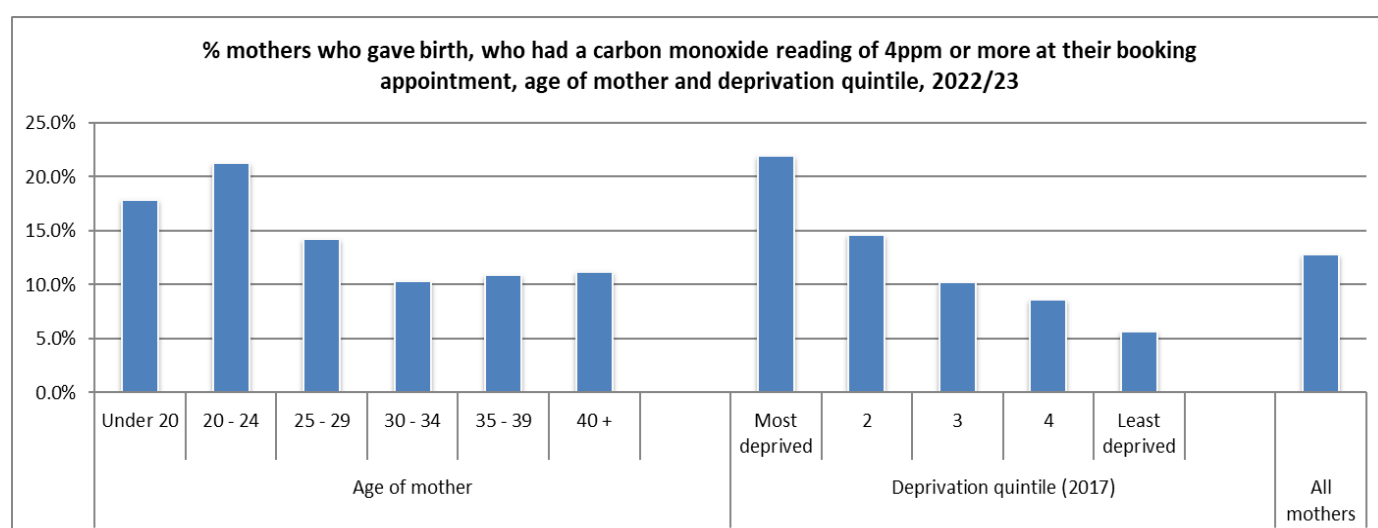
## Carbon Monoxide Screening

### Carbon Monoxide Screening (Antenatal)

Carbon monoxide (CO) is a poisonous gas produced when tobacco products are burnt. Carbon monoxide is found in inhaled, exhaled and passive smoke; however, it can be produced also by e.g. car exhaust fumes or emitted from malfunctioning fossil/wood fuelled heating. Exposure to carbon monoxide is dangerous during pregnancy, as it deprives the baby of oxygen, slows its growth and increases the risk of e.g. miscarriage and still birth.

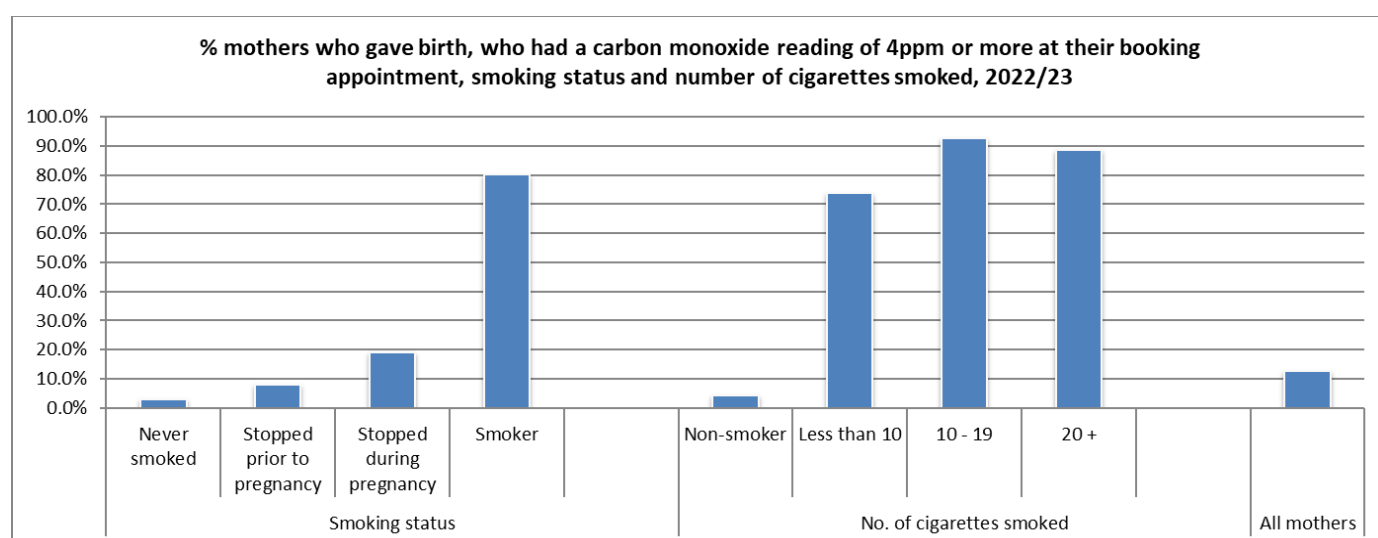
All pregnant women in Northern Ireland are offered carbon monoxide breath testing at their antenatal booking appointment. Carbon monoxide levels will be higher in those women who smoke, or who have been exposed to unsafe levels of CO from another source. Following testing, women with a result of 4ppm (parts per million) or higher, and who smoke, are provided with information on support services, which are available in Northern Ireland to help her stop smoking. If the woman does not smoke and is not exposed to second hand smoke, advice is given to reduce exposure to environmental sources of CO e.g. to check for faulty home heating appliances etc.

**Figure 6.3: % mothers who gave birth, who had a carbon monoxide reading of 4ppm or more at their booking appointment, by age of mother and deprivation quintile, 2022/23**



Source: Northern Ireland Maternity System

**Figure 6.4: % mothers who gave birth, who had a carbon monoxide reading of 4ppm or more at their booking appointment, by smoking status and number of cigarettes smoked, 2022/23**



Source: Northern Ireland Maternity System



**Table 6.5: Mothers resident in Northern Ireland who gave birth, by carbon monoxide reading taken at antenatal booking appointment, 2022/23**

		Exhaled carbon monoxide reading (ppm)						% 4ppm or more
		0-3	4-9	10 - 19	20+	Not known *	Total	
Age Group of mother	Under 20	212	32	<15	<5	164	<b>422</b>	>12.8%
	20 - 24	1,059	202	75	9	855	<b>2,200</b>	21.3%
	25 - 29	2,576	253	148	25	1,871	<b>4,873</b>	14.2%
	30 - 34	4,025	266	157	41	2,886	<b>7,375</b>	10.3%
	35 - 39	2,299	184	70	26	1,667	<b>4,246</b>	10.9%
	40 +	514	39	<20	<10	369	<b>948</b>	<12.8%
	Not known	0	0	0	0	0	<b>0</b>	-
	<b>All mothers</b>	<b>10,685</b>	<b>976</b>	<b>481</b>	<b>110</b>	<b>7,812</b>	<b>20,064</b>	<b>12.8%</b>
Smoking status of mother (at booking)	Never smoked	8,741	244	<10	<5	5,390	<b>14,386</b>	<12.8%
	No - stopped prior to this pregnancy	1,217	93	12	0	716	<b>2,038</b>	7.9%
	No - stopped during this pregnancy	458	84	<25	<5	367	<b>933</b>	>12.8%
	Smoker	269	555	439	105	690	<b>2,058</b>	80.3%
	Not known	0	0	0	0	649	<b>649</b>	-
	<b>All mothers</b>	<b>10,685</b>	<b>976</b>	<b>481</b>	<b>110</b>	<b>7,812</b>	<b>20,064</b>	<b>12.8%</b>
Number of cigarettes smoked (per day) (recorded at booking)	Non-smoker (0 cigarettes)	10,416	421	42	5	6,473	<b>17,357</b>	4.3%
	Less than 10	230	386	218	43	429	<b>1,306</b>	73.8%
	10 - 19	31	145	194	51	237	<b>658</b>	92.6%
	20 +	8	24	27	11	24	<b>94</b>	88.6%
	Not known	0	0	0	0	649	<b>649</b>	-
	<b>All mothers</b>	<b>10,685</b>	<b>976</b>	<b>481</b>	<b>110</b>	<b>7,812</b>	<b>20,064</b>	<b>12.8%</b>
Trust of residence of mother	Belfast	1,557	193	93	24	1,950	<b>3,817</b>	16.6%
	Northern	2,886	260	105	16	1,544	<b>4,811</b>	11.7%
	South Eastern	1,308	119	48	12	2,030	<b>3,517</b>	12.0%
	Southern	2,195	159	102	25	2,150	<b>4,631</b>	11.5%
	Western	2,739	245	133	33	138	<b>3,288</b>	13.0%
	<b>All mothers</b>	<b>10,685</b>	<b>976</b>	<b>481</b>	<b>110</b>	<b>7,812</b>	<b>20,064</b>	<b>12.8%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	2,093	338	206	44	1,552	<b>4,233</b>	21.9%
	2	2,296	238	113	41	1,467	<b>4,155</b>	14.6%
	3	2,454	187	83	11	1,528	<b>4,263</b>	10.3%
	4	2,195	144	<60	<15	1,530	<b>3,933</b>	<12.8%
	Least deprived	1,647	69	<30	<5	1,735	<b>3,480</b>	<12.8%
	<b>All mothers</b>	<b>10,685</b>	<b>976</b>	<b>481</b>	<b>110</b>	<b>7,812</b>	<b>20,064</b>	<b>12.8%</b>

Source: Northern Ireland Maternity System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

ppm: particles per million

In September 2016, new screens were added to Northern Ireland Maternity System to collect more detailed data on the mother's smoking habits. Initially, this data could not be used due to the large number of incomplete records, however from 2018/19, CO levels, the proportion of mothers who smoked and the number of cigarettes smoked per day will be presented using this new data. The percentage of mothers with a CO level of 4ppm or more is a valid percentage i.e. the % calculation is based on those records where CO level was known and blank data has been removed from the denominator value.

Disclosure controls have been applied to this table. As a result, for some percentages, it is not possible to show the exact percentage values in the final column and so a comparison to the NI value has been provided.

**\*NOTE THAT IN 2022/23 THERE WERE A LARGE NUMBER OF WOMEN WHO DID NOT HAVE A CARBON MONOXIDE READING RECORDED**

# Section 7: Maternal BMI

## Why should we be concerned?

This report highlights that over a quarter (28%) of mothers giving birth in Northern Ireland in 2022/23 were obese (BMI  $\geq 30.00$  at time of antenatal booking). A further 30% of mothers were overweight (pre-obese) (BMI 25.00-29.99 at time of antenatal booking). (Table 7.1, page 54). Obesity (and excessive weight gain during pregnancy) is associated with increased risks to both mother and infant.

Risks to mothers include<sup>46 47</sup>:

- Reduced fertility
- Greater risk of miscarriage / still birth / congenital anomalies
- Greater risk of developing gestational diabetes
- Having a larger baby (>4kg) resulting in complications such as infant shoulder dystocia
- Increased risk of requiring instrumental delivery or Caesarean Section
- Greater risk of conditions such as diabetes and hypertension to both mother and child
- Maternal death

Postnatally, maternal obesity has been linked to depression and difficulties in breastfeeding, with adverse cardiovascular and respiratory outcomes in children<sup>48</sup>.

The Royal College of Obstetricians and Gynaecologists<sup>49</sup> adds that mothers who were obese were also at risk of thrombosis (blood clot), high blood pressure and pre-eclampsia, post-Caesarean wound infection, anaesthetic complications and postpartum haemorrhage.

Risks to infants include:

- Neural tube defects (problems with development of brain and spine)
- Being born preterm
- The increased risk of obesity and diabetes in later life.

## What can be done?

Advice given to the general population on maintaining a sensible weight should be encouraged in women of childbearing age. Recent campaigns and initiatives such as the Public Health Agency's "Choose to Live Better"<sup>50</sup> and the Department of Health framework "A Fitter Future for All"<sup>51</sup> encourage people to make healthy choices, to improve their health and wellbeing and to reduce the risk of diseases relating to obesity. A new framework "Strategic Framework to Prevent the Harm caused by Obesity, and Improve Diets and Levels of Physical Activity in Northern Ireland" is currently out for consultation<sup>52</sup>.

The Royal College of Obstetricians and Gynaecologists state<sup>53</sup>:

*"Primary care services should ensure that all women of childbearing age have the opportunity to optimise their weight before pregnancy. Advice on weight and lifestyle should be given during preconception counselling or contraceptive consultations. Weight and BMI should be measured to encourage women to optimise their weight before pregnancy. Women of childbearing age with a BMI 30 kg/m<sup>2</sup> or greater should receive information and advice about the risks of obesity during pregnancy and childbirth, and be supported to lose weight before conception and between pregnancies in line with National Institute for Health and Care Excellence (NICE) Clinical guideline (CG) 189. Women should be informed that weight loss between pregnancies reduces the risk of stillbirth, hypertensive complications and fetal macrosomia".*

<sup>46</sup> The BMJ, "Obesity and pregnancy: mechanisms of short term and long term adverse consequences for mother and child", February 2017 <https://www.bmj.com/content/356/bmj.i1>

<sup>47</sup> British Dietetic Association, "Maternal Obesity", December 2015, updated November 2019 <https://www.bda.uk.com/resource/maternal-obesity.html>

<sup>48</sup> "Maternal Obesity", Public Health England, December 2015 [https://khub.net/c/document\\_library/get\\_file?uuid=a5768682-fb3d-4fda-ab4a-937a8d80f855&groupId=31798783](https://khub.net/c/document_library/get_file?uuid=a5768682-fb3d-4fda-ab4a-937a8d80f855&groupId=31798783)

<sup>49</sup> Royal College of Obstetricians and Gynaecologists, "Being overweight in pregnancy and after birth" <https://www.rcog.org.uk/for-the-public/browse-our-patient-information/being-overweight-in-pregnancy-and-after-birth/>

<sup>50</sup> Choose to Live Better, Public Health Agency <http://www.choosetolivebetter.com/>

<sup>51</sup> "A Fitter Future for All", Department of Health <https://www.health-ni.gov.uk/articles/obesity-prevention>

<sup>52</sup> "Strategic Framework to Prevent the Harm caused by Obesity, and Improve diets and Levels of Physical Activity in Northern Ireland", Department of Health <https://www.health-ni.gov.uk/articles/obesity-prevention>

<sup>53</sup> Denison FC, Aedla NR, Keag O, Hor K, Reynolds RM, Milne A, Diamond A, on behalf of the Royal College of Obstetricians and Gynaecologists. Care of Women with Obesity in Pregnancy. Green-top Guideline No. 72. BJOG 2018

<https://www.rcog.org.uk/guidance/browse-all-guidance/green-top-guidelines/care-of-women-with-obesity-in-pregnancy-green-top-guideline-no-72/>

## Key Points

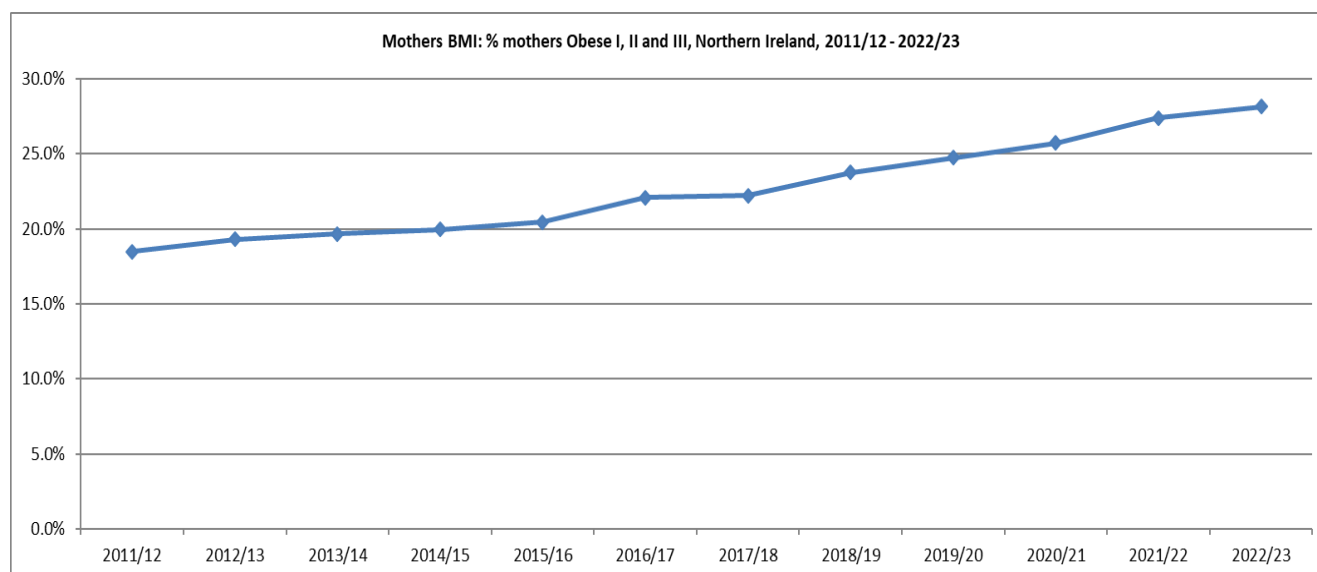
- Over 28% of mothers giving birth during 2022/23 were measured as obese (BMI = 30.00 or more) at time of antenatal booking appointment. This proportion has increased year on year since 2011/12. 58.7% of mothers at the time of booking, were considered pre-obese or obese (BMI = 25.00 or more). [Page 54]
- Levels of obesity decreased as level of deprivation decreased (NIMDM 2017). In 2022/23, 62.0% of mothers from the most deprived areas were classified as pre-obese/obese, compared to 53.4% from the least deprived areas (all mothers = 58.7%). [Page 56]

**Table 7.1: Body Mass Index, at time of booking, of mothers' resident in Northern Ireland who gave birth, 2011/12 - 2022/23**

Year of birth		Mothers by BMI at booking								Total: Obese I, II and III (valid %)
		Under weight (<18.50)	Normal (18.50 - 24.99)	Pre-obese (25.00 - 29.99)	Obese I (30.00 - 34.99)	Obese II (35.00 - 39.99)	Obese III (≥40.00)	Not known	Total	
2011/12	n	487	11,540	6,753	2,733	1,032	489	947	23,981	4,254
	%	2.1%	50.1%	29.3%	11.9%	4.5%	2.1%	-	-	18.5%
2012/13	n	509	11,805	7,037	2,971	1,115	547	552	24,536	4,633
	%	2.1%	49.2%	29.3%	12.4%	4.6%	2.3%	-	-	19.3%
2013/14	n	470	11,430	6,950	2,923	1,174	515	368	23,830	4,612
	%	2.0%	48.7%	29.6%	12.5%	5.0%	2.2%	-	-	19.7%
2014/15	n	472	11,512	6,952	2,933	1,215	576	307	23,967	4,724
	%	2.0%	48.7%	29.4%	12.4%	5.1%	2.4%	-	-	20.0%
2015/16	n	472	11,216	7,178	2,970	1,271	605	331	24,043	4,846
	%	2.0%	47.3%	30.3%	12.5%	5.4%	2.6%	-	-	20.4%
2016/17	n	456	10,704	7,043	3,148	1,332	676	345	23,704	5,156
	%	2.0%	45.8%	30.2%	13.5%	5.7%	2.9%	-	-	22.1%
2017/18	n	435	10,213	6,776	3,028	1,351	595	307	22,705	4,974
	%	1.9%	45.6%	30.3%	13.5%	6.0%	2.7%	-	-	22.2%
2018/19	n	359	9,953	6,808	3,254	1,408	675	125	22,582	5,337
	%	1.6%	44.3%	30.3%	14.5%	6.3%	3.0%	-	-	23.8%
2019/20	n	382	9,463	6,682	3,345	1,416	669	127	22,084	5,430
	%	1.7%	43.1%	30.4%	15.2%	6.4%	3.0%	-	-	24.7%
2020/21	n	321	8,769	6,515	3,173	1,475	758	152	21,163	5,406
	%	1.5%	41.7%	31.0%	15.1%	7.0%	3.6%	-	-	25.7%
2021/22	n	344	8,535	6,628	3,416	1,590	848	108	21,469	5,854
	%	1.6%	40.0%	31.0%	16.0%	7.4%	4.0%	-	-	27.4%
2022/23	n	332	7,905	6,111	3,252	1,562	804	98	20,064	5,618
	%	1.7%	39.6%	30.6%	16.3%	7.8%	4.0%	-	-	28.1%

Source: Northern Ireland Maternity System

**Figure 7.1: % mothers Obese I, II and III, Northern Ireland, 2011/12 – 2022/23**



**Table 7.2: Body Mass Index, at time of booking, of mothers' resident in Northern Ireland who gave birth, 2022/23**

		Mothers by BMI at booking								% obese I, II and III (valid %)
		Under weight (<18.50)	Normal (18.50 - 24.99)	Pre-obese (25.00 - 29.99)	Obese I (30.00 - 34.99)	Obese II (35.00 - 39.99)	Obese III (≥40.00)	Not known	Total	
Age Group of mother	Under 20	36	238	88	41	14	<5	<5	422	<28.1%
	20 - 24	87	922	584	344	170	87	6	2,200	27.4%
	25 - 29	76	1,865	1,469	812	408	217	26	4,873	29.6%
	30 - 34	90	2,933	2,294	1,176	557	285	40	7,375	27.5%
	35 - 39	35	1,613	1,357	727	323	172	19	4,246	28.9%
	40 +	8	334	319	152	90	<50	<10	948	>28.1%
	All mothers	332	7,905	6,111	3,252	1,562	804	98	20,064	28.1%
Multiple births	Single	327	7,791	6,018	3,199	1,538	790	94	19,757	28.1%
	Multiple	5	114	93	53	24	14	4	307	30.0%
	All mothers	332	7,905	6,111	3,252	1,562	804	98	20,064	28.1%
First time mothers	First time mother	142	2,712	1,883	919	407	217	32	6,312	24.6%
	Not a first time mother	190	5,193	4,228	2,333	1,155	587	66	13,752	29.8%
	All infants	332	7,905	6,111	3,252	1,562	804	98	20,064	28.1%
Ethnic group of mother	White	306	7,427	5,715	3,076	1,487	780	91	18,882	28.4%
	Non-white	26	467	386	170	73	24	5	1,151	23.3%
	Not stated/Blank	0	11	10	6	2	0	2	31	27.6%
	All mothers	332	7,905	6,111	3,252	1,562	804	98	20,064	28.1%
Place of birth	Altnagelvin	33	804	650	372	182	105	5	2,151	30.7%
	Antrim	42	1,091	806	451	227	146	7	2,770	29.8%
	Causeway	14	316	272	126	<70	<5	12	809	<28.1%
	Craigavon	60	1,111	890	473	237	146	4	2,921	29.3%
	Daisy Hill	<20	811	613	285	130	<40	7	1,902	<28.1%
	Royal Victoria	94	1,760	1,422	754	364	187	12	4,593	28.5%
	SWAH	13	423	359	187	93	36	1	1,112	28.4%
	Ulster	56	1,540	1,073	595	262	143	49	3,718	27.3%
	Home/Freebirth	<5	49	26	9	<5	0	1	88	<28.1%
	All mothers	332	7,905	6,111	3,252	1,562	804	98	20,064	28.1%

**Table 7.2 continued: Body Mass Index, at time of booking, of mothers' resident in Northern Ireland who gave birth, 2022/23**

		Mothers by BMI at booking								% obese I, II and III (valid %)
		Under weight (<18.50)	Normal (18.50 - 24.99)	Pre-obese (25.00 - 29.99)	Obese I (30.00 - 34.99)	Obese II (35.00 - 39.99)	Obese III (≥40.00)	Not known	Total	
Trust of residence of mother	Belfast	82	1,572	1,158	577	288	132	8	<b>3,817</b>	26.2%
	Northern	76	1,869	1,472	806	372	193	23	<b>4,811</b>	28.6%
	South Eastern	57	1,376	1,037	580	267	153	47	<b>3,517</b>	28.8%
	Southern	69	1,855	1,427	723	365	180	12	<b>4,631</b>	27.5%
	Western	48	1,233	1,017	566	270	146	8	<b>3,288</b>	29.9%
	<b>All mothers</b>	<b>332</b>	<b>7,905</b>	<b>6,111</b>	<b>3,252</b>	<b>1,562</b>	<b>804</b>	<b>98</b>	<b>20,064</b>	<b>28.1%</b>
Local Government District	Antrim and Newtownabbey	26	566	446	248	103	57	3	<b>1,449</b>	28.2%
	Ards and North Down	24	566	381	234	111	72	5	<b>1,393</b>	30.0%
	Armagh City, Banbridge and Craigavon	37	965	757	400	221	91	4	<b>2,475</b>	28.8%
	Belfast	82	1,483	1,117	569	293	129	4	<b>3,677</b>	27.0%
	Causeway Coast and Glens	16	492	422	217	106	53	11	<b>1,317</b>	28.8%
	Derry City and Strabane	33	641	495	289	141	72	3	<b>1,674</b>	30.0%
	Fermanagh and Omagh	14	452	401	209	105	57	4	<b>1,242</b>	30.0%
	Lisburn and Castlereagh	24	659	458	232	96	53	29	<b>1,551</b>	25.0%
	Mid and East Antrim	25	549	377	228	113	55	7	<b>1,354</b>	29.4%
	Mid Ulster	29	758	614	291	128	74	3	<b>1,897</b>	26.0%
	Newry, Mourne and Down	22	774	643	335	145	91	25	<b>2,035</b>	28.4%
	<b>All infants</b>	<b>332</b>	<b>7,905</b>	<b>6,111</b>	<b>3,252</b>	<b>1,562</b>	<b>804</b>	<b>98</b>	<b>20,064</b>	<b>28.1%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	87	1,516	1,271	752	371	219	17	<b>4,233</b>	31.8%
	2	78	1,556	1,323	698	329	159	12	<b>4,155</b>	28.6%
	3	53	1,643	1,303	721	354	161	28	<b>4,263</b>	29.2%
	4	57	1,636	1,193	575	293	161	18	<b>3,933</b>	26.3%
	Least deprived	57	1,554	1,021	506	215	104	23	<b>3,480</b>	23.9%
	<b>All mothers</b>	<b>332</b>	<b>7,905</b>	<b>6,111</b>	<b>3,252</b>	<b>1,562</b>	<b>804</b>	<b>98</b>	<b>20,064</b>	<b>28.1%</b>

Source: Northern Ireland Maternity System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Due to small numbers, it is not possible to show data by individual ethnic group

Disclosure controls have been applied to this table. As a result, for some age groups and places of birth, it is not possible to show the exact percentage values in the final column and so a comparison to the NI value has been provided

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

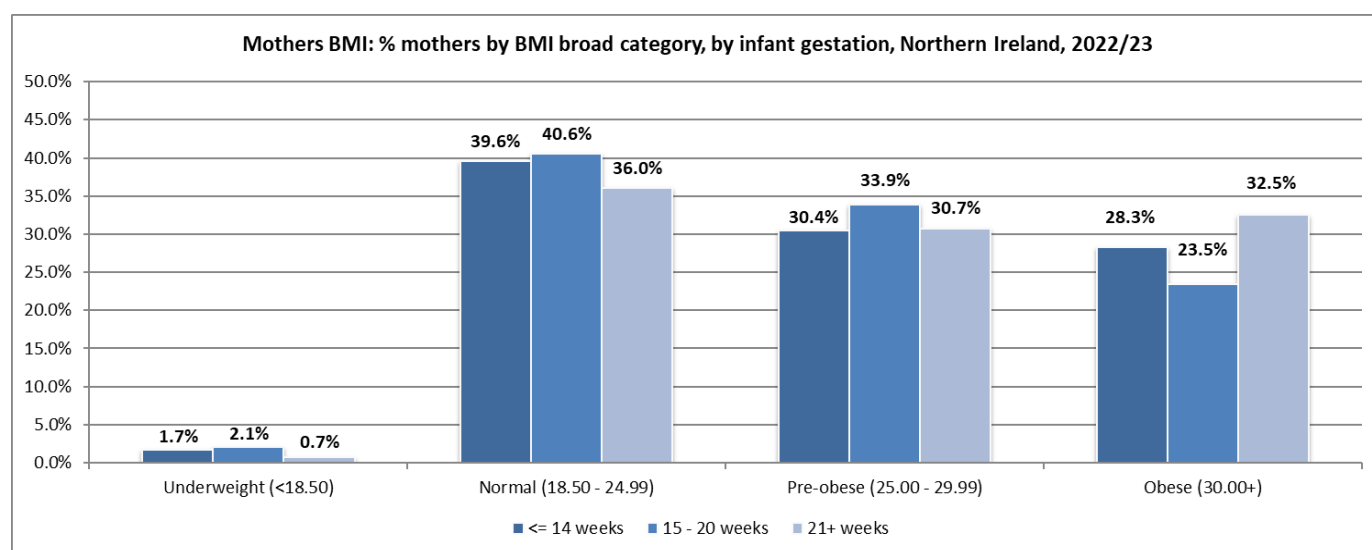
**Table 7.3: Body Mass Index, at time of booking, of mothers' resident in Northern Ireland by infant gestation at time of booking (completed weeks), 2022/23**

Infant gestation at booking	No. of infants by mother's BMI at booking								% obese I, II and III (valid %)
	Under weight (<18.50)	Normal (18.50 - 24.99)	Pre-obese (25.00 - 29.99)	Obese I (30.00 - 34.99)	Obese II (35.00 - 39.99)	Obese III (40.00+)	Not known	Grand Total	
<= 14 weeks	315	7,466	5,737	3,078	1,478	769	76	<b>18,919</b>	<b>28.3%</b>
15 - 20 weeks	<20	351	293	112	60	31	<20	<b>875</b>	<b>23.5%</b>
21+ weeks	<5	204	174	118	48	18	<20	<b>582</b>	<b>32.5%</b>
Grand Total	<b>337</b>	<b>8,021</b>	<b>6,204</b>	<b>3,308</b>	<b>1,586</b>	<b>818</b>	<b>102</b>	<b>20,376</b>	<b>28.2%</b>

Source: Northern Ireland Maternity System

Disclosure controls have been applied to this table

**Figure 7.2: % mothers by BMI category, by infant gestation, Northern Ireland, 2022/23**



The data from Table 5.2 [Page 36] shows that younger women are more likely to attend for their antenatal booking appointment later in their pregnancy. Women under 20 years tend to be less overweight/obese and this can confuse the picture.

Table 7.4 below looks at women who attend antenatal booking, in under 15 weeks only, across a range of risk factors and outcomes by maternal weight at booking.

**Table 7.4: Body Mass Index, at time of booking, of mothers' resident in Northern Ireland, who booked at ≤14 weeks gestation, by various risk factors/outcomes, 2018/19 – 2022/23**

Risk factor/outcome (blanks/not knowns removed except diabetes)		No. of mothers	Mother's BMI at booking (% of BMI category)					TOTAL
			Underweight (<18.50)	Normal (18.50 - 24.99)	Overweight (25.00 - 29.99)	Obese (≥30.00)	Not known	
Birth weight	Low birth weight (<2,500g)	5,255	11.1%	5.3%	4.8%	5.3%	12.1%	<b>5.3%</b>
	2500 - 3999g	79,766	84.6%	82.5%	79.0%	78.2%	73.4%	<b>80.3%</b>
	High birth weight (> 4000g)	14,302	4.2%	12.2%	16.2%	16.5%	14.5%	<b>14.4%</b>
	<b>Total mothers</b>	<b>99,323</b>	-	-	-	-	-	-
Delivery method	Elective Caesarean	17,755	11.2%	14.9%	18.4%	22.4%	17.4%	<b>17.9%</b>
	Emergency Caesarean	16,045	11.9%	13.6%	16.9%	19.6%	19.5%	<b>16.2%</b>
	Normal	53,871	61.9%	57.6%	53.3%	49.4%	51.8%	<b>54.2%</b>
	Other	11,666	15.0%	13.9%	11.4%	8.5%	11.3%	<b>11.7%</b>
	<b>Total mothers</b>	<b>99,337</b>	-	-	-	-	-	-
Gestation at delivery (completed weeks)	<28 weeks	444	0.5%	0.4%	0.4%	0.6%	3.1%	<b>0.4%</b>
	28 - 31 weeks	643	0.6%	0.6%	0.6%	0.8%	1.2%	<b>0.6%</b>
	32 - 36 weeks	5,345	9.4%	5.0%	5.3%	5.7%	10.0%	<b>5.4%</b>
	37 - 38 weeks	22,178	24.1%	20.4%	20.6%	27.3%	19.9%	<b>22.3%</b>
	39+ weeks	70,730	65.4%	73.6%	73.1%	65.6%	65.8%	<b>71.2%</b>
	<b>Total mothers</b>	<b>99,340</b>	-	-	-	-	-	-
Breastfeeding at discharge (live births)	Total	36,820	35.0%	44.2%	37.4%	27.1%	40.3%	<b>37.5%</b>
	Partial	12,936	10.9%	12.3%	13.7%	14.2%	15.1%	<b>13.2%</b>
	Not at all	48,322	54.1%	43.5%	48.9%	58.7%	44.7%	<b>49.3%</b>
	<b>Total mothers</b>	<b>98,078</b>	-	-	-	-	-	-
Smoker (recorded at booking)	Yes	10,865	22.2%	10.8%	11.0%	12.9%	7.0%	<b>11.6%</b>
	No	83,001	77.8%	89.2%	89.0%	87.1%	93.0%	<b>88.4%</b>
	<b>Total mothers</b>	<b>93,866</b>	-	-	-	-	-	-
Diabetes	Yes	11,287	2.6%	4.4%	8.3%	26.8%	7.8%	<b>11.4%</b>
	Not known	88,053	97.4%	95.6%	91.7%	73.2%	92.2%	<b>88.6%</b>
	<b>Total mothers</b>	<b>99,340</b>	-	-	-	-	-	-

Source: Northern Ireland Maternity System

Data above refers to mothers giving birth between 2018/19 and 2022/23

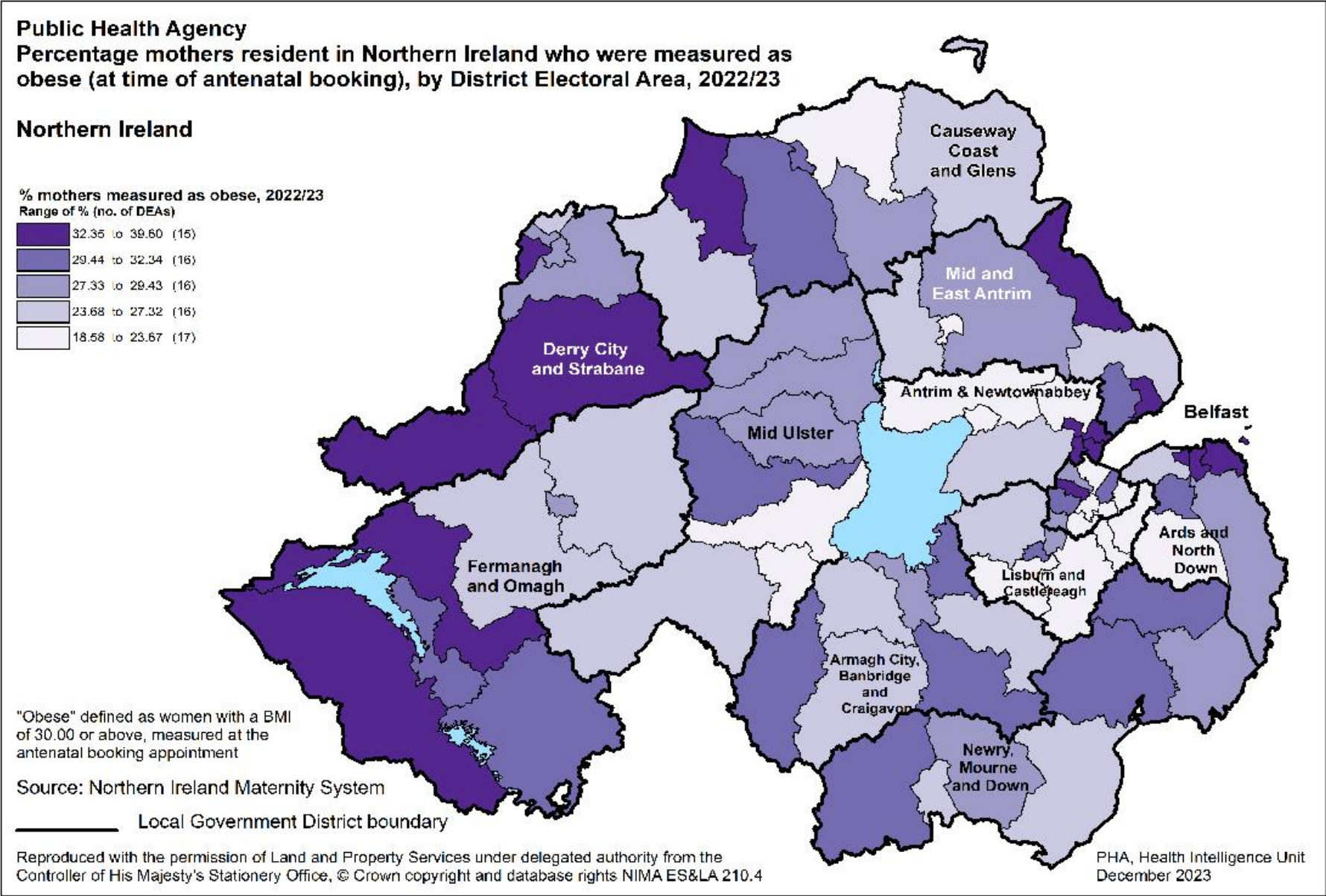
The percentage of mothers is shown as a valid percentage (except for diabetes) i.e. the % calculation is based on those records where data has been completed - blanks or unknowns have been removed from the denominator value.

It is possible that due to COVID-19, not all mothers will have had their smoking status recorded. Carbon Monoxide (CO) monitoring ceased April 2020 and recommenced November 2021. As smoking status is usually recorded at the same time as CO level, it is likely that some women will not have had their smoking status recorded.

During 2022 and 2023, a validation exercise was completed on data being recorded on Northern Ireland Maternity System for women with diabetes. As a result, data sourced from Northern Ireland Maternity System for women with diabetes has been amended and is still considered provisional at this time.



Figure 7.3: Percentage mothers' resident in Northern Ireland who were measured as obese (at time of antenatal booking), by District Electoral Area, Northern Ireland, 2022/23





# Section 8: Method of Delivery

## Why should we be concerned?

This report highlights the high level of Caesarean Section births in Northern Ireland (38.9% of births in 2022/23, Table 8.1, page 61). 20.8% were elective and 18.1% were emergency Caesarean Section births. Table 8.1 shows a general year on year increase in the rate of Caesarean Section births, particularly noticeable in the last five years. World Health Organisation (WHO) considers an ideal Caesarean Section rate to be 10-15%<sup>54</sup>.

In some pregnancies where help is needed at birth, a Caesarean Section may be necessary e.g. breech presentation, a multiple birth, placenta praevia (low lying placenta), labour not progressing. In some cases, a Caesarean Section can prevent maternal/infant death. However, there are risks associated with a Caesarean Section which may include <sup>55 56</sup>:

- Wound infection
- Blood clots
- Excess bleeding
- Damage to other organs e.g. bladder
- Longer recovery time
- Maternal death

Having numerous Caesarean Sections may increase the risk of the following (although risk is low):

- Damage to the bowel and bladder
- Further procedures after birth e.g. blood transfusion, emergency hysterectomy
- Stillbirth in a future pregnancy

Following delivery by Caesarean Section, there is some evidence to suggest that infants/children are at a slightly higher risk of developing asthma, Type 1 diabetes, becoming overweight/obese in childhood and increase in autism spectrum condition.<sup>57 58</sup>

## What can be done?

WHO states that *“when medically justified, a caesarean section can effectively prevent maternal and perinatal mortality and morbidity. However, there is no evidence showing the benefits of caesarean delivery for women or infants who do not require the procedure. As with any surgery, caesarean sections are associated with short and long term risk which can extend many years beyond the current delivery and affect the health of the woman, her child, and future pregnancies”*.<sup>59</sup>

For some women, there may not be a choice i.e. a Caesarean Section must be carried out (as above). However, all women should be provided with information and support when choosing how they will deliver and in particular, the benefits and risks associated with both planned vaginal and Caesarean birth.

<sup>54</sup> World Health Organisation, Statement on Caesarean Section Rates, 2015 <https://www.who.int/publications/i/item/WHO-RHR-15.02>

<sup>55</sup> National Institute for Health and Care Excellence (NICE), “Caesarean birth”, NICE Guideline (NG192), March 2021, updated January 2024 <https://www.nice.org.uk/guidance/ng192>

<sup>56</sup> Royal College of Obstetricians and Gynaecologists “Choosing to have a caesarean section <https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-choosing-to-have-a-c-section.pdf>

<sup>57</sup> National Institute for Health and Care Excellence (NICE), “Caesarean birth”, NICE Guideline (NG192), March 2021, updated January 2024 <https://www.nice.org.uk/guidance/ng192>

<sup>58</sup> Keag OE, Norman JE, Stock SJ. “Long-term risks and benefits associated with caesarean delivery for mother, baby, and subsequent pregnancies: systematic review and meta-analysis”. PLoS Med, 2018;15(1):e1002494, January 2018 <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002494>

<sup>59</sup> World Health Organisation, Statement on Caesarean Section Rates, 2015 <https://www.who.int/publications/i/item/WHO-RHR-15.02>

## Key Points

- In 2022/23, 38.9% of infants were delivered by Caesarian section. [Page 61]
- In 2022/23, mothers under 30 years of age had a higher percentage of births by emergency Caesarian section (19.1%) than by elective Caesarian section (13.2%), but the opposite was seen when the mother was over 30 years of age, where 25.3% of births are by elective Caesarian section and 17.6% by emergency Caesarian section. [Page 63]
- In 2022/23, there was little difference between the proportion of births by Caesarian Section in those who were first-time mothers (40.4%) and those who were not first-time mothers (38.2%) (All infants = 38.9%). [Page 63]
- In 2022/23, of those hospitals providing Caesarean Sections, the proportion of infants born by this method, ranged from 32.0% in Royal Victoria Hospital to 48.3% in Daisy Hill Hospital. (All infants = 38.9%). [Page 63]

**Table 8.1: Births to Northern Ireland residents, by method of delivery, 2010/11 – 2022/23**

Year of birth		Infants born by method of delivery							Infants born by Caesarean Section (valid %)
		Elective C/S	Emergency C/S	C/S Other	Normal	Other	Not known	Total	
2010/11	n	3,614	3,518	16	14,318	3,313	880	25,659	7,148
	%	14.6%	14.2%	0.1%	57.8%	13.4%	-	-	28.8%
2011/12	n	3,614	3,509	0	14,291	3,744	151	25,309	7,123
	%	14.4%	13.9%	0.0%	56.8%	14.9%	-	-	28.3%
2012/13	n	3,785	3,610	0	13,902	3,574	157	25,028	7,395
	%	15.2%	14.5%	0.0%	55.9%	14.4%	-	-	29.7%
2013/14	n	3,475	3,484	0	13,778	3,393	147	24,277	6,959
	%	14.4%	14.4%	0.0%	57.1%	14.1%	-	-	28.8%
2014/15	n	3,473	3,550	0	13,754	3,525	98	24,400	7,023
	%	14.3%	14.6%	0.0%	56.6%	14.5%	-	-	28.9%
2015/16	n	3,742	3,492	0	13,832	3,262	108	24,436	7,234
	%	15.4%	14.4%	0.0%	56.9%	13.4%	-	-	29.7%
2016/17	n	3,832	3,480	0	13,527	3,130	110	24,079	7,312
	%	16.0%	14.5%	0.0%	56.4%	13.1%	-	-	30.5%
2017/18	n	3,677	3,458	0	13,144	2,766	0	23,045	7,135
	%	16.0%	15.0%	0.0%	57.0%	12.0%	-	-	31.0%
2018/19	n	3,701	3,454	0	13,014	2,788	0	22,957	7,155
	%	16.1%	15.0%	0.0%	56.7%	12.1%	-	-	31.2%
2019/20	n	3,808	3,562	0	12,430	2,610	0	22,410	7,370
	%	17.0%	15.9%	0.0%	55.5%	11.6%	-	-	32.9%
2020/21	n	3,740	3,460	0	11,824	2,446	1	21,471	7,200
	%	17.4%	16.1%	0.0%	55.1%	11.4%	-	-	33.5%
2021/22	n	4,167	3,603	0	11,434	2,562	1	21,767	7,770
	%	19.1%	16.6%	0.0%	52.5%	11.8%	-	-	35.7%
2022/23	n	4,231	3,694	0	10,035	2,414	2	20,376	7,925
	%	20.8%	18.1%	0.0%	49.3%	11.8%	-	-	38.9%

Source: Child Health System (2010/11 - 2016/17), Northern Ireland Maternity System (2017/18 onwards)

Following a change in the interface between Northern Ireland Maternity System and Child Health System during 2017/18, fields containing information on method of delivery, which had usually transferred from Northern Ireland Maternity System to Child Health System are not now available on Child Health System. As a result, the data must be sourced from Northern Ireland Maternity System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

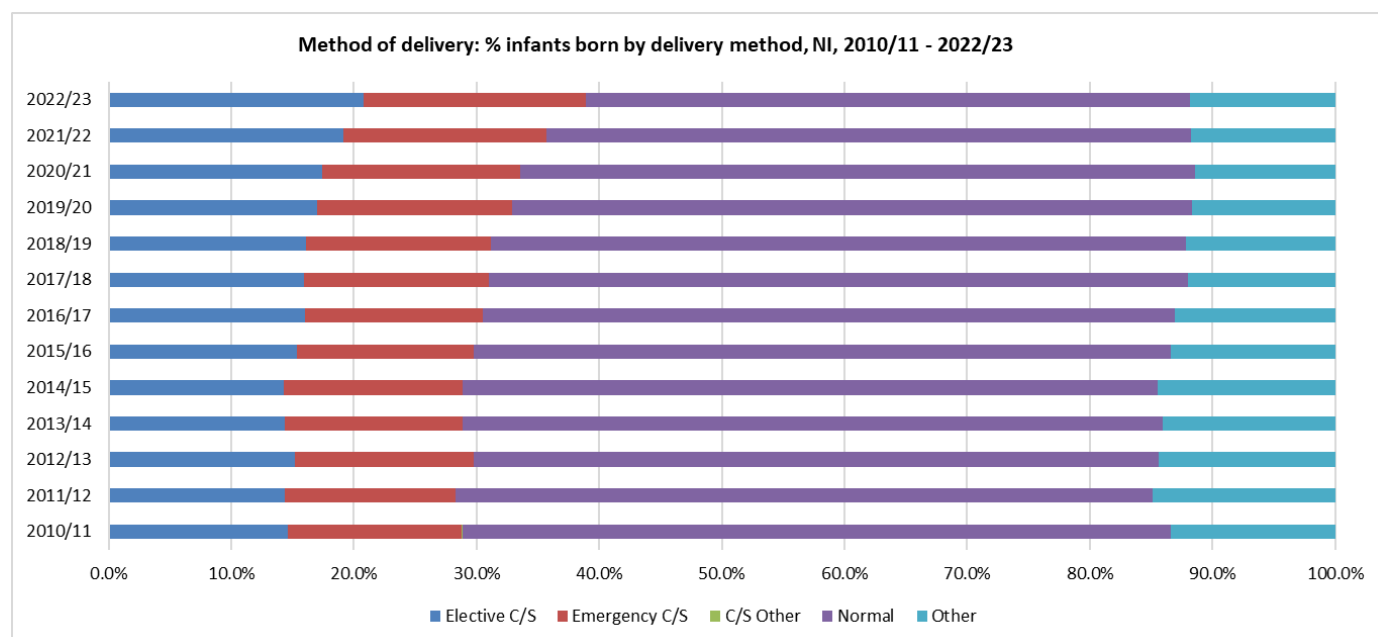
Method of delivery – categories used (Child Health System)

- Normal: normal vertex
- Elective Caesarean: elective, planned or scheduled Caesarean
- Emergency Caesarean: crash, emergency or urgent Caesarean
- Other: assisted breech, breech delivery, breech extraction, forceps (low), forceps (other), other cephalic, spontaneous breech or vacuum

Method of delivery – categories used (Northern Ireland Maternity System)

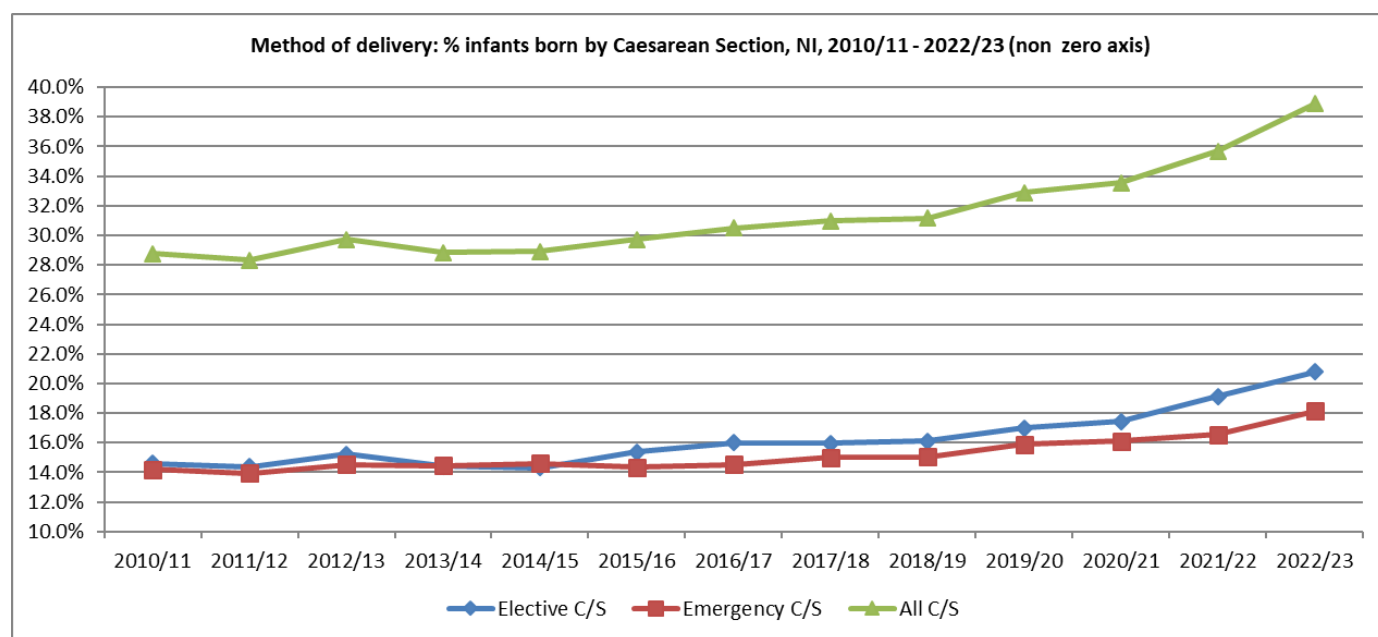
- Normal: normal delivery, normal face to pubes
- Elective Caesarean
- Emergency Caesarean
- Other: assisted breech, Barnes-Neville forceps, Haig Ferguson forceps, breech extraction, Kielland's forceps, spontaneous breech, vacuum extraction or Wrigley's forceps

**Figure 8.1: % infants born by delivery method, Northern Ireland, 2010/11 – 2022/23**



Source: Northern Ireland Maternity System

**Figure 8.2: % infants born by Caesarean Section, Northern Ireland, 2010/11 – 2022/23**



Source: Child Health System (2010/11 - 2016/17), Northern Ireland Maternity System (2017/18 onwards)

**Table 8.2: Births to Northern Ireland residents, by method of delivery, 2022/23**

		Infants born by method of delivery						% infants born by Caesarean Section (valid)
		Elective C/S	Emergency C/S	Normal	Other	Not known	Total	
Age Group of mother	Under 20	18	64	279	66	0	427	19.2%
	20 - 24	247	429	1,261	286	0	2,223	30.4%
	25 - 29	739	957	2,564	690	1	4,951	34.3%
	30 - 34	1,617	1,326	3,614	911	1	7,469	39.4%
	35 - 39	1,248	732	1,970	387	0	4,337	45.7%
	40 +	362	186	347	74	0	969	56.6%
	<b>All infants</b>	<b>4,231</b>	<b>3,694</b>	<b>10,035</b>	<b>2,414</b>	<b>2</b>	<b>20,376</b>	<b>38.9%</b>
Multiple births	Single	3,981	3,506	9,931	2,337	2	19,757	37.9%
	Multiple	250	188	104	77	0	619	70.8%
	<b>All infants</b>	<b>4,231</b>	<b>3,694</b>	<b>10,035</b>	<b>2,414</b>	<b>2</b>	<b>20,376</b>	<b>38.9%</b>
First time mother	First time mother	773	1,814	2,384	1,440	0	6,411	40.4%
	Not a first time mother	3,458	1,880	7,651	974	2	13,965	38.2%
	<b>All infants</b>	<b>4,231</b>	<b>3,694</b>	<b>10,035</b>	<b>2,414</b>	<b>2</b>	<b>20,376</b>	<b>38.9%</b>
Ethnic group of mother	White	4,015	3,447	9,440	2,271	2	19,175	38.9%
	Asian	73	80	180	53	0	386	39.6%
	Black	61	59	137	28	0	285	42.1%
	Mixed	21	18	53	12	0	104	37.5%
	Other	54	86	208	47	0	395	35.4%
	Not stated / Blank	7	4	17	3	0	31	35.5%
	<b>All infants</b>	<b>4,231</b>	<b>3,694</b>	<b>10,035</b>	<b>2,414</b>	<b>2</b>	<b>20,376</b>	<b>38.9%</b>
Place of birth	Altnagelvin	500	446	1,033	207	0	2,186	43.3%
	Antrim	599	511	1,411	299	0	2,820	39.4%
	Causeway	137	122	446	104	0	809	32.0%
	Craigavon	449	601	1,485	435	0	2,970	35.4%
	Daisy Hill	639	288	795	199	0	1,921	48.3%
	Royal Victoria	782	776	2,533	602	0	4,693	33.2%
	SWAH	207	229	557	128	0	1,121	38.9%
	Ulster	918	721	1,688	440	0	3,767	43.5%
	Home	0	0	87	0	0	87	0.0%
	Freebirth	0	0	0	0	2	2	0.0%
	<b>All infants</b>	<b>4,231</b>	<b>3,694</b>	<b>10,035</b>	<b>2,414</b>	<b>2</b>	<b>20,376</b>	<b>38.9%</b>
Trust of residence of mother	Belfast	716	681	2,012	483	0	3,892	35.9%
	Northern	952	850	2,508	576	0	4,886	36.9%
	South Eastern	819	633	1,710	411	0	3,573	40.6%
	Southern	1,023	855	2,211	603	0	4,692	40.0%
	Western	721	675	1,594	341	3	3,334	41.9%
	<b>All infants</b>	<b>4,231</b>	<b>3,694</b>	<b>10,035</b>	<b>2,414</b>	<b>3</b>	<b>20,377</b>	<b>38.9%</b>
Local Government District	Antrim and Newtownabbey	247	263	746	203	0	1,459	35.0%
	Ards and North Down	356	274	608	169	0	1,407	44.8%
	Armagh City, Banbridge & Craigavon	535	456	1,170	347	0	2,508	39.5%
	Belfast	667	641	1,983	462	0	3,753	34.9%
	Causeway Coast and Glens	296	224	680	141	0	1,341	38.8%
	Derry City and Strabane	380	336	815	166	2	1,699	42.2%
	Fermanagh and Omagh	250	266	601	141	0	1,258	41.0%
	Lisburn and Castlereagh	330	271	777	196	0	1,574	38.2%
	Mid and East Antrim	275	245	712	146	0	1,378	37.7%
	Mid Ulster	396	345	972	212	0	1,925	38.5%
	Newry, Mourne and Down	499	373	971	231	0	2,074	42.0%
	<b>All infants</b>	<b>4,231</b>	<b>3,694</b>	<b>10,035</b>	<b>2,414</b>	<b>2</b>	<b>20,376</b>	<b>38.9%</b>

**Table 8.2 continued: Births to Northern Ireland residents, by method of delivery, 2022/23**

		Infants born by method of delivery						% infants born by Caesarean Section (valid)
		Elective C/S	Emergency C/S	Normal	Other	Not known	Total	
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	800	763	2,268	479	1	<b>4,311</b>	36.3%
	2	850	785	2,115	470	1	<b>4,221</b>	38.7%
	3	865	777	2,158	516	0	<b>4,316</b>	38.0%
	4	906	733	1,873	482	0	<b>3,994</b>	41.0%
	Least deprived	810	636	1,621	467	0	<b>3,534</b>	40.9%
	<b>All infants</b>	<b>4,231</b>	<b>3,694</b>	<b>10,035</b>	<b>2,414</b>	<b>2</b>	<b>20,376</b>	<b>38.9%</b>

Source: Northern Ireland Maternity System

Method of delivery – categories used

- Normal: normal delivery, normal face to pubes
- Elective Caesarean
- Emergency Caesarean
- Other: assisted breech, Barnes-Neville forceps, Haig Ferguson forceps, breech extraction, Kielland's forceps, spontaneous breech, vacuum extraction or Wrigley's forceps

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

# Section 9: Infant Birth Weight

## LOW BIRTH WEIGHT

### Why should we be concerned?

Low birth weight is defined as weight at birth of less than 2,500 grammes (or 5.5 pounds), irrespective of gestational age. In Northern Ireland, in 2022/23, 6.2% of infants were born with a low birth weight (Table 9.1, page 67). Typically, a baby might have a lower birth weight because they were born earlier than expected (pre-term, <37 weeks gestation) or where growth has been restricted (small for gestational age). Low birth weight in infants can be prevented, with the following risk factors associated with low birth weight<sup>60,61,62,63,64</sup>:

- Younger (<17) / older mothers (>35)
- Low maternal BMI / poor maternal diet
- Maternal smoking (heavy) / substance misuse
- Maternal alcohol consumption (heavy)
- Over exercising by mother
- Previous pregnancy with a low birth weight baby
- Multiple pregnancy
- Maternal hypertension and diabetes
- Certain medications e.g. for high blood pressure, epilepsy
- Non-attendance at antenatal care.

A birth weight below 2,500g contributes to a range of poor outcomes, including still birth and infant mortality<sup>65,66,67,68,69</sup>:

- Respiratory problems
- Infections
- Difficulty eating/gaining weight
- In later life - diabetes, high blood pressure, heart disease, obesity
- Possible lower life expectancy
- Possible lower educational achievement maybe as a result of intellectual and developmental disabilities.

### What can be done?

Actions to prevent low birth weight should address the risk factors identified above. For example, by reducing teenage pregnancies, encouraging women to maintain a healthy weight/promote healthy eating, encouraging healthier lifestyles (stop smoking and substance misuse/reduce alcohol consumption), monitoring women with conditions such as diabetes (see Sections 3, 6 and 7).

<sup>60</sup> World Health Organisation, "Born too soon - The global action report on preterm birth", 2012 <https://www.who.int/publications/i/item/9789241503433>

<sup>61</sup> Han Z, Mulla S, Beyene J et al. Maternal underweight and the risk of preterm birth and low birth weight: a systematic review and meta-analyses. *Int J Epidemiol* 2011;40(1):65–101 <http://ije.oxfordjournals.org/content/40/1/65.long>

<sup>62</sup> Patra J, Bakker R, Irving H, Jaddoe V, Malini S, Rehm J. Dose–response relationship between alcohol consumption before and during pregnancy and the risks of low birthweight, preterm birth and small for gestational age (SGA)—a systematic review and meta-analyses. *BJOG* 2011;118:1411–1421 <https://obgyn.onlinelibrary.wiley.com/doi/abs/10.1111/j.1471-0528.2011.03050.x>

<sup>63</sup> Bramham Kate, Parnell Bethany, Nelson-Piercy Catherine, Seed Paul T, Poston Lucilla, Chappell Lucy C et al. Chronic hypertension and pregnancy outcomes: systematic review and meta-analysis *BMJ* 2014; 348 :g2301 <http://www.bmj.com/content/348/bmj.g2301>

<sup>64</sup> Royal College of Obstetricians and Gynaecologists, "Having a small baby" <https://www.rcog.org.uk/for-the-public/browse-all-patient-information-leaflets/having-a-small-baby/>

<sup>65</sup> Royal College of Obstetricians and Gynaecologists, "Having a small baby" <https://www.rcog.org.uk/for-the-public/browse-all-patient-information-leaflets/having-a-small-baby/>

<sup>66</sup> Diabetes UK, [https://www.diabetes.org.uk/node/4193#:~:text=They%20found%20that%20the%20lighter.3.5kg%20\(7lb%2011oz\).](https://www.diabetes.org.uk/node/4193#:~:text=They%20found%20that%20the%20lighter.3.5kg%20(7lb%2011oz).)

<sup>67</sup> Class QA, Rickert ME, Lichtenstein P, et al. Birth weight, physical morbidity, and mortality: a population-based sibling-comparison study. *Am J Epidemiol* 2014;179:550–8.

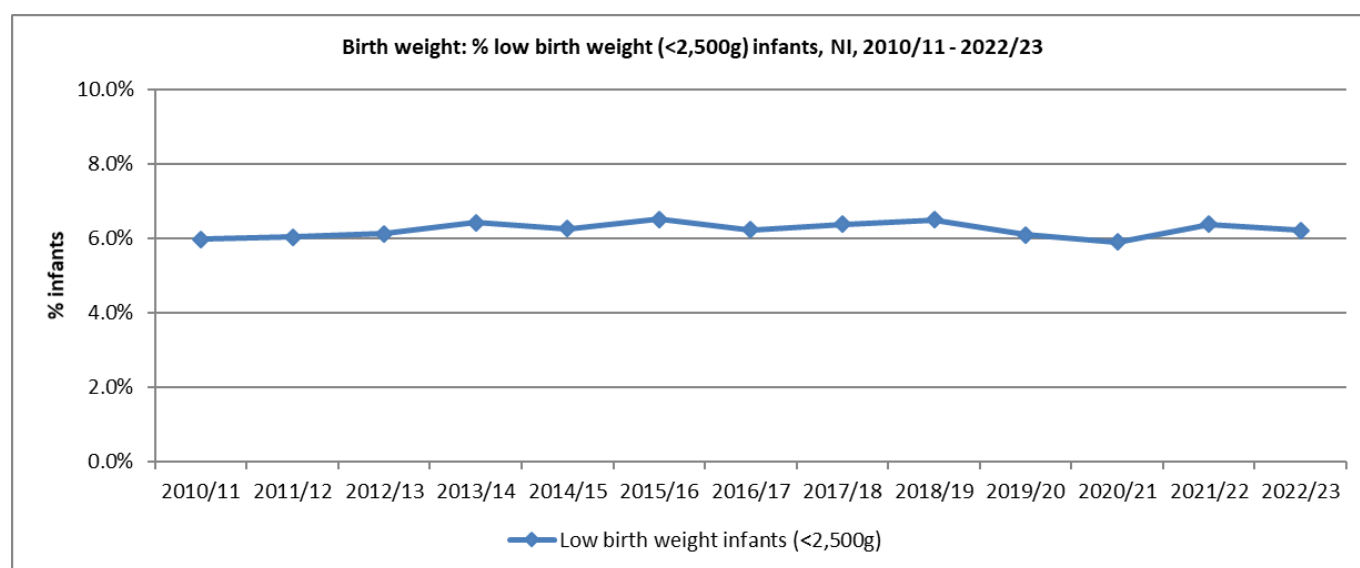
<sup>68</sup> Institute of Health Economics, Canada, "Determinants and Prevention of Low Birth Weight: A Synopsis of the Evidence", 2008 <https://www.ihe.ca/publications/determinants-and-prevention-of-low-birth-weight-a-synopsis-of-the-evidence>

<sup>69</sup> Public Health Wales, Low Birth Weight – Review of risk factors and interventions – Technical Report, 2014, [https://www2.nphs.wales.nhs.uk/ChildrenMatFamiliesDocs.nsf/\(\\$all\)/E3F761EC6EFE646F80257D490044FBAE/\\$file/Low%20Birth%20Weight%20-%20technical%20paper%20v1.pdf?OpenElement](https://www2.nphs.wales.nhs.uk/ChildrenMatFamiliesDocs.nsf/($all)/E3F761EC6EFE646F80257D490044FBAE/$file/Low%20Birth%20Weight%20-%20technical%20paper%20v1.pdf?OpenElement)

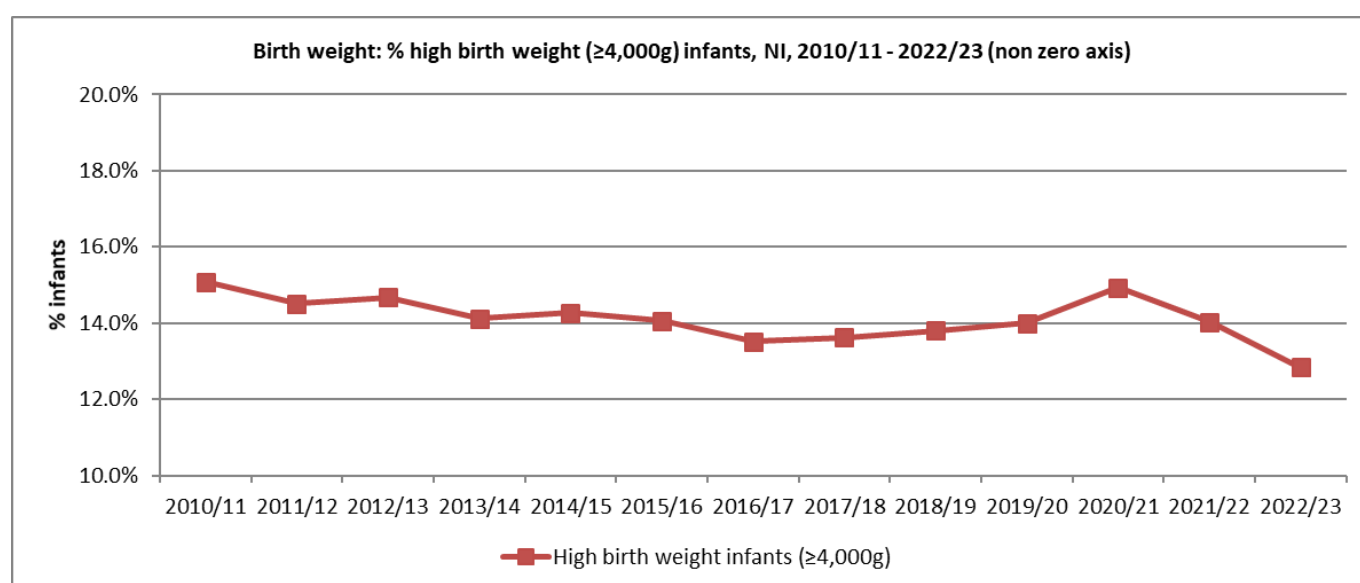
## Key Points

- In 2022/23, 6.2% of all births were measured as low birth weight i.e. less than 2,500g (6.0% of live and 68.5% of still births). 12.9% of live infants were born with a higher birth weight of 4,000g+ and 1.5% with a birth weight of 4,500g+. The proportion of infants born with a higher birth weight has been decreasing in recent years. [Page 67, 68]
- A higher proportion (13.3%) of mothers in 2022/23 who were of a white ethnic group had infants with a higher birth weight ( $\geq 4,000$ g) than those of a non-white ethnic group (6.4%). [Page 68]
- The proportion of low birth weight infants born to mothers residing in the most deprived areas (NIMDM 2017) in 2022/23 was higher at 8.4% than to mothers from least deprived areas (4.7%). [Page 69]

**Figure 9.1: Percentage low birth weight infants, Northern Ireland, 2010/11 – 2022/23**



**Figure 9.2: Percentage high birth weight infants, Northern Ireland, 2010/11 – 2022/23**



**Table 9.1: Births to Northern Ireland residents, by birth weight, 2010/11 - 2022/23**

Year of birth		Infants born by birth weight							Low birth weight infants (<2,500g)	High birth weight infants (≥4,000g)	High birth weight infants (≥4,500g)
		LIVE BIRTHS									
		< 1,500g	1,500 - 2,499g	2,500 - 3,999g	4,000 - 4,499g	4,500+ g	Not known	Total			
2010/11	n	251	1,220	20,190	3,245	621	29	25,556	1,471	3,866	621
	%	1.0%	4.8%	79.1%	12.7%	2.4%	-	-	5.76%	15.14%	2.43%
2011/12	n	247	1,218	20,062	3,075	590	28	25,220	1,465	3,665	590
	%	1.0%	4.8%	79.6%	12.2%	2.3%	-	-	5.82%	14.55%	2.34%
2012/13	n	229	1,225	19,767	3,118	548	24	24,911	1,454	3,666	548
	%	0.9%	4.9%	79.4%	12.5%	2.2%	-	-	5.84%	14.73%	2.20%
2013/14	n	243	1,241	19,238	2,942	480	25	24,169	1,484	3,422	480
	%	1.0%	5.1%	79.7%	12.2%	2.0%	-	-	6.15%	14.17%	1.99%
2014/15	n	238	1,221	19,341	2,997	477	35	24,309	1,459	3,474	477
	%	1.0%	5.0%	79.7%	12.3%	2.0%	-	-	6.01%	14.31%	1.97%
2015/16	n	206	1,327	19,333	2,923	504	55	24,348	1,533	3,427	504
	%	0.8%	5.5%	79.6%	12.0%	2.1%	-	-	6.31%	14.11%	2.07%
2016/17	n	239	1,208	19,261	2,764	484	21	23,977	1,447	3,248	484
	%	1.0%	5.0%	80.4%	11.5%	2.0%	-	-	6.04%	13.56%	2.02%
2017/18	n	208	1,187	18,361	2,711	416	20	22,903	1,395	3,127	416
	%	0.9%	5.2%	80.2%	11.8%	1.8%	-	-	6.10%	13.67%	1.82%
2018/19	n	221	1,221	18,226	2,753	404	14	22,839	1,442	3,157	404
	%	1.0%	5.3%	79.9%	12.1%	1.8%	-	-	6.32%	13.83%	1.77%
2019/20	n	193	1,121	17,839	2,735	391	12	22,291	1,314	3,126	391
	%	0.9%	5.0%	80.1%	12.3%	1.8%	-	-	5.90%	14.03%	1.76%
2020/21	n	211	990	16,840	2,755	424	14	21,234	1,201	3,179	424
	%	1.0%	4.7%	79.4%	13.0%	2.0%	-	-	5.66%	14.98%	2.00%
2021/22	n	215	1,111	17,302	2,655	397	9	21,689	1,326	3,052	397
	%	1.0%	5.1%	79.8%	12.2%	1.8%	-	-	6.12%	14.08%	1.83%
2022/23	n	207	1,008	16,468	2,307	309	10	20,309	1,215	2,616	309
	%	1.0%	5.0%	81.1%	11.4%	1.5%	-	-	5.99%	12.89%	1.52%

Year of birth		Infants born by birth weight					Low birth weight infants (<2,500g)
		STILL BIRTHS					
		< 1,500g	1,500 - 2,499g	2,500+g	Not known	Total	
2010/11	n	38	24	38	3	103	62
	%	38.0%	24.0%	38.0%	-	-	62.00%
2011/12	n	34	25	29	1	89	59
	%	38.6%	28.4%	33.0%	-	-	67.05%
2012/13	n	53	25	39	0	117	78
	%	45.3%	21.4%	33.3%	-	-	66.67%
2013/14	n	50	25	32	1	108	75
	%	46.7%	23.4%	29.9%	-	-	70.09%
2014/15	n	43	23	24	1	91	66
	%	47.8%	25.6%	26.7%	-	-	73.33%
2015/16	n	33	20	29	6	88	53
	%	40.2%	24.4%	35.4%	-	-	64.63%
2016/17	n	43	10	43	6	102	53
	%	44.8%	10.4%	44.8%	-	-	55.21%
2017/18	n	46	24	31	0	101	70
	%	45.5%	23.8%	30.7%	-	-	69.31%
2018/19	n	28	17	30	1	76	45
	%	37.3%	22.7%	40.0%	-	-	60.00%
2019/20	n	35	13	22	1	71	48
	%	50.0%	18.6%	31.4%	-	-	68.57%
2020/21	n	44	14	30	1	89	58
	%	50.0%	15.9%	34.1%	-	-	65.91%
2021/22	n	44	19	28	2	93	63
	%	48.4%	20.9%	30.8%	-	-	69.23%
2022/23	n	34	16	23	2	75	50
	%	46.6%	21.9%	31.5%	-	-	68.49%

The number of infants with a birth weight above 4,000g was too small to show separately



**Table 9.1 continued: Births to Northern Ireland residents, by birth weight, 2010/11 - 2022/23**

Year of birth		Infants born by birth weight						Low birth weight infants (<2,500g)	High birth weight infants (≥4,000g)
		ALL BIRTHS							
		< 1,500g	1,500 - 2,499g	2,500 - 3,999g	4,000+g	Not known	Total		
2010/11	n	289	1,244	20,227	3,867	32	25,659	1,533	3,867
	%	1.1%	4.9%	78.9%	15.1%	-	-	5.98%	15.09%
2011/12	n	281	1,243	20,087	3,669	29	25,309	1,524	3,669
	%	1.1%	4.9%	79.5%	14.5%	-	-	6.03%	14.51%
2012/13	n	282	1,250	19,801	3,671	24	25,028	1,532	3,671
	%	1.1%	5.0%	79.2%	14.7%	-	-	6.13%	14.68%
2013/14	n	293	1,266	19,267	3,425	26	24,277	1,559	3,425
	%	1.2%	5.2%	79.4%	14.1%	-	-	6.43%	14.12%
2014/15	n	281	1,244	19,362	3,477	36	24,400	1,525	3,477
	%	1.2%	5.1%	79.5%	14.3%	-	-	6.26%	14.27%
2015/16	n	239	1,347	19,360	3,429	61	24,436	1,586	3,429
	%	1.0%	5.5%	79.4%	14.1%	-	-	6.51%	14.07%
2016/17	n	282	1,218	19,302	3,250	27	24,079	1,500	3,250
	%	1.2%	5.1%	80.3%	13.5%	-	-	6.24%	13.51%
2017/18	n	254	1,211	18,389	3,130	20	23,004	1,465	3,130
	%	1.1%	5.3%	80.0%	13.6%	-	-	6.37%	13.62%
2018/19	n	249	1,238	18,252	3,161	15	22,915	1,487	3,161
	%	1.1%	5.4%	79.7%	13.8%	-	-	6.49%	13.80%
2019/20	n	228	1,134	17,858	3,129	13	22,362	1,362	3,129
	%	1.0%	5.1%	79.9%	14.0%	-	-	6.09%	14.00%
2020/21	n	255	1,004	16,867	3,182	15	21,323	1,259	3,182
	%	1.2%	4.7%	79.2%	14.9%	-	-	5.91%	14.93%
2021/22	n	259	1,130	17,327	3,055	11	21,782	1,389	3,055
	%	1.2%	5.2%	79.6%	14.0%	-	-	6.38%	14.03%
2022/23	n	241	1,024	16,491	2,616	12	20,384	1,265	2,616
	%	1.2%	5.0%	80.9%	12.8%	-	-	6.21%	12.84%

Source: Child Health System

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

**Table 9.2: Births to Northern Ireland residents, by birth weight, 2022/23**

		Infants born by birth weight						% low birth weight infants (<2,500g)	% high birth weight infants (≥4,000g)
		< 1,500g	1,500 - 2,499g	2,500 - 3,999g	4,000 +g	Not known	Total		
Age Group of mother	Under 20	10	30	358	30	0	428	9.35%	7.01%
	20 - 24	31	123	1,843	239	0	2,236	6.89%	10.69%
	25 - 29	60	265	4,062	582	3	4,972	6.54%	11.71%
	30 - 34	74	323	6,016	1,056	3	7,472	5.32%	14.14%
	35 - 39	46	222	3,433	612	6	4,319	6.21%	14.19%
	40 +	18	61	779	97	0	955	8.27%	10.16%
	Not known	2	0	0	0	0	2	100.00%	0.00%
	<b>All infants</b>	<b>241</b>	<b>1,024</b>	<b>16,491</b>	<b>2,616</b>	<b>12</b>	<b>20,384</b>	<b>6.21%</b>	<b>12.84%</b>
Multiple births	Single	186	745	16,204	2,616	11	19,762	4.71%	13.24%
	Multiple	55	279	287	0	1	622	53.78%	0.00%
	<b>All infants</b>	<b>241</b>	<b>1,024</b>	<b>16,491</b>	<b>2,616</b>	<b>12</b>	<b>20,384</b>	<b>6.21%</b>	<b>12.84%</b>
Ethnic group of mother (NIMATS)	White	220	943	15,451	2,558	3	19,175	6.07%	13.34%
	Non-white	19	82	1,017	52	0	1,170	8.63%	4.44%
	Not stated / Blank	2	2	26	1	0	31	12.90%	3.23%
	<b>All infants</b>	<b>241</b>	<b>1,027</b>	<b>16,494</b>	<b>2,611</b>	<b>0</b>	<b>20,376</b>	<b>6.22%</b>	<b>12.82%</b>

**Table 9.2 continued: Births to Northern Ireland residents, by birth weight, 2022/23**

		Infants born by birth weight						% low birth weight infants (<2,500g)	% high birth weight infants (≥4,000g)
		< 1,500g	1,500 - 2,499g	2,500 - 3,999g	4,000 +g	Not known	Total		
Ethnic group of infant	White	212	927	15,244	2,524	11	<b>18,918</b>	6.02%	13.35%
	Non-white	26	95	1,212	91	0	<b>1,424</b>	8.50%	6.39%
	Not stated / Blank	3	2	35	1	1	<b>42</b>	12.20%	2.44%
	<b>All infants</b>	<b>241</b>	<b>1,024</b>	<b>16,491</b>	<b>2,616</b>	<b>12</b>	<b>20,384</b>	<b>6.21%</b>	<b>12.84%</b>
Place of birth	Altnagelvin	27	132	1,751	276	1	<b>2,187</b>	7.27%	12.63%
	Antrim	32	142	2,275	370	2	<b>2,821</b>	6.17%	13.13%
	Causeway	<5	<15	658	134	0	<b>807</b>	<6.21%	16.60%
	Craigavon	27	179	2,412	375	2	<b>2,995</b>	6.88%	12.53%
	Daisy Hill	9	53	1,556	309	0	<b>1,927</b>	3.22%	16.04%
	Royal Victoria	108	283	3,821	483	1	<b>4,696</b>	8.33%	10.29%
	SWAH	<5	<40	885	194	0	<b>1,118</b>	<6.21%	17.35%
	Ulster	31	185	3,099	467	2	<b>3,784</b>	5.71%	12.35%
	Home/Freebirth/Other location	<5	<5	34	8	4	<b>29</b>	>6.21%	27.59%
	<b>All infants</b>	<b>241</b>	<b>1,024</b>	<b>16,491</b>	<b>2,616</b>	<b>12</b>	<b>20,384</b>	<b>6.21%</b>	<b>12.84%</b>
Trust of residence of mother	Belfast	52	235	3,190	378	3	<b>3,858</b>	7.44%	9.81%
	Northern	67	218	3,958	663	3	<b>4,909</b>	5.81%	13.51%
	South Eastern	33	187	2,902	455	0	<b>3,577</b>	6.15%	12.72%
	Southern	52	208	3,795	650	5	<b>4,710</b>	5.53%	13.82%
	Western	37	176	2,646	470	1	<b>3,330</b>	6.40%	14.12%
	<b>All infants</b>	<b>241</b>	<b>1,024</b>	<b>16,491</b>	<b>2,616</b>	<b>12</b>	<b>20,384</b>	<b>6.21%</b>	<b>12.84%</b>
Local Government District	Antrim and Newtownabbey	25	67	1,206	186	0	<b>1,484</b>	6.20%	12.53%
	Ards and North Down	13	73	1,127	196	0	<b>1,409</b>	6.10%	13.91%
	Armagh City, Banbridge and Craigavon	25	127	2,038	319	4	<b>2,513</b>	6.06%	12.71%
	Belfast	52	238	3,077	351	2	<b>3,720</b>	7.80%	9.44%
	Causeway Coast and Glens	11	58	1,069	204	1	<b>1,343</b>	5.14%	15.20%
	Derry City and Strabane	22	102	1,351	221	1	<b>1,697</b>	7.31%	13.03%
	Fermanagh and Omagh	11	59	991	196	0	<b>1,257</b>	5.57%	15.59%
	Lisburn and Castlereagh	13	63	1,304	195	1	<b>1,576</b>	4.83%	12.38%
	Mid and East Antrim	25	69	1,123	161	0	<b>1,378</b>	6.82%	11.68%
	Mid Ulster	20	68	1,551	285	2	<b>1,926</b>	4.57%	14.81%
	Newry, Mourne and Down	24	100	1,654	302	1	<b>2,081</b>	5.96%	14.52%
	<b>All infants</b>	<b>241</b>	<b>1,024</b>	<b>16,491</b>	<b>2,616</b>	<b>12</b>	<b>20,384</b>	<b>6.21%</b>	<b>12.84%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	76	285	3,485	439	1	<b>4,286</b>	8.42%	10.25%
	2	48	228	3,408	546	1	<b>4,231</b>	6.52%	12.91%
	3	39	200	3,476	605	1	<b>4,321</b>	5.53%	14.00%
	4	42	182	3,205	557	3	<b>3,989</b>	5.62%	13.97%
	Least deprived	36	129	2,917	469	6	<b>3,557</b>	4.65%	13.21%
	<b>All infants</b>	<b>241</b>	<b>1,024</b>	<b>16,491</b>	<b>2,616</b>	<b>12</b>	<b>20,384</b>	<b>6.21%</b>	<b>12.84%</b>

Source: Child Health System and Northern Ireland Maternity System (ethnic group of mother)

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Due to small numbers, it is not possible to show data by individual ethnic group

Disclosure controls have been applied to this table. As a result, for some places of birth, it is not possible to show the exact percentage values in the final two columns and so a comparison to the NI value has been provided.

Ethnic group of mother is not available from Child Health System, therefore data from Northern Ireland Maternity System has been provided.

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

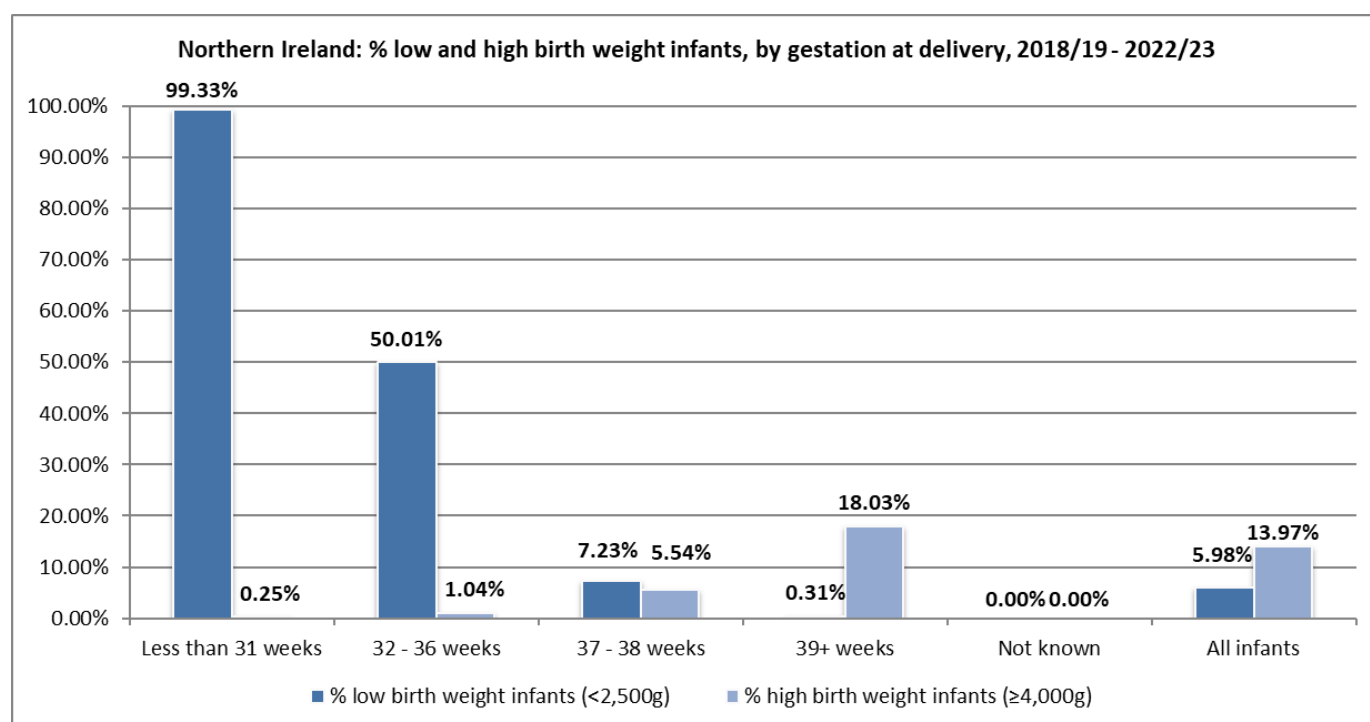
**Table 9.3: Births to Northern Ireland residents (live only), by birth weight and gestation at delivery, 2018/19 – 2022/23**

Gestation at delivery (completed weeks)	Infants born live by birth weight					% low birth weight infants (<2,500g)	% high birth weight infants (≥4,000g)
	<2,499g	2,500-3,999g	4,000+g	Not known	Total		
Less than 31 weeks	1,195	5	3	0	<b>1,203</b>	99.33%	0.25%
32 - 36 weeks	3,283	3,214	68	5	<b>6,570</b>	50.01%	1.04%
37 - 38 weeks	1,783	21,527	1,368	1	<b>24,679</b>	7.23%	5.54%
39+ weeks	237	62,246	13,743	12	<b>76,238</b>	0.31%	18.03%
Not known	0	1	0	0	<b>1</b>	0.00%	0.00%
<b>All infants</b>	<b>6,498</b>	<b>86,993</b>	<b>15,182</b>	<b>18</b>	<b>108,691</b>	<b>5.98%</b>	<b>13.97%</b>

Source: Northern Ireland Maternity System

Due to small numbers, data had to be provided over a 5 year period

**Figure 9.3: Percentage low and high birth weight infants, gestation at delivery, Northern Ireland, 2018/19 - 2022/23**



**Table 9.4: Births to Northern Ireland residents, by birth weight, by District Electoral Area, 2022/23**

Local Government District	District Electoral Area	Infants born by birth weight					% low birth weight infants (<2,500g)	% high birth weight infants (≥4,000g)
		< 2,500g	2,500 - 3,999g	4,000+ g	Not known	Total		
Antrim and Newtownabbey	Airport	15	160	44	0	219	6.85%	20.09%
	Antrim	25	221	32	0	278	8.99%	11.51%
	Ballyclare	7	187	21	0	215	3.26%	9.77%
	Dunsilly	12	152	23	0	187	6.42%	12.30%
	Glengormley Urban	12	162	21	0	195	6.15%	10.77%
	Macedon	12	182	18	0	212	5.66%	8.49%
	Three Mile Water	9	142	27	0	178	5.06%	15.17%
	<b>Total</b>	<b>92</b>	<b>1,206</b>	<b>186</b>	<b>0</b>	<b>1,484</b>	<b>6.20%</b>	<b>12.53%</b>
Ards and North Down	Ards Peninsula	11	163	30	0	204	5.39%	14.71%
	Bangor Central	17	182	27	0	226	7.52%	11.95%
	Bangor East and Donaghadee	10	111	26	0	147	6.80%	17.69%
	Bangor West	6	166	19	0	191	3.14%	9.95%
	Comber	14	143	34	0	191	7.33%	17.80%
	Hollywood and Clondeboyne	12	129	21	0	162	7.41%	12.96%
	Newtownards	16	233	39	0	288	5.56%	13.54%
	<b>Total</b>	<b>86</b>	<b>1,127</b>	<b>196</b>	<b>0</b>	<b>1,409</b>	<b>6.10%</b>	<b>13.91%</b>
Armagh, Banbridge and Craigavon	Armagh	22	294	57	2	375	5.90%	15.28%
	Banbridge	21	291	48	1	361	5.83%	13.33%
	Craigavon	24	279	42	0	345	6.96%	12.17%
	Cusher	13	262	45	1	321	4.06%	14.06%
	Lagan River	18	219	34	0	271	6.64%	12.55%
	Lurgan	27	377	51	0	455	5.93%	11.21%
	Portadown	27	316	42	0	385	7.01%	10.91%
	<b>Total</b>	<b>152</b>	<b>2,038</b>	<b>319</b>	<b>4</b>	<b>2,513</b>	<b>6.06%</b>	<b>12.71%</b>
Belfast	Balmoral	7	194	31	0	232	3.02%	13.36%
	Black Mountain	48	332	42	0	422	11.37%	9.95%
	Botanic	35	351	33	1	420	8.35%	7.88%
	Castle	32	260	24	0	316	10.13%	7.59%
	Collin	30	360	37	0	427	7.03%	8.67%
	Court	36	360	38	0	434	8.29%	8.76%
	Lisnasharragh	7	231	36	0	274	2.55%	13.14%
	Oldpark	45	362	37	0	444	10.14%	8.33%
	Ormiston	16	289	40	0	345	4.64%	11.59%
	Titanic	34	338	33	1	406	8.40%	8.15%
	<b>Total</b>	<b>290</b>	<b>3,077</b>	<b>351</b>	<b>2</b>	<b>3,720</b>	<b>7.80%</b>	<b>9.44%</b>
Causeway Coast and Glens	Ballymoney	10	175	42	0	227	4.41%	18.50%
	Bann	10	138	31	0	179	5.59%	17.32%
	Benbradagh	12	171	34	0	217	5.53%	15.67%
	Causeway	8	137	17	1	163	4.94%	10.49%
	Coleraine	7	175	23	0	205	3.41%	11.22%
	Limavady	7	132	19	0	158	4.43%	12.03%
	The Glens	15	141	38	0	194	7.73%	19.59%
	<b>Total</b>	<b>69</b>	<b>1,069</b>	<b>204</b>	<b>1</b>	<b>1,343</b>	<b>5.14%</b>	<b>15.20%</b>
Derry City and Strabane	Ballyarnett	28	254	27	1	310	9.06%	8.74%
	Derg	10	153	37	0	200	5.00%	18.50%
	Faughan	16	157	27	0	200	8.00%	13.50%
	Foyleside	17	163	22	0	202	8.42%	10.89%
	Sperrin	9	217	42	0	268	3.36%	15.67%
	The Moor	19	146	22	0	187	10.16%	11.76%
	Waterside	25	261	44	0	330	7.58%	13.33%
	<b>Total</b>	<b>124</b>	<b>1,351</b>	<b>221</b>	<b>1</b>	<b>1,697</b>	<b>7.31%</b>	<b>13.03%</b>

**Table 9.4 continued: Births to Northern Ireland residents, by birth weight, District Electoral Area, 2022/23**

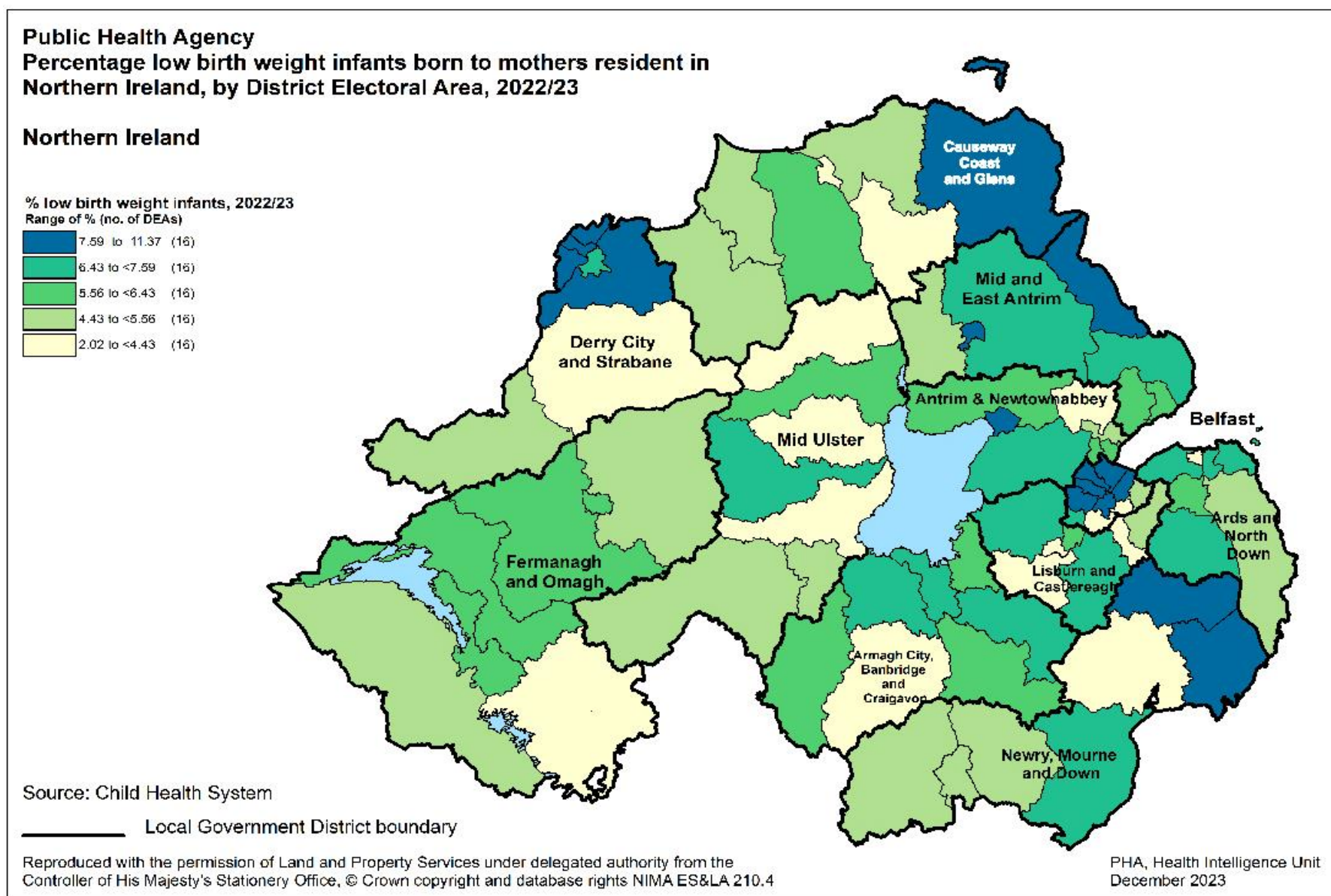
Local Government District	District Electoral Area	Infants born by birth weight					% low birth weight infants (<2,500g)	% high birth weight infants (≥4,000g)
		< 2,500g	2,500 - 3,999g	4,000+ g	Not known	Total		
Fermanagh and Omagh	Enniskillen	11	148	16	0	175	6.29%	9.14%
	Erne East	7	129	34	0	170	4.12%	20.00%
	Erne North	11	133	31	0	175	6.29%	17.71%
	Erne West	7	120	16	0	143	4.90%	11.19%
	Mid Tyrone	10	162	34	0	206	4.85%	16.50%
	Omagh	12	155	25	0	192	6.25%	13.02%
	West Tyrone	12	144	40	0	196	6.12%	20.41%
	<b>Total</b>	<b>70</b>	<b>991</b>	<b>196</b>	<b>0</b>	<b>1,257</b>	<b>5.57%</b>	<b>15.59%</b>
Lisburn and Castlereagh	Castlereagh East	13	217	23	0	253	5.14%	9.09%
	Castlereagh South	8	202	30	1	241	3.33%	12.50%
	Downshire East	10	122	19	0	151	6.62%	12.58%
	Downshire West	8	158	35	0	201	3.98%	17.41%
	Killultagh	15	171	37	0	223	6.73%	16.59%
	Lisburn North	14	201	21	0	236	5.93%	8.90%
	Lisburn South	8	233	30	0	271	2.95%	11.07%
	<b>Total</b>	<b>76</b>	<b>1,304</b>	<b>195</b>	<b>1</b>	<b>1,576</b>	<b>4.83%</b>	<b>12.38%</b>
Mid and East Antrim	Ballymena	22	211	22	0	255	8.63%	8.63%
	Bannside	10	171	27	0	208	4.81%	12.98%
	Braid	17	201	32	0	250	6.80%	12.80%
	Carrick Castle	10	133	19	0	162	6.17%	11.73%
	Coast Road	12	123	23	0	158	7.59%	14.56%
	Knockagh	12	161	20	0	193	6.22%	10.36%
	Larne Lough	11	123	18	0	152	7.24%	11.84%
	<b>Total</b>	<b>94</b>	<b>1,123</b>	<b>161</b>	<b>0</b>	<b>1,378</b>	<b>6.82%</b>	<b>11.68%</b>
Mid Ulster	Carntogher	<5	162	<35	1	199	<4.57%	>14.81%
	Clogher Valley	14	231	54	0	299	4.68%	18.06%
	Cookstown	20	254	37	0	311	6.43%	11.90%
	Dungannon	19	285	40	0	344	5.52%	11.63%
	Magherafelt	7	209	37	0	253	2.77%	14.62%
	Moyola	<20	178	<45	1	238	>4.57%	>14.81%
	Torrent	9	232	41	0	282	3.19%	14.54%
	<b>Total</b>	<b>88</b>	<b>1,551</b>	<b>285</b>	<b>2</b>	<b>1,926</b>	<b>4.57%</b>	<b>14.81%</b>
Newry, Mourne and Down	Crotlieve	14	249	49	1	313	4.49%	15.71%
	Downpatrick	20	178	23	0	221	9.05%	10.41%
	Newry	15	250	39	0	304	4.93%	12.83%
	Rowallane	17	173	28	0	218	7.80%	12.84%
	Slieve Croob	7	161	23	0	191	3.66%	12.04%
	Slieve Gullion	23	358	77	0	458	5.02%	16.81%
	The Mournes	28	285	63	0	376	7.45%	16.76%
	<b>Total</b>	<b>124</b>	<b>1,654</b>	<b>302</b>	<b>1</b>	<b>2,081</b>	<b>5.96%</b>	<b>14.52%</b>
Northern Ireland	<b>All infants</b>	<b>1,265</b>	<b>16,491</b>	<b>2,616</b>	<b>12</b>	<b>20,384</b>	<b>6.21%</b>	<b>12.84%</b>

Source: Child Health System

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal

Disclosure controls have been applied to this table. As a result, for some DEAs, it is not possible to show the exact percentage values in the final two columns and so a comparison to the NI value has been provided.

**Figure 9.4: Percentage low birth weight (<2,500g) infants born to mothers' resident in Northern Ireland, by District Electoral Area, Northern Ireland, 2022/23**





# Section 10: Breastfeeding

## Why should we be concerned?

In June 2013, the Department of Health presented “*Breastfeeding – A Great Start. A Strategy for Northern Ireland 2013 - 2023*.”<sup>70</sup> The Strategy describes breastfeeding as “a fundamental public health issue because it promotes health, prevents disease and helps contribute to reducing health inequalities. It provides the foundation for a healthy start in life and prevents disease in the short and long term for both babies and their mothers.” The Strategy highlights the benefits of breastfeeding - “Human milk provides infants with all the nutrients they need for healthy growth and development. Many of the components of breast milk cannot be manufactured”.

In 2023 the WHO re-emphasized the importance of breastfeeding to child growth and development “From the earliest moments of a child’s life, breastfeeding is the ultimate child survival and development intervention. Breastfeeding protects babies from common infectious diseases and boosts children’s immune systems, providing the key nutrients children need to grow and develop to their full potential.”<sup>71</sup>

Breastfeeding has multiple benefits for infants and mothers.<sup>72</sup> For infants, evidence supports the role of breastfeeding in reducing the risk of ear and respiratory infections, gastroenteritis, bowel complications e.g. necrotising enterocolitis (NEC), Sudden Infant Death Syndrome (SIDS) (cot death) and childhood leukaemia.<sup>73,74,75</sup> There is evidence to suggest likely effects in reducing obesity and the risk of developing type 2 diabetes.<sup>76</sup> Breastfeeding has been associated with small positive effects on intelligence and supporting better life chances.<sup>77,78</sup> Breastfeeding mothers have a reduced risk of breast cancer, ovarian cancer and type 2 diabetes.<sup>79,80,81,82</sup> A recent meta-analysis also suggests benefits for cardiovascular health.<sup>83</sup>

However, despite the benefits to both infant and mother, breastfeeding rates across NI remain low.

## What can be done?

The factors that influence women’s decisions on infant feeding are complex.<sup>84</sup> Review level evidence has reported on the multifaceted nature of decision making around infant feeding in the antenatal and postnatal periods, suggesting that the choice is not simply between breastfeeding and formula feeding but a process of weighing up the reasons for and against breastfeeding, in the context of factors including their own views, beliefs and lifestyle, the views of family and social networks, health professional advice and information, socio-cultural norms and media representation.<sup>85</sup>

The 2010 UK Infant Feeding Survey reported the most common reasons given by mothers who planned before birth to use infant formula were: that they had previously fed children with formula, disliked the idea of breastfeeding, convenience/mother’s lifestyle, others could feed the baby, put off by their own or

<sup>70</sup> Department of Health, “Breastfeeding – A Great Start. A Strategy for Northern Ireland 2013 – 2023” <https://www.health-ni.gov.uk/publications/breastfeeding-strategy>  
<sup>71</sup> Joint statement by UNICEF Executive Director and WHO Director-General on the occasion of World Breastfeeding Week, Geneva, 2023.

<sup>72</sup> UNICEF Research on maternal health <https://www.unicef.org.uk/babyfriendly/news-and-research/baby-friendly-research/maternal-health-research/>

<sup>73</sup> Department of Health, “Breastfeeding – A Great Start. A Strategy for Northern Ireland 2013 – 2023” <https://www.health-ni.gov.uk/publications/breastfeeding-strategy>

<sup>74</sup> Health Service Executive, Republic of Ireland, 2008 “The Evidence for Breastfeeding” <https://www.breastfeeding.ie/Uploads/The-evidence-for-breastfeeding.pdf>

<sup>75</sup> UNICEF Research on infant health <https://www.unicef.org.uk/babyfriendly/news-and-research/baby-friendly-research/infant-health-research/>

<sup>76</sup> Horta BL, Rollins N, Dias MS, Garcez V, Pérez-Escamilla R. Systematic review and meta-analysis of breastfeeding and later overweight or obesity expands on previous study for World Health Organization. *Acta Paediatr.* 2023 Jan;112(1):34-41.

<sup>77</sup> Victoria CG et al. Breastfeeding in the 21st century: epidemiology, mechanisms and lifelong effect. *Lancet* 2016; 387: 475-490. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)01024-7/abstract](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)01024-7/abstract)

<sup>78</sup> McGowan C, Bland R. The Benefits of Breastfeeding on Child Intelligence, Behavior, and Executive Function: A Review of Recent Evidence. *Breastfeed Med.* 2023 Mar;18(3):172-187. doi: 10.1089/bfm.2022.0192.

<sup>79</sup> Chowdhury R, Sinha B, Sankar MJ, Taneja S, Bhandari N, Rollins N, Bahl R, Martinez J. Breastfeeding and maternal health outcomes: a systematic review and meta-analysis. *Acta Paediatr.* 2015 Dec;104(467):96-113. doi: 10.1111/apa.13102. PMID: 26172878; PMCID: PMC4670483.

<sup>80</sup> Fan D, Xia Q, Lin D, Ma Y, Rao J, Liu L, Tang H, Xu T, Li P, Chen G, Zhou Z, Guo X, Zhang Z, Liu Z. Role of breastfeeding on maternal and childhood cancers: An umbrella review of meta-analyses. *J Glob Health.* 2023 Jun 23;13:04067.

<sup>81</sup> Rameez RM, Sadana D, Kaur S, Ahmed T, Patel J, Khan MS, Misbah S, Simonson MT, Riaz H, Ahmed HM. Association of Maternal Lactation With Diabetes and Hypertension: A Systematic Review and Meta-analysis. *JAMA Netw Open.* 2019 Oct 2;2(10):e1913401. doi: 10.1001/jamanetworkopen.2019.13401. PMID: 31617928; PMCID: PMC6806428.

<sup>82</sup> Aune D, Norat T, Romundstad P, Vatten LJ. Breastfeeding and the maternal risk of type 2 diabetes: a systematic review and dose-response meta-analysis of cohort studies. *Nutr Metab Cardiovasc Dis.* 2014 Feb;24(2):107-15. doi: 10.1016/j.numecd.2013.10.028.

<sup>83</sup> Thidderer L, Seekircher L, Kunutsor S. K., Peters S., O’Keeffe, L. M., & Willeit, P. (2022). Breastfeeding Is Associated With a Reduced Maternal Cardiovascular Risk: Systematic Review and Meta-Analysis Involving Data From 8 Studies and 1 192 700 Parous Women. *Journal of the American Heart Association*, 11(2), Article e022746. <https://doi.org/10.1161/JAHA.121.022746>

<sup>84</sup> Matriano MG, Ivers R, Meedya S. Factors that influence women’s decision on infant feeding: An integrative review. *Women Birth.* 2022 Sep;35(5):430-439. doi: 10.1016/j.wombi.2021.10.005. Epub 2021 Oct 18. PMID: 34674954.

<sup>85</sup> Roll, CL and Cheater, F. Expectant parents’ views of factors influencing infant feeding decisions in the antenatal period: A systematic review. *International Journal of Nursing Studies* 2016; 60:145-55.



another's previous experience, medical reasons or embarrassment.<sup>86</sup> Among mothers who had stopped breastfeeding, the most common reasons for doing so included: insufficient milk, baby not sucking/rejecting the breast/would not latch on and having painful breasts or nipples.<sup>87</sup> When asked what could have helped them to breastfeed for longer, the main reasons included: more support and guidance from hospital staff, midwives and family; if the baby could have latched on the breast easier; and naturally producing more milk and less pain/being more comfortable.<sup>88</sup>

In qualitative research undertaken in Northern Ireland, mothers reported that breastfeeding was not convenient at home or outside the home and a lack of information/support as reasons why they chose not to breastfeed or had ceased breastfeeding. Other reasons for not starting to breastfeed included a lack of social acceptance, lack of confidence, lack of facilities and complicated births/medical issues. While those who stopped breastfeeding reported problems establishing breastfeeding, exhaustion/difficult births, self-image/lifestyle and not believing the benefits of breastfeeding over feeding with formula.<sup>89,90</sup>

Further studies conducted with mothers in Northern Ireland report varied experiences in relation to breastfeeding and outline challenges encountered with support to initiate and sustain breastfeeding.<sup>91,92</sup> The findings highlighted the need for more support with breastfeeding in hospital and during the early days and the importance of consistent evidence-based advice from health professionals. Recognising that each breastfeeding journey is different and that women who have had babies before also need support was emphasised.

A 2022 review to explore the type and effectiveness of support for breastfeeding mothers highlighted the potential of 'breastfeeding only' support (defined as standalone breastfeeding support rather than breastfeeding support as part of a wider maternal and newborn health intervention) to increase the duration and exclusivity of breastfeeding. It also highlighted that such support may also be more effective in reducing the number of women stopping breastfeeding at three to four months compared to later time points.<sup>93</sup>

The NI Breastfeeding Strategy details the following four strategic outcomes to help increase breastfeeding rates in Northern Ireland:

**Outcome 1** - *Supportive environments for breastfeeding exist throughout Northern Ireland.*

**Outcome 2** - *Health and Social Care has the necessary knowledge, skills and leadership to protect, promote, support and normalise breastfeeding.*

**Outcome 3** - *High quality information systems in place that underpin the development of policy and programmes, and which support Strategy delivery.*

**Outcome 4** - *An informed and supportive public.*

A Mid-Term Review of the breastfeeding strategy published in May 2018 outlined the progress made since 2013 through the Strategy action plan, assessed and made recommendations on new actions including: investment for maternity support workers in postnatal wards and the community; support for Sure Starts to implement UNICEF UK Baby Friendly Initiative Children's Centre standards for breastfeeding and relationship building; and public information to promote breastfeeding and facilitate change in attitudes and culture.<sup>94</sup>

In October 2022, the Health Minister agreed a one year extension of the Strategy term until June 2024. A process to provide a final review of the strategy is currently underway which will allow for an assessment of progress made against the strategy's targets and objectives and make recommendations that will form an evidence-base to determine whether a successor strategy or plan is required.

<sup>86</sup> UK Infant Feeding Survey 2010. Available at <http://digital.nhs.uk/catalogue/PUB08694> Table 3.7

<sup>87</sup> UK Infant Feeding Survey 2010. Available at <http://digital.nhs.uk/catalogue/PUB08694> Table 6.6

<sup>88</sup> UK Infant Feeding Survey 2010. Available at <http://digital.nhs.uk/catalogue/PUB08694> Table 6.8

<sup>89</sup> Glass K. Breastfeeding and maternity care research: final report Spring. Report prepared for the Public Health Agency. Belfast: Ipsos MORI, 2015.

<sup>90</sup> Glass K. Breastfeeding and maternity care research: final report Autumn. Report prepared for the Public Health Agency. Belfast: Ipsos MORI, 2016.

<sup>91</sup> BirthWise-Survey-2019. pdf <https://cdn.birthwise.org.uk/reports/BirthWise-Survey-2019.pdf>

<sup>92</sup> Ipsos Mori. Impact of the COVID-19 pandemic on breastfeeding support. Report prepared for the Public Health Agency. Belfast: Ipsos MORI 2021.

<sup>93</sup> Gavine A, Shinwell SC, Buchanan P, Farre A, Wade A, Lynn F, Marshall J, Cumming SE, Dare S, McFadden A. Support for healthy breastfeeding mothers with healthy term babies.

Cochrane Database Syst Rev. 2022 Oct 25;10(10):CD001141. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9595242/pdf/CD001141.pdf>

<sup>94</sup> Department of Health. Breastfeeding – A great start. A strategy for NI 2013-2023. Mid-Term Review. Belfast: DOH, 2018. Available at [www.health-ni.gov.uk/sites/default/files/publications/health/draft-mid-term-review-breastfeeding-strategy.pdf](http://www.health-ni.gov.uk/sites/default/files/publications/health/draft-mid-term-review-breastfeeding-strategy.pdf)

## Key Points

### Breastfeeding at discharge

- **Please note that recording of breastfeeding data may not be complete. In any year, there will be a number of records where the breastfeeding status is not known. Therefore, the figures shown may not reflect the true numbers of children being breastfed.**

In 2022/23:

- Just over half of live infants (51.8%) were breastfed (total/partial feeding) at discharge (where feeding status was known). *[Page 77].*
- Only 27.4% of infants born to mothers under 20 were breastfed at discharge, compared to 62.2% of infants to mothers aged 40 and over. *[Page 78].*
- Breastfeeding rates were slightly higher for infants born to first time mothers at 54.2%. Mothers who had previously given birth = 50.2%. *[Page 78].*
- Breastfeeding rates were much higher in infants born to 'non-white' mothers. However the number of births for some ethnic groupings was small and caution is advised. *[Page 78].*
- Breastfeeding rates varied by Health Trust of residence of mother, ranging from 45.8% of infants born to mothers from Western Trust, to 54.8% in South Eastern Trust. *[Page 79].*
- The proportion breastfeeding was markedly lower in more deprived areas (NIMDM 2017). In 2022/23, 39.1% of mothers from the most deprived areas were breastfeeding at discharge, compared to 67.8% of mothers from the least deprived areas. It should however be noted that breastfeeding rates increase with age of mother, and more deprived areas tend to have a higher proportion of younger mothers. *[Page 79]*
- Breastfeeding rates at District Electoral Area level ranged from 33.3% in Court DEA (Belfast LGD) to 76.3% in Castlereagh South DEA (Lisburn and Castlereagh LGD). *Note that when providing data at this geographic level, numbers of births can be small and so caution is advised. [Page 80].*

### Breastfeeding duration

- Of infants who were delivered in 2021/22, the proportion breastfed gradually decreased with time – 51.2% of infants in Northern Ireland were breastfed at discharge, falling to only 17.0% of infants at 12 months old. In general, the percentage breastfed after 12 months increased with age of mother – 4.2% of mothers aged less than 20 years up to 23.9% of mothers aged 40+. *[Page 84]*
- At all stages where breastfeeding was recorded, the rate was substantially higher in those infants born to mothers who lived in less deprived areas (NIMDM 2017), when compared to mothers from more deprived areas. For example, in 2021/22, prevalence of breastfeeding at 12 months old was higher at 27.0% in the least deprived areas, than in the most deprived areas of Northern Ireland (10.3%). *[Page 85]*

Breastfeeding data on the Child Health System is recorded as either 'Total', 'Partial' or 'Not at all'. Total – where the child receives breast milk only, with no other type of milk, liquids or food given. Partial – where the child receives breast milk, as well as formula milk and other liquids or food. Not at all - where the child does not receive any breast milk at all, but rather other feeding methods are used.

**Please note that recording of breastfeeding data may not be complete. In any year, there will be a number of records where the breastfeeding status is not known. As a result, percentage breastfeeding is calculated as a valid percentage. The calculation is based on those records where feeding status was known i.e. blank data has been removed from the denominator value.**

**Table 10.1: Breastfeeding status (at discharge) of live infants born to Northern Ireland residents, 2010/11 – 2022/23**

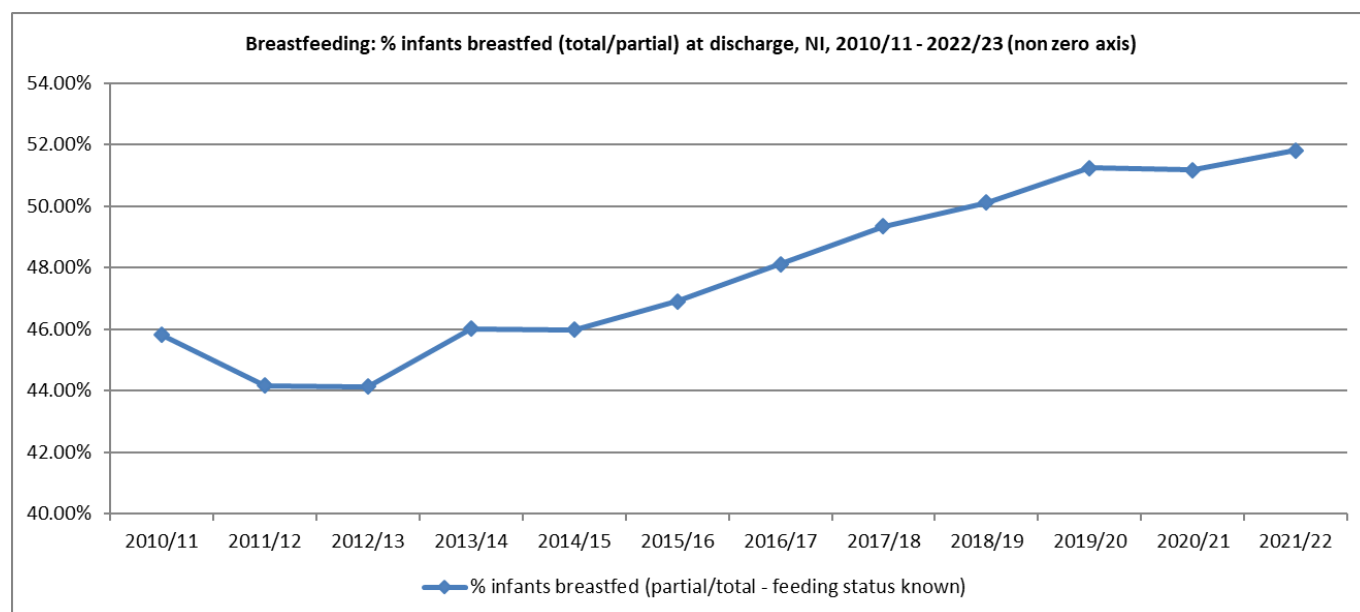
Year of birth		Infant breastfeeding status at discharge					% infants breastfed (partial/total - feeding status known)
		Total	Partial	Not at all	Not known	Total	
2010/11	n	9,578	1,897	13,573	508	25,556	11,475
	%	38.2%	7.6%	54.2%	-	-	45.81%
2011/12	n	9,369	1,610	13,879	362	25,220	10,979
	%	37.7%	6.5%	55.8%	-	-	44.17%
2012/13	n	9,011	1,777	13,658	465	24,911	10,788
	%	36.9%	7.3%	55.9%	-	-	44.13%
2013/14	n	9,148	1,838	12,886	297	24,169	10,986
	%	38.3%	7.7%	54.0%	-	-	46.02%
2014/15	n	9,235	1,762	12,918	394	24,309	10,997
	%	38.6%	7.4%	54.0%	-	-	45.98%
2015/16	n	9,157	1,891	12,988	312	24,348	11,048
	%	38.1%	7.9%	54.0%	-	-	45.96%
2016/17	n	8,655	2,439	12,562	321	23,977	11,094
	%	36.6%	10.3%	53.1%	-	-	46.90%
2017/18	n	8,343	2,507	11,704	349	22,903	10,850
	%	37.0%	11.1%	51.9%	-	-	48.11%
2018/19	n	8,471	2,613	11,383	372	22,839	11,084
	%	37.7%	11.6%	50.7%	-	-	49.33%
2019/20	n	8,254	2,747	10,953	337	22,291	11,001
	%	37.6%	12.5%	49.9%	-	-	50.11%
2020/21	n	7,853	2,828	10,162	391	21,234	10,681
	%	37.7%	13.6%	48.8%	-	-	51.25%
2021/22	n	8,044	2,842	10,383	420	21,689	10,886
	%	37.8%	13.4%	48.8%	-	-	51.18%
2022/23	n	7,089	3,217	9,585	418	20,309	10,306
	%	35.6%	16.2%	48.2%	-	-	51.81%

Source: Child Health System

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

Percentage breastfeeding is calculated as a valid percentage. The calculation is based on those records where feeding status was known i.e. blank data has been removed from the denominator value.

**Figure 10.1: % infants' breastfed (total/partial) at discharge, Northern Ireland, 2010/11 – 2022/23**



**Table 10.2: Breastfeeding status (at discharge) of live infants born to Northern Ireland residents, 2022/23**

		Infant breastfeeding status at discharge					% infants breastfed (partial/total - feeding status known)
		Total	Partial	Not at all	Other / Not known	Total	
Age Group of mother	Under 20	63	52	304	7	426	27.4%
	20 - 24	484	267	1,427	47	2,225	34.5%
	25 - 29	1,496	769	2,576	116	4,957	46.8%
	30 - 34	2,929	1,213	3,162	144	7,448	56.7%
	35 - 39	1,724	728	1,764	83	4,299	58.2%
	40 +	393	186	352	21	952	62.2%
	Not known	0	2	0	0	2	100.0%
	All ages	7,089	3,217	9,585	418	20,309	51.8%
Multiple births	Single	7,014	3,041	9,252	384	19,691	52.1%
	Multiple	75	176	333	34	618	43.0%
	All infants	7,089	3,217	9,585	418	20,309	51.8%
First time mothers	First time mother	2,681	1,592	3,614	158	8,045	54.2%
	Not a first time mother	4,397	1,618	5,960	252	12,227	50.2%
	Not known	11	7	11	8	37	62.1%
	All infants	7,089	3,217	9,585	418	20,309	51.8%
Ethnic group of mother (NIMATS)	White	6,636	2,849	9,392	227	19,104	50.2%
	Asian	157	165	58	4	384	84.7%
	Black	130	109	39	7	285	86.0%
	Mixed	52	27	22	2	103	78.2%
	Other	152	112	121	8	393	68.6%
	Not stated / Blank	13	9	8	1	31	73.3%
	All ethnic groups	7,140	3,271	9,640	249	20,300	51.9%

**Table 10.2 continued: Breastfeeding status (at discharge) of live infants born to Northern Ireland residents, 2022/23**

		Infant breastfeeding status at discharge					% infants breastfed (partial/total - feeding status known)
		Total	Partial	Not at all	Other / Not known	Total	
Place of birth	Altnagelvin	600	303	1,212	63	<b>2,178</b>	42.7%
	Antrim	928	441	1,425	17	<b>2,811</b>	49.0%
	Causeway	351	75	Disclosure controls applied		<b>805</b>	53.1%
	Craigavon	1,050	440	1,413	78	<b>2,981</b>	51.3%
	Daisy Hill	691	320	879	34	<b>1,924</b>	53.5%
	Royal Victoria	1,437	897	2,217	123	<b>4,674</b>	51.3%
	SWAH	401	175	522	18	<b>1,116</b>	52.5%
	Ulster	1,626	561	1,540	44	<b>3,771</b>	58.7%
	Home/Freebirth/Other location	5	5	Disclosure controls applied		<b>49</b>	20.4%
	<b>All places of birth</b>	<b>7,089</b>	<b>3,217</b>	<b>9,585</b>	<b>418</b>	<b>20,309</b>	<b>51.8%</b>
Trust of residence of mother	Belfast	1,344	718	1,713	67	<b>3,842</b>	54.6%
	Northern	1,744	729	2,370	49	<b>4,892</b>	51.1%
	South Eastern	1,353	562	1,577	71	<b>3,563</b>	54.8%
	Southern	1,653	730	2,185	126	<b>4,694</b>	52.2%
	Western	995	478	1,740	105	<b>3,318</b>	45.8%
	<b>All infants</b>	<b>7,089</b>	<b>3,217</b>	<b>9,585</b>	<b>418</b>	<b>20,309</b>	<b>51.8%</b>
Local Government District	Antrim and Newtownabbey	544	264	650	16	<b>1,474</b>	55.4%
	Ards and North Down	573	195	609	27	<b>1,404</b>	55.8%
	Armagh City, Banbridge and Craigavon	896	367	1,168	71	<b>2,502</b>	52.0%
	Belfast	1,177	690	1,765	72	<b>3,704</b>	51.4%
	Causeway Coast and Glens	462	171	682	21	<b>1,336</b>	48.1%
	Derry City and Strabane	471	227	939	56	<b>1,693</b>	42.6%
	Fermanagh and Omagh	432	193	589	40	<b>1,254</b>	51.5%
	Lisburn and Castlereagh	691	294	560	25	<b>1,570</b>	63.8%
	Mid and East Antrim	475	213	674	13	<b>1,375</b>	50.5%
	Mid Ulster	656	275	957	33	<b>1,921</b>	49.3%
	Newry, Mourne and Down	712	328	992	44	<b>2,076</b>	51.2%
	<b>All infants</b>	<b>7,089</b>	<b>3,217</b>	<b>9,585</b>	<b>418</b>	<b>20,309</b>	<b>51.8%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	1,001	631	2,546	92	<b>4,270</b>	39.1%
	2	1,350	629	2,145	88	<b>4,212</b>	48.0%
	3	1,484	650	2,079	89	<b>4,302</b>	50.7%
	4	1,531	677	1,696	74	<b>3,978</b>	56.6%
	Least deprived	1,723	630	1,119	75	<b>3,547</b>	67.8%
	<b>All infants</b>	<b>7,089</b>	<b>3,217</b>	<b>9,585</b>	<b>418</b>	<b>20,309</b>	<b>51.8%</b>

Source: Child Health System and Northern Ireland Maternity System (ethnic group of mother)

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Disclosure controls have been applied to this table.

Percentage breastfeeding is calculated as a valid percentage. The calculation is based on those records where feeding status was known i.e. blank data has been removed from the denominator value.

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

**Table 10.3: Breastfeeding status (at discharge) of live infants born to Northern Ireland residents, District Electoral Area, 2022/23**

Local Government District	District Electoral Area	Infant breastfeeding status at discharge					% infants breastfed (partial/total - feeding status known)
		Total	Partial	Not at all	Not known	Total	
Antrim and Newtownabbey	Airport	86	34	96	2	<b>218</b>	55.56%
	Antrim	103	46	123	3	<b>275</b>	54.78%
	Ballyclare	80	37	94	3	<b>214</b>	55.45%
	Dunsilly	71	31	81	3	<b>186</b>	55.74%
	Glengormley Urban	69	38	85	1	<b>193</b>	55.73%
	Macedon	63	39	109	1	<b>212</b>	48.34%
	Three Mile Water	72	39	62	3	<b>176</b>	64.16%
	<b>Total</b>	<b>544</b>	<b>264</b>	<b>650</b>	<b>16</b>	<b>1,474</b>	<b>55.42%</b>
Ards and North Down	Ards Peninsula	73	28	102	0	<b>203</b>	49.75%
	Bangor Central	79	37	104	5	<b>225</b>	52.73%
	Bangor East and Donaghadee	66	22	54	4	<b>146</b>	61.97%
	Bangor West	91	15	80	4	<b>190</b>	56.99%
	Comber	86	26	76	3	<b>191</b>	59.57%
	Holywood and Clandeboye	85	28	44	5	<b>162</b>	71.97%
	Newtownards	93	39	149	6	<b>287</b>	46.98%
	<b>Total</b>	<b>573</b>	<b>195</b>	<b>609</b>	<b>27</b>	<b>1,404</b>	<b>55.77%</b>
Armagh, Banbridge and Craigavon	Armagh	125	54	185	8	<b>372</b>	49.18%
	Banbridge	137	56	156	12	<b>361</b>	55.30%
	Craigavon	117	57	158	12	<b>344</b>	52.41%
	Cusher	122	48	144	7	<b>321</b>	54.14%
	Lagan River	125	33	100	12	<b>270</b>	61.24%
	Lurgan	142	59	243	9	<b>453</b>	45.27%
	Portadown	128	60	182	11	<b>381</b>	50.81%
	<b>Total</b>	<b>896</b>	<b>367</b>	<b>1,168</b>	<b>71</b>	<b>2,502</b>	<b>51.95%</b>
Belfast	Balmoral	121	40	66	5	<b>232</b>	70.93%
	Black Mountain	84	74	246	14	<b>418</b>	39.11%
	Botanic	159	125	128	8	<b>420</b>	68.93%
	Castle	115	52	140	8	<b>315</b>	54.40%
	Collin	92	67	254	12	<b>425</b>	38.50%
	Court	81	62	286	4	<b>433</b>	33.33%
	Lisnasharragh	140	48	81	3	<b>272</b>	69.89%
	Oldpark	71	76	289	4	<b>440</b>	33.72%
	Ormiston	185	61	91	7	<b>344</b>	73.00%
	Titanic	129	85	184	7	<b>405</b>	53.77%
	<b>Total</b>	<b>1,177</b>	<b>690</b>	<b>1,765</b>	<b>72</b>	<b>3,704</b>	<b>51.40%</b>
Causeway Coast and Glens	Ballymoney	85	22	120	0	<b>227</b>	47.14%
	Bann	79	16	82	2	<b>179</b>	53.67%
	Benbradagh	64	32	115	4	<b>215</b>	45.50%
	Causeway	70	25	62	5	<b>162</b>	60.51%
	Coleraine	73	23	106	2	<b>204</b>	47.52%
	Limavady	27	26	97	5	<b>155</b>	35.33%
	The Glens	64	27	100	3	<b>194</b>	47.64%
	<b>Total</b>	<b>462</b>	<b>171</b>	<b>682</b>	<b>21</b>	<b>1,336</b>	<b>48.14%</b>
Derry City and Strabane	Ballyarnett	82	34	181	11	<b>308</b>	39.06%
	Derg	61	20	115	4	<b>200</b>	41.33%
	Faughan	63	29	104	4	<b>200</b>	46.94%
	Foyleside	51	30	109	11	<b>201</b>	42.63%
	Sperrin	75	35	146	12	<b>268</b>	42.97%
	The Moor	42	24	117	4	<b>187</b>	36.07%
	Waterside	97	55	167	10	<b>329</b>	47.65%
	<b>Total</b>	<b>471</b>	<b>227</b>	<b>939</b>	<b>56</b>	<b>1,693</b>	<b>42.64%</b>

**Table 10.3 continued: Breastfeeding status (at discharge) of live infants born to Northern Ireland residents, District Electoral Area, 2021/22**

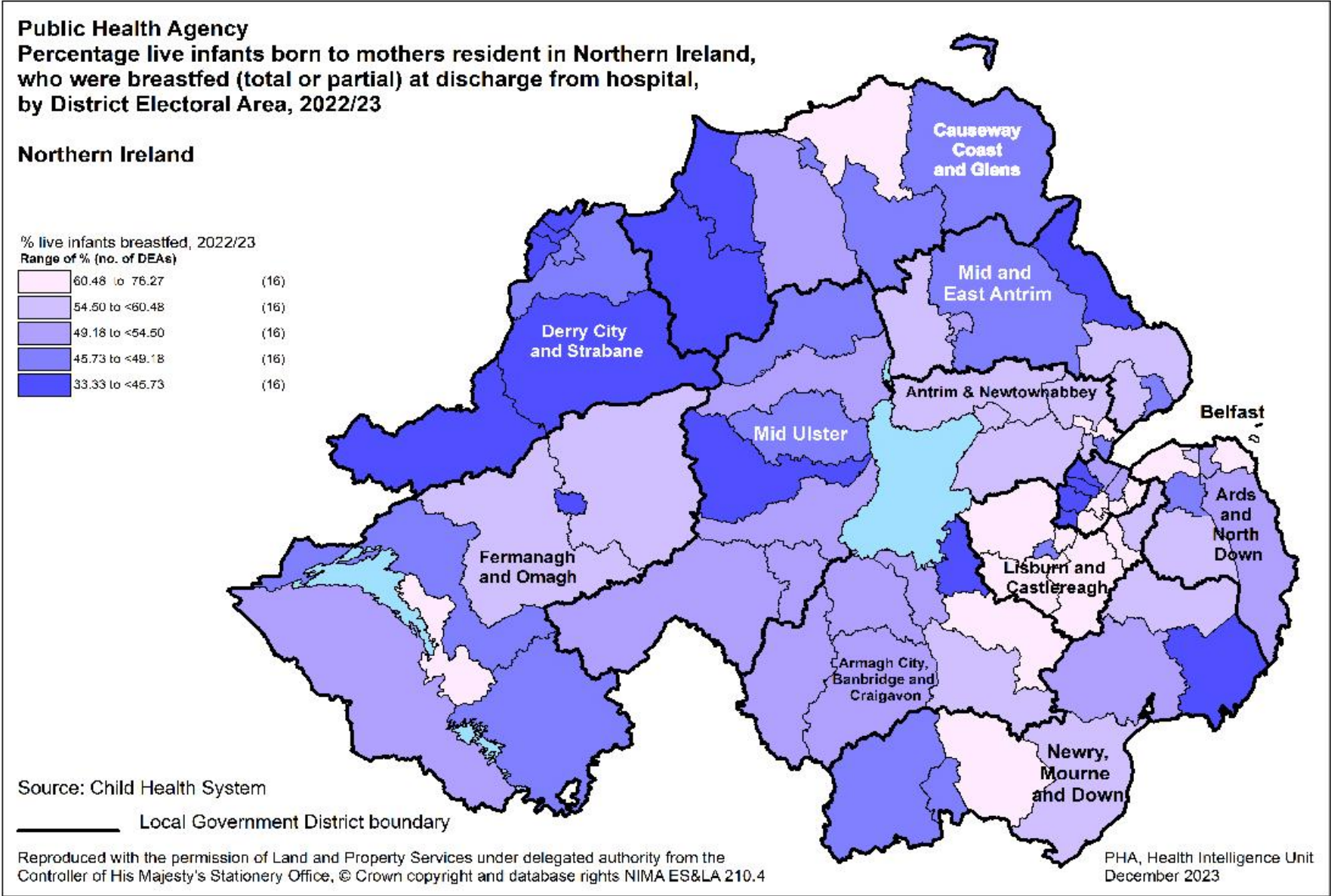
Local Government District	District Electoral Area	Infant breastfeeding status at discharge					% infants breastfed (partial/total - feeding status known)
		Total	Partial	Not at all	Not known	Total	
Fermanagh and Omagh	Enniskillen	69	32	66	8	<b>175</b>	60.48%
	Erne East	50	25	89	6	<b>170</b>	45.73%
	Erne North	56	21	91	6	<b>174</b>	45.83%
	Erne West	52	23	66	2	<b>143</b>	53.19%
	Mid Tyrone	70	40	88	7	<b>205</b>	55.56%
	Omagh	60	18	106	8	<b>192</b>	42.39%
	West Tyrone	75	34	83	3	<b>195</b>	56.77%
	<b>Total</b>	<b>432</b>	<b>193</b>	<b>589</b>	<b>40</b>	<b>1,254</b>	<b>51.48%</b>
Lisburn and Castlereagh	Castlereagh East	108	42	100	2	<b>252</b>	60.00%
	Castlereagh South	134	46	56	4	<b>240</b>	76.27%
	Downshire East	73	27	47	4	<b>151</b>	68.03%
	Downshire West	108	39	48	4	<b>199</b>	75.38%
	Killultagh	91	47	77	7	<b>222</b>	64.19%
	Lisburn North	86	56	89	4	<b>235</b>	61.47%
	Lisburn South	91	37	143	0	<b>271</b>	47.23%
	<b>Total</b>	<b>691</b>	<b>294</b>	<b>560</b>	<b>25</b>	<b>1,570</b>	<b>63.75%</b>
Mid and East Antrim	Ballymena	87	39	123	6	<b>255</b>	50.60%
	Bannside	79	36	91	1	<b>207</b>	55.83%
	Braid	84	35	128	2	<b>249</b>	48.18%
	Carrick Castle	53	22	86	0	<b>161</b>	46.58%
	Coast Road	44	20	92	2	<b>158</b>	41.03%
	Knockagh	68	38	87	0	<b>193</b>	54.92%
	Larne Lough	60	23	67	2	<b>152</b>	55.33%
	<b>Total</b>	<b>475</b>	<b>213</b>	<b>674</b>	<b>13</b>	<b>1,375</b>	<b>50.51%</b>
Mid Ulster	Carntogher	69	23	106	1	<b>199</b>	46.46%
	Clogher Valley	104	49	140	5	<b>298</b>	52.22%
	Cookstown	99	37	172	3	<b>311</b>	44.16%
	Dungannon	115	60	153	15	<b>343</b>	53.35%
	Magherafelt	86	33	131	2	<b>252</b>	47.60%
	Moyola	78	39	118	2	<b>237</b>	49.79%
	Torrent	105	34	137	5	<b>281</b>	50.36%
	<b>Total</b>	<b>656</b>	<b>275</b>	<b>957</b>	<b>33</b>	<b>1,921</b>	<b>49.31%</b>
Newry, Mourne and Down	Crotlieve	122	64	119	8	<b>313</b>	60.98%
	Downpatrick	61	33	124	1	<b>219</b>	43.12%
	Newry	90	47	162	5	<b>304</b>	45.82%
	Rowallane	90	26	94	7	<b>217</b>	55.24%
	Slieve Croob	72	22	93	4	<b>191</b>	50.27%
	Slieve Gullion	143	70	233	12	<b>458</b>	47.76%
	The Mournes	134	66	167	7	<b>374</b>	54.50%
	<b>Total</b>	<b>712</b>	<b>328</b>	<b>992</b>	<b>44</b>	<b>2,076</b>	<b>51.18%</b>
Northern Ireland	<b>All infants</b>	<b>7,089</b>	<b>3,217</b>	<b>9,585</b>	<b>418</b>	<b>20,309</b>	<b>51.81%</b>

Source: Child Health System

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal. Percentage breastfeeding is calculated as a valid percentage. The calculation is based on those records where feeding status was known i.e. blank data has been removed from the denominator value.



Figure 10.2: Percentage infants born live to mothers' resident in Northern Ireland who were breastfed at discharge (total or partial), by District Electoral Area, 2022/23



**Table 10.4: Breastfeeding status (at discharge) of live infants born to Northern Ireland residents, Sure Start Area, 2022/23**

Sure Start area	Total children	Infant breastfeeding status at discharge				% infants breastfed (partial/total - feeding status known)
		Total	Partial	Not at all	Not known	
Abbey	277	30.0%	17.7%	52.0%	0.4%	47.7%
Ards	210	32.4%	9.5%	57.6%	0.5%	41.9%
ArKe	205	28.8%	16.1%	53.2%	2.0%	44.9%
Ballymena and Little Steps	297	31.3%	15.8%	50.5%	2.4%	47.1%
Bangor	<100	33.0%	15.9%	48.9%	2.3%	48.9%
Beechmount	<100	11.1%	20.8%	65.3%	2.8%	31.9%
Blossom	177	34.5%	15.8%	48.0%	1.7%	50.3%
Cherish	296	31.8%	14.5%	50.0%	3.7%	46.3%
Clan Mor	167	18.0%	19.8%	61.7%	0.6%	37.7%
Clogher Valley	187	38.0%	14.4%	46.5%	1.1%	52.4%
Coleraine	145	32.4%	9.0%	58.6%	0.0%	41.4%
Colin	300	18.0%	14.7%	64.7%	2.7%	32.7%
Dalriada	147	29.3%	12.2%	57.8%	0.7%	41.5%
Down	260	28.5%	15.4%	55.8%	0.4%	43.8%
Dungannon and Coalisland	310	37.4%	17.1%	42.6%	2.9%	54.5%
Dungiven	220	25.5%	15.9%	56.4%	2.3%	41.4%
East Belfast	379	25.9%	19.5%	52.8%	1.8%	45.4%
Edenballymore	179	21.2%	10.1%	64.8%	3.9%	31.3%
Glenbrook	259	18.1%	15.4%	65.6%	0.8%	33.6%
Gold	275	31.3%	10.9%	56.7%	1.1%	42.2%
Horizon	132	22.7%	12.9%	62.9%	1.5%	35.6%
LAST	222	31.1%	13.1%	52.7%	3.2%	44.1%
Lisburn	102	28.4%	14.7%	55.9%	1.0%	43.1%
Little Hands	174	21.3%	16.7%	59.2%	2.9%	37.9%
Mourne	<100	31.8%	18.2%	50.0%	0.0%	50.0%
Newry City	261	29.9%	16.5%	51.0%	2.7%	46.4%
Outer West Belfast	278	27.0%	15.1%	55.0%	2.9%	42.1%
Rainbow	176	28.4%	12.5%	56.8%	2.3%	40.9%
Saol Ur	165	15.8%	17.0%	64.2%	3.0%	32.7%
Shankill	342	19.0%	14.6%	65.5%	0.9%	33.6%
Shantallow	262	24.8%	9.5%	62.2%	3.4%	34.4%
Smile	258	24.8%	20.2%	53.5%	1.6%	45.0%
South Armagh	411	31.1%	14.1%	52.3%	2.4%	45.3%
South Belfast	345	31.6%	24.9%	42.0%	1.4%	56.5%
Splash	315	26.3%	11.4%	60.3%	1.9%	37.8%
Star	<100	37.8%	6.7%	53.3%	2.2%	44.4%
Strabane	245	28.6%	11.4%	55.9%	4.1%	40.0%
Waterside	222	29.3%	16.2%	53.2%	1.4%	45.5%
<b>Children living in Sure Start areas</b>	<b>8,493</b>	<b>27.6%</b>	<b>15.2%</b>	<b>55.3%</b>	<b>2.0%</b>	<b>42.8%</b>
<b>Children not living in Sure Start areas</b>	<b>11,816</b>	<b>40.2%</b>	<b>16.3%</b>	<b>41.4%</b>	<b>2.1%</b>	<b>56.5%</b>
<b>All children</b>	<b>20,309</b>	<b>34.9%</b>	<b>15.8%</b>	<b>47.2%</b>	<b>2.1%</b>	<b>50.7%</b>

Source: Child Health System

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of CHS data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each CHS. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

Note that some percentages above are based on small numbers

Percentage breastfeeding is calculated as a valid percentage. The calculation is based on those records where feeding status was known i.e. blank data has been removed from the denominator value.

Some Sure Start boundaries have been revised and therefore it will not be possible to compare the data in the above table to previously published reports

## BREASTFEEDING PREVALENCE (Infants born in previous year, 2021/22)

**Table 10.5: Prevalence of breastfeeding of live infants born to Northern Ireland residents, at various stages during first year of life, 2021/22**

		% infants breastfed (total/partial) by time period (feeding status known)					
		Discharge	Primary visit (10-14 days old)	6 weeks	3 months	6 months	12 months
Age Group of mother	Under 20	25.5%	21.4%	14.2%	10.9%	5.2%	4.2%
	20 - 24	31.9%	27.1%	18.6%	14.2%	10.9%	7.8%
	25 - 29	45.9%	39.1%	30.2%	25.6%	20.1%	12.7%
	30 - 34	55.4%	48.6%	40.3%	34.4%	28.9%	20.3%
	35 - 39	60.4%	52.9%	44.8%	39.6%	32.7%	21.5%
	40 +	63.0%	55.8%	44.3%	38.7%	32.9%	23.9%
	Not known	-	66.7%	66.7%	50.0%	66.7%	50.0%
	<b>All infants</b>	<b>51.2%</b>	<b>44.5%</b>	<b>36.0%</b>	<b>30.8%</b>	<b>25.3%</b>	<b>17.0%</b>
Multiple births	Single	51.5%	44.7%	36.3%	31.1%	25.6%	17.2%
	Multiple	38.5%	37.9%	24.7%	19.9%	14.7%	8.6%
	<b>All infants</b>	<b>51.2%</b>	<b>44.5%</b>	<b>36.0%</b>	<b>30.8%</b>	<b>25.3%</b>	<b>17.0%</b>
First time mothers	First time mother	53.6%	45.8%	35.9%	29.6%	23.6%	15.1%
	Not a first time mother	49.8%	43.8%	36.1%	31.6%	26.3%	18.1%
	Not known	44.4%	34.9%	26.8%	24.4%	17.9%	14.3%
	<b>All infants</b>	<b>51.2%</b>	<b>44.5%</b>	<b>36.0%</b>	<b>30.8%</b>	<b>25.3%</b>	<b>17.0%</b>
Ethnic group of infant	White	49.5%	42.4%	34.1%	29.2%	24.1%	16.2%
	Asian	89.2%	89.4%	82.4%	71.4%	65.2%	51.0%
	Black	82.0%	90.3%	85.2%	80.9%	64.7%	51.6%
	Mixed	73.3%	68.4%	56.7%	48.0%	42.4%	28.4%
	Other	76.8%	74.3%	59.8%	52.1%	39.4%	27.4%
	Not stated / Blank	48.5%	57.1%	45.2%	38.9%	28.6%	18.2%
	<b>All infants</b>	<b>51.2%</b>	<b>44.5%</b>	<b>36.0%</b>	<b>30.8%</b>	<b>25.3%</b>	<b>17.0%</b>
Place of birth	Altnagelvin	42.6%	34.5%	25.2%	21.1%	17.2%	11.8%
	Antrim	48.2%	42.1%	33.9%	28.5%	24.1%	16.3%
	Causeway	53.5%	44.6%	37.2%	32.7%	26.9%	18.4%
	Craigavon	52.8%	44.6%	35.8%	30.1%	24.6%	14.8%
	Daisy Hill	51.8%	42.6%	33.5%	28.3%	22.1%	14.1%
	Lagan Valley	70.6%	66.2%	61.3%	54.3%	51.9%	32.8%
	Royal Victoria	47.9%	43.2%	34.7%	30.0%	24.8%	18.0%
	SWAH	51.1%	42.6%	34.5%	29.1%	23.8%	15.0%
	Ulster	59.4%	54.4%	45.9%	40.5%	33.6%	22.0%
	Home	80.0%	75.0%	82.6%	77.3%	75.0%	68.2%
	Other location	50.0%	33.3%	25.0%	14.3%	28.6%	25.0%
	<b>All infants</b>	<b>51.2%</b>	<b>44.5%</b>	<b>36.0%</b>	<b>30.8%</b>	<b>25.3%</b>	<b>17.0%</b>
Trust of residence of mother	Belfast	51.1%	47.0%	39.1%	35.2%	29.2%	19.0%
	Northern	51.1%	43.9%	35.6%	30.2%	25.3%	17.5%
	South Eastern	55.5%	50.0%	41.2%	35.3%	28.9%	20.3%
	Southern	52.5%	44.4%	35.7%	30.1%	24.5%	15.5%
	Western	44.9%	37.0%	28.1%	23.5%	19.2%	12.8%
	<b>All infants</b>	<b>51.2%</b>	<b>44.5%</b>	<b>36.0%</b>	<b>30.8%</b>	<b>25.3%</b>	<b>17.0%</b>

**Table 10.5 continued: Prevalence of breastfeeding of live infants born to Northern Ireland residents, at various stages during first year of life, 2021/22**

		% infants breastfed (total/partial) by time period (feeding status known)					
		Discharge	Primary visit (10-14 days old)	6 weeks	3 months	6 months	12 months
Local Government District	Antrim and Newtownabbey	53.0%	47.1%	38.6%	33.6%	28.6%	20.4%
	Ards and North Down	57.5%	52.2%	44.5%	37.9%	31.4%	22.6%
	Armagh City, Banbridge and Craigavon	52.4%	44.6%	36.6%	31.3%	25.4%	16.6%
	Belfast	47.5%	43.9%	36.0%	32.1%	26.7%	17.7%
	Causeway Coast and Glens	47.9%	39.6%	31.8%	27.3%	22.0%	15.3%
	Derry City and Strabane	40.9%	33.4%	24.3%	20.4%	17.2%	11.2%
	Fermanagh and Omagh	51.4%	43.4%	34.9%	28.9%	23.1%	15.4%
	Lisburn and Castlereagh	63.3%	57.1%	47.5%	42.7%	34.9%	23.3%
	Mid and East Antrim	50.7%	44.6%	36.2%	30.9%	27.2%	19.9%
	Mid Ulster	51.3%	42.6%	32.7%	26.9%	21.7%	12.4%
	Newry, Mourne and Down	51.7%	44.1%	34.9%	28.6%	23.1%	14.8%
	<b>All infants</b>	<b>51.2%</b>	<b>44.5%</b>	<b>36.0%</b>	<b>30.8%</b>	<b>25.3%</b>	<b>17.0%</b>
Deprivation 2017 quintile (SOA) based on residence of mother	Most deprived	36.7%	32.0%	24.5%	20.2%	15.9%	10.3%
	2	46.7%	40.2%	31.8%	26.6%	21.9%	14.6%
	3	50.6%	42.3%	32.8%	27.7%	22.5%	14.7%
	4	58.6%	51.1%	41.7%	36.4%	29.8%	20.6%
	Least deprived	66.8%	60.6%	52.4%	46.6%	39.5%	27.0%
	<b>All infants</b>	<b>51.2%</b>	<b>44.5%</b>	<b>36.0%</b>	<b>30.8%</b>	<b>25.3%</b>	<b>17.0%</b>

Source: Child Health System

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of Child Health System data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each Child Health System. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Note that for some ethnic groups, hospitals and age groups the number of infants will be very small

Percentage breastfeeding is calculated as a valid percentage. The calculation is based on those records where feeding status was known i.e. blank data has been removed from the denominator value.

Hospitals closed to deliveries: Mater Infirmorum from 30 March 2020, Causeway Hospital between 8 April 2020 and 23 August 2020 and then from 17 July 2023, Lagan Valley from March 2022 and Downe from March 2020.

**Table 10.6: Prevalence of breastfeeding of live infants born to Northern Ireland residents, at various stages during first year of life, Sure Start areas, 2021/22**

	% infants breastfed (total/partial) by time period (where feeding status is known)					
	Discharge	Primary visit (10-14 days old)	6 weeks	3 months	6 months	12 months
<b>Children living in Sure Start areas</b>	42.0%	36.4%	28.1%	23.4%	18.8%	12.2%
<b>Children not living in Sure Start areas</b>	57.9%	50.5%	41.8%	36.2%	30.0%	20.3%
<b>All children</b>	51.2%	44.5%	36.0%	30.8%	25.3%	17.0%

Source: Child Health System

Following the inclusion of Child Health data into the Regional Data Warehouse, the source of CHS data for 2021/22 onwards will be the Data Warehouse, rather than downloads from each CHS. The data from both sources were analysed and the impact of changing the source of the data was considered minimal.

Percentage breastfeeding is calculated as a valid percentage. The calculation is based on those records where feeding status was known i.e. blank data has been removed from the denominator value.

For some Sure Start areas, the number of births and those breastfeeding was too small and therefore it is not possible to provide the above data split by each Sure Start area. Some Sure Start boundaries have been revised and therefore it will not be possible to compare the data in the above table to previously published reports

# Section 11: Childhood Immunisations

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## Vaccination Coverage

The COVER (Cover of Vaccination Evaluated Rapidly) programme monitors immunisation coverage data for children in the United Kingdom who reach their first, second or fifth birthday during each evaluation year.

The World Health Organisation (WHO, European Region) states that there is an expectation that a target of 95% coverage should be reached for all routine childhood immunisation in the UK by the age of five years.<sup>95</sup>

However, over the last number of years, immunisation coverage in Northern Ireland has been falling and coverage for some immunisations is below the expected 95% target.

### Northern Ireland

Detailed coverage data for Northern Ireland can be found at the link below:

Public Health Agency, Health Protection Department

<https://www.publichealth.hscni.net/publications/annual-immunisation-and-vaccine-preventable-diseases-reports>

<https://www.publichealth.hscni.net/directorate-public-health/health-protection/surveillance-data>

### Rest of United Kingdom

Detailed coverage data for the rest of the UK can be found at the links below:

NHS Digital

<https://digital.nhs.uk/data-and-information/publications/statistical/nhs-immunisation-statistics>

UK Health Security Agency

<https://www.gov.uk/government/collections/vaccine-uptake>

Public Health Scotland/ISD Scotland

<https://beta.isdscotland.org/topics/child-health/immunisation/>

Public Health Wales

<https://phw.nhs.wales/topics/immunisation-and-vaccines/>

<sup>95</sup> World Health Organisation "Health 21" - The health for all policy framework for the WHO European Region [http://www.euro.who.int/\\_data/assets/pdf\\_file/0010/98398/wa540ga199heeng.pdf](http://www.euro.who.int/_data/assets/pdf_file/0010/98398/wa540ga199heeng.pdf)

# Section 12: Childhood BMI

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## Why should we be concerned?

The World Health Organisation (WHO) states that “*childhood obesity is one of the most serious public health challenges of the 21st century... prevalence has increased at an alarming rate. Globally in 2016, the number of overweight children under the age of five, is estimated to have been over 41 million... Overweight and obese children are likely to stay obese into adulthood and more likely to develop noncommunicable diseases like diabetes and cardiovascular diseases at a younger age. Overweight and obesity, as well as their related diseases, are largely preventable. Prevention of childhood obesity therefore needs high priority*”.<sup>96</sup>

A child who is obese may have a greater risk of the following in later life<sup>97 98</sup>:

- Type 2 diabetes
- Asthma
- Musculo-skeletal problems
- Heart disease / high blood pressure / stroke
- Low self-esteem / mental illness / eating disorders

An obese child is more likely to become an obese adult.

## What can be done?

The Department of Health developed a strategic framework “A Fitter Future for All, 2012-2022”<sup>99</sup> aimed at preventing overweight and obesity across the life course of the population of Northern Ireland.

The overall aim of the Framework is to: “*Empower the population of Northern Ireland to make healthy choices, reduce the risk of overweight and obesity related diseases and improve health and well-being, by creating an environment that supports a physically active lifestyle and a healthy diet*”.

A target to reduce levels of overweight and obesity in children was set – a reduction of 3% in those obese and 2% in those obese/overweight.

### Further reading:

[Healthy eating - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

[Overview | Obesity: identification, assessment and management | Guidance | NICE](#)

[Overview | Weight management: lifestyle services for overweight or obese children and young people | Guidance | NICE](#)

[Noncommunicable diseases: Childhood overweight and obesity \(who.int\)](#)

[WSA-approach-to-obesity-prevention-final.pdf \(publichealth.ie\)](#)

<sup>96</sup> World Health Organisation <http://www.who.int/dietphysicalactivity/childhood/en/>

<sup>97</sup> Royal College of Paediatrics and Child Health, <https://www.rcpch.ac.uk/key-topics/nutrition-obesity/about-childhood-obesity>

<sup>98</sup> Royal College of Paediatrics and Child Health, State of Child Health, 2020 <https://stateofchildhealth.rcpch.ac.uk/>

<sup>99</sup> Department of Health, Northern Ireland <https://www.health-ni.gov.uk/articles/obesity-prevention>



## Classification of Growth Measurements in Northern Ireland

In this report, in the past, growth measurements have been classified using the International Obesity Task Force Classification (IOTF) only. However, from 2017/18 onwards a further classification will be provided - the British 1990 (UK90) growth reference. In other countries of the UK, the British 1990 growth reference (UK90) is recommended for population monitoring and clinical assessment in children aged 4 years and over.

### International Obesity Task Force (IOTF)

The IOTF thresholds are derived from BMI data from six large, nationally representative, cross-sectional surveys from Brazil, Great Britain, Hong Kong, the Netherlands, Singapore, and the United States. These samples include 192,727 children aged 0 to 25 years. Each data set has over 10,000 subjects, with age ranges covering at least the period from 6 to 18 years. Age and sex specific cut-off points are extrapolated from the adult BMI cut-offs of 25kg/m<sup>2</sup> and 30kg/m<sup>2</sup> for overweight and obesity respectively. Three grades of thinness are defined from equivalent adult BMIs of 16, 17 and 18.5.

### British 1990 Growth Reference (UK90)

The UK90 BMI reference provides centile curves for BMI for British children from birth to 23 years. They are based on a sample of 32,222 measurements from 12 distinct surveys collected between 1978 and 1994. The sample was rebased to 1990 levels and the data were then used to express BMI as a centile based on the BMI distribution, adjusted for skewness, age and sex using Cole's LMS method (*'Growth monitoring with the British 1990 growth reference'. Cole Arch Dis Child.1997; 76: 47-49.*)

The BMI classification of each child is derived by calculating the child's BMI centile and assigning the BMI classification based on the following thresholds:

- Underweight is defined as a BMI centile less than or equal to the 2nd centile
- Healthy weight is defined as a BMI centile greater than the 2nd centile but less than the 85th centile
- Overweight is defined as a BMI centile greater than or equal to the 85th centile but less than the 95th centile (i.e. overweight but not obese)
- Obese is defined as a BMI centile greater than or equal to the 95th centile.

### Further information on classifications:

National Obesity Observatory (PHE), "A simple guide to classifying body mass index in children", June 2011  
<https://khub.net/documents/31798783/32039025/A+simple+guide+to+classifying+body+mass+index+in+children/ce d23256-6f8d-43c7-9f44-222e2beebf97?version=1.0>

### **Note**

**Due to the COVID-19 pandemic, disruption in schools resulted in some children not being measured during this time. As a result, data coverage was not sufficient enough to provide information for 2019/20 and 2020/21 for Primary 1 children, and 2019/20, 2020/21 and 2021/22 for Year 8 children.**



# International Obesity Task Force Classification

## Key Points

### Primary 1

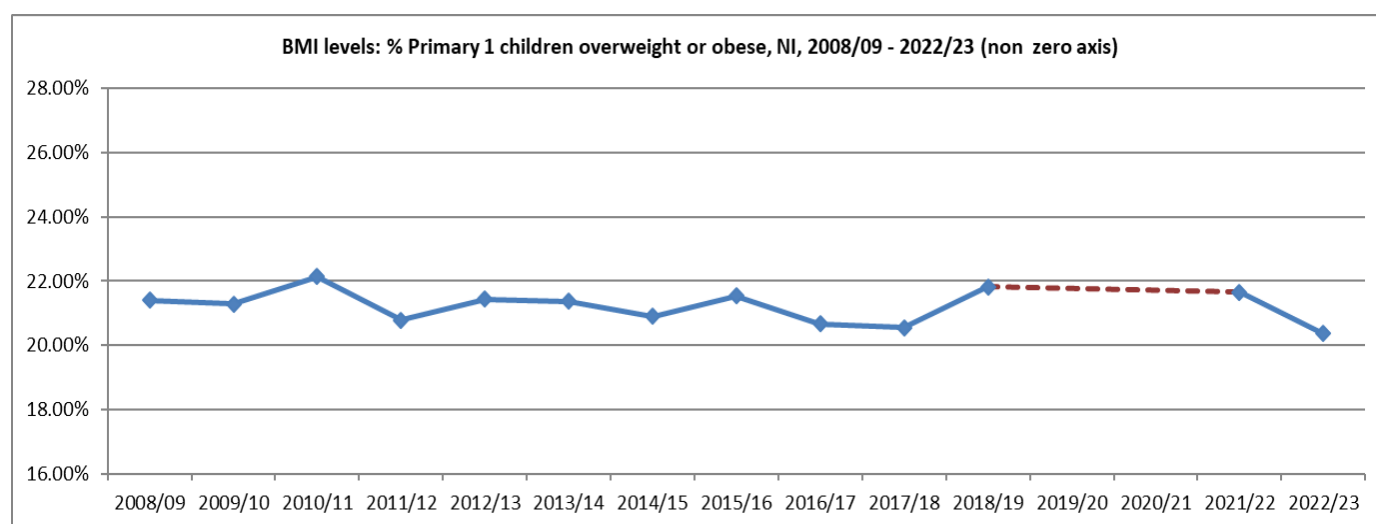
- Of those children measured in Primary 1 in 2022/23, 20.4% were considered overweight or obese [Page 90].
- A higher proportion of girls were overweight/obese (24.3%) compared to boys (16.5%) [Page 91].
- The proportion of children overweight/obese by Local Government District ranges from 18.1% (Ards and North Down LGD) to 22.5% (Antrim and Newtownabbey LGD) [Page 91].
- 23.9% of children living in the most deprived areas of Northern Ireland were measured as overweight/obese, compared to 16.9% of children from the least deprived areas [Page 91].

### Year 8

- In 2022/23, almost 28% of children in Year 8 were measured as overweight/obese [Page 89].
- At this age, in 2022/23, there was little difference in the proportion overweight/obese between the two genders (27.5% male, 28.1% female) [Page 94].
- 34.0% of children living in the most deprived areas of Northern Ireland were measured as overweight/obese, compared to 23.4% of children from the least deprived areas [Page 94].

## PRIMARY 1 (IOTF)

**Figure 12.1: % Primary 1 children overweight or obese, Northern Ireland (IOTF), 2008/09 - 2022/23**



Source: Child Health System

Year refers to school year

Children measured are typically between 4½ and 5½ years of age

Figures above are categorised using International Obesity TaskForce measures

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2021/22 and 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

Data for 2019/20 and 2020/21 is not available due to impact of COVID-19 pandemic on data collection. Therefore, the break in the trend is shown as a dashed line.

**Table 12.1: BMI levels in Primary 1 children across Northern Ireland (IOTF), 2008/09 – 2022/23**

	% Primary 1 children												
<b>BMI category</b>	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	21/22	22/23
<b>Number of children</b>	<b>18,514</b>	<b>19,749</b>	<b>19,469</b>	<b>21,223</b>	<b>21,934</b>	<b>23,048</b>	<b>21,780</b>	<b>23,778</b>	<b>24,042</b>	<b>23,314</b>	<b>22,848</b>	<b>18,260</b>	<b>20,603</b>
Thinness grade 1 to 3	2.98%	3.21%	2.72%	3.46%	3.53%	3.38%	3.86%	3.58%	4.48%	4.51%	4.12%	4.22%	4.48%
Normal	75.62%	75.50%	75.15%	75.75%	75.04%	75.26%	75.23%	74.88%	74.86%	74.95%	74.06%	74.12%	75.16%
Overweight	16.84%	16.57%	17.12%	15.83%	16.59%	16.57%	15.82%	16.19%	15.69%	15.48%	16.29%	15.55%	15.23%
Obese	4.56%	4.72%	5.01%	4.96%	4.85%	4.80%	5.08%	5.35%	4.97%	5.06%	5.53%	6.10%	5.14%
<b>% children overweight/obese</b>	<b>21.40%</b>	<b>21.29%</b>	<b>22.13%</b>	<b>20.79%</b>	<b>21.44%</b>	<b>21.37%</b>	<b>20.90%</b>	<b>21.54%</b>	<b>20.66%</b>	<b>20.54%</b>	<b>21.82%</b>	<b>21.65%</b>	<b>20.37%</b>

Source: Child Health System

Year refers to school year

Children measured are typically between 4½ and 5½ years of age

Figures above are categorised using International Obesity TaskForce measures

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2021/22 and 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

Data for 2019/20 and 2020/21 is not available due to impact of COVID-19 pandemic on data collection.

**Table 12.2: BMI levels in Primary 1 children across Northern Ireland (IOTF), 2022/23**

		No. of children by BMI category					% children overweight or obese
		Thinness grade 1 to 3	Normal	Overweight	Obese	Total	
Gender	Male	546	8,150	1,294	422	<b>10,412</b>	16.48%
	Female	377	7,335	1,843	636	<b>10,191</b>	24.33%
	<b>All persons</b>	<b>923</b>	<b>15,485</b>	<b>3,137</b>	<b>1,058</b>	<b>20,603</b>	<b>20.36%</b>
Trust of residence of child	Belfast	170	2,370	469	155	<b>3,164</b>	19.72%
	Northern	233	3,803	800	303	<b>5,139</b>	21.46%
	South Eastern	133	2,807	564	171	<b>3,675</b>	20.00%
	Southern	222	3,759	759	237	<b>4,977</b>	20.01%
	Western	164	2,723	542	189	<b>3,618</b>	20.20%
	Not known	1	23	3	3	<b>30</b>	20.00%
	<b>All persons</b>	<b>923</b>	<b>15,485</b>	<b>3,137</b>	<b>1,058</b>	<b>20,603</b>	<b>20.36%</b>
Local Government District	Antrim and Newtownabbey	64	1,060	242	85	<b>1,451</b>	22.54%
	Ards and North Down	60	1,165	217	54	<b>1,496</b>	18.11%
	Armagh City, Banbridge and Craigavon	114	1,979	417	108	<b>2,618</b>	20.05%
	Belfast	167	2,343	470	172	<b>3,152</b>	20.37%
	Causeway Coast and Glens	68	1,111	236	102	<b>1,517</b>	22.28%
	Derry City and Strabane	65	1,304	268	103	<b>1,740</b>	21.32%
	Fermanagh and Omagh	80	1,122	211	64	<b>1,477</b>	18.62%
	Lisburn and Castlereagh	58	1,040	199	54	<b>1,351</b>	18.73%
	Mid and East Antrim	68	1,097	216	86	<b>1,467</b>	20.59%
	Mid Ulster	102	1,538	302	104	<b>2,046</b>	19.84%
	Newry, Mourne and Down	76	1,703	356	123	<b>2,258</b>	21.21%
	Not known	1	23	3	3	<b>30</b>	20.00%
	<b>All persons</b>	<b>923</b>	<b>15,485</b>	<b>3,137</b>	<b>1,058</b>	<b>20,603</b>	<b>20.36%</b>
Deprivation 2017 quintile (SOA) based on residence of child	Most deprived	173	2,830	660	281	<b>3,944</b>	23.86%
	2	200	3,377	699	244	<b>4,520</b>	20.86%
	3	207	3,362	658	217	<b>4,444</b>	19.69%
	4	182	3,147	634	206	<b>4,169</b>	20.15%
	Least deprived	160	2,746	483	107	<b>3,496</b>	16.88%
	Not known	1	23	3	3	<b>30</b>	20.00%
	<b>All persons</b>	<b>923</b>	<b>15,485</b>	<b>3,137</b>	<b>1,058</b>	<b>20,603</b>	<b>20.36%</b>

Source: Child Health System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Year refers to school year

Children measured are typically between 4½ and 5½ years of age

Figures above are categorised using International Obesity TaskForce measures

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

**Table 12.3: BMI levels in Primary 1 children across Northern Ireland (IOTF), by Sure Start area, 2022/23**

Sure Start area	Total children	% children by BMI category				% children overweight or obese
		Thinness grade 1 to 3	Normal	Overweight	Obese	
Abbey	245	2.4%	75.1%	17.1%	5.3%	22.4%
Ards	230	3.5%	76.1%	15.2%	5.2%	20.4%
ArKe	210	3.8%	70.0%	20.5%	5.7%	26.2%
Ballymena & Little Steps	264	5.7%	69.7%	16.7%	8.0%	24.6%
Bangor	<100	1.0%	76.5%	17.3%	5.1%	22.4%
Beechmount	<100	6.3%	73.0%	14.3%	6.3%	20.6%
Blossom	201	6.5%	70.6%	18.9%	4.0%	22.9%
Cherish	361	5.5%	74.5%	14.1%	5.8%	19.9%
Clan Mor	122	8.2%	69.7%	17.2%	4.9%	22.1%
Clogher Valley	222	5.4%	74.3%	13.1%	7.2%	20.3%
Coleraine	180	6.1%	68.3%	15.0%	10.6%	25.6%
Colin	254	3.5%	74.0%	15.0%	7.5%	22.4%
Dalriada	171	3.5%	73.1%	15.8%	7.6%	23.4%
Down	308	1.0%	69.5%	23.4%	6.2%	29.5%
Dungannon & Coalisland	357	5.0%	75.9%	13.7%	5.3%	19.0%
Dungiven	237	2.5%	74.3%	16.9%	6.3%	23.2%
East Belfast	339	5.3%	75.2%	13.9%	5.6%	19.5%
Edenballymore	154	3.2%	73.4%	17.5%	5.8%	23.4%
Glenbrook	194	6.7%	73.2%	11.3%	8.8%	20.1%
Gold	255	4.3%	71.8%	19.2%	4.7%	23.9%
Horizon	177	5.6%	67.2%	16.9%	10.2%	27.1%
LAST	266	1.9%	75.2%	17.7%	5.3%	22.9%
Lisburn	112	1.8%	74.1%	16.1%	8.0%	24.1%
Little Hands	124	0.0%	74.2%	15.3%	10.5%	25.8%
Mourne	<100	1.3%	75.0%	20.0%	3.8%	23.8%
Newry City	280	7.1%	72.5%	13.9%	6.4%	20.4%
Outer West Belfast	218	2.3%	78.0%	15.6%	4.1%	19.7%
Rainbow	170	4.7%	71.8%	17.1%	6.5%	23.5%
Saol Ur	126	7.1%	77.0%	13.5%	2.4%	15.9%
Shankill	288	2.4%	66.7%	21.2%	9.7%	30.9%
Shantallow	300	4.7%	74.7%	16.0%	4.7%	20.7%
Smile	198	6.6%	66.2%	19.2%	8.1%	27.3%
South Armagh	393	3.3%	73.8%	16.8%	6.1%	22.9%
South Belfast	257	6.2%	74.7%	14.0%	5.1%	19.1%
Splash	265	4.2%	72.5%	18.5%	4.9%	23.4%
Star	<100	6.4%	83.0%	8.5%	2.1%	10.6%
Strabane	287	3.5%	72.5%	18.1%	5.9%	24.0%
Waterside	256	3.9%	77.7%	12.1%	6.3%	18.4%
<b>Children living in Sure Start areas</b>	<b>8,309</b>	<b>4.3%</b>	<b>73.1%</b>	<b>16.4%</b>	<b>6.2%</b>	<b>22.6%</b>
<b>Children not living in Sure Start areas</b>	<b>12,264</b>	<b>4.6%</b>	<b>76.5%</b>	<b>14.5%</b>	<b>4.4%</b>	<b>18.8%</b>
<b>Children - address not known</b>	<b>30</b>	<b>3.3%</b>	<b>76.7%</b>	<b>10.0%</b>	<b>10.0%</b>	<b>20.0%</b>
<b>All children</b>	<b>20,603</b>	<b>4.5%</b>	<b>75.2%</b>	<b>15.2%</b>	<b>5.1%</b>	<b>20.4%</b>

Source: Child Health System

Year refers to school year

Children measured are typically between 4½ and 5½ years of age

Figures above are categorised using International Obesity TaskForce measures

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

Note that some percentages above are based on small numbers

Disclosure controls have been applied to the data

Some Sure Start boundaries have been revised and therefore it will not be possible to compare the data in the above table to previously published reports

## YEAR 8 (IOTF)

**Table 12.4: BMI levels in Year 8 children across Northern Ireland (IOTF), 2010/11 - 2022/23**

BMI category	% Year 8 children									
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2022/23
<b>Number of children</b>	<b>17,873</b>	<b>17,836</b>	<b>16,618</b>	<b>14,789</b>	<b>15,490</b>	<b>17,832</b>	<b>18,108</b>	<b>18,465</b>	<b>16,367</b>	<b>16,886</b>
Thinness grade 1 to 3	6.13%	6.21%	5.87%	6.04%	6.95%	6.21%	6.86%	6.64%	7.15%	6.92%
Normal	65.97%	66.12%	66.77%	65.72%	66.66%	66.45%	65.92%	65.50%	65.69%	65.28%
Overweight	21.88%	21.96%	21.59%	22.14%	20.97%	21.93%	21.67%	21.83%	21.20%	20.03%
Obese	6.03%	5.71%	5.78%	6.10%	5.42%	5.42%	5.55%	6.03%	5.96%	7.77%
<b>% children overweight/obese</b>	<b>27.91%</b>	<b>27.67%</b>	<b>27.37%</b>	<b>28.24%</b>	<b>26.39%</b>	<b>27.35%</b>	<b>27.22%</b>	<b>27.86%</b>	<b>27.16%</b>	<b>27.80%</b>

Source: Child Health System

NOTE THAT IN 2018/19, CHILDREN IN WESTERN TRUST DID NOT HAVE HEIGHT AND WEIGHT MEASUREMENTS TAKEN. THEREFORE 2018/19 DATA IS BASED ON FOUR OUT OF FIVE HEALTH TRUSTS ONLY

Year refers to school year

Children measured are typically between 4½ and 5½ years of age

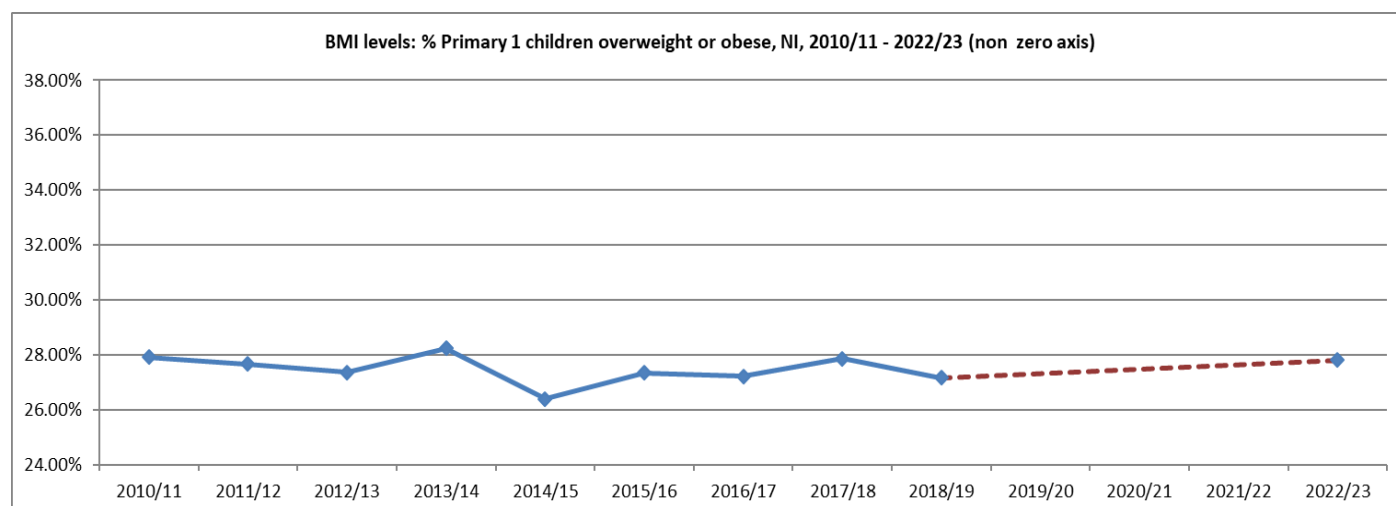
Figures above are categorised using International Obesity TaskForce measures

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

Due to lower coverage in previous years, figures are only available for Year 8 from 2010/11

Data for 2019/20, 2020/21 and 2021/22 is not available due to impact of COVID-19 pandemic on data collection.

**Figure 12.2: % Year 8 children overweight or obese, Northern Ireland (IOTF), 2010/11 - 2022/23**



Note that due to insufficient recording of growth measurements during the COVID-19 pandemic, it is not possible to include 2019/20, 2020/21 and 2021/22 data in the chart above. Therefore the break in the trend is shown as a dashed line.

**Table 12.5: BMI levels in Year 8 children across Northern Ireland (IOTF), 2022/23**

		No. of children by BMI category					% children overweight or obese
		Thinness grade 1 to 3	Normal	Overweight	Obese	Total	
Gender	Male	553	5,635	1,634	718	<b>8,540</b>	27.54%
	Female	616	5,388	1,748	594	<b>8,346</b>	28.06%
	<b>All persons</b>	<b>1,169</b>	<b>11,023</b>	<b>3,382</b>	<b>1,312</b>	<b>16,886</b>	<b>27.80%</b>
Trust of residence of child	Belfast	162	1,533	454	164	<b>2,313</b>	26.72%
	Northern	394	3,210	909	383	<b>4,896</b>	26.39%
	South Eastern	184	1,617	507	159	<b>2,467</b>	27.00%
	Southern	269	2,687	827	349	<b>4,132</b>	28.46%
	Western	160	1,958	678	257	<b>3,053</b>	30.63%
	Not known	0	18	7	0	<b>25</b>	28.00%
	<b>All persons</b>	<b>1,169</b>	<b>11,023</b>	<b>3,382</b>	<b>1,312</b>	<b>16,886</b>	<b>27.80%</b>
Local Government District	Antrim and Newtownabbey	115	894	249	105	<b>1,363</b>	25.97%
	Ards and North Down	106	913	284	103	<b>1,406</b>	27.52%
	Armagh City, Banbridge and Craigavon	168	1,521	458	211	<b>2,358</b>	28.37%
	Belfast	153	1,435	461	161	<b>2,210</b>	28.14%
	Causeway Coast and Glens	91	909	313	129	<b>1,442</b>	30.65%
	Derry City and Strabane	83	960	337	147	<b>1,527</b>	31.70%
	Fermanagh and Omagh	59	759	261	78	<b>1,157</b>	29.30%
	Lisburn and Castlereagh	73	745	187	50	<b>1,055</b>	22.46%
	Mid and East Antrim	109	845	244	94	<b>1,292</b>	26.16%
	Mid Ulster	136	1,198	305	132	<b>1,771</b>	24.68%
	Newry, Mourne and Down	76	826	276	102	<b>1,280</b>	29.53%
	Not known	0	18	7	0	<b>25</b>	28.00%
	<b>All persons</b>	<b>1,169</b>	<b>11,023</b>	<b>3,382</b>	<b>1,312</b>	<b>16,886</b>	<b>27.80%</b>
Deprivation 2017 quintile (SOA) based on residence of child	Most deprived	150	1,678	663	280	<b>2,771</b>	34.03%
	2	233	2,232	755	297	<b>3,517</b>	29.91%
	3	281	2,433	763	307	<b>3,784</b>	28.28%
	4	259	2,626	661	266	<b>3,812</b>	24.32%
	Least deprived	246	2,036	533	162	<b>2,977</b>	23.35%
	Not known	0	18	7	0	<b>25</b>	28.00%
	<b>All persons</b>	<b>1,169</b>	<b>11,023</b>	<b>3,382</b>	<b>1,312</b>	<b>16,886</b>	<b>27.80%</b>

Source: Child Health System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Year refers to school year

Children measured are typically between 11½ and 12½ years of age

Figures above are categorised using International Obesity TaskForce measures

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

**Table 12.6: BMI levels in Year 8 children across Northern Ireland (IOTF), by Sure Start area, 2022/23**

Sure Start area	Total children	% children by BMI category				% children overweight or obese
		Thinness grade 1 to 3	Normal	Overweight	Obese	
Abbey	240	5.8%	55.0%	25.0%	14.2%	39.2%
Ards	206	5.3%	54.4%	28.2%	12.1%	40.3%
ArKe	147	7.5%	63.9%	18.4%	10.2%	28.6%
Ballymena & Little Steps	187	11.2%	68.4%	15.5%	4.8%	20.3%
Bangor	<100	7.1%	51.8%	28.2%	12.9%	41.2%
Beechmount	<100	0.0%	63.0%	30.4%	6.5%	37.0%
Blossom	138	6.5%	60.9%	22.5%	10.1%	32.6%
Cherish	276	5.1%	60.9%	24.6%	9.4%	34.1%
Clan Mor	<100	7.7%	52.3%	30.8%	9.2%	40.0%
Clogher Valley	137	8.0%	65.0%	23.4%	3.6%	27.0%
Coleraine	131	4.6%	61.1%	21.4%	13.0%	34.4%
Colin	131	4.6%	61.8%	27.5%	6.1%	33.6%
Dalriada	187	9.6%	62.0%	19.8%	8.6%	28.3%
Down	<100	8.7%	39.1%	34.8%	17.4%	52.2%
Dungannon & Coalisland	219	6.8%	60.7%	21.9%	10.5%	32.4%
Dungiven	207	6.8%	64.3%	21.3%	7.7%	29.0%
East Belfast	150	6.7%	59.3%	23.3%	10.7%	34.0%
Edenballymore	154	6.5%	56.5%	24.7%	12.3%	37.0%
Glenbrook	173	5.8%	56.6%	26.0%	11.6%	37.6%
Gold	270	5.2%	68.5%	18.9%	7.4%	26.3%
Horizon	121	9.1%	57.0%	25.6%	8.3%	33.9%
LAST	163	3.7%	66.3%	25.2%	4.9%	30.1%
Lisburn	<100	6.5%	64.5%	29.0%	0.0%	29.0%
Little Hands	129	3.1%	61.2%	22.5%	13.2%	35.7%
Mourne	<100	6.3%	60.4%	18.8%	14.6%	33.3%
Newry City	200	6.0%	65.5%	19.0%	9.5%	28.5%
Outer West Belfast	142	7.0%	66.9%	16.9%	9.2%	26.1%
Rainbow	140	6.4%	67.1%	24.3%	2.1%	26.4%
Saol Ur	105	2.9%	71.4%	18.1%	7.6%	25.7%
Shankill	204	11.3%	60.3%	21.1%	7.4%	28.4%
Shantallow	201	4.5%	69.7%	15.4%	10.4%	25.9%
Smile	180	5.6%	56.7%	25.6%	12.2%	37.8%
South Armagh	357	3.1%	67.2%	22.4%	7.3%	29.7%
South Belfast	125	5.6%	64.0%	23.2%	7.2%	30.4%
Splash	224	5.8%	57.6%	21.9%	14.7%	36.6%
Star	<100	4.2%	64.6%	10.4%	20.8%	31.3%
Strabane	248	4.8%	66.5%	21.0%	7.7%	28.6%
Waterside	236	5.5%	55.5%	25.8%	13.1%	39.0%
<b>Children living in Sure Start areas</b>	<b>6,074</b>	<b>6.0%</b>	<b>62.0%</b>	<b>22.4%</b>	<b>9.5%</b>	<b>32.0%</b>
<b>Children not living in Sure Start areas</b>	<b>10,787</b>	<b>7.4%</b>	<b>67.1%</b>	<b>18.7%</b>	<b>6.8%</b>	<b>25.5%</b>
<b>Children - address not known</b>	<b>25</b>	<b>0.0%</b>	<b>72.0%</b>	<b>28.0%</b>	<b>0.0%</b>	<b>28.0%</b>
<b>All children</b>	<b>16,886</b>	<b>6.9%</b>	<b>65.3%</b>	<b>20.0%</b>	<b>7.8%</b>	<b>27.8%</b>

Source: Child Health System

Year refers to school year

Children measured are typically between 11½ and 12½ years of age

Figures above are categorised using International Obesity TaskForce measures

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

Note that some percentages above are based on small numbers

Disclosure controls have been applied to the data

Some Sure Start boundaries have been revised and therefore it will not be possible to compare the data in the above table to previously published reports



## British 1990 Growth Reference (UK90) Classification

### Key Points

#### Primary 1

- Based on the UK90 classification, in 2022/23, 24.4% of children in Northern Ireland measured in Primary 1 were considered overweight or obese. This compares to 21.3% in England and 21.9% in Scotland. At time of publication, data for 2022/23 for Wales was not available. *[Page 97]*.
- Of those children measured in Primary 1 across Northern Ireland in 2022/23, 10.7% were considered obese. This figure has fluctuated since 2008/09 when measurements first became available - ranging from 10.7% to 12.0% *[Page 98]*.
- There was little difference between the genders in those children measured as overweight or obese during 2022/23 (males = 24.5%, females = 24.3%) *[Page 99]*.
- Based on this classification, there was little difference between Health and Social Care Trusts. Just over a quarter (25.1%) of children in Northern HSCT area were considered overweight/obese. South Eastern HSCT had the lowest proportion at 23.8% *[Page 99]*.
- The proportion of children overweight/obese by Local Government District ranged from 21.8% (Ards and North Down LGD) to 26.3% (Antrim and Newtownabbey LGD) *[Page 99]*.
- Levels of overweight/obesity decreased as deprivation level decreased. 27.8% of children living in the most deprived areas of Northern Ireland (NIMDM 2017) were measured as overweight/obese, compared to 20.9% of children from the least deprived areas *[Page 99]*.

#### Year 8

- In 2022/23, more than 1 in 3 children in Year 8 were measured as overweight/obese (35.4%). This figure has not improved much since 2010/11 – fluctuating between 34.3% and 36.0% across these years *[Page 101]*.
- At this age, more males than females were considered overweight/obese (37.2% male, 33.6% female). All children = 35.4% *[Page 102]*.
- At Health and Social Care Trust level, the percentage of children measured as overweight/obese ranged from 34.3% (Belfast HSCT) to 38.1% (Western HSCT) *[Page 102]*.
- 41.3% of children living in the most deprived areas of Northern Ireland (NIMDM 2017) were measured as overweight/obese, compared to 31.0% of children from the least deprived areas. All children = 35.4% *[Page 102]*.

# PRIMARY 1 (UK90)

**Table 12.7: Levels of obesity in Primary 1/Reception aged children, by UK country (UK90), 2012/13 - 2022/23**

Country	Year measured (school year)	Number measured (valid height/weight)	% children in each BMI category (UK90)				
			Underweight	Healthy	Overweight	Obese	Overweight/obese
Northern Ireland	2012/13	21,934	0.5%	73.7%	15.0%	10.8%	25.8%
	2013/14	23,048	0.5%	73.5%	15.4%	10.7%	26.1%
	2014/15	21,780	0.6%	74.2%	14.3%	10.8%	25.1%
	2015/16	23,778	0.5%	73.5%	14.7%	11.2%	25.9%
	2016/17	24,042	0.7%	74.1%	14.5%	10.7%	25.2%
	2017/18	23,314	0.8%	74.6%	14.0%	10.7%	24.6%
	2018/19	22,848	0.7%	73.2%	14.5%	11.6%	26.1%
	2019/20	Not available due to impact of COVID-19 pandemic on data collection					
	2020/21	Not available due to impact of COVID-19 pandemic on data collection					
	2021/22	18,260	0.9%	73.3%	13.8%	12.0%	25.7%
England	2022/23	20,603	0.7%	74.9%	13.8%	10.7%	24.4%
	2012/13	587,678	0.9%	76.9%	13.0%	9.3%	22.2%
	2013/14	587,336	0.9%	76.5%	13.1%	9.5%	22.5%
	2014/15	610,636	1.0%	77.2%	12.8%	9.1%	21.9%
	2015/16	625,326	1.0%	76.9%	12.8%	9.3%	22.1%
	2016/17	629,359	1.0%	76.4%	13.0%	9.6%	22.6%
	2017/18	610,435	1.0%	76.6%	12.8%	9.5%	22.4%
	2018/19	597,812	1.0%	76.5%	12.9%	9.7%	22.6%
	2019/20	399,470	0.9%	76.1%	13.1%	9.9%	23.0%
	2020/21	129,586	0.9%	71.3%	13.3%	14.4%	27.7%
Scotland	2021/22	569,322	1.2%	76.5%	12.1%	10.1%	22.3%
	2022/23	568,067	1.2%	77.5%	12.2%	9.2%	21.3%
	2012/13	54,423	1.2%	77.5%	12.0%	9.4%	21.3%
	2013/14	55,046	1.0%	76.3%	12.4%	10.2%	22.6%
	2014/15	54,976	1.1%	77.1%	12.0%	9.8%	21.8%
	2015/16	53,729	1.2%	76.7%	12.2%	10.0%	22.1%
	2016/17	52,537	1.0%	76.1%	12.4%	10.5%	22.9%
	2017/18	52,929	1.1%	76.4%	12.3%	10.2%	22.5%
	2018/19	45,078	1.0%	76.6%	12.2%	10.3%	22.4%
	2019/20	25,256	1.0%	76.3%	12.3%	10.4%	22.7%
Wales	2020/21	21,789	0.8%	69.7%	14.0%	15.5%	29.5%
	2021/22	53,638	1.1%	74.7%	12.4%	11.7%	24.2%
	2022/23	48,995	1.3%	76.8%	11.4%	10.5%	21.9%
	2012/13	29,259	0.6%	73.2%	14.9%	11.3%	26.2%
	2013/14	30,693	0.8%	72.7%	14.6%	11.8%	26.4%
	2014/15	32,859	0.9%	72.9%	14.6%	11.6%	26.1%
	2015/16	33,337	1.0%	72.9%	14.5%	11.7%	26.2%
	2016/17	33,159	0.8%	72.1%	14.7%	12.4%	27.1%
	2017/18	32,166	0.8%	72.8%	14.3%	12.0%	26.4%
	2018/19	31,756	0.7%	72.4%	14.4%	12.6%	26.9%
	2019/20	Not available due to impact of COVID-19 pandemic on data collection					
	2020/21	Not available due to impact of COVID-19 pandemic on data collection					
	2021/22	Not available due to missing data for one region					
	2022/23	Not available at time of publication					

Source:

Northern Ireland: Child Health System (Health Trusts). Due to COVID-19 pandemic, disruption in schools resulted in some children not being measured and therefore there was insufficient coverage during 2019/20 and 2020/21.

England: National Child Measurement Programme, NHS Digital/Public Health England.

<https://digital.nhs.uk/data-and-information/publications/statistical/national-child-measurement-programme>

Due to disruptions caused by COVID-19 and periods of lockdown, the 2020/21 NCMP collection took the form of a sample, measuring many fewer children than usual. Statistical weighting was applied to data collected to produce estimates of the prevalence of underweight, healthy weight, overweight, obese and severely obese children at national level.

Scotland: Public Health Scotland <https://publichealthscotland.scot/>

In 2019/20 and 2020/21 coverage fell to 44% and 40% respectively due to the Covid-19 pandemic. Therefore, data should be interpreted with a degree of caution.

Wales: Child Measurement Programme for Wales, Public Health Wales

<https://phw.nhs.wales/services-and-teams/child-measurement-programme/>

Data for 2019/20 and 2020/21 was not available due to impact of COVID-19 pandemic on data collection.

**Table 12.8: BMI levels in Primary 1 children across Northern Ireland (UK90), 2008/09 - 2022/23**

	% Primary 1 children												
<b>BMI category</b>	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2021/22	2022/23
<b>Number of children</b>	<b>18,514</b>	<b>19,749</b>	<b>19,469</b>	<b>21,223</b>	<b>21,934</b>	<b>23,048</b>	<b>21,780</b>	<b>23,778</b>	<b>24,042</b>	<b>23,314</b>	<b>22,848</b>	<b>18,260</b>	<b>20,603</b>
Underweight	0.42%	0.48%	0.39%	0.54%	0.49%	0.47%	0.64%	0.51%	0.70%	0.75%	0.70%	0.94%	0.69%
Healthy	73.64%	73.75%	72.75%	74.19%	73.74%	73.46%	74.21%	73.54%	74.11%	74.60%	73.20%	73.32%	74.90%
Overweight	15.17%	15.06%	15.40%	14.53%	14.99%	15.39%	14.32%	14.72%	14.49%	13.95%	14.50%	13.77%	13.76%
Obese	10.78%	10.71%	11.46%	10.74%	10.78%	10.68%	10.83%	11.22%	10.70%	10.69%	11.60%	11.97%	10.65%
<b>% children overweight/obese</b>	<b>25.95%</b>	<b>25.77%</b>	<b>26.86%</b>	<b>25.27%</b>	<b>25.77%</b>	<b>26.07%</b>	<b>25.15%</b>	<b>25.94%</b>	<b>25.19%</b>	<b>24.64%</b>	<b>26.10%</b>	<b>25.74%</b>	<b>24.41%</b>

Source: Child Health System

Year refers to school year

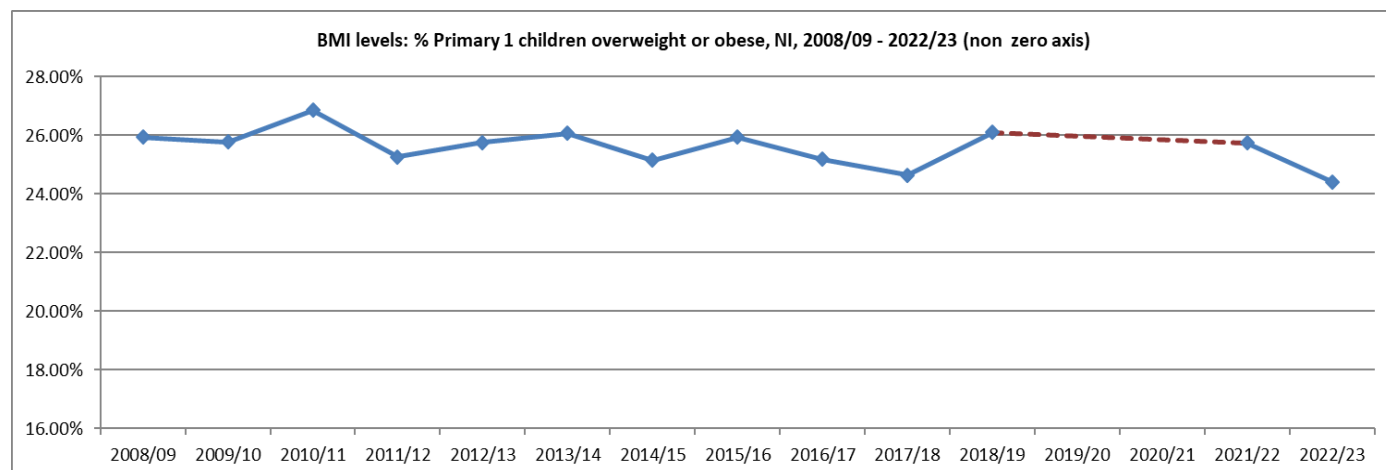
Children measured are typically between 4½ and 5½ years of age

Figures above are categorised using British 1990 (UK90) Growth Reference thresholds

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2021/22 and 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

Data for 2019/20 and 2020/21 is not available due to impact of COVID-19 pandemic on data collection

**Figure 12.3: % Primary 1 children overweight or obese, Northern Ireland (UK90), 2008/09 – 2018/19 and 2021/22 – 2022/23**



Note that due to insufficient recording of growth measurements during the COVID-19 pandemic, it is not possible to include 2019/20 and 2020/21 data in the chart above. Therefore, the break in the trend is shown as a dashed line.

**Table 12.9: BMI levels in Primary 1 children across Northern Ireland (UK90), 2022/23**

		No. of children by BMI category					% children overweight or obese
		Underweight	Healthy	Overweight	Obese	Total	
Gender	Male	110	7,750	1,402	1,150	10,412	24.51%
	Female	33	7,682	1,432	1,044	10,191	24.30%
	<b>All persons</b>	<b>143</b>	<b>15,432</b>	<b>2,834</b>	<b>2,194</b>	<b>20,603</b>	<b>24.40%</b>
Trust of residence of child	Belfast	30	2,375	424	335	3,164	23.99%
	Northern	37	3,811	697	594	5,139	25.12%
	South Eastern	21	2,780	504	370	3,675	23.78%
	Southern	26	3,737	696	518	4,977	24.39%
	Western	29	2,706	510	373	3,618	24.41%
	Not known	0	23	3	4	30	23.33%
	<b>All persons</b>	<b>143</b>	<b>15,432</b>	<b>2,834</b>	<b>2,194</b>	<b>20,603</b>	<b>24.40%</b>
Local Government District	Antrim and Newtownabbey	10	1,060	205	176	1,451	26.26%
	Ards and North Down	6	1,164	194	132	1,496	21.79%
	Armagh City, Banbridge and Craigavon	16	1,966	376	260	2,618	24.29%
	Belfast	28	2,350	426	348	3,152	24.56%
	Causeway Coast and Glens	14	1,111	211	181	1,517	25.84%
	Derry City and Strabane	9	1,281	250	200	1,740	25.86%
	Fermanagh and Omagh	15	1,134	199	129	1,477	22.21%
	Lisburn and Castlereagh	12	1,032	181	126	1,351	22.72%
	Mid and East Antrim	9	1,098	195	165	1,467	24.54%
	Mid Ulster	14	1,544	271	217	2,046	23.85%
	Newry, Mourne and Down	10	1,669	323	256	2,258	25.64%
	Not known	0	23	3	4	30	23.33%
	<b>All persons</b>	<b>143</b>	<b>15,432</b>	<b>2,834</b>	<b>2,194</b>	<b>20,603</b>	<b>24.40%</b>
Deprivation 2017 quintile (SOA) based on residence of child	Most deprived	25	2,824	554	541	3,944	27.76%
	2	34	3,337	657	492	4,520	25.42%
	3	39	3,352	601	452	4,444	23.69%
	4	19	3,158	565	427	4,169	23.79%
	Least deprived	26	2,738	454	278	3,496	20.94%
	Not known	0	23	3	4	30	23.33%
	<b>All persons</b>	<b>143</b>	<b>15,432</b>	<b>2,834</b>	<b>2,194</b>	<b>20,603</b>	<b>24.40%</b>

Source: Child Health System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Year refers to school year

Children measured are typically between 4½ and 5½ years of age

Figures above are categorised using British 1990 (UK90) Growth Reference thresholds

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

**Table 12.10: BMI levels in Primary 1 children across Northern Ireland (UK90), by Sure Start area, 2022/23**

Sure Start area	Total children	% children by BMI category				% children overweight or obese
		Underweight	Healthy	Overweight	Obese	
Abbey	245	1.22%	71.43%	13.88%	13.47%	27.35%
Ards	230	0.43%	76.52%	13.04%	10.00%	23.04%
ArKe	210	0.48%	70.48%	13.81%	15.24%	29.05%
Ballymena & Little Steps	264	0.76%	70.08%	15.91%	13.26%	29.17%
Bangor	<100	0.00%	72.45%	14.29%	13.27%	27.55%
Beechmount	<100	3.17%	73.02%	12.70%	11.11%	23.81%
Blossom	201	1.49%	72.14%	15.42%	10.95%	26.37%
Cherish	361	0.83%	76.18%	13.57%	9.42%	22.99%
Clan Mor	122	0.00%	71.31%	15.57%	13.11%	28.69%
Clogher Valley	222	0.90%	76.13%	11.71%	11.26%	22.97%
Coleraine	180	1.11%	70.00%	13.89%	15.00%	28.89%
Colin	254	0.00%	74.02%	14.17%	11.81%	25.98%
Dalriada	171	0.58%	74.85%	10.53%	14.04%	24.56%
Down	308	0.32%	66.88%	17.21%	15.58%	32.79%
Dungannon & Coalisland	357	0.28%	75.91%	13.45%	10.36%	23.81%
Dungiven	237	1.69%	69.62%	18.14%	10.55%	28.69%
East Belfast	339	0.29%	78.76%	9.73%	11.21%	20.94%
Edenballymore	154	1.30%	72.08%	12.99%	13.64%	26.62%
Glenbrook	194	1.03%	74.74%	10.82%	13.40%	24.23%
Gold	255	0.78%	71.76%	14.12%	13.33%	27.45%
Horizon	177	1.13%	65.54%	18.08%	15.25%	33.33%
LAST	266	0.75%	72.56%	16.17%	10.53%	26.69%
Lisburn	112	0.00%	72.32%	8.93%	18.75%	27.68%
Little Hands	124	0.00%	68.55%	12.90%	18.55%	31.45%
Mourne	<100	0.00%	73.75%	11.25%	15.00%	26.25%
Newry City	280	0.71%	75.00%	11.79%	12.50%	24.29%
Outer West Belfast	218	0.46%	74.77%	12.39%	12.39%	24.77%
Rainbow	170	1.18%	70.00%	15.29%	13.53%	28.82%
Saol Ur	126	0.00%	77.78%	14.29%	7.94%	22.22%
Shankill	288	0.69%	64.24%	18.75%	16.32%	35.07%
Shantallow	300	1.00%	71.67%	17.33%	10.00%	27.33%
Smile	198	0.51%	69.70%	14.14%	15.66%	29.80%
South Armagh	393	0.76%	71.76%	16.28%	11.20%	27.48%
South Belfast	257	0.78%	75.88%	12.45%	10.89%	23.35%
Splash	265	0.75%	70.57%	16.60%	12.08%	28.68%
Star	<100	0.00%	78.72%	12.77%	8.51%	21.28%
Strabane	287	0.35%	68.99%	18.12%	12.54%	30.66%
Waterside	256	0.39%	78.52%	10.55%	10.55%	21.09%
<b>Children living in Sure Start areas</b>	<b>8,309</b>	<b>0.69%</b>	<b>72.56%</b>	<b>14.30%</b>	<b>12.46%</b>	<b>26.75%</b>
<b>Children not living in Sure Start areas</b>	<b>12,264</b>	<b>0.70%</b>	<b>76.48%</b>	<b>13.40%</b>	<b>9.42%</b>	<b>22.81%</b>
<b>Children - address not known</b>	<b>30</b>	<b>0.00%</b>	<b>76.67%</b>	<b>10.00%</b>	<b>13.33%</b>	<b>23.33%</b>
<b>All children</b>	<b>20,603</b>	<b>0.69%</b>	<b>74.90%</b>	<b>13.76%</b>	<b>10.65%</b>	<b>24.40%</b>

Source: Child Health System

Year refers to school year

Children measured are typically between 4½ and 5½ years of age

Figures above are categorised using British 1990 (UK90) Growth Reference thresholds

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

Note that some percentages above are based on small numbers

Disclosure controls have been applied to the data

Some Sure Start boundaries have been revised and therefore it will not be possible to compare the data in the above table to previously published reports

## YEAR 8 (UK90)

**Table 12.11: BMI levels in Year 8 children across Northern Ireland (UK90), 2010/11 - 2022/23**

BMI category	% Year 8 children									
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2022/23
<b>Number of children</b>	<b>17,873</b>	<b>17,836</b>	<b>16,618</b>	<b>14,789</b>	<b>15,490</b>	<b>17,832</b>	<b>18,108</b>	<b>18,465</b>	<b>16,367</b>	<b>16,886</b>
Underweight	1.08%	1.26%	1.28%	1.14%	1.53%	1.22%	1.58%	1.47%	1.45%	1.60%
Healthy	63.20%	62.77%	63.26%	62.93%	64.15%	63.62%	63.37%	62.89%	63.40%	63.03%
Overweight	15.15%	15.70%	15.39%	15.04%	15.48%	15.25%	14.86%	15.17%	15.20%	14.59%
Obese	20.57%	20.27%	20.07%	20.89%	18.84%	19.91%	20.19%	20.47%	20.00%	20.81%
<b>% children overweight/obese</b>	<b>35.72%</b>	<b>35.97%</b>	<b>35.46%</b>	<b>35.93%</b>	<b>34.32%</b>	<b>35.16%</b>	<b>35.05%</b>	<b>35.64%</b>	<b>35.20%</b>	<b>35.40%</b>

Source: Child Health System

NOTE THAT IN 2018/19, CHILDREN IN WESTERN TRUST DID NOT HAVE HEIGHT AND WEIGHT MEASUREMENTS TAKEN.

THEREFORE 2018/19 DATA IS BASED ON FOUR OUT OF FIVE HEALTH TRUSTS ONLY

Year refers to school year

Children measured are typically between 11½ and 12½ years of age

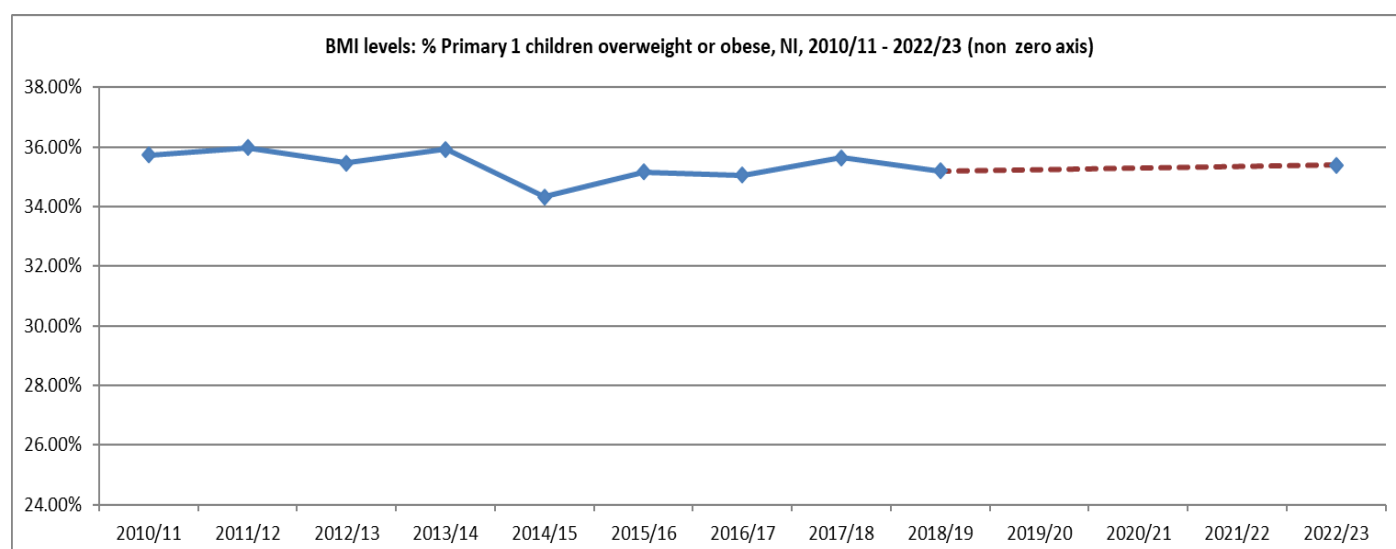
Figures above are categorised using British 1990 (UK90) Growth Reference thresholds

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

Due to lower coverage in previous years, figures are only available for Year 8 from 2010/11

Data for 2019/20, 2020/21 and 2021/22 is not available due to impact of COVID-19 pandemic on data collection.

**Figure 12.4: % Year 8 children overweight or obese, Northern Ireland (UK90), 2010/11 – 2018/19 and 2022/23**



Note that due to insufficient recording of growth measurements during the COVID-19 pandemic, it is not possible to include 2019/20, 2020/21 and 2021/22 data in the chart above. Therefore the break in the trend is shown as a dashed line.

**Table 12.12: BMI levels in Year 8 children across Northern Ireland (UK90), 2022/23**

		No. of children by BMI category					% children overweight or obese
		Underweight	Healthy	Overweight	Obese	Total	
Gender	Male	114	5249	1221	1956	<b>8,540</b>	37.20%
	Female	152	5394	1242	1558	<b>8,346</b>	33.55%
	<b>All persons</b>	<b>266</b>	<b>10,643</b>	<b>2,463</b>	<b>3,514</b>	<b>16,886</b>	<b>35.40%</b>
Trust of residence of child	Belfast	42	1478	344	449	<b>2,313</b>	34.28%
	Northern	93	3118	681	1004	<b>4,896</b>	34.42%
	South Eastern	37	1579	359	492	<b>2,467</b>	34.50%
	Southern	66	2589	602	875	<b>4,132</b>	35.75%
	Western	28	1862	472	691	<b>3,053</b>	38.09%
	Not known	0	17	5	3	<b>25</b>	32.00%
	<b>All persons</b>	<b>266</b>	<b>10,643</b>	<b>2,463</b>	<b>3,514</b>	<b>16,886</b>	<b>35.40%</b>
Local Government District	Antrim and Newtownabbey	22	883	183	275	<b>1,363</b>	33.60%
	Ards and North Down	19	913	175	299	<b>1,406</b>	33.71%
	Armagh City, Banbridge and Craigavon	44	1482	326	506	<b>2,358</b>	35.28%
	Belfast	39	1371	348	452	<b>2,210</b>	36.20%
	Causeway Coast and Glens	18	867	205	352	<b>1,442</b>	38.63%
	Derry City and Strabane	18	911	245	353	<b>1,527</b>	39.16%
	Fermanagh and Omagh	9	725	176	247	<b>1,157</b>	36.56%
	Lisburn and Castlereagh	18	711	163	163	<b>1,055</b>	30.90%
	Mid and East Antrim	28	825	178	261	<b>1,292</b>	33.98%
	Mid Ulster	36	1147	262	326	<b>1,771</b>	33.20%
	Newry, Mourne and Down	15	791	197	277	<b>1,280</b>	37.03%
	Not known	0	17	5	3	<b>25</b>	32.00%
	<b>All persons</b>	<b>266</b>	<b>10,643</b>	<b>2,463</b>	<b>3,514</b>	<b>16,886</b>	<b>35.40%</b>
Deprivation 2017 quintile (SOA) based on residence of child	Most deprived	44	1582	424	721	<b>2,771</b>	41.32%
	2	44	2152	537	784	<b>3,517</b>	37.56%
	3	61	2369	540	814	<b>3,784</b>	35.78%
	4	69	2517	524	702	<b>3,812</b>	32.16%
	Least deprived	48	2006	433	490	<b>2,977</b>	31.00%
	Not known	0	17	5	3	<b>25</b>	32.00%
	<b>All persons</b>	<b>266</b>	<b>10,643</b>	<b>2,463</b>	<b>3,514</b>	<b>16,886</b>	<b>35.40%</b>

Source: Child Health System

NI Statistics and Research Agency, NI Multiple Deprivation Measure 2017

<https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017>

Year refers to school year

Children measured are typically between 11½ and 12½ years of age

Figures above are categorised using British 1990 (UK90) Growth Reference thresholds

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.



**Table 12.13: BMI levels in Year 8 children across Northern Ireland (UK90), by Sure Start area, 2022/23**

Sure Start area	Total children	% children by BMI category				% children overweight or obese
		Underweight	Healthy	Overweight	Obese	
Abbey	240	1.3%	53.8%	12.5%	32.5%	45.0%
Ards	206	0.5%	54.4%	15.0%	30.1%	45.1%
ArKe	147	2.0%	61.2%	14.3%	22.4%	36.7%
Ballymena & Little Steps	187	4.8%	63.6%	17.1%	14.4%	31.6%
Bangor	<100	1.2%	52.9%	17.6%	28.2%	45.9%
Beechmount	<100	0.0%	54.3%	17.4%	28.3%	45.7%
Blossom	138	2.2%	55.8%	16.7%	25.4%	42.0%
Cherish	276	0.7%	58.0%	16.7%	24.6%	41.3%
Clan Mor	<100	1.5%	47.7%	23.1%	27.7%	50.8%
Clogher Valley	137	2.9%	60.6%	19.0%	17.5%	36.5%
Coleraine	131	0.8%	55.0%	17.6%	26.7%	44.3%
Colin	131	2.3%	47.3%	24.4%	26.0%	50.4%
Dalriada	187	2.1%	59.9%	15.0%	23.0%	38.0%
Down	<100	0.0%	39.1%	21.7%	39.1%	60.9%
Dungannon & Coalisland	219	0.9%	60.3%	16.4%	22.4%	38.8%
Dungiven	207	0.5%	62.8%	13.0%	23.7%	36.7%
East Belfast	150	2.0%	54.0%	17.3%	26.7%	44.0%
Edenballymore	154	1.9%	53.2%	18.8%	26.0%	44.8%
Glenbrook	173	2.3%	49.7%	17.3%	30.6%	48.0%
Gold	270	0.4%	65.2%	14.1%	20.4%	34.4%
Horizon	121	2.5%	55.4%	14.9%	27.3%	42.1%
LAST	163	0.6%	63.2%	16.0%	20.2%	36.2%
Lisburn	<100	0.0%	64.5%	12.9%	22.6%	35.5%
Little Hands	129	0.8%	59.7%	12.4%	27.1%	39.5%
Mourne	<100	0.0%	58.3%	16.7%	25.0%	41.7%
Newry City	200	1.5%	61.5%	16.0%	21.0%	37.0%
Outer West Belfast	142	1.4%	64.8%	14.8%	19.0%	33.8%
Rainbow	140	0.7%	62.1%	22.1%	15.0%	37.1%
Saol Ur	105	0.0%	69.5%	11.4%	19.0%	30.5%
Shankill	204	3.9%	63.2%	11.3%	21.6%	32.8%
Shantallow	201	0.0%	66.7%	14.4%	18.9%	33.3%
Smile	180	1.7%	52.8%	17.2%	28.3%	45.6%
South Armagh	357	0.6%	61.3%	15.7%	22.4%	38.1%
South Belfast	125	0.0%	63.2%	15.2%	21.6%	36.8%
Splash	224	2.2%	53.6%	13.4%	30.8%	44.2%
Star	<100	0.0%	68.8%	4.2%	27.1%	31.3%
Strabane	248	0.8%	60.5%	16.9%	21.8%	38.7%
Waterside	236	0.8%	55.1%	12.7%	31.4%	44.1%
<b>Children living in Sure Start areas</b>	<b>6,074</b>	<b>1.4%</b>	<b>58.8%</b>	<b>15.7%</b>	<b>24.2%</b>	<b>39.8%</b>
<b>Children not living in Sure Start areas</b>	<b>10,787</b>	<b>1.7%</b>	<b>65.4%</b>	<b>14.0%</b>	<b>18.9%</b>	<b>32.9%</b>
<b>Children - address not known</b>	<b>25</b>	<b>0.0%</b>	<b>68.0%</b>	<b>20.0%</b>	<b>12.0%</b>	<b>32.0%</b>
<b>All children</b>	<b>16,886</b>	<b>1.6%</b>	<b>63.0%</b>	<b>14.6%</b>	<b>20.8%</b>	<b>35.4%</b>

Source: Child Health System

Year refers to school year

Children measured are typically between 11½ and 12½ years of age

Figures above are categorised using British 1990 (UK90) Growth Reference thresholds

Note that in any year all children may not be measured and so coverage may not be complete. Although data for 2022/23 is provided, the coverage is lower than in previous years and so caution is advised when interpreting data.

Note that some percentages above are based on small numbers

Disclosure controls have been applied to the data

Some Sure Start boundaries have been revised and therefore it will not be possible to compare the data in the above table to previously published reports



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