



Children's Health in Northern Ireland

**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 24,475 registered births to Northern Ireland residents in 2014 with a birth rate of 13.3 per thousand. *[Page 9]* The live birth rate (13.3) is the highest across the four UK countries, but is lower than the equivalent rate for Republic of Ireland (2014 = 14.6). *[Page 8]*
- There were 81 registered still births to Northern Ireland residents *[Page 9]* which was the lowest number ever recorded in Northern Ireland.
- Of the four regions of the United Kingdom, Northern Ireland had the highest total period fertility rate (1.97 in 2014). Scotland had the lowest at 1.62. *[Page 12]*
- In 2014, births to teenage mothers (less than 20 years) represented 2.9% of all births in Northern Ireland. This proportion has fallen consistently over the last five years. However the proportion of births to mothers aged 40 and over has increased from 3.6% in 2010/11 to 4.1% in 2014/15. *[Page 17]*
- In 2014/15, almost 93% of births are less than 15 weeks gestation at the time of booking. This proportion has increased slightly year on year since 2010/11 (89.8%). *[Page 24]*
- Over the last five years there has been little variation in the proportion of infants born pre-term (<37 weeks gestation). (2014/15 = 7.6%) *[Page 27]* The figures differ considerably by type of birth: 7.4% of live births, 74.4% of still births. The same can be seen for multiple births (63.3%) compared to singleton births (6.0%). *[Page 28]*
- In 2014/15 (at time of booking) *[Page 30]*:
 - 14.5% of mothers smoked (2010/11 = 15.3%)
 - 5.6% of mothers had diabetes (2010/11 = 1.7%)
- In 2014/15, almost half (49.3%) of all mothers at the time of booking, are considered pre-obese or obese. *[Page 33]*
- In 2014/15, 28.9% of infants were delivered by Caesarian section. This figure has remained steady over the last five years. *[Page 36]*
- In 2014/15, 6.3% of all births were measured as low birth weight i.e. less than 2,500g (6.0% of live and 73.3% of still births). *[Page 40]*
- In this year, 14.3% of live infants were born with a higher birth weight of 4,000g+ and 2.0% with a birth weight of 4,500g+. *[Page 40]*
- In 2014/15, 46% of live infants were breastfed (total/partial feeding) at discharge (46% in 2013/14 and 44% in 2012/13). *[Page 44]*.
- Only 19.9% of infants born to mothers under 20 were breastfed at discharge, compared to 54% of infants to mothers aged 40 and over. *[Page 45]*.
- In 2013/14, the proportion of mothers' breastfeeding gradually decreased with time e.g. less than 6% of mothers were still breastfeeding 12 months after the baby was born. *[Page 46]*
- 21% of Primary 1 children and almost 28% of Year 8 children measured in 2014/15 were considered overweight or obese. *[Page 48, 51]*.

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Introduction

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

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 **General Register Office for Northern Ireland (GRONI)** is the part of the Northern Ireland Statistics and Research Agency (NISRA) that administers civil registration e.g. the registration of births, deaths, marriages through District Registration Offices. The Registrar General has additional statutory duties relating to the production and publication of vital statistics. Demography and Methodology Branch within NISRA manage these duties in partnership with GRONI.

(Source: Registrar General Northern Ireland Annual Report 2011)

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 now 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 ¹	2014 (n)		661,496	33,544	56,725	24,394	67,462
		2013 (n)		664,517	33,747	56,014	24,277	68,930
2	Still births numbers and rates per 1,000 live and still births ²	2014 (n)		3,030	166	229 ^P	81	283 ^P
		2013 (n)		3,088	150	234	110	277
		2014 (rate)		4.7	5.2	4.0	3.3	4.2 ^P
		2013 (rate)		4.7	4.7	4.2	4.5	4.0
3	Infant mortality – numbers and rates per 1,000 live births ³	Deaths in first year (2014)		2,548	123	207	118	249
		Deaths in first year (2013)		2,611	122	186	112	228
		2014 (rate)		3.9	3.7	3.6	4.8	3.7
		2013 (rate)		3.9	3.6	3.3	4.6	3.3
4	Fertility rate (TPFR) ⁴	2014		1.83	1.78	1.62	1.97	1.95
		2013		1.85	1.80	1.61	1.96	1.96
5	Live births to teenage mothers under twenty years ⁵	2014 (n)		24,246	1,725	2,446	839	1,253
		2013 (n)		27,213	1,915	2,763	937	1,381
		2014 (rate/1,000 aged 15-19 years)		15.4	18.9	16.1	14.2	9.3
		2013 (rate/1,000 aged 15-19 years)		17.2	20.6	17.9	15.7	10.4
6	Multiple birth maternities (% of all maternities) ⁶	2014		1.60		1.56	1.46	1.9 ^P
		2013		1.56		1.50	1.60	1.9
7	Risk factors ⁷	% mothers who smoked at booking	2014	11.4 (at delivery, 2014/15)	N/A	17.5 (as % of births)	14.5 (2014/15)	N/A
			2013	12.0 (at delivery, 2013/14)	N/A	18.4 (as % of births)	15.3 (2013/14)	N/A
8	Caesarean Sections (% of deliveries / births) ⁸	2014/15		26.5 (deliveries)	26.3 (deliveries)	30.1 (live births only, 2014)	28.8 (births)	30.3 ^P (births, 2014)
		2013/14		25.7 (deliveries)	26.9 (deliveries)	28.4 (live births only, 2013)	28.7 (births)	29.7 (births, 2013)
9	Low Birth weight ⁹	% total births less than 2,500g	2014	7.3	7.0	6.4	6.3 (2014/15)	5.6 ^P (live births)
			2013	7.3	7.3	6.6	6.4 (2013/14)	5.5 (live births)
10	Breastfeeding - % infants breastfed at discharge / breastfeeding initiated ¹⁰	2014/15		74.3 (initiation)	52.9 (2014)	N/A	46.0	56.9 ^P (2014)
		2013/14		74.0 (initiation)	46.4 (2013)	N/A	46.0	55.7 (2013)

For references see over

References

- ¹ United Kingdom home countries: Office for National Statistics (ONS), Vital Statistics: Population and Health Reference Tables, Summer 2015 Update <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-362576>
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.
Republic of Ireland: Central Statistics Office, Vital Statistics Annual Reports/Yearly Summaries <http://www.cso.ie/en/statistics/birthsdeathsandmarriages/>
- ² Still birth rate is the number of stillbirths per 1,000 total births (live and still)
England and Wales: ONS <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Stillbirths#tab-data-tables>
Scotland: National Records of Scotland
<http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/births-deaths-and-other-vital-events-preliminary-annual-figures/2014> and <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/births-deaths-and-other-vital-events-preliminary-annual-figures/2013>
Northern Ireland: Northern Ireland Statistics and Research Agency <http://www.nisra.gov.uk/demography/default.asp9.htm>
Republic of Ireland: National Perinatal Reporting System, Healthcare Pricing Office (HPO)
2013 data - Perinatal Statistics Report, 2013 http://www.hpo.ie/latest_hipe_nprs_reports/NPRS_2013/Perinatal_Statistics_Report_2013.pdf
2014 data - ad hoc request to National Perinatal Reporting system (NPRS), Healthcare Pricing Office (HPO), January 2016
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'. CSO data shows a still birth rate in 2012 of 2.6 per 1,000 while NPRS shows 3.9 per 1,000. For this reason the NPRS data for 2013 and 2014 is shown.
- ³ NPRS data for 2014 is provisional and subject to change.
- ⁴ 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.
United Kingdom home countries: ONS, Vital Statistics: Population and Health Reference Tables, Summer 2015 Update <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-362576>
The infant mortality rates for Northern Ireland represent the rate per 1,000 live births including non Northern Ireland resident births.
- ⁵ 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 ¹
- ⁵ England and Wales: ONS <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Live+Births+and+Stillbirths#tab-data-tables>
Scotland: National Records of Scotland <http://nationalrecords.scotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/births>
Northern Ireland: Northern Ireland Statistics and Research Agency <http://www.nisra.gov.uk/demography/default.asp8.htm>
Republic of Ireland: Central Statistics Office, Vital Statistics Annual Reports/Yearly Summaries <http://www.cso.ie/en/statistics/birthsdeathsandmarriages/>
- ⁶ England: ONS <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Maternities>
Wales: StatWales <https://stats.wales.gov.uk/Catalogue/Health-and-Social-Care/Births-Deaths-and-Conceptions/Births>
Scotland: As ²
Northern Ireland: Northern Ireland Statistics and Research Agency <http://www.nisra.gov.uk/demography/default.asp22.htm>
Republic of Ireland: NPRS – as ²
- ⁷ England: Health And Social Care Information Centre (HSCIC) <http://www.hscic.gov.uk/article/1165/Search-catalogue?q=title:%22Statistics+on+Women%27s+Smoking+Status+at+Time+of+Delivery%22&area=&size=10&sort=RelevanceDesc>
Scotland: Information Services Division (ISD Scotland) <http://www.isdscotland.org/Health-Topics/Maternity-and-Births/Publications/data-tables.asp?id=1285#1285>
Northern Ireland: CHS data as per this document – see Section 6
- ⁸ 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: Health And Social Care Information Centre
<http://www.hscic.gov.uk/searchcatalogue?topics=2%2fHospital+care%2fAdmissions+and+attendances%2fMaternity+admissions&kwd=M&sort=Relevance&size=10&page=1#top>
Scotland: Information Services Division (ISD Scotland) <http://www.isdscotland.org/Health-Topics/Maternity-and-Births/Births/>
Wales: StatWales <https://stats.wales.gov.uk/Catalogue/Health-and-Social-Care/NHS-Primary-and-Community-Activity/Maternity>
Northern Ireland: CHS data as per this document – see Section 8
Republic of Ireland: NPRS – as ²
- ⁹ England and Wales: ONS <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Live+Births+and+Stillbirths>
Scotland: as ⁷
Northern Ireland: CHS data as per this document – see Section 9
Republic of Ireland: NPRS – as ²
- ¹⁰ England: NHS England, <https://www.england.nhs.uk/statistics/statistical-work-areas/maternity-and-breastfeeding/>
Wales: National Community Child Health Database, <http://gov.wales/statistics-and-research/births-national-community-child-health-database/?lang=en>
Northern Ireland: CHS data as per this document – see Section 10
Republic of Ireland: NPRS – as ² Data is based on live births only and excludes early neonatal deaths.

Section 1: Trends in Births

Key Points

- There were 24,475 registered births to Northern Ireland residents in 2014 with a birth rate of 13.3 per thousand (2013=13.3, 2012=13.9). *[Page 9]* The live birth rate (13.3) is the highest across the four UK countries, but is lower than the equivalent rate for Republic of Ireland (2014 = 14.6). *[Page 8]*
- There were 81 registered still births to Northern Ireland residents which was the lowest number ever recorded in Northern Ireland. *[Page 9]*
- The number of births in Northern Ireland to non-NI resident mothers continued to decrease. In 2014, there were 221 such births. *[Page 9]*
- In 2014, the highest number of registered births was recorded to residents in the Northern LCG area (5,895), with the lowest number in the Western LCG (4,047). *[Page 10]*
- The increase in births in the last ten years (2005 to 2014) has not been consistent across Northern Ireland with a 17.3% increase in Belfast LCG, but only 3.5% increase in Western LCG (increase across NI = 9.2%). *[Page 10]*
- In 2014, the percentage of live births to mothers whose country of birth was not Northern Ireland was 17.5%. This has increased from 14.7% in 2005 (ten years ago). *[Page 9]*

Table 1.1: Trends in live births/birth rate across the United Kingdom and Republic of Ireland, 1974 - 2014

Year	Number of Live Births						Crude Birth Rate (Live Births per 1,000 total population)					
	Northern Ireland	England	Scotland	Wales	United Kingdom	Republic of Ireland	Northern Ireland	England	Scotland	Wales	United Kingdom	Republic of Ireland
2014	24,394	661,496	56,725	33,544	776,352	67,462	13.3	12.2	10.6	10.8	12.0	14.6
2009	24,910	671,058	59,046	34,937	790,204	75,554	13.9	12.9	11.3	11.5	12.7	16.9
2004	22,318	607,184	53,957	32,325	715,996	61,972	13.0	12.1	10.6	10.9	11.9	15.3
1999	22,957	589,468	55,147	32,111	699,976	53,924	13.7	12.0	10.9	11.1	11.9	14.4
1994	24,098	628,956	61,656	35,366	750,480	48,255	14.7	13.0	12.1	12.2	13.0	13.5
1989	25,831	649,357	63,480	38,019	777,036	52,018	16.2	13.7	12.5	13.3	13.6	14.8
1984	27,477	600,573	65,106	35,861	729,401	64,062	17.6	12.8	12.7	12.8	12.9	18.2
1979	28,178	601,316	68,366	36,174	734,572	72,539	18.4	12.9	13.1	12.9	13.1	21.5
1974	27,160	603,153	70,093	36,206	737,138	68,907	17.8	12.9	13.4	13.0	13.1	22.1

Source:

For United Kingdom: Office for National Statistics, Vital Statistics: Population and Health Reference Tables, Summer 2015 Update

<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-362576>

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

For Republic of Ireland: Central Statistics Office, Vital Statistics Annual Reports/Yearly Summaries <http://www.cso.ie/en/statistics/birthsdeathsandmarriages/>

Table 1.2: Trends in births registered in Northern Ireland, 2005 – 2014

		Year of birth (registered)									
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total resident births (live and still)		22,417	23,361	24,553	25,746	25,029	25,420	25,364	25,375	24,387	24,475
Total resident birth rate / 1,000 population		12.9	13.4	13.9	14.4	13.9	14.0	13.9	13.9	13.3	13.3
Birth status (NI maternal residents)	Live	22,328	23,272	24,451	25,631	24,910	25,315	25,273	25,269	24,277	24,394
	Still	89	89	102	115	119	105	91	106	110	81
	All infants	22,417	23,361	24,553	25,746	25,029	25,420	25,364	25,375	24,387	24,475
Born to NI-resident / non-resident mothers	Resident	22,417	23,361	24,553	25,746	25,029	25,420	25,364	25,375	24,387	24,475
	Non-resident	523	497	523	623	577	455	461	352	261	221
	All infants	22,940	23,858	25,076	26,369	25,606	25,875	25,825	25,727	24,648	24,696
Country of birth of mother (live births only)	NI	19,040	19,611	20,325	21,095	20,539	20,805	20,808	20,819	19,937	20,129
	Other UK	1,463	1,477	1,456	1,410	1,364	1,323	1,296	1,293	1,271	1,170
	RoI	705	736	723	779	689	714	692	698	626	626
	A8 countries	118	390	775	1,080	1,113	1,235	1,210	1,201	1,257	1,258
	All other countries	986	1,058	1,170	1,267	1,205	1,238	1,267	1,258	1,186	1,211
	Not stated	16	0	2	0	0	0	0	0	0	0
	All infants	22,328	23,272	24,451	25,631	24,910	25,315	25,273	25,269	24,277	24,394
Place of birth (live births only)	Altnagelvin	2,459	2,485	2,528	2,672	2,676	2,623	2,830	2,741	2,554	2,695
	Antrim	2,330	2,495	3,064	3,078	2,790	2,770	2,671	2,640	2,638	2,820
	Causeway	1,126	1,239	1,328	1,447	1,373	1,412	1,432	1,413	1,362	1,204
	Craigavon	3,123	3,413	3,670	3,805	3,812	4,000	3,975	4,170	3,993	4,015
	Daisy Hill	1,637	1,675	1,797	1,875	1,842	1,840	1,765	1,814	1,701	1,806
	Downe	-	-	-	-	-	40	72	97	86	57
	Erne	1,154	1,268	1,240	1,331	1,266	1,307	1,206	624	4	2
	Lagan Valley	1,154	1,122	1,190	1,196	1,069	979	334	213	206	178
	Mater	1,082	1,084	1,159	1,272	1,119	1,204	1,219	1,194	437	191
	Mid Ulster	662	570	-	-	-	-	-	-	-	-
	Royal	4,998	5,193	5,459	5,437	5,467	5,473	5,555	5,584	5,927	5,995
	SWAH	-	-	-	-	-	-	-	602	1,213	1,231
	Ulster	2,504	2,623	2,908	3,416	3,398	3,553	4,120	4,086	4,036	4,119
	Other hospitals	8	4	7	3	3	2	5	1	-	1
	Home	82	91	81	83	91	95	73	72	105	67
	Other locations	9	10	20	16	4	17	16	18	15	13
	All places of birth	22,328	23,272	24,451	25,631	24,910	25,315	25,273	25,269	24,277	24,394

Table 1.2 continued: Trends in births registered in Northern Ireland, 2005 – 2014

		Year of birth (registered)									
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total resident births (live and still)		22,417	23,361	24,553	25,746	25,029	25,420	25,364	25,375	24,387	24,475
Local Government District (2014) of residence of mother	Antrim and Newtownabbey				2,062	1,925	1,927	1,914	1,896	1,744	1,779
	Armagh, Banbridge and Craigavon				3,076	3,053	3,156	3,061	3,139	2,884	2,931
	Belfast				4,727	4,668	4,773	4,847	4,938	4,743	4,641
	Causeway Coast and Glens				1,810	1,666	1,755	1,777	1,768	1,771	1,712
	Derry and Strabane				2,227	2,257	2,128	2,242	2,155	2,066	2,104
	Fermanagh and Omagh				1,603	1,541	1,623	1,559	1,549	1,461	1,513
	Lisburn and Castlereagh				1,810	1,836	1,819	1,808	1,767	1,740	1,757
	Mid and East Antrim				1,702	1,579	1,628	1,627	1,569	1,535	1,596
	Mid Ulster				2,160	2,123	2,197	2,115	2,195	2,219	2,142
	Newry, Mourne and Down				2,623	2,591	2,602	2,525	2,603	2,485	2,552
	North Down and Ards				1,946	1,790	1,812	1,889	1,796	1,739	1,748
	All infants				25,746	25,029	25,420	25,364	25,375	24,387	24,475
Trust of residence of mother (NI resident mothers only)	Belfast	4,024	4,165	4,484	4,763	4,715	4,809	4,854	4,957	4,786	4,718
	Northern	5,644	5,795	6,058	6,376	5,979	6,134	6,062	5,984	5,901	5,895
	South Eastern	4,009	4,263	4,539	4,697	4,554	4,539	4,615	4,542	4,374	4,338
	Southern	4,829	5,056	5,379	5,620	5,558	5,733	5,538	5,724	5,384	5,477
	Western	3,911	4,082	4,093	4,290	4,223	4,205	4,295	4,168	3,942	4,047
		All infants	22,417	23,361	24,553	25,746	25,029	25,420	25,364	25,375	24,387

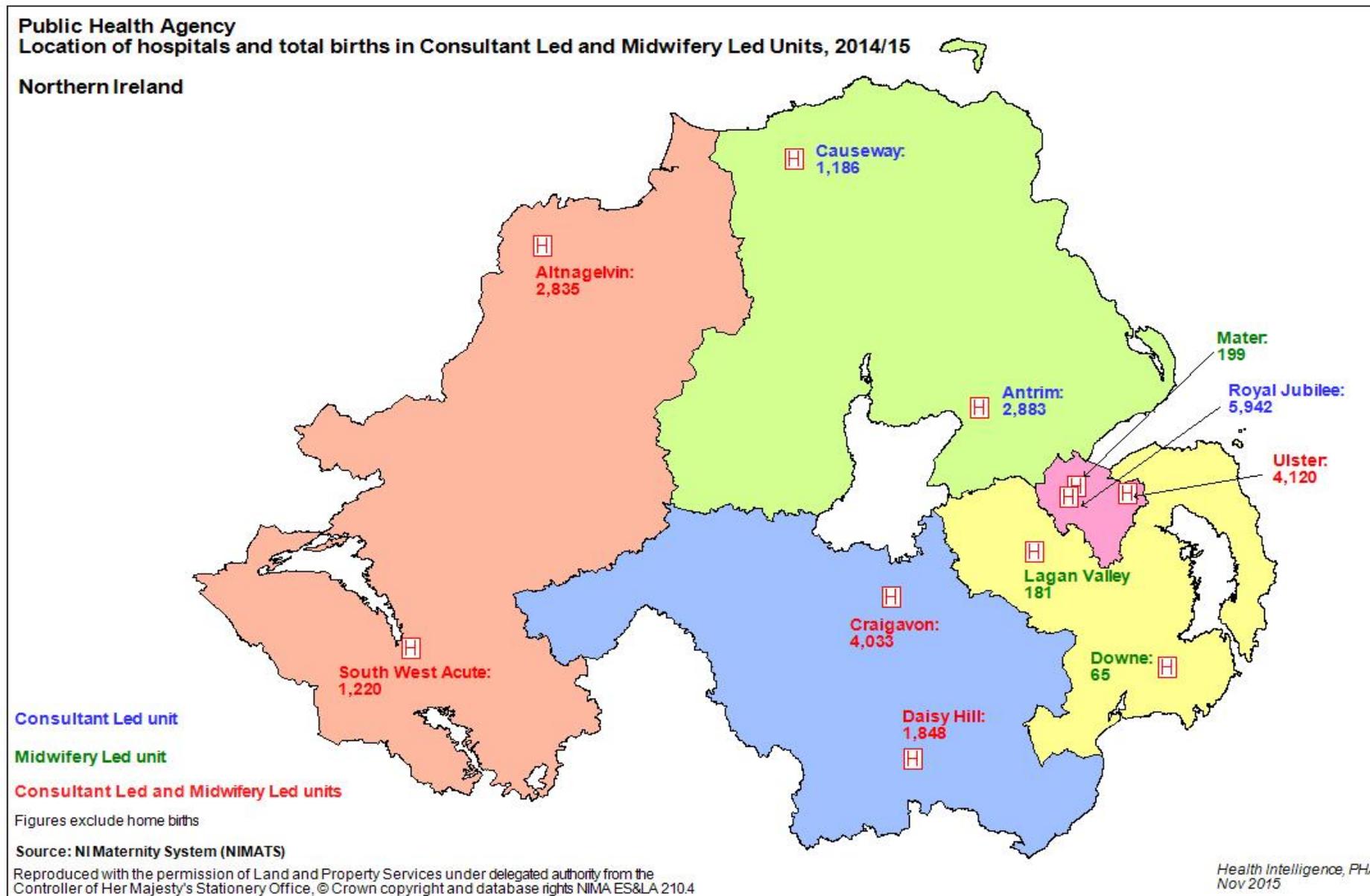
Source: NISRA <http://www.nisra.gov.uk/demography/default.asp8.htm>

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

RoI = Republic of Ireland

Data at 2014 Local Government District is not available prior to 2008

Figure 1.1: Location of hospitals and number of births in Consultant Led Units/Midwifery Led Units, Northern Ireland, 2014/15



Section 2: Fertility Rates

Key Points

- Total Period Fertility Rates (TPFR) show that fertility has not been at replacement level (2.10 children per “average woman”) since 1991. Replacement level is taken to be the level at which the population would replace itself, ignoring migration. In 2014 fertility levels were below replacement level at 1.97 children; however this is still higher than the record fertility low of 1.75 in 2000. [Page 12]
- Of the four regions of the United Kingdom, Northern Ireland had the highest total period fertility rate (1.97 in 2014). Scotland had the lowest at 1.62. [Page 12]
- Age specific fertility rates have remained fairly steady over the last ten years in most age groups with increases in the 30-34 and 35-39 age groups and overall decreases in the 15-19 and 20-24 age groups. [Page 15]. The shift to women having children later in life is clearly shown in Figure 2.4. [Page 14]
- The decrease in actual numbers of teenage births (under 20 years) reflects less young women and a lower birth rate than in the 1990s. The primary driver in this reduction in births is the decline in the fertility rate in this age group e.g. 21.5 per 1,000 population in 2005 to 14.2 in 2014. [Page 15]

Table 2.1: UK/Rol fertility rates 1992 - 2014, and projections 2019/20 - 2029/30

Total Fertility Rate	1992	1997	2002	2007	2012	2013	2014	2012 based projections		
								2019/20	2024/25	2029/30
Northern Ireland	2.08	1.93	1.76	1.98	2.03	1.96	1.97	2.00	2.00	2.00
England	1.79	1.73	1.64	1.88	1.94	1.85	1.83	1.90	1.90	1.90
Wales	1.87	1.81	1.64	1.86	1.88	1.80	1.78	1.88	1.89	1.90
Scotland	1.67	1.58	1.47	1.70	1.67	1.61	1.62	1.69	1.72	1.75
UK	1.79	1.72	1.63	1.87	1.92	1.83	1.82	1.89	1.89	1.89
Total Period Fertility Rate										
Republic of Ireland	1.99	1.94	1.98	2.03	2.01	1.96	1.95	-	-	-

Source: Office for National Statistics and Central Statistics Office (Rol)

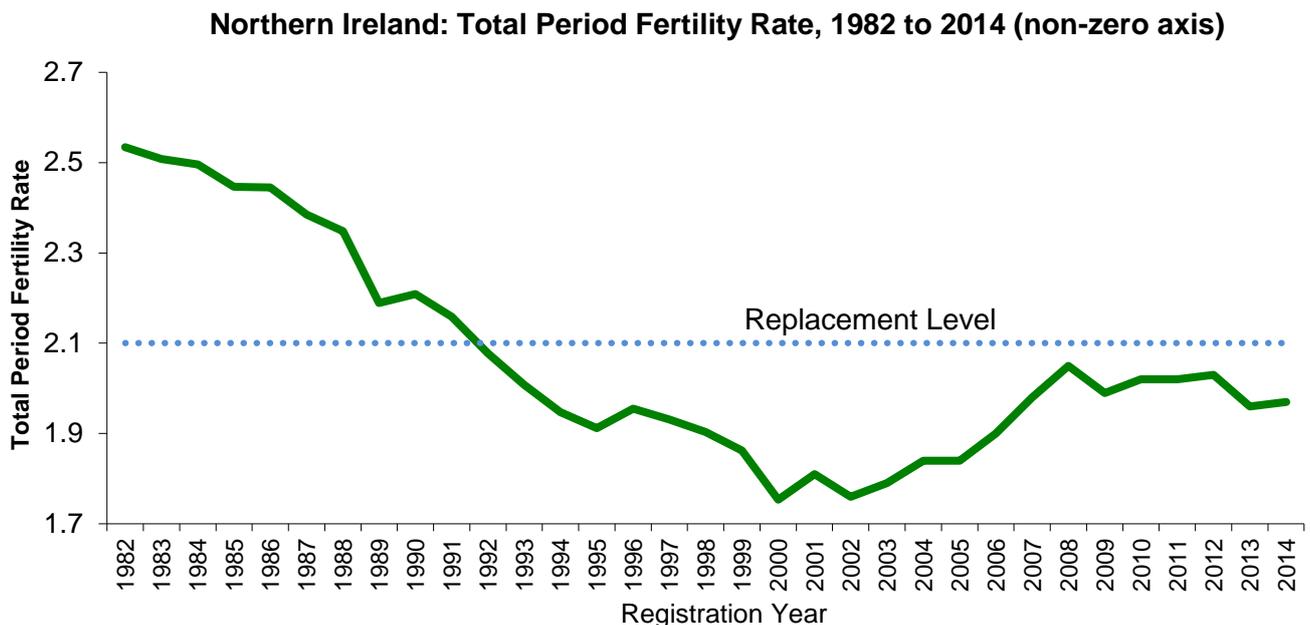
2012 based projections are assumed mid year to mid year fertility rates per 1,000 females (principal projection)

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

Rol: 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.

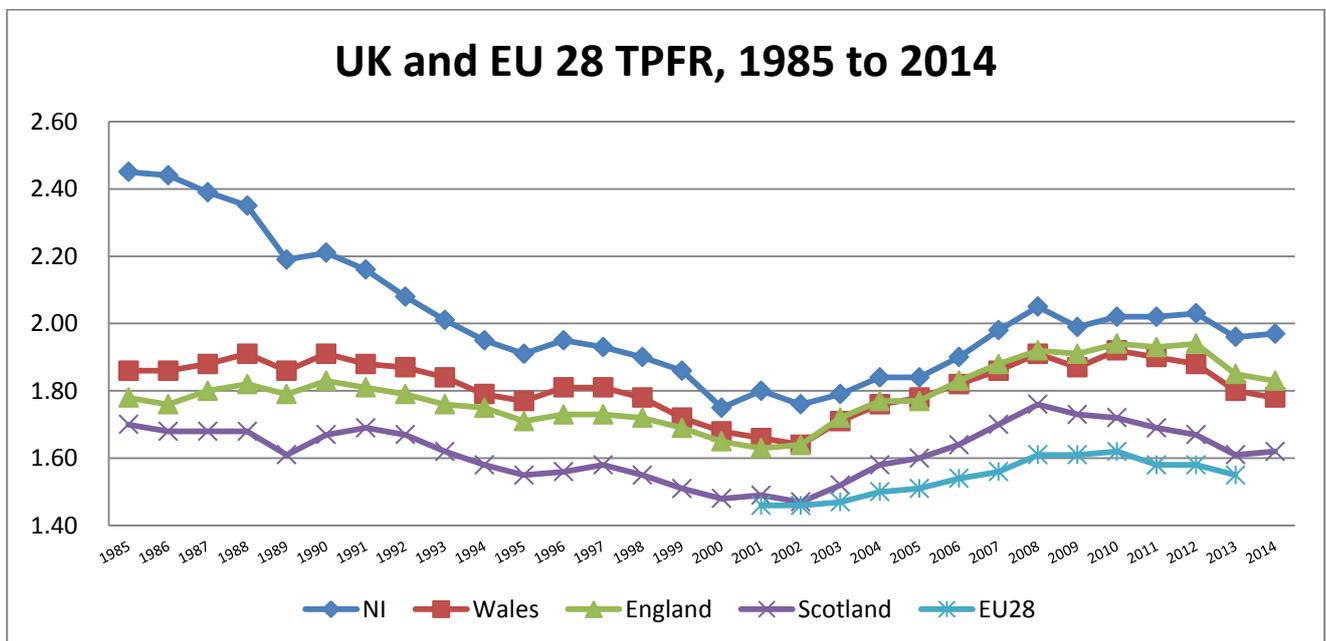
Rol projections data not produced

Figure 2.1: Total Period Fertility Rate (TPFR), Northern Ireland, 1982 - 2014



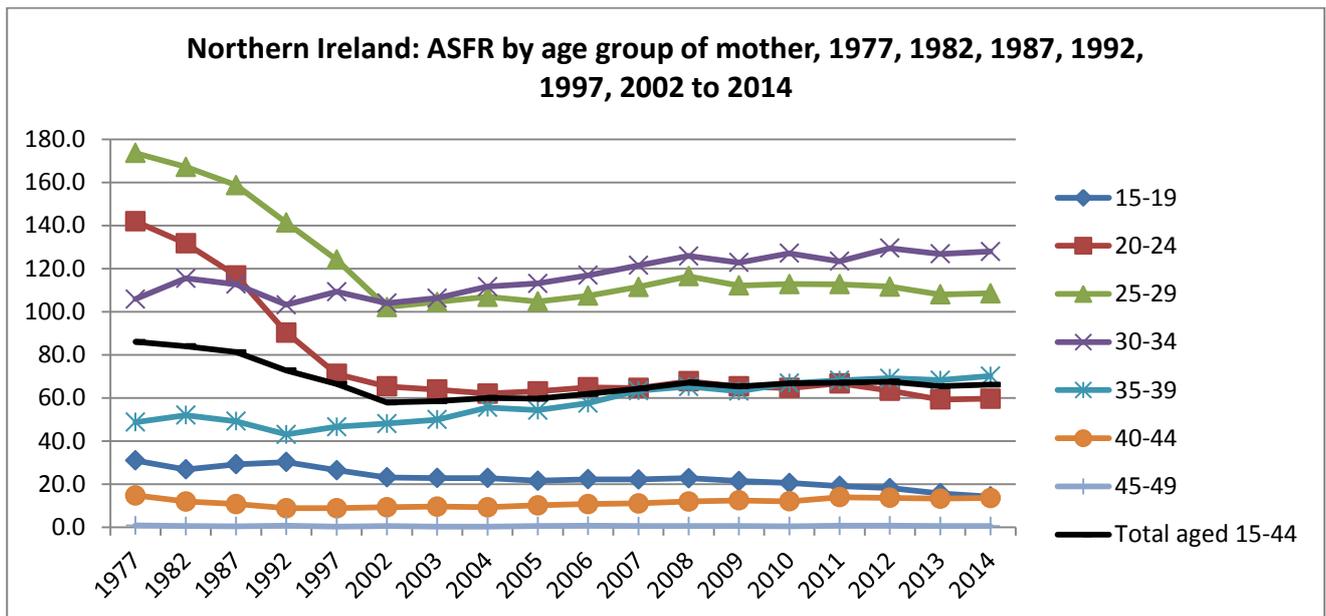
Source: NISRA, Registrar General Annual Report 2014 (Fig 1.14): <http://www.nisra.gov.uk/demography/default.asp22.htm>
 The dotted line at a TPFR of 2.1 represents the 'replacement level' which is the number of births that are required to maintain a steady Northern Ireland population taking account of this population's mortality rates but ignoring any outside effects of population movement.

Figure 2.2: UK and EU total period fertility rate, 1985 to 2014



Source: Office for National Statistics (ONS) - Birth Summary Tables <http://www.ons.gov.uk/ons/datasets-and-tables/index.html> AND National Records of Scotland <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2014/section-3-births>
 StatWales <https://stats.wales.gov.uk/Catalogue/Health-and-Social-Care/Births-Deaths-and-Conceptions/Births/totalfertilityrateandgeneralfertilityrate-by-year>
 Eurostat (European Commission) - <http://ec.europa.eu/eurostat/web/population-demography-migration-projections/births-fertility-data/main-tables>
 EU 28 refers to the 28 member states of the European Union at 2013. Data only available from 2001 - 2013

Figure 2.3: Age-Specific Fertility Rates by age-group of mother, 1977, 1982, 1987, 1992, 1997, 2002 to 2014

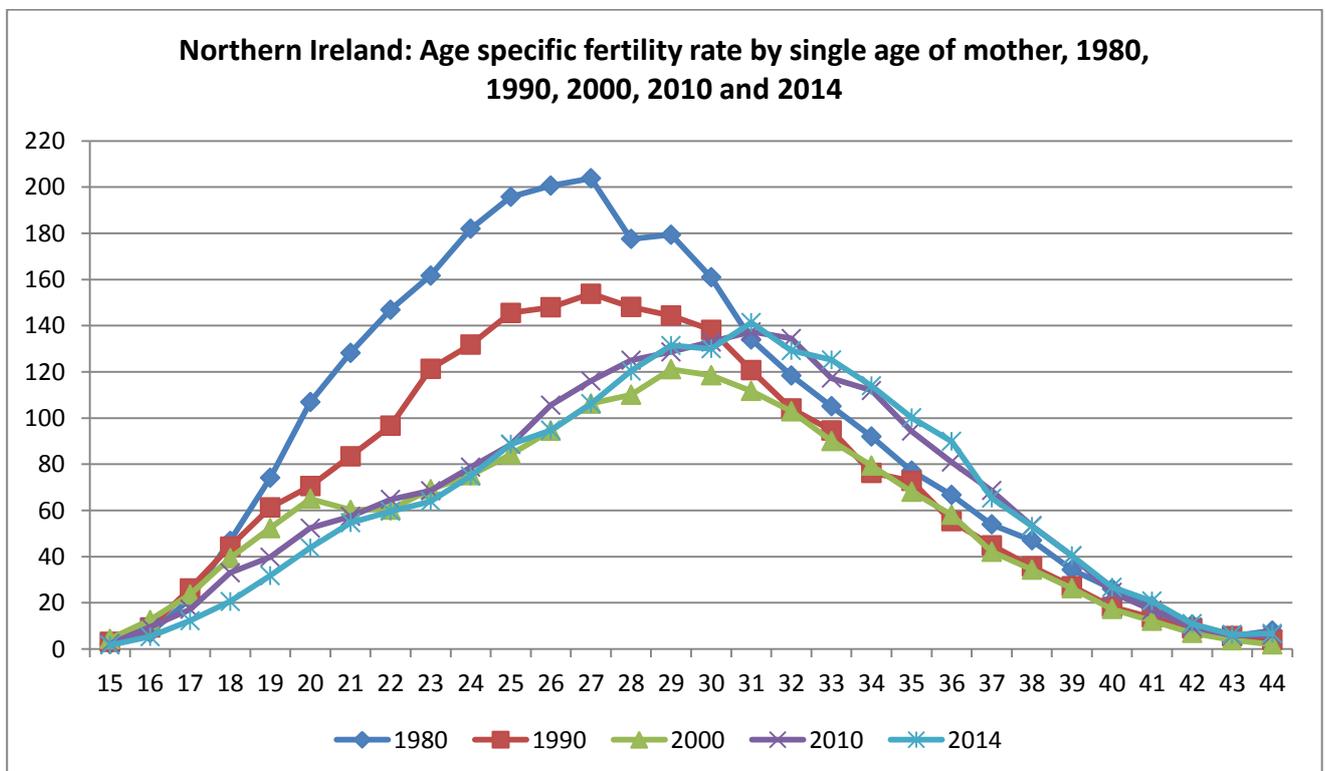


Source: NISRA (<http://www.nisra.gov.uk/demography/default.asp98.htm>)

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

Figure 2.4: Fertility by age of mother 1980, 1990, 2000, 2010 and 2014



Source: NISRA (<http://www.nisra.gov.uk/demography/default.asp98.htm>)

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

Table 2.2: Age-Specific Fertility Rates by age group of mother, 1977, 1982, 1987, 1992, 1997 and 2002 to 2014

Age Group of Mother	Registration Year																	
	1977	1982	1987	1992	1997	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
15-19	30.9	26.8	29.2	30.2	26.4	23.1	22.8	22.8	21.5	22.2	22.1	22.7	21.4	20.5	19.1	18.1	15.7	14.2
20-24	141.9	131.7	116.8	90.2	71.1	65.3	63.8	62.0	63.0	64.9	64.6	67.7	65.3	64.6	66.7	63.3	59.2	59.6
25-29	173.6	167.2	158.8	141.3	124.2	102.1	104.5	106.9	104.7	107.4	111.5	116.4	112.1	112.8	112.7	111.6	108.0	108.5
30-34	105.8	115.5	112.7	103.2	109.2	103.9	106.3	111.6	113.1	116.9	121.5	125.8	122.8	127.1	123.4	129.5	126.8	127.9
35-39	48.7	52.0	49.1	43.0	46.6	48.0	49.9	55.5	54.3	57.5	63.3	65.2	63.1	66.8	68.1	69.1	68.2	70.1
40-44	14.7	11.9	10.7	8.8	8.8	9.2	9.5	9.2	10.1	10.7	11.0	11.9	12.4	12.0	13.9	13.6	13.2	13.5
45-49	0.8	0.5	0.4	0.6	0.3	0.5	0.3	0.3	0.5	0.6	0.5	0.5	0.5	0.4	0.6	0.7	0.5	0.5
Total aged 15-44	86.0	84.0	81.2	72.7	66.4	57.8	58.4	60.0	59.6	61.8	64.3	67.1	65.3	66.7	67.0	67.5	65.4	66.1

Source: NISRA (<http://www.nisra.gov.uk/demography/default.asp98.htm>)

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

Section 3: Age Profile of Mother

TEENAGERS

Why should we be concerned?

The majority of births to teenage mothers are unplanned. Many teenage mothers experience difficulty adapting to their new situation. Becoming pregnant at an early age, may result in¹:

- 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
- Further teenage pregnancies i.e. conceiving again relatively quickly.

What can be done?

In November 2008, the Department of Health published a “Sexual Health Promotion Strategy and Action Plan (2008 – 2013)” with an Addendum to the Strategy published in March 2014². The Strategy states that “*with proper information and knowledge, people are more likely to avoid risky behaviour, use contraception, know what local services are available and be more likely to use them*”. The Strategy suggested the following to help prevent unwanted teenage pregnancies:

- Encourage young people to delay sexual relations until they are sufficiently mature to participate in a mutually respectful relationship
- Improve parent/child communication
- Encourage partnerships between parents, schools and health services to ensure a consistent approach
- Provide effective Relationship and Sexuality Education (RSE) in schools.

The Family Nurse Partnership³ is a voluntary preventive programme for teenage mothers, offering intensive and structured home visiting, delivered by specially trained ‘family nurses’, from early pregnancy until the child is two years old. What happens during pregnancy and in the first years of a baby’s life has a major influence on their subsequent behaviour, education, employment, health and other life chances.

OLDER MOTHERS

Why should we be concerned?

Fertility rates in NI show that women are postponing having children until later in life (Section 2). Pregnancies in older women can be complicated by:

- Increased chance of miscarriage
- Greater risk of complications in pregnancy e.g. diabetes, hypertension
- Higher rate of multiple births
- Delivering by Caesarean Section
- Congenital abnormalities are more common.

What can be done?

The Royal College of Obstetricians and Gynaecologists⁴ suggest that women be advised of the increased risk of delaying pregnancy and that infertility is more difficult to treat after the age of 40.

¹ Scottish Parliament Information Centre, “Teenage Pregnancy” briefing http://www.scottish.parliament.uk/ResearchBriefingsAndFactsheets/S4/SB_13-03.pdf

² Department of Health, “Sexual Health Promotion Strategy and Action Plan (2008 – 2013) and Addendum, <https://www.dhsspsni.gov.uk/publications/sexual-health-promotion-strategy-and-information>

³ Public Health Agency <http://www.publichealth.hscni.net/directorate-public-health/health-and-social-wellbeing-improvement/family-nurse-partnership>

⁴ Royal College of Obstetricians and Gynaecologists, “Reproductive Ageing” (Scientific Impact Paper No. 24 January 2011) https://www.rcog.org.uk/globalassets/documents/guidelines/scientific-impact-papers/sip_24.pdf

Key Points

- Births to teenage mothers have shown substantial reductions in the last five years. This is consistent with the decline in the age specific fertility rate in women under twenty. The decrease in actual numbers reflects less young women and a lower birth rate than in 1990s. In 2014/15, there were 712 infants born to mothers aged less than twenty years. Of these, 170 were to mothers aged less than eighteen years. [Page 17]
- In 2014, births to teenage mothers represented 2.9% of all births. This proportion has fallen consistently over the last five years. However the proportion of births to mothers aged 40 and over has increased from 3.6% in 2010/11 to 4.1% in 2014/15. [Page 17]
- Looking at deprivation quintiles across Northern Ireland, the proportion of births to teenage mothers falls from 5.0% in the most deprived areas to 1.3% in the least deprived. The opposite can be seen in the proportion of births to older mothers (40+), increasing from 2.6% in the most deprived areas to 7.3% in the least deprived areas. [Page 18]

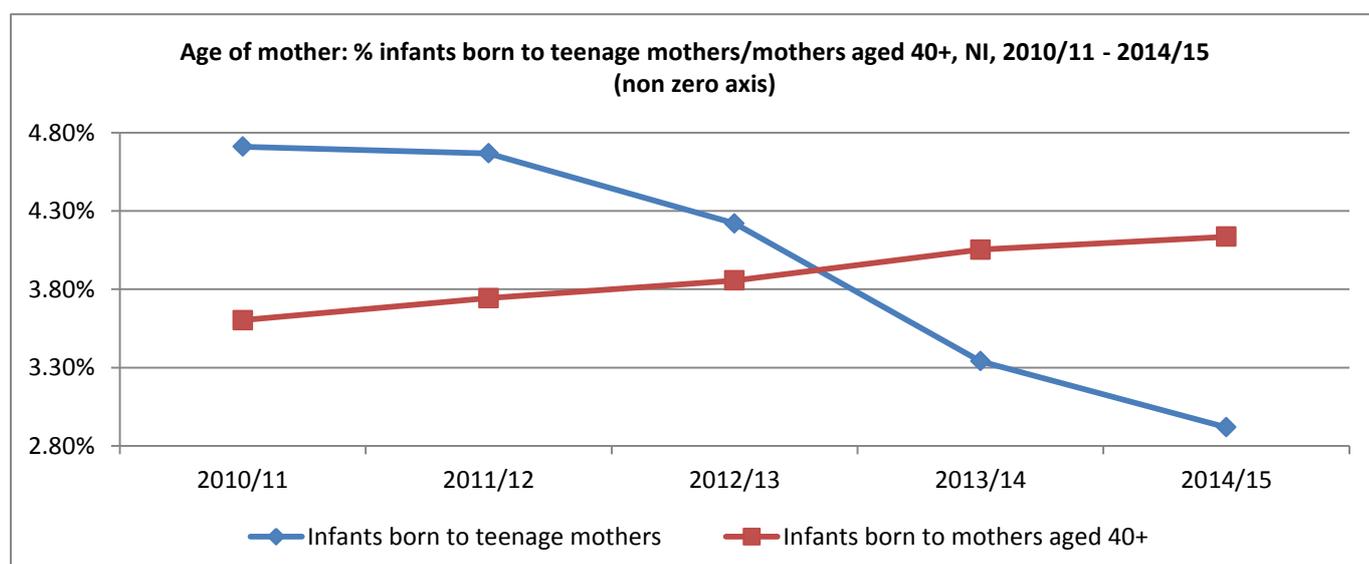
Table 3.1: Births to Northern Ireland residents, by age of mother, 2010/11 - 2014/15

Year of birth		Infants born by age of mother								Total	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			
2010/11	n	343	864	4,103	7,177	7,902	4,308	923	39	25,659	1,207	923
	%	1.3%	3.4%	16.0%	28.0%	30.8%	16.8%	3.6%	-	-	4.7%	3.6%
2011/12	n	318	863	4,098	7,196	7,706	4,172	947	9	25,309	1,181	947
	%	1.3%	3.4%	16.2%	28.4%	30.5%	16.5%	3.7%	-	-	4.7%	3.7%
2012/13	n	263	793	3,737	6,891	8,211	4,164	965	4	25,028	1,056	965
	%	1.1%	3.2%	14.9%	27.5%	32.8%	16.6%	3.9%	-	-	4.2%	3.9%
2013/14	n	187	624	3,466	6,780	7,955	4,280	984	1	24,277	811	984
	%	0.8%	2.6%	14.3%	27.9%	32.8%	17.6%	4.1%	-	-	3.3%	4.1%
2014/15	n	170	542	3,441	6,619	8,220	4,396	1,009	3	24,400	712	1,009
	%	0.7%	2.2%	14.1%	27.1%	33.7%	18.0%	4.1%	-	-	2.9%	4.1%

Source: Child Health System

Teenage refers to those aged less than twenty years

Figure 3.1: % infants born to teenage/older mothers, Northern Ireland, 2010/11 – 2014/15



Source: Child Health System

Table 3.2: Births to Northern Ireland residents, by age of mother, 2014/15

		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		
Birth status	Live	170	538	3,424	6,600	8,196	4,378	1,000	3	24,309	2.9%	4.1%
	Still	0	4	17	19	24	18	9	0	91	4.4%	9.9%
	All infants	170	542	3,441	6,619	8,220	4,396	1,009	3	24,400	2.9%	4.1%
Ethnic group of mother	White	150	514	3,254	6,266	7,798	4,132	939	0	23,053	2.9%	4.1%
	Non-white	8	20	135	263	313	204	54	0	997	2.8%	5.4%
	Not stated / Blank	12	8	52	90	109	60	16	3	350	5.8%	4.6%
	All infants	170	542	3,441	6,619	8,220	4,396	1,009	3	24,400	2.9%	4.1%
Place of birth	Altnagelvin	23	73	453	753	884	464	90	0	2,740	3.5%	3.3%
	Antrim	17	70	394	846	1,020	444	90	0	2,881	3.0%	3.1%
	Causeway	11	39	210	343	379	177	26	0	1,185	4.2%	2.2%
	Craigavon	26	84	524	1,078	1,455	682	160	0	4,009	2.7%	4.0%
	Daisy Hill	8	28	181	509	641	386	73	0	1,826	2.0%	4.0%
	Downe	0	≤3	14	22	21	7	≤3	0	65	0.0%	1.5%
	Lagan Valley	≤3	≤5	34	47	65	27	6	0	184	2.7%	3.3%
	Mater	≤3	≤10	46	65	49	25	≤3	0	195	3.6%	1.5%
	Royal	53	132	939	1,570	1,850	1,090	304	2	5,940	3.1%	5.1%
	SWAH	4	24	120	321	445	245	56	0	1,215	2.3%	4.6%
	Ulster	26	82	522	1,053	1,401	839	197	0	4,120	2.6%	4.8%
	Home/Other	0	0	4	12	10	10	3	1	40	0.0%	7.7%
All infants	170	542	3,441	6,619	8,220	4,396	1,009	3	24,400	2.9%	4.1%	
Trust of residence of mother	Belfast	49	123	777	1,279	1,445	842	206	1	4,722	3.6%	4.4%
	Northern	37	139	859	1,651	2,004	942	206	0	5,838	3.0%	3.5%
	South Eastern	25	79	577	1,106	1,457	846	224	2	4,316	2.4%	5.2%
	Southern	33	107	661	1,518	1,960	1,010	216	0	5,505	2.5%	3.9%
	Western	26	94	567	1,065	1,354	756	157	0	4,019	3.0%	3.9%
	All infants	170	542	3,441	6,619	8,220	4,396	1,009	3	24,400	2.9%	4.1%
Deprivation quintile based on residence of mother	Most deprived	70	210	1,223	1,756	1,519	688	146	0	5,612	5.0%	2.6%
	2	36	122	812	1,523	1,699	933	187	1	5,313	3.0%	3.5%
	3	29	94	646	1,358	1,887	944	197	0	5,155	2.4%	3.8%
	4	25	80	500	1,226	1,738	959	220	1	4,749	2.2%	4.6%
	Least deprived	10	36	260	756	1,377	872	259	1	3,571	1.3%	7.3%
	All infants	170	542	3,441	6,619	8,220	4,396	1,009	3	24,400	2.9%	4.1%

Source: Child Health System

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 the data

Section 4: Multiple Births

Why should we be concerned?

The incidence of multiple births (mainly twin births) has increased over the last 30 years from 1.1% of mothers in 1984 to 1.5% of mothers in 2014 having a multiple birth in Northern Ireland⁵. This may be due to the increased use of fertility treatments and the increase in the average age of a mother giving birth (older women are more likely to have a multiple pregnancy)⁶. However, having a multiple pregnancy increases the risk of:

- Maternal mortality
- Miscarriage
- Haemorrhage
- Anaemia
- Gestational diabetes
- Hypertensive disorders
- Preterm birth and
- Intervention during delivery e.g. forceps or Caesarean Section.

Infants are at risk of complications if the placenta is shared e.g. possible stillbirth. Other risks include low birth weight, congenital abnormalities and perinatal mortality^{7,8}.

What can be done?

The higher risks faced by the mother and infant in a multiple pregnancy need to be explained to women and births should take place in properly staffed hospitals. Providers of infertility services such as IVF should follow HFEA and NICE guidance on embryo transfer strategies.

⁵ Northern Ireland Statistics and Research Agency, Registrar General Annual Reports, 2014 and 1984 <http://www.nisra.gov.uk/demography/default.asp22.htm>

⁶ 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>

⁷ 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>

⁸ 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>

Key Points

- The proportion of infants born within a multiple birth has remained fairly steady over the last five years (2014/15 = 2.9%). [Page 20]
- The incidence of multiple births increases with mother's age. In 2014/15, across NI, less than 1% of births to mothers aged less than twenty years were multiple births, compared to almost 4.2% of births to mothers aged 40 and over. [Page 21]

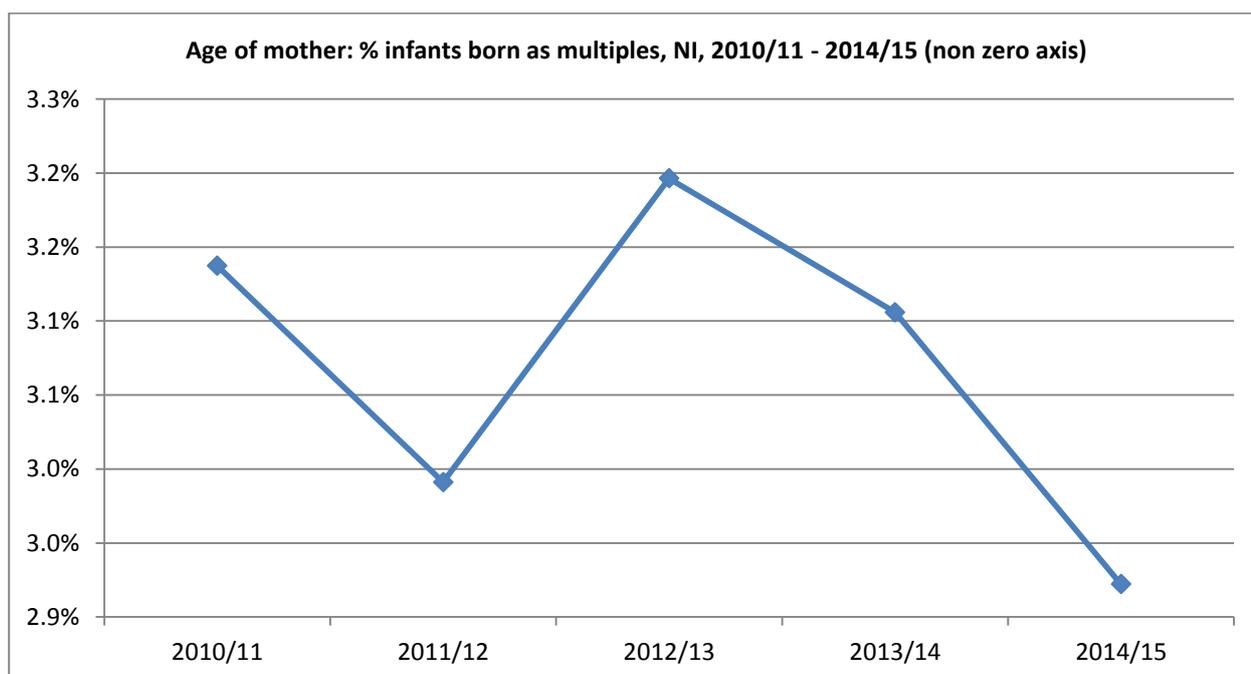
Table 4.1: Births to Northern Ireland residents, by singleton/multiple births, 2010/11 - 2014/15

Year of birth		Infants born by singleton/multiple birth				Infants born as multiples
		Single	Twin	Triplet	Total	
2010/11	n	24,854	784	21	25,659	805
	%	96.9%	3.1%	0.1%	-	3.1%
2011/12	n	24,552	748	9	25,309	757
	%	97.0%	3.0%	0.0%	-	3.0%
2012/13	n	24,228	782	18	25,028	800
	%	96.8%	3.1%	0.1%	-	3.2%
2013/14	n	23,523	742	12	24,277	754
	%	96.9%	3.1%	0.0%	-	3.1%
2014/15	n	23,687	698	15	24,400	713
	%	97.1%	2.9%	0.1%	-	2.9%

Source: Child Health System

Figures for multiple births show the number of infants born

Figure 4.1: % infants born as multiples, Northern Ireland, 2010/11 – 2014/15



Source: Child Health System

Table 4.2: Births to Northern Ireland residents, by singleton/multiple births, 2014/15

		Infants born by singleton/multiple birth			% infants born as multiples
		Single	Multiple	Total	
Birth status	Live	23,603	706	24,309	2.9%
	Still	84	7	91	7.7%
	All infants	23,687	713	24,400	2.9%
Age Group of mother	Under 20	708	4	712	0.6%
	20 - 24	3,383	58	3,441	1.7%
	25 - 29	6,453	166	6,619	2.5%
	30 - 34	7,952	268	8,220	3.3%
	35 - 39	4,221	175	4,396	4.0%
	40 +	967	42	1,009	4.2%
	Not known	3	0	3	0.0%
	All infants	23,687	713	24,400	2.9%
Ethnic group of mother	White	22,382	671	23,053	2.9%
	Non-white	963	34	997	3.4%
	Not stated / Blank	342	8	350	2.3%
	All infants	23,687	713	24,400	2.9%
Place of birth	Altnagelvin	2,673	67	2,740	2.4%
	Antrim	2,777	104	2,881	3.6%
	Causeway	1,163	22	1,185	1.9%
	Craigavon	3,881	128	4,009	3.2%
	Daisy Hill	1,776	50	1,826	2.7%
	Downe	65	0	65	0.0%
	Lagan Valley	184	0	184	0.0%
	Mater	195	0	195	0.0%
	Royal	5,758	182	5,940	3.1%
	SWAH	1,189	26	1,215	2.1%
	Ulster	3,992	128	4,120	3.1%
	Home/Other	34	6	40	15.0%
	All infants	23,687	713	24,400	2.9%
Trust of residence of mother	Belfast	4,592	130	4,722	2.8%
	Northern	5,643	195	5,838	3.3%
	South Eastern	4,183	133	4,316	3.1%
	Southern	5,345	160	5,505	2.9%
	Western	3,924	95	4,019	2.4%
	All infants	23,687	713	24,400	2.9%
Deprivation quintile based on residence of mother	Most deprived	5,462	150	5,612	2.7%
	2	5,153	160	5,313	3.0%
	3	4,996	159	5,155	3.1%
	4	4,595	154	4,749	3.2%
	Least deprived	3,481	90	3,571	2.5%
	All infants	23,687	713	24,400	2.9%

Source: Child Health System

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

Section 5: Infant Gestation

AT BOOKING

Why should we be concerned?

Women are encouraged to attend for antenatal care (booking appointment) at 10 weeks gestation and certainly before 12 weeks^{9,10}. At these early stages 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 will have uncomplicated pregnancies, some women will experience difficulties maybe as a result of risk factors e.g. smoking, obesity, and diabetes (see Section 6). 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.

It is recognised that the earlier a mother attends for antenatal care, the better the outcome for her and her baby. However there are some groups of women e.g. young mothers, women from a non-white ethnic group, and those living in more deprived areas who do not attend early in pregnancy (Table 5.2, page 25). A recent study¹¹ also associated late booking with those women who have had numerous prior births and those who were migrants to the UK or did not speak English well (if at all).

The current Maternity Strategy for Northern Ireland¹² outlines the type of care women should receive.

What can be done?

The Maternity Strategy for Northern Ireland set an objective: “*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*”.

AT DELIVERY

Why should we be concerned?

This report shows that almost 8% of infants born in 2014/15 in Northern Ireland were pre-term i.e. less than 37 weeks gestation at birth (Table 5.3, page 27).

The causes of premature birth are not always known, however there are recognised risk factors such as having had a previous premature birth, a previous late miscarriage, having a multiple birth and smoking^{13,14}. An infant born pre-term is at greater risk of neonatal death, neurological disorders e.g. cerebral palsy, infection, visual/hearing impairment and respiratory illness.

What can be done?

World Health Organisation guidelines¹⁵ 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. progesterational 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*”.

⁹National Institute for Health and Care Excellence (NICE) “Antenatal care”, Quality Standard, September 2012 <http://www.nice.org.uk/guidance/gs22/resources/antenatal-care-2098542418117>

¹⁰ Department of Health “A Strategy for Maternity Care in Northern Ireland, 2012 - 2018” <https://www.dhsspsni.gov.uk/publications/strategy-maternity-care-northern-ireland-2012-2018>

¹¹ 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>

¹² As

¹³ Royal College of Obstetricians and Gynaecologists, “Premature labour”, 2014 <https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-premature-labour.pdf>

¹⁴ World Health Organisation, “Born too soon - The global action report on preterm birth”, 2012 http://www.who.int/maternal_child_adolescent/documents/born_too_soon/en/

¹⁵ World Health Organisation, “WHO recommendations on interventions to improve preterm birth outcomes” 2015 http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/preterm-birth-guideline/en/

Key Points

- In 2014/15, almost 93% of births are less than 15 weeks gestation at the time of booking. This proportion has increased slightly year on year since 2010/11 (89.8%). *[Page 24]*
- There were 431 (1.8%) infants born to women who were estimated to be 28 weeks or more gestation at booking. *[Page 24]*
- The proportion of infants born to mothers booking at 15 or more weeks varies by age of mother. In 2014/15, almost 19% of births to mothers aged less than twenty were booked at 15+ weeks. This results in a larger proportion of births to mothers in this age group booked at later gestations e.g. 4.7% booked at 28+ weeks compared to 2.2% of infants born to mothers aged 40 and over (all infants = 1.8%). *[Page 25]*
- There are substantial differences in the timescales of when mothers book by ethnic group. 27.2% of births to mothers from a 'non-white' ethnic group booked at 15+ weeks, compared to 6.6% of those of a white ethnic group (all births = 7.2%). *[Page 25]*
- In 2014/15, data revealed that fewer mothers booked at less than 15 weeks gestation in the most deprived areas of Northern Ireland (90.5% of births), compared to births to those mothers from least deprived areas (93.7%). *[Page 26]*
- Over the last five years there has been little variation in the proportion of infants born pre-term (<37 weeks gestation). (2014/15 = 7.6%) *[Page 27]* The figures differ considerably by type of birth: 7.4% of live births, 74.4% of still births. The same can be seen for multiple births (63.3%) compared to singleton births (6.0%). *[Page 28]*
- In 2014/15, a higher proportion of infants were born pre-term to those mothers aged 40 and over (13.7%), compared to all infants born (7.6%). *[Page 28]*

GESTATION AT BOOKING

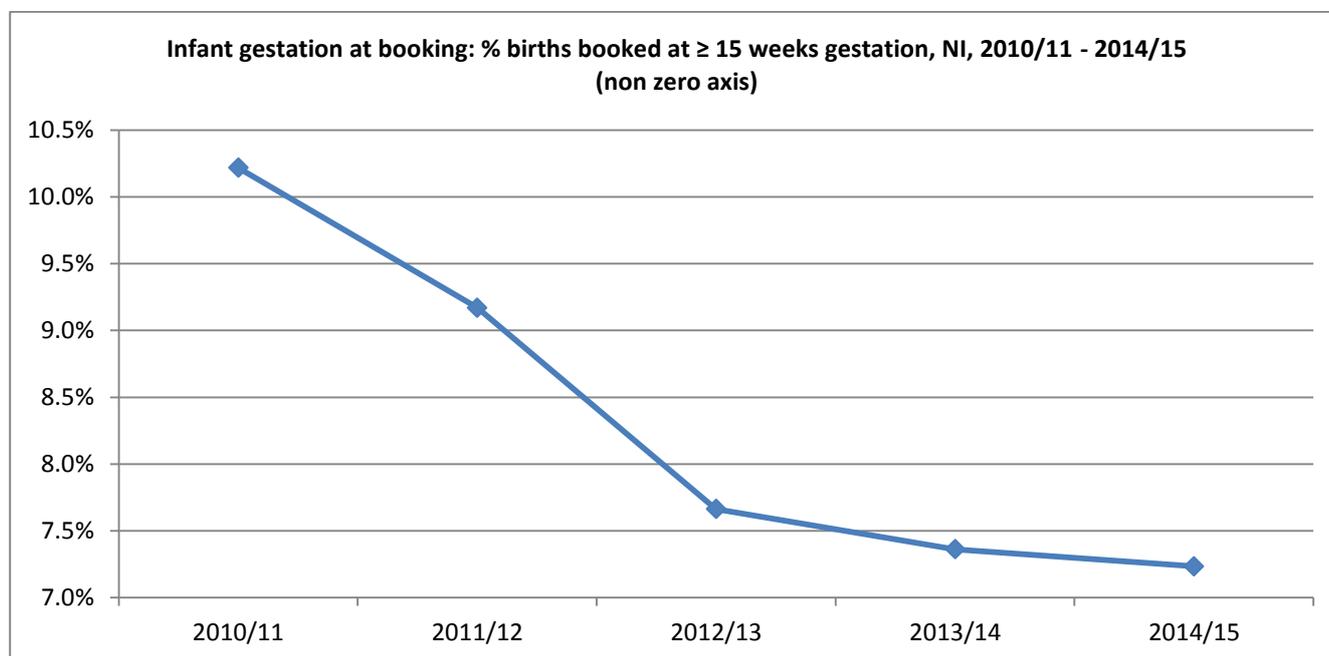
Table 5.1: Gestation at booking for births in Northern Ireland by completed weeks, 2010/11 - 2014/15

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	
2010/11	n	19,567	1,420	353	170	170	114	37	21,831	2,227
	%	89.8%	6.5%	1.6%	0.8%	0.8%	0.5%	-	-	10.2%
2011/12	n	22,504	1,355	374	216	178	149	39	24,815	2,272
	%	90.8%	5.5%	1.5%	0.9%	0.7%	0.6%	-	-	9.2%
2012/13	n	23,281	1,087	338	203	161	143	31	25,244	1,932
	%	92.3%	4.3%	1.3%	0.8%	0.6%	0.6%	-	-	7.7%
2013/14	n	22,651	1,047	334	176	150	93	13	24,464	1,800
	%	92.6%	4.3%	1.4%	0.7%	0.6%	0.4%	-	-	7.4%
2014/15	n	22,762	1,022	322	202	164	65	6	24,543	1,775
	%	92.8%	4.2%	1.3%	0.8%	0.7%	0.3%	-	-	7.2%

Source: NIMATS

Data for Western area hospitals for 2010/11 is very limited as bookings were not recorded on NIMATS until January 2011 and births from June 2011

Figure 5.1: % births booked at ≥ 15 weeks gestation, Northern Ireland, 2010/11 – 2014/15



Source: NIMATS

Table 5.2: Gestation at booking for births in Northern Ireland by completed weeks, 2014/15

		Infants born by gestation at booking, 2014/15							Total	% booking at ≥ 15 weeks
		≤ 14 weeks	15 - 20 weeks	21 - 27 weeks	28 - 32 weeks	33 - 36 weeks	37+ weeks	Not known		
Age Group of mother	Under 20	639	76	34	21	14	≤3	≤3	787	18.7%
	20 - 24	3,186	193	72	49	31	13	0	3,544	10.1%
	25 - 29	6,269	256	71	57	34	16	2	6,705	6.5%
	30 - 34	7,794	245	87	43	47	17	1	8,234	5.3%
	35 - 39	4,023	183	39	24	28	14	2	4,313	6.7%
	40 +	851	69	19	8	10	≤3	≤3	960	11.4%
	All infants	22,762	1,022	322	202	164	65	6	24,543	7.2%
Multiple births	Single	22,093	1,000	314	192	160	65	6	23,830	7.3%
	Multiple	669	22	8	10	4	0	0	713	6.2%
	All infants	22,762	1,022	322	202	164	65	6	24,543	7.2%
Ethnic group of mother	White	22,243	934	283	170	144	52	5	23,831	6.6%
	Non-white	485	81	37	30	20	13	1	667	27.2%
	Not stated / Blank	34	7	2	2	0	0	0	45	24.4%
	All infants	22,762	1,022	322	202	164	65	6	24,543	7.2%
Place of birth	Altnagelvin	2,656	104	26	26	17	6	0	2,835	6.3%
	Antrim	2,699	100	40	22	18	≤5	≤3	2,883	6.4%
	Causeway	1,131	32	8	≤3	8	≤5	≤3	1,186	4.6%
	Craigavon	3,768	154	50	29	22	9	1	4,033	6.5%
	Daisy Hill	1,729	65	18	7	18	10	1	1,848	6.4%
	Downe	63	≤3	≤3	≤3	≤3	≤3	≤3	65	3.1%
	Lagan Valley	165	8	≤3	≤3	≤3	≤3	≤3	181	8.8%
	Mater	179	20	0	0	0	0	0	199	10.1%
	Royal	5,365	337	115	75	31	17	2	5,942	9.7%
	SWAH	1,134	55	12	9	7	≤3	≤3	1,220	7.0%
	Ulster	3,851	143	48	28	38	10	2	4,120	6.5%
	Home/Other	22	≤3	≤3	≤3	≤5	≤3	≤3	31	29.0%
	All infants	22,762	1,022	322	202	164	65	6	24,543	7.2%

Table 5.2 continued: Gestation at booking for births in Northern Ireland by completed weeks, 2014/15

		Infants born by gestation at booking, 2014/15							% 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	4,241	272	96	61	27	16	0	4,713	10.0%
	Northern	5,451	203	65	36	38	10	0	5,803	6.1%
	South Eastern	3,982	163	52	34	32	10	6	4,279	6.8%
	Southern	5,121	208	71	36	36	18	0	5,490	6.7%
	Western	3,736	154	33	28	25	6	0	3,982	6.2%
	Not known	231	22	5	7	6	5	0	276	16.3%
	All infants	22,762	1,022	322	202	164	65	6	24,543	7.2%
Deprivation quintile based on residence of mother	Most deprived	5,060	312	102	63	34	21	0	5,592	9.5%
	2	4,945	203	60	42	30	13	1	5,294	6.6%
	3	4,768	200	59	25	36	10	1	5,099	6.5%
	4	4,414	167	63	32	25	8	1	4,710	6.3%
	Least deprived	3,344	118	33	33	33	8	3	3,572	6.3%
	Not known	231	22	5	7	6	5	0	276	16.3%
	All infants	22,762	1,022	322	202	164	65	6	24,543	7.2%

Source: NIMATS

Due to small numbers, it is not possible to show data by individual ethnic group
Disclosure controls have been applied to the data

GESTATION AT DELIVERY

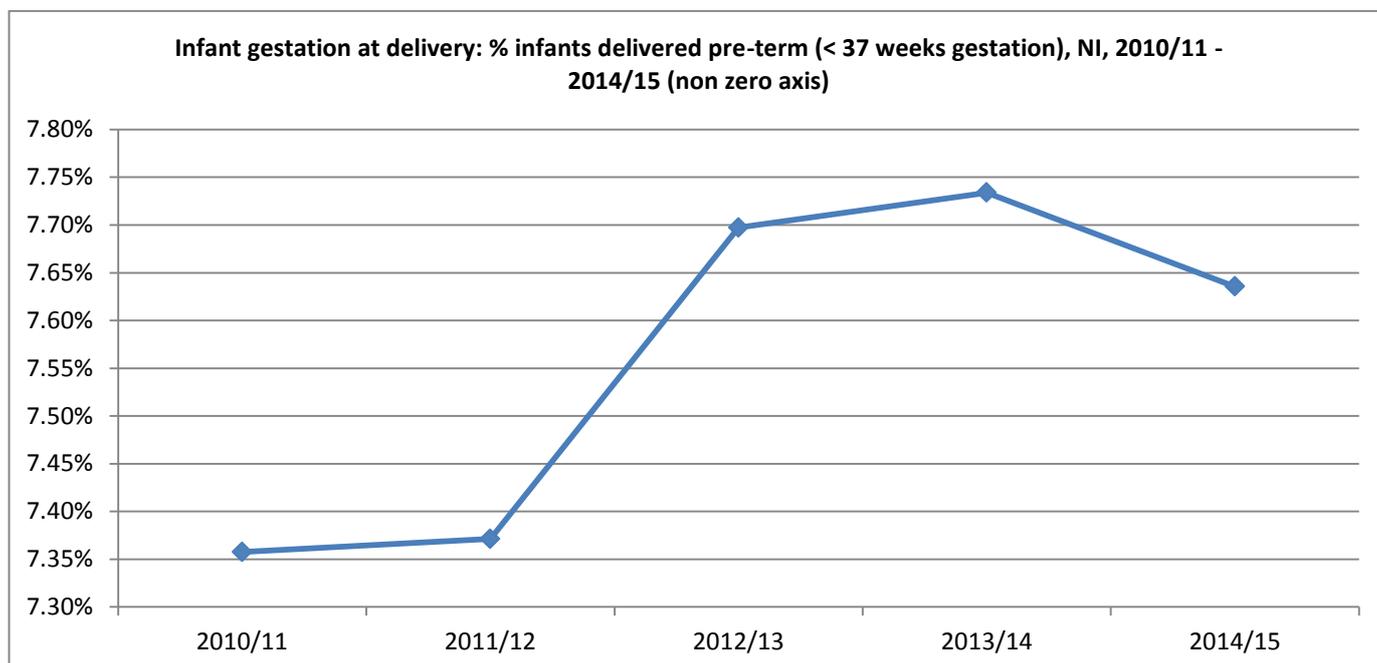
Table 5.3: Gestation at delivery for births in Northern Ireland by completed weeks, 2010/11 - 2014/15

Year of birth		Infants born by gestation at delivery						Total	Infants born pre-term (< 37 wks)
		< 28 weeks	28 - 31 weeks	32 - 36 weeks	37 - 38 weeks	39+ weeks	Not known		
2010/11	n	105	180	1,321	4,127	16,095	3	21,831	1,606
	%	0.48%	0.82%	6.05%	18.91%	73.74%	-	-	7.36%
2011/12	n	124	201	1,504	4,581	18,403	2	24,815	1,829
	%	0.50%	0.81%	6.06%	18.46%	74.17%	-	-	7.37%
2012/13	n	120	206	1,617	4,655	18,645	1	25,244	1,943
	%	0.48%	0.82%	6.41%	18.44%	73.86%	-	-	7.70%
2013/14	n	110	217	1,565	4,535	18,037	0	24,464	1,892
	%	0.45%	0.89%	6.40%	18.54%	73.73%	-	-	7.73%
2014/15	n	107	230	1,537	4,695	17,974	0	24,543	1,874
	%	0.44%	0.94%	6.26%	19.13%	73.23%	-	-	7.64%

Source: NIMATS

Data for Western area hospitals for 2010/11 is very limited as bookings were not recorded on NIMATS until January 2011 and births from June 2011

Figure 5.2: % infants delivered pre-term (<37 weeks gestation), Northern Ireland, 2010/11 – 2014/15



Source: NIMATS

Table 5.4: Gestation at delivery for births in Northern Ireland by completed weeks, 2014/15

		Infants born by gestation at delivery, 2014/15							% 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	8	10	55	114	600	0	787	9.28%
	20 - 24	15	47	206	622	2,654	0	3,544	7.56%
	25 - 29	27	60	371	1,168	5,079	0	6,705	6.83%
	30 - 34	23	61	508	1,574	6,068	0	8,234	7.19%
	35 - 39	23	32	297	967	2,994	0	4,313	8.16%
	40 +	11	20	100	250	579	0	960	13.65%
	All infants	107	230	1,537	4,695	17,974	0	24,543	7.64%
Multiple births	Single	86	163	1,174	4,441	17,966	0	23,830	5.97%
	Multiple	21	67	363	254	8	0	713	63.25%
	All infants	107	230	1,537	4,695	17,974	0	24,543	7.64%
Birth status	Live	89	214	1,504	4,688	17,958	0	24,453	7.39%
	Still	18	16	33	7	16	0	90	74.44%
	All infants	107	230	1,537	4,695	17,974	0	24,543	7.64%
Ethnic group of mother	White	101	220	1,494	4,510	17,505	0	23,830	7.62%
	Non-white	≤5	≤10	38	175	443	0	667	7.35%
	Not stated / Blank	≤5	≤5	5	10	26	0	46	21.74%
	All infants	107	230	1,537	4,695	17,974	0	24,543	7.64%
Place of birth	Altnagelvin	17	28	181	525	2,084	0	2,835	7.97%
	Antrim	5	27	223	560	2,068	0	2,883	8.84%
	Causeway	≤3	≤3	33	251	898	0	1,186	3.12%
	Craigavon	12	55	343	884	2,739	0	4,033	10.17%
	Daisy Hill	≤3	≤10	95	267	1,477	0	1,848	5.63%
	Downe	0	0	0	7	58	0	65	0.00%
	Lagan Valley	0	0	0	24	157	0	181	0.00%
	Mater	0	0	0	17	182	0	199	0.00%
	Royal	57	81	349	1,180	4,275	0	5,942	8.20%
	SWAH	≤5	≤3	64	213	938	0	1,220	5.66%
	Ulster	8	29	249	763	3,071	0	4,120	6.94%
	Home/Other	0	0	0	4	27	0	31	0.00%
	All infants	107	230	1,537	4,695	17,974	0	24,543	7.64%
Trust of residence of mother	Belfast	23	45	277	890	3,493	0	4,728	7.30%
	Northern	13	55	359	1,157	4,229	0	5,813	7.35%
	South Eastern	16	36	266	782	3,195	0	4,295	7.40%
	Southern	26	66	390	1,093	3,925	0	5,500	8.76%
	Western	27	25	223	735	3,004	0	4,014	6.85%
	Not known	2	3	22	38	128	0	193	13.99%
	All infants	107	230	1,537	4,695	17,974	0	24,543	7.64%
Deprivation quintile based on residence of mother	Most deprived	31	61	354	1,115	4,042	0	5,603	7.96%
	2	20	47	356	1,023	3,839	0	5,285	8.00%
	3	21	50	346	913	3,818	0	5,148	8.10%
	4	16	48	271	944	3,465	0	4,744	7.06%
	Least deprived	17	21	188	662	2,682	0	3,570	6.33%
	Not known	2	3	22	38	128	0	193	13.99%
	All infants	107	230	1,537	4,695	17,974	0	24,543	7.64%

Source: NIMATS

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

Disclosure controls have been applied to the data

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. The Public Health Agency¹⁶ provides information on the effects of smoking while pregnant. Smoking in pregnancy is linked to:

- Pregnancy complications e.g. problems with the placenta
- Premature delivery/still birth/miscarriage
- Low birth weight/small for gestational age – increased risk of infection, other health problems and neonatal death
- Higher carbon monoxide levels as a result of smoking 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 of¹⁷:

- Sudden or unexplained death (SIDS)
- Developing respiratory conditions such as asthma, chest infections
- Developing behavioural problems e.g. Attention Deficit Hyperactivity Disorder (ADHD) which consequently may result in poor educational achievement and decreased opportunities in later life.

What can be done?

Further information on interventions during pregnancy is available in guidance from NICE “Smoking: stopping in pregnancy and after childbirth”¹⁸.

DIABETES

Why should we be concerned?

NICE Clinical Guidelines describes the additional risk to mother and baby associated with Type 1 and Type 2 diabetes. Women with diabetes are more likely to:

- Give birth by Caesarean Section
- Deliver an infant that was large for gestational age

Women may also have an increased risk of pre-eclampsia or miscarriage¹⁹.

Infants born to mothers with diabetes are at a greater risk of²⁰:

- Stillbirth
- Being born pre-term (<37 weeks gestation)
- Neonatal death
- Congenital abnormality.

Gestational diabetes 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.

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:

- Being overweight, having a high BMI or a large waist measurement (more than 80cm/31.5 inches in women)
- Coming from an African-Caribbean, Black African, Chinese or South Asian background and aged over 25 or from another ethnic background and aged over 40 years
- Having a close relative e.g. parent, brother or sister with diabetes.

The 2015 NICE²¹ guidance focuses on the additional/different care that a woman with diabetes should be offered and provides advice on best practice for the care of the mother/baby.

Pre pregnancy clinics are available throughout Northern Ireland for women with a history of Type 1, Type 2 and a past history of Gestational Diabetes who should attend early if they are planning pregnancy. An online resource “Women with Diabetes” is available at www.womenwithdiabetes.net

¹⁶ Public Health Agency, Want2Stop <http://www.want2stop.info/know-about-smoking/smoking-and-pregnancy>

¹⁷ Institute of Public Health, “A Tobacco-Free Future: An All-Ireland 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>

¹⁸ 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>

¹⁹ “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/>

²⁰ Diabetes UK, “Diabetes: Facts and Stats”, May 2015 <https://www.diabetes.org.uk/Documents/Position%20statements/Facts%20and%20stats%20June%202015.pdf>

²¹ National Institute for Health and Care Excellence (NICE) “Diabetes in pregnancy: management from preconception to the postnatal period”, February 2015 <http://www.nice.org.uk/guidance/ng3>

Key Points

- In 2014/15 (at time of booking) [Page 30]:
 - 14.5% of mothers smoked (2010/11 = 15.3%)
 - 5.6% of mothers had diabetes (2010/11 = 1.7%)
 - 4.3% of mothers had pregnancy induced hypertension (2010/11 = 4.5%)
 - 3.3% of mothers had anaemia (2010/11 = 3.7%)
- Smoking: the proportion of mothers who smoked (at booking) decreased with age, from 32.7% of those aged under 20 years to 8.3% of those aged 40 and over. The same can be seen when considering deprivation level, from 26.3% of those mothers living in the most deprived areas to 6.1% in the least deprived areas. [Page 31]
- Diabetes: the percentage of mothers with diabetes increased with age. 2.4% of those aged less than 20 years, compared to 10.7% of mothers aged 40 and over. A considerably higher proportion of mothers from an Asian ethnic background had diabetes (16.8%), compared to all mothers (5.8%). [Page 31]

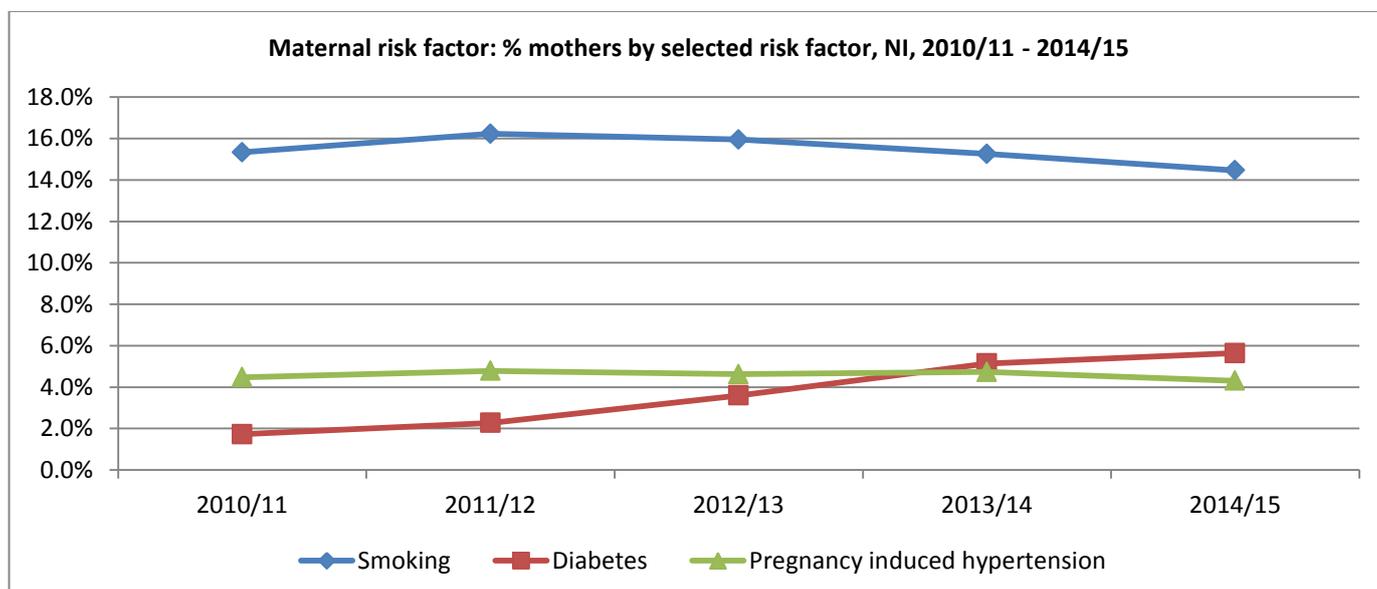
Table 6.1: Mothers by maternal risk factor, 2010/11 - 2014/15

Year of birth		Maternal risk factor						
		Mothers giving birth	Smoking	Diabetes	Pregnancy induced hypertension	Anaemia	Alcohol use	Antepartum haemorrhage (APH)
2010/11	n	25,682	3,938	444	1,150	955	22	569
	%	-	15.3%	1.7%	4.5%	3.7%	0.09%	2.2%
2011/12	n	25,358	4,114	576	1,214	875	27	753
	%	-	16.2%	2.3%	4.8%	3.5%	0.11%	3.0%
2012/13	n	24,857	3,965	894	1,149	1,107	26	723
	%	-	16.0%	3.6%	4.6%	4.5%	0.10%	2.9%
2013/14	n	24,094	3,676	1,239	1,139	1,008	25	667
	%	-	15.3%	5.1%	4.7%	4.2%	0.10%	2.8%
2014/15	n	24,199	3,500	1,365	1,042	789	19	628
	%	-	14.5%	5.6%	4.3%	3.3%	0.08%	2.6%

Source: Child Health System

Note that there have been a number of initiatives specifically targeting diabetic mothers and this is likely to have improved the recording of diabetes as a risk factor at time of booking

Figure 6.1: % mothers by selected risk factor, Northern Ireland, 2010/11 – 2014/15



Source: Child Health System

Table 6.2: Mothers by maternal risk factor, 2014/15

		% mothers by risk factor						
		Total mothers	Smoking	Diabetes	Pregnancy induced hypertension	Anaemia	Alcohol use	Antepartum haemorrhage (APH)
Age Group of mother	Under 20	710	32.68%	2.39%	5.07%	6.06%		2.39%
	20 - 24	3,414	27.42%	3.90%	3.84%	4.28%		3.05%
	25 - 29	6,556	16.40%	4.48%	4.65%	3.43%		2.68%
	30 - 34	8,151	9.79%	5.64%	3.94%	2.59%		2.10%
	35 - 39	4,364	8.59%	8.11%	4.38%	2.89%		2.77%
	40 +	1,001	8.29%	10.69%	5.79%	3.80%		3.90%
	Not known	3	33.33%	0.00%	0.00%	0.00%		0.00%
	All mothers	24,199	14.46%	5.64%	4.31%	3.26%		2.60%
Multiple births	Single	23,842	14.51%	5.61%	4.25%	3.20%		2.58%
	Multiple	357	11.48%	7.56%	8.12%	7.00%		3.92%
	All mothers	24,199	14.46%	5.64%	4.31%	3.26%		2.60%
First time mothers	First time mother	9,359	12.93%	4.97%	6.41%	2.46%		2.66%
	Not a first time mother	14,550	15.34%	6.12%	3.00%	3.82%		2.59%
	Not known	290	20.00%	3.10%	2.07%	1.03%		0.69%
	All mothers	24,199	14.46%	5.64%	4.31%	3.26%		2.60%
Ethnic group of mother	White	22,868	14.67%	5.52%	4.35%	3.24%		2.62%
	Asian	220	1.36%	16.82%	1.82%	3.18%		2.73%
	Black	111	3.60%	6.31%	3.60%	8.11%		0.90%
	Mixed	365	12.33%	7.12%	4.11%	3.84%		3.01%
	Other	287	13.59%	9.41%	6.27%	4.53%		3.14%
	Not stated / Blank	348	15.52%	1.44%	1.72%	1.72%		0.86%
	All mothers	24,199	14.46%	5.64%	4.31%	3.26%		2.60%
Place of birth	Altnagelvin	2,797	15.87%	5.79%	4.50%	3.65%		2.79%
	Antrim	2,831	13.32%	10.77%	3.67%	2.12%		1.87%
	Causeway	1,175	15.49%	0.85%	3.57%	2.47%		0.94%
	Craigavon	3,964	11.43%	5.47%	5.02%	3.53%		2.02%
	Daisy Hill	1,827	11.11%	0.11%	2.63%	3.56%		2.03%
	Downe	65	16.92%	0.00%	0.00%	6.15%		1.54%
	Lagan Valley	184	16.85%	0.00%	0.00%	1.63%		0.54%
	Mater	195	25.13%	0.00%	0.00%	1.54%		0.00%
	Royal	5,854	18.57%	6.25%	4.94%	3.91%		3.16%
	SWAH	1,210	11.82%	3.22%	3.22%	3.06%		2.23%
	Ulster	4,060	12.76%	6.50%	4.78%	2.88%		3.82%
	Home/Other	37	5.41%	0.00%	2.70%	0.00%		0.00%
	All mothers	24,199	14.46%	5.64%	4.31%	3.26%		2.60%
Trust of residence of mother	Belfast	4,657	19.63%	5.93%	4.23%	3.71%		3.37%
	Northern	5,740	13.78%	7.37%	4.18%	2.68%		1.92%
	South Eastern	4,249	14.14%	5.74%	4.78%	3.11%		3.04%
	Southern	5,425	11.24%	3.96%	4.26%	3.52%		2.27%
	Western	3,970	14.63%	5.11%	4.11%	3.45%		2.62%
	Not known	158	1.90%	2.53%	5.06%	1.27%		3.16%
	All mothers	24,199	14.46%	5.64%	4.31%	3.26%		2.60%
Deprivation quintile based on residence of mother	Most deprived	5,536	26.30%	6.14%	4.53%	4.03%		3.11%
	2	5,233	16.03%	5.68%	4.05%	3.59%		2.62%
	3	5,074	10.86%	5.05%	4.38%	3.07%		1.99%
	4	4,672	9.31%	5.84%	4.43%	2.78%		2.42%
	Least deprived	3,526	6.13%	5.53%	4.03%	2.55%		2.84%
	Not known	158	1.90%	2.53%	5.06%	1.27%		3.16%
	All mothers	24,199	14.46%	5.64%	4.31%	3.26%		2.60%

Source: Child Health System

Alcohol use - figures are too small and so have not been provided

Section 7: Maternal BMI

Why should we be concerned?

This report highlights that almost one fifth of mothers giving birth in Northern Ireland in 2014/15 were obese (BMI \geq 30) (Table 7.1, page 33). A recent annual report by the Chief Medical Officer (England)²², stated that obesity in pregnancy is linked to the following:

- Greater risk of miscarriage
- Greater risk of developing gestational diabetes
- Perinatal complications e.g. shoulder dystocia
- Greater risk of conditions such as diabetes and hypertension to both mother and child.

The Royal College of Obstetricians and Gynaecologists²³ 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 born to a mother who is obese include²⁴:

- Greater risk of neural tube defects (problems with development of brain and spine)
- Having a larger baby
- Being born preterm
- The increased risk of obesity and diabetes in later life.

Maternal obesity has been linked also to low breastfeeding rates and adverse cardiovascular and respiratory outcomes in children²⁵.

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"²⁶ and the Department of Health framework "A Fitter Future for All"²⁷ encourage people to make healthy choices, to improve their health and wellbeing and to reduce the risk of diseases relating to obesity.

For women who are already pregnant or are planning conception, healthy eating, appropriate physical activity, increased dose of folic acid and vitamin D supplements are encouraged, particularly in obese women. Due to the risks highlighted above, women who are obese are more likely to need specialist health care during their pregnancy, in birth and postnatally. Various guidelines, recommendations and resources are available to health care professionals to encourage better weight management in pregnancy²⁸.

²² "Annual Report of the Chief Medical Officer, 2014, The Health of the 51%: Women" https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/484383/cmo-report-2014.pdf

²³ Royal College of Obstetricians and Gynaecologists "Why your weight matters during pregnancy and after birth" https://www.rcog.org.uk/en/patients/patient-leaflets/why-your-weight-matters-during-pregnancy-and-after-birth/?t_id=1B2M2Y8AsqTpgAmY7PhCiq%3d%3d&t_q=obesity+and+pregnancy&t_tags=language%3aen%2csiteid%3a39338ee9-cb61-4e10-a686-8f4a5e1b76d7&t_ip=81.145.165.209&t_hit.id=EPIServer_Templates_RCOG_Models_Pages_PatientGuidelinesDetailsType/a0e7baf6-8ee1-45e5-921f-727dce8de07_en&t_hit.pos=9

²⁴ As²⁵
²⁵ National Obesity Observatory (part of Public Health England) http://www.noo.org.uk/NOO_about_obesity/maternal_obesity_2015

²⁶ Choose to Live Better, Public Health Agency <http://www.choosetolivebetter.com/>

²⁷ "A Fitter Future for All", Department of Health <https://www.dhsspsni.gov.uk/publications/obesity-prevention-framework-and-reports>

²⁸ Centre for Maternal and Child Enquiries/Royal College of Obstetricians and Gynaecologists. Joint guideline "Management of Women with Obesity in Pregnancy", 2010 <https://www.rcog.org.uk/globalassets/documents/guidelines/cmacercojointguidelinemanagementwomenobesitypregnancya.pdf> and National Institute for Health and Care Excellence (NICE), "Weight management before, during and after pregnancy", 2010 <http://www.nice.org.uk/guidance/ph27/resources/weight-management-before-during-and-after-pregnancy-1996242046405>

Key Points

- Almost 20% of mothers giving birth during 2014/15 were measured as obese at time of booking appointment. This proportion has increased year on year since 2010/11. [Page 33]
- In 2014/15, almost half (49.3%) of all mothers at the time of booking, are considered pre-obese or obese. [Page 33]
- Levels of obesity in mothers increased with age e.g. in 2014/15, 36.2% of mothers aged less than twenty years were considered pre-obese/obese compared to 59.6% of mothers aged 40 and over. [Page 34]
- Levels of obesity decreased as level of deprivation decreased. In 2014/15, 51.81% of mothers from most deprived areas were classified as pre-obese/obese compared to 46.0% from the least deprived areas. [Page 34]

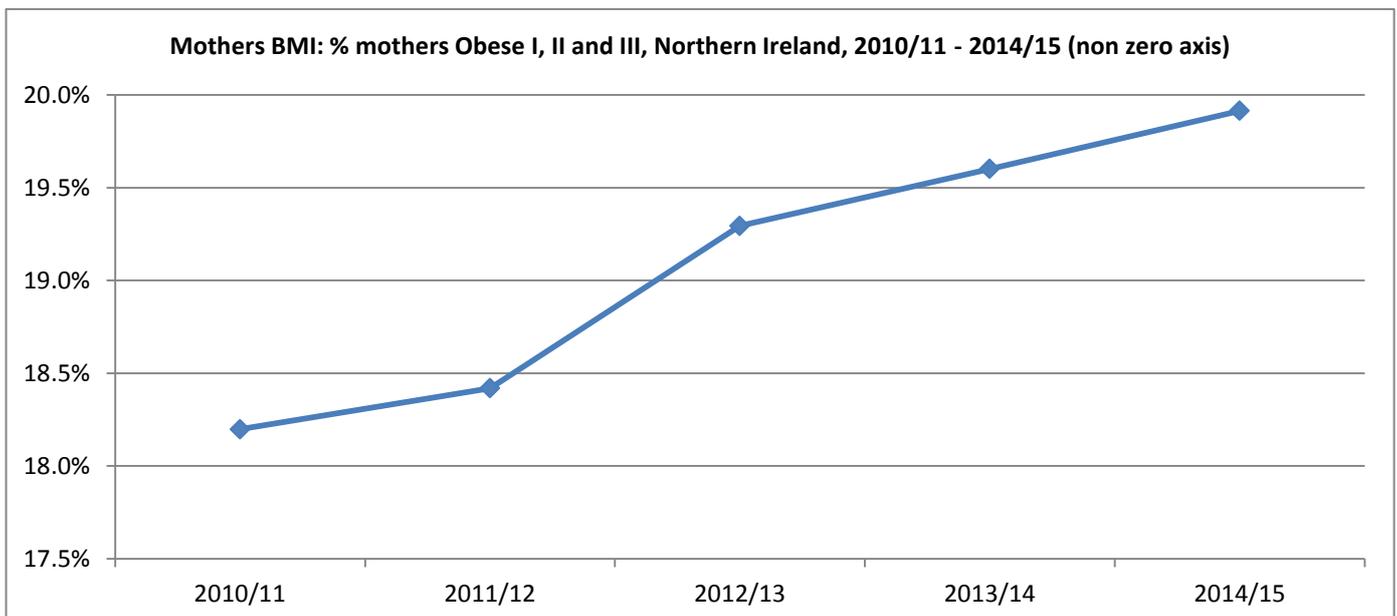
Table 7.1: Body Mass Index, at time of booking, of mothers who gave birth in Northern Ireland, 2010/11 - 2014/15

Year of birth		Mothers by BMI at booking							Total	Total: Obese I, II and III
		Underweight (<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		
2010/11	n	432	9,590	5,702	2,209	877	412	2,275	21,497	3,498
	%	2.2%	49.9%	29.7%	11.5%	4.6%	2.1%	-	-	18.2%
2011/12	n	492	11,758	6,880	2,774	1,048	497	987	24,436	4,319
	%	2.1%	50.1%	29.3%	11.8%	4.5%	2.1%	-	-	18.4%
2012/13	n	513	11,951	7,120	3,003	1,126	553	565	24,831	4,682
	%	2.1%	49.2%	29.3%	12.4%	4.6%	2.3%	-	-	19.3%
2013/14	n	472	11,569	7,015	2,945	1,182	519	377	24,079	4,646
	%	2.0%	48.8%	29.6%	12.4%	5.0%	2.2%	-	-	19.6%
2014/15	n	479	11,613	7,026	2,954	1,221	579	313	24,185	4,754
	%	2.0%	48.6%	29.4%	12.4%	5.1%	2.4%	-	-	19.9%

Source: NIMATS

Data for Western area hospitals for 2010/11 is very limited as bookings were not recorded on NIMATS until January 2011 and births from June 2011

Figure 7.1: % mothers Obese I, II and III, Northern Ireland, 2010/11 – 2014/15



Source: NIMATS

Table 7.2: Body Mass Index, at time of booking, of mothers who gave birth in Northern Ireland, 2014/15

		Mothers by BMI at booking, 2014/15							Total	% obese I, II and III
		Underweight (<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		
Age Group of mother	Under 20	47	447	180	73	24	3	10	784	12.9%
	20 - 24	134	1,712	922	433	176	80	58	3,515	19.9%
	25 - 29	136	3,181	1,944	796	334	158	71	6,620	19.7%
	30 - 34	125	3,947	2,354	967	405	201	103	8,102	19.7%
	35 - 39	31	1,957	1,319	531	226	101	57	4,222	20.6%
	40 +	6	369	307	154	56	36	14	942	26.5%
	All mothers	479	11,613	7,026	2,954	1,221	579	313	24,185	19.9%
Multiple births	Single	470	11,467	6,907	2,908	1,204	570	304	23,830	19.9%
	Multiple	9	146	119	46	17	9	9	355	20.8%
	All mothers	479	11,613	7,026	2,954	1,221	579	313	24,185	19.9%
Ethnic group of mother	White	453	11,280	6,805	2,881	1,199	573	293	23,484	20.1%
	Non-white	22	317	211	68	21	5	10	654	14.6%
	Not stated / Blank	4	16	10	5	1	1	8	45	18.9%
	All mothers	479	11,613	7,026	2,954	1,221	579	313	24,185	19.9%
Place of birth	Altnagelvin	58	1,324	814	361	156	80	6	2,799	21.4%
	Antrim	61	1,308	851	364	133	86	28	2,831	20.8%
	Causeway	40	607	347	128	48	≤3	≤3	1,175	15.2%
	Craigavon	68	1,916	1,173	465	222	102	23	3,969	20.0%
	Daisy Hill	20	878	572	220	93	30	10	1,823	18.9%
	Downe	≤3	39	16	5	≤3	≤3	≤5	65	8.2%
	Lagan Valley	≤3	104	57	13	≤3	≤3	≤3	181	8.4%
	Mater	≤3	106	70	20	≤3	0	≤3	199	10.1%
	Royal	120	2,797	1,683	701	286	179	83	5,849	20.2%
	SWAH	30	611	350	134	62	19	1	1,207	17.8%
	Ulster	74	1,907	1,084	538	219	81	153	4,056	21.5%
	Home/Other	≤3	16	9	5	≤3	0	0	31	16.1%
All mothers	479	11,613	7,026	2,954	1,221	579	313	24,185	19.9%	
Trust of residence of mother	Belfast	104	2,296	1,345	559	220	122	16	4,662	19.4%
	Northern	140	2,738	1,690	709	279	139	26	5,721	19.8%
	South Eastern	71	1,968	1,161	516	211	87	214	4,228	20.3%
	Southern	83	2,598	1,626	649	290	128	45	5,419	19.9%
	Western	77	1,917	1,148	500	215	101	8	3,966	20.6%
	Not known	4	96	56	21	6	2	4	189	15.7%
	All mothers	479	11,613	7,026	2,954	1,221	579	313	24,185	19.9%
Deprivation quintile based on residence of mother	Most deprived	135	2,507	1,571	748	346	172	49	5,528	23.1%
	2	107	2,472	1,517	640	280	125	66	5,207	20.3%
	3	80	2,448	1,479	623	261	117	58	5,066	20.0%
	4	95	2,226	1,384	570	200	107	87	4,669	19.1%
	Least deprived	58	1,864	1,019	352	128	56	49	3,526	15.4%
	Not known	4	96	56	21	6	2	4	189	15.7%
	All mothers	479	11,613	7,026	2,954	1,221	579	313	24,185	19.9%

Source: NIMATS

Due to small numbers, it is not possible to show data by individual ethnic group
Disclosure controls have been applied to the data

Section 8: Method of Delivery

Why should we be concerned?

This report highlights the high level of Caesarean section births in Northern Ireland (almost 29% of births in 2014/15). This level increases as age of mother increases and if the birth was a multiple birth. In some pregnancies where there are complications present, a Caesarean section may be necessary e.g. breech presentation, multiple birth, inadequate progress during labour, pre-eclampsia, placenta praevia (low lying placenta).

The main risks associated with a Caesarean section include²⁹:

- Wound infection
- Blood clots
- Excess bleeding
- Needing to stay in hospital for longer
- Maternal death

What can be done?

A joint statement by the Royal College of Obstetricians and Gynaecologists, Royal College of Midwives and National Childbirth Trust (based on findings by the NHS Institute) suggested a Caesarean section rate of 20%, which is lower than the current rate in Northern Ireland (29%). WHO also states that “*Caesarean sections should ideally only be undertaken when medically necessary*”.³⁰

For some women, there will not be a choice i.e. a Caesarean section must be carried out (see above). However all women should be provided with information on the potential risks and benefits associated with Caesarean delivery. One particular area of concern is the number of first time mothers delivering by Caesarean unnecessarily. These women are more likely to give birth again by Caesarean, and so reducing the number in first time mothers by encouraging a birth without intervention, may help to decrease the overall number of Caesarean sections carried out.

ROBSON GROUPS

To allow for meaningful comparison of Caesarean section rates, a classification system (Ten Group Classification System)³¹ developed by Dr Michael Robson, was recommended for use within all healthcare facilities. WHO believes that this classification will help health care facilities to:

- Optimize the use of caesarean section by identifying, analysing and focusing interventions on specific groups of particular relevance for each health care facility
- Assess the effectiveness of strategies or interventions targeted at optimizing the use of caesarean section
- Assess the quality of care, clinical management practices and outcomes by group
- Assess the quality of the data collected, while raising staff awareness about the importance of the data and its use.

Currently work is being carried out to allow the Robson Groups to be monitored across Northern Ireland.

²⁹ 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>

³⁰ World Health Organisation, Statement on Caesarean Section Rates, 2015 http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/cs-statement/en/

³¹ As³⁰

Key Points

- In 2014/15, 28.9% of infants were delivered by Caesarian section. This figure has remained steady over the last five years. [Page 36]
- In 2014/15, mothers under 30 years of age had a higher percentage of births by emergency Caesarian section (14.2%) than by elective Caesarian section (8.6%), but this reverses when the mother is over 30 years of age when 18.8% of births are by elective Caesarian section and 15.0% are by emergency Caesarian section. [Page 37]
- In 2014/15, 34% of infants born in Daisy Hill Hospital were by Caesarian section, compared to 25.5% in South West Acute Hospital. (All infants = 28.9%). [Page 37]
- In 2014/15, elective Caesarian sections accounted for 12% of births in the most deprived areas, compared to 16% in least deprived areas. (All births = 14%) [Page 37]

Table 8.1: Births to Northern Ireland residents, by method of delivery, 2010/11 - 2014/15

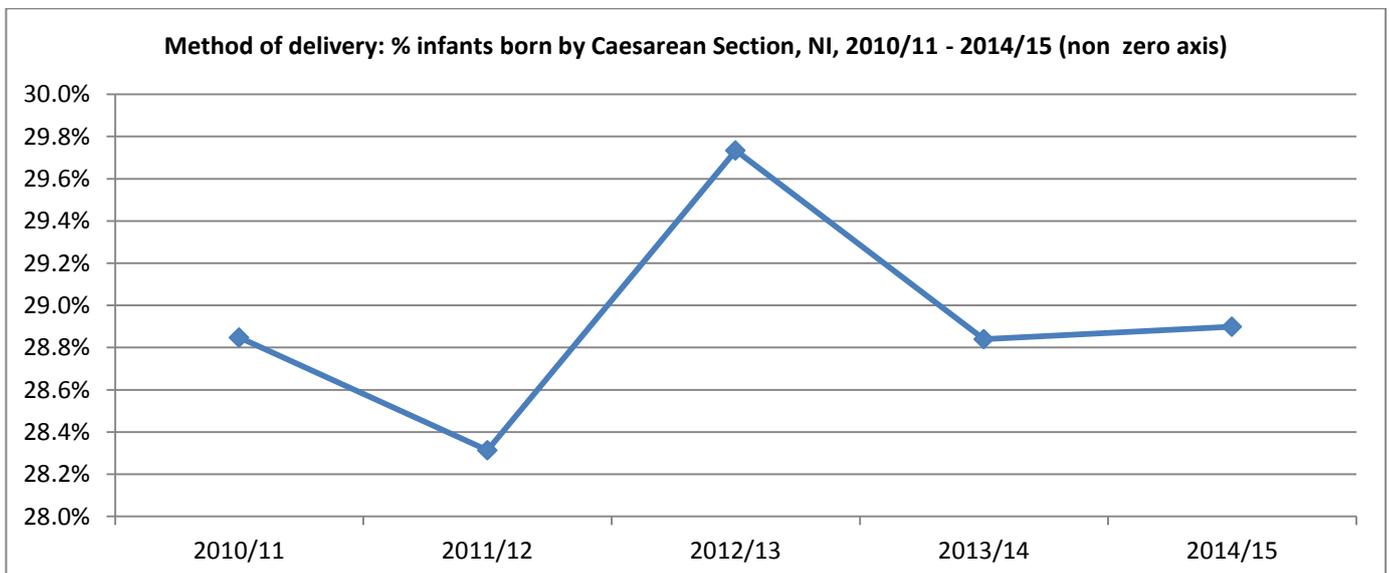
Year of birth		Infants born by method of delivery						Total	Infants born by Caesarean Section
		Elective C/S	Emergency C/S	C/S Other	Normal	Other	Not known		
2010/11	n	3,614	3,518	16	14,318	3,313	880	25,659	7,148
	%	14.6%	14.2%	0.1%	57.8%	13.4%	-	-	28.8%
2011/12	n	3,614	3,509	0	14,291	3,744	151	25,309	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%

Source: Child Health System

Method of delivery – Categories (Child Health System data)

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

Figure 8.1: % infants born by Caesarean Section, Northern Ireland, 2010/11 – 2014/15



Source: Child Health System

Table 8.2: Births to Northern Ireland residents, by method of delivery, 2014/15

		Infants born by method of delivery, 2014/15						% infants born by Caesarean Section
		Elective C/S	Emergency C/S	Normal	Other	Not known	Total	
Age Group of mother	Under 20	18	90	471	130	3	712	15.2%
	20 - 24	214	466	2,202	544	15	3,441	19.8%
	25 - 29	689	964	3,901	1,048	17	6,619	25.0%
	30 - 34	1,312	1,190	4,511	1,175	32	8,220	30.6%
	35 - 39	942	643	2,265	525	21	4,396	36.2%
	40 +	298	197	402	103	9	1,009	49.5%
	Not known	0	0	2	0	1	3	0.0%
	All infants	3,473	3,550	13,754	3,525	98	24,400	28.9%
Multiple births	Single	3,232	3,323	13,637	3,402	93	23,687	27.8%
	Multiple	241	227	117	123	5	713	66.1%
	All infants	3,473	3,550	13,754	3,525	98	24,400	28.9%
Birth status	Live	3,468	3,544	13,701	3,509	87	24,309	28.9%
	Still	5	6	53	16	11	91	13.8%
	All infants	3,473	3,550	13,754	3,525	98	24,400	28.9%
First time mothers	First time mother	609	2,127	4,262	2,436	33	9,467	29.0%
	Not a first time mother	2,832	1,394	9,306	1,052	55	14,639	29.0%
	Not known	32	29	186	37	10	294	21.5%
	All infants	3,473	3,550	13,754	3,525	98	24,400	28.9%
Ethnic group of mother	White	3,312	3,338	12,975	3,348	80	23,053	28.9%
	Asian	33	37	115	36	3	224	31.7%
	Black	10	24	71	7	0	112	30.4%
	Mixed	55	71	196	46	2	370	34.2%
	Other	36	40	173	42	0	291	26.1%
	Not stated / Blank	27	40	224	46	13	350	19.9%
	All infants	3,473	3,550	13,754	3,525	98	24,400	28.9%
Place of birth	Altnagelvin	349	374	1,630	384	3	2,740	26.4%
	Antrim	467	468	1,503	441	2	2,881	32.5%
	Causeway	166	200	664	155	0	1,185	30.9%
	Craigavon	633	609	2,199	515	53	4,009	31.4%
	Daisy Hill	290	330	909	293	4	1,826	34.0%
	Downe	0	0	63	1	1	65	0.0%
	Lagan Valley	0	0	179	4	1	184	0.0%
	Mater	0	0	189	6	0	195	0.0%
	Royal	869	810	3,379	875	7	5,940	28.3%
	SWAH	156	153	703	201	2	1,215	25.5%
	Ulster	543	603	2,319	648	7	4,120	27.9%
	Home/Other	0	3	17	2	18	40	13.6%
	All infants	3,473	3,550	13,754	3,525	98	24,400	28.9%
Trust of residence of mother	Belfast	576	639	2,774	727	6	4,722	25.8%
	Northern	887	911	3,162	860	18	5,838	30.9%
	South Eastern	607	577	2,525	596	11	4,316	27.5%
	Southern	873	893	2,925	752	62	5,505	32.4%
	Western	530	530	2,368	590	1	4,019	26.4%
	All infants	3,473	3,550	13,754	3,525	98	24,400	28.9%
Deprivation quintile based on residence of mother	Most deprived	665	822	3,343	764	18	5,612	26.6%
	2	773	758	2,977	783	22	5,313	28.9%
	3	766	790	2,847	731	21	5,155	30.3%
	4	701	695	2,652	680	21	4,749	29.5%
	Least deprived	568	485	1,935	567	16	3,571	29.6%
	All infants	3,473	3,550	13,754	3,525	98	24,400	28.9%

Source: Child Health System

Method of delivery – Categories (Child Health System data)

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

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). In Northern Ireland in 2014/15, just over 6% of infants were born with a low birth weight (Table 9.1, page 40). Typically, a baby might have a lower birth weight because they were born earlier than expected (pre term) or where growth has been restricted (small for gestational age). The following risks factors are associated with low birth weight^{32,33,34,35:}

- Younger (<17) / older mothers (>35)
- Low maternal BMI / poor maternal diet
- Maternal smoking (heavy) / drug use
- Maternal alcohol consumption (heavy)
- Multiple pregnancy
- Maternal hypertension and diabetes.

A birthweight below 2,500g contributes to a range of poor health outcomes, including infant mortality^{36,37,38,39,40}

- Respiratory problems
- Infections
- In later life - diabetes, high blood pressure, heart disease, obesity.

What can be done?

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

Studies suggest that encouraging women to take folic acid prior to conception and during early stages of pregnancy is associated with a significant reduction in the risk of delivering a small for gestation age infant⁴¹.

³² World Health Organisation, "Born too soon - The global action report on preterm birth", 2012 http://www.who.int/maternal_child_adolescent/documents/born_too_soon/en/

³³ 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-analysis. *Int J Epidemiol* 2011;40(1):65–101 <http://ije.oxfordjournals.org/content/40/1/65.long>

³⁴ 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-analysis. *BJOG* 2011;118:1411–1421 <http://onlinelibrary.wiley.com/doi/10.1111/j.1471-0528.2011.03050.x#epdf>

³⁵ 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>

³⁶ Royal College of Obstetricians and Gynaecologists "Premature labour" <https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-premature-labour.pdf>

³⁷ Royal College of Obstetricians and Gynaecologists "Having a small baby" <https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-having-a-small-baby.pdf>

³⁸ Diabetes UK, https://www.diabetes.org.uk/About_us/News_Landing_Page/2008/Underweight-babies-at-higher-risk-of-Type-2-diabetes/

³⁹ 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. <http://aje.oxfordjournals.org/content/179/5/550.full>

⁴⁰ Institute of Health Economics, Canada, "Determinants and Prevention of Low Birth Weight: A Synopsis of the Evidence", 2008

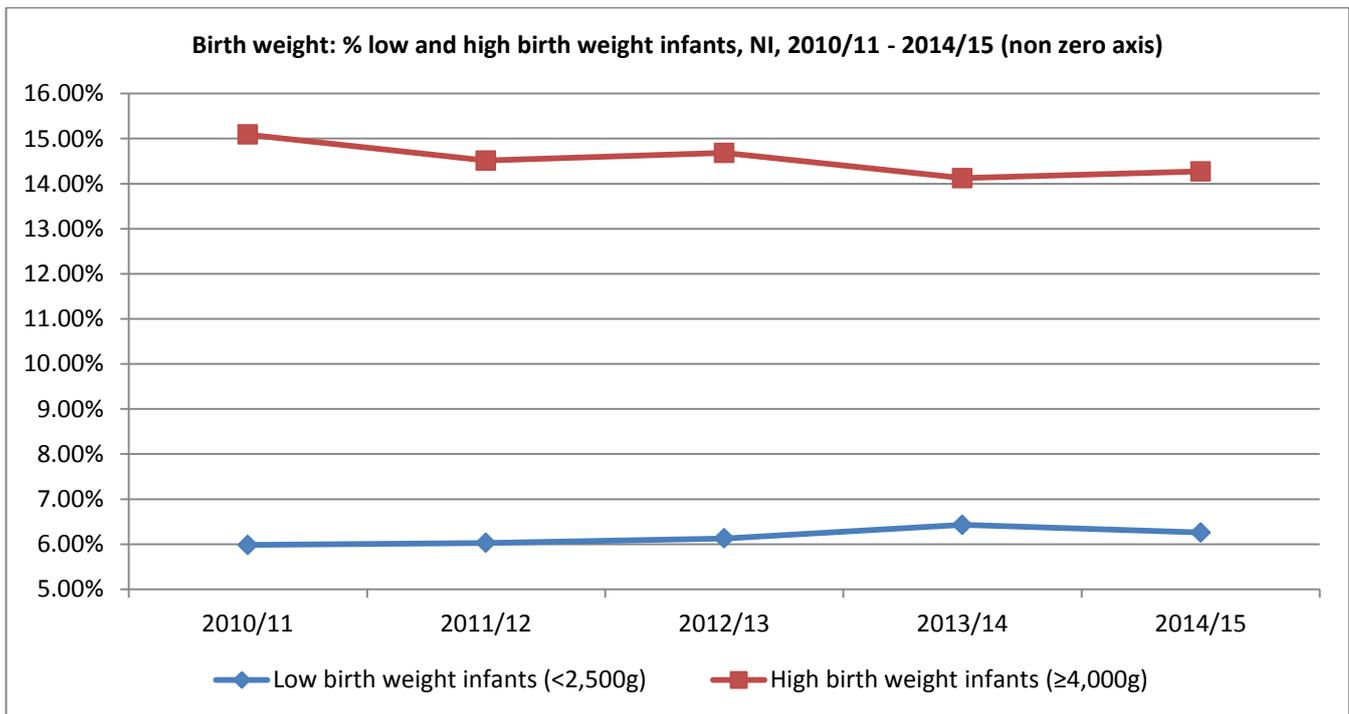
http://www.ihe.ca/index.php?download/determinants_and_prevention_of_low_birth_weight_a_synopsis_of_the_evidence.pdf

⁴¹ Hodgetts VA, Morris RK, Francis A, Gardosi J, Ismail KM. Effectiveness of folic acid supplementation in pregnancy on reducing the risk of small-for-gestational age neonates: a population study, systematic review and meta-analysis. *BJOG* 2014; DOI:10.1111/1471-0528.13202 <https://www.rcog.org.uk/globalassets/documents/news/folic-acid-supplementation.pdf>

Key Points

- In 2014/15, 6.3% of all births were measured as low birth weight i.e. less than 2,500g (6.0% of live and 73.3% of still births). [Page 40]
- In this year, 14.3% of live infants were born with a higher birth weight of 4,000g+ and 2.0% with a birth weight of 4,500g+. [Page 40]
- There were differences in birth weight by ethnic group of mother. For example, 8.8% of infants born to mothers from a non-white ethnic grouping were considered low birth weight, compared to 6.1% of infants born to mothers from white ethnic background. The opposite picture can be seen in mothers giving birth to higher weight infants ($\geq 4,000g$). Non-white=8.3%, White=14.5%. [Page 41]
- The proportion of low birth weight infants born to mothers residing in the most deprived areas of Northern Ireland in 2014/15 was higher at 7.3% than to mothers from least deprived areas (4.7%). [Page 41]
- In 2014/15, Belfast LCG had a lower proportion of high birth weight infants (11.8%) compared to other areas which were close to the NI figure of 14.3%. [Page 41]

Figure 9.1: Percentage low and high birth weight infants, Northern Ireland, 2010/11 – 2014/15



Source: Child Health System

Table 9.1: Births to Northern Ireland residents, by birth weight, 2010/11 - 2014/15

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%

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%

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

Year of birth		Infants born by birth weight					Low birth weight infants (<2,500g)
		ALL BIRTHS					
		< 1,500g	1,500 - 2,499g	2,500+g	Not known	Total	
2010/11	n	289	1,244	24,094	32	25,659	1,533
	%	1.1%	4.9%		-	-	5.98%
2011/12	n	281	1,243	23,756	29	25,309	1,524
	%	1.1%	4.9%		-	-	6.03%
2012/13	n	282	1,250	23,472	24	25,028	1,532
	%	1.1%	5.0%		-	-	6.13%
2013/14	n	293	1,266	22,692	26	24,277	1,559
	%	1.2%	5.2%		-	-	6.43%
2014/15	n	281	1,244	22,839	36	24,400	1,525
	%	1.2%	5.1%		-	-	6.26%

Source: Child Health System

Table 9.2: Births to Northern Ireland residents, by birth weight, 2014/15

		Infants born by birth weight, 2014/15							% low birth weight infants (<2,500g)	% high birth weight infants (≥4,000g)
		< 1,500g	1,500 - 2,499g	2,500 - 3,999g	4,000 - 4,499g	4,500+ g	Not known	Total		
Age Group of mother	Under 20	15	42	595	57	3	0	712	8.01%	8.43%
	20 - 24	42	191	2,796	365	40	7	3,441	6.79%	11.79%
	25 - 29	77	314	5,301	790	130	7	6,619	5.91%	13.91%
	30 - 34	71	390	6,455	1,119	176	9	8,220	5.61%	15.77%
	35 - 39	45	237	3,421	570	111	12	4,396	6.43%	15.53%
	40 +	31	70	792	98	18	0	1,009	10.01%	11.50%
	Not known	0	0	2	0	0	1	3	0.00%	0.00%
	All infants	281	1,244	19,362	2,999	478	36	24,400	6.26%	14.27%
Multiple births	Single	207	908	19,059	2,999	478	36	23,687	4.71%	14.70%
	Multiple	74	336	303	0	0	0	713	57.50%	0.00%
	All infants	281	1,244	19,362	2,999	478	36	24,400	6.26%	14.27%
Birth status	Live	238	1,221	19,341	2,997	477	35	24,309	6.01%	14.31%
	Still	43	23	21	2	1	1	91	73.33%	3.33%
	All infants	281	1,244	19,362	2,999	478	36	24,400	6.26%	14.27%
Ethnic group of mother	White	253	1,158	18,275	2,878	463	26	23,053	6.13%	14.51%
	Non-white	17	70	824	71	11	4	997	8.76%	8.26%
	Not stated / Blank	11	16	263	50	4	6	350	7.85%	15.70%
	All infants	281	1,244	19,362	2,999	478	36	24,400	6.26%	14.27%
Place of birth	Altnagelvin	45	157	2,127	346	65	0	2,740	7.37%	15.00%
	Antrim	20	167	2,298	358	38	0	2,881	6.49%	13.75%
	Causeway	≤3	38	973	153	18	≤3	1,185	3.46%	14.43%
	Craigavon	44	237	3,135	491	87	15	4,009	7.04%	14.47%
	Daisy Hill	8	71	1,441	248	57	1	1,826	4.33%	16.71%
	Downe	≤3	≤3	52	12	≤3	0	65	1.54%	18.46%
	Lagan Valley	≤3	≤3	148	33	≤3	0	184	0.54%	19.02%
	Mater	≤3	≤3	163	31	≤3	0	195	0.51%	15.90%
	Royal	117	334	4,725	652	99	13	5,940	7.61%	12.67%
	SWAH	5	47	952	172	39	0	1,215	4.28%	17.37%
	Ulster	34	186	3,323	499	73	5	4,120	5.35%	13.90%
	Home/Other	≤5	≤5	25	4	≤3	≤3	40	23.68%	10.53%
	All infants	281	1,244	19,362	2,999	478	36	24,400	6.26%	14.27%
Trust of residence of mother	Belfast	60	263	3,834	496	60	9	4,722	6.85%	11.80%
	Northern	54	308	4,623	747	103	3	5,838	6.20%	14.57%
	South Eastern	41	208	3,433	547	79	8	4,316	5.78%	14.53%
	Southern	68	271	4,332	684	135	15	5,505	6.17%	14.92%
	Western	58	194	3,140	525	101	1	4,019	6.27%	15.58%
	All infants	281	1,244	19,362	2,999	478	36	24,400	6.26%	14.27%
Deprivation quintile based on residence of mother	Most deprived	88	322	4,527	583	82	10	5,612	7.32%	11.87%
	2	51	289	4,203	645	117	8	5,313	6.41%	14.36%
	3	55	260	4,038	669	126	7	5,155	6.12%	15.44%
	4	52	241	3,718	644	87	7	4,749	6.18%	15.42%
	Least deprived	35	132	2,876	458	66	4	3,571	4.68%	14.69%
	All infants	281	1,244	19,362	2,999	478	36	24,400	6.26%	14.27%

Source: Child Health System

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

Disclosure controls have been applied to the data

Section 10: Breastfeeding

Why should we be concerned?

Recent comparable data across the United Kingdom is not available for breastfeeding, however data from the 2010 Infant Feeding Survey showed that Northern Ireland had the lowest incidence of initial breastfeeding at 64%⁴².

In June 2013, the Department of Health presented “*Breastfeeding – A Great Start. A Strategy for Northern Ireland 2013 - 2023*”⁴³. 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 explains 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*”. Infants who are breastfed are at a lower risk of^{44,45}:

- Chest and ear infections
- Respiratory illness
- Becoming obese
- Developing allergies and food intolerances
- Bowel complications e.g. diarrhoea, constipation
- Sudden Infant Death Syndrome (cot death)

Benefits to the mother include:

- Improved relationship with the infant (bonding) which can help with emotional/mental health and wellbeing
- A lower risk of osteoporosis
- A lower risk of developing Type 2 diabetes and certain cancers e.g. breast or ovarian
- The ability to lose weight gained during pregnancy more easily.

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

What can be done?

In the Strategy mentioned above, the Department of Health recognise that there are many reasons why a mother chooses not to breastfeed. These include lack of knowledge about how to breastfeed, lack of support from health care staff particularly in the early days after giving birth, problems experienced during feeding, embarrassment, lack of suitable facilities to breastfeed (public areas/workplace).

The Strategy has suggested the following to help increase breastfeeding rates in Northern Ireland:

- Protecting breastfeeding by ensuring marketing of milk substitutes does not undermine breastfeeding, and that women have the right to breastfeed in public;
- Promoting breastfeeding by informing and influencing mothers, families, and the public about the benefits of breastfeeding;
- Supporting breastfeeding by having health services and communities which actively support antenatal preparation for breastfeeding, and postnatal breastfeeding initiation and maintenance; and
- Normalising breastfeeding so that it is seen as the normal social and biological way to feed babies.

Initiatives such as the WHO/UNICEF Baby Friendly Initiative⁴⁶ provides a framework to implement best practice in hospitals/health care facilities to ensure that mothers are able to make informed decisions about how they will feed their infant. Facilities accredited as ‘Baby Friendly’ will implement standards which have been proven to increase breastfeeding rates.

⁴² Infant Feeding Survey, Health and Social Care Information Centre <http://www.hscic.gov.uk/catalogue/PUB08694/Infant-Feeding-Survey-2010-Consolidated-Report.pdf>

⁴³ Department of Health, “Breastfeeding – A Great Start. A Strategy for Northern Ireland 2013 – 2023” <https://www.dhsspsni.gov.uk/publications/breastfeeding-strategy>

⁴⁴ As⁴³

⁴⁵ Health Service Executive, Republic of Ireland, 2008 “*The Evidence for Breastfeeding*” <https://www.breastfeeding.ie/Uploads/The-evidence-for-breastfeeding.pdf>

⁴⁶ WHO/UNICEF, The Baby Friendly Initiative <http://www.unicef.org.uk/BabyFriendly/>

Key Points

Breastfeeding at discharge

- In 2014/15, 46% of live infants were breastfed (total/partial feeding) at discharge (46% in 2013/14 and 44% in 2012/13). *[Page 44]*.
- Only 19.9% of infants born to mothers under 20 were breastfed at discharge, compared to 54% of infants to mothers aged 40 and over. *[Page 45]*.
- Breastfeeding rates were slightly higher for first time mothers at 49.6%. Mothers who have previously given birth = 43.7%. *[Page 45]*.
- Breastfeeding rates were much higher in infants born to 'non-white' mothers. However the numbers for some ethnic groups were small and caution is advised. *[Page 45]*.
- The proportion breastfeeding is markedly lower in more deprived areas. In 2014/15, 31.5% of mothers from most deprived areas were breastfeeding at discharge compared to 63.4% of mothers from the least deprived areas. It should however be noted that breastfeeding rates increase with age of mother, and more deprived areas have a higher proportion of younger mothers. *[Page 45]*

Breastfeeding at later stages

- Duration of breastfeeding data is not yet available for 2014/15 as a child will not have reached 12 months of age.
- In 2013/14, the proportion of mothers' breastfeeding gradually decreased with time e.g. less than 6% of mothers were still breastfeeding 12 months after the baby was born. This percentage increased with age of mother – 0.9% of mothers aged less than 20 years up to 10.3% of mothers aged 40+ were still breastfeeding after 12 months in this year. *[Page 46]*
- At all stages where breastfeeding was recorded, the rate was higher in those infants born to mothers who lived in less deprived areas, when compared to those mothers from more deprived areas. In 2013/14, breastfeeding at 12 months old was higher at 8.3% in the least deprived areas than in the most deprived areas of Northern Ireland (2.7%). *[Page 46]*
- Breastfeeding in multiple birth infants falls off quicker when compared to single births. *[Page 46]*

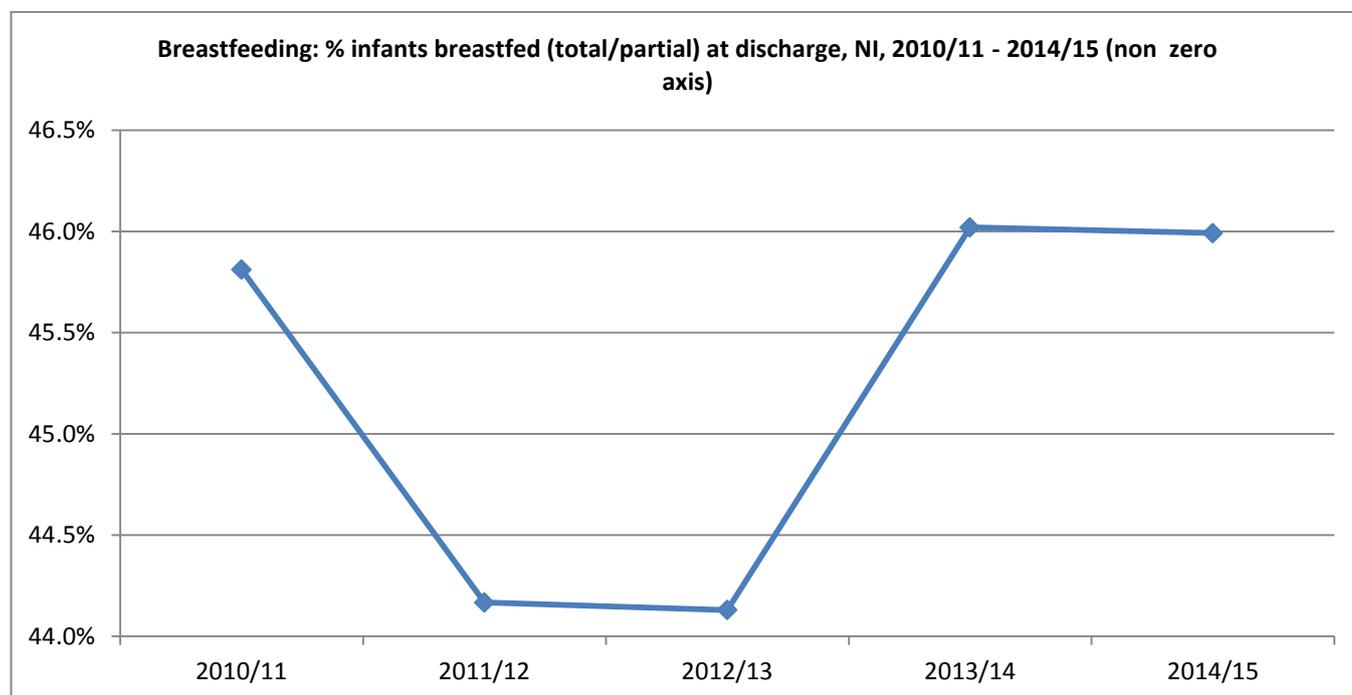
Breastfeeding data on the Child Health System is recorded as either 'Total', 'Partial' or 'Not at all'. Total – where the child is breastfed fully with no other feed given. Partial – where the child is breastfed alongside another feeding method. Not at all - where the child is not breastfed at all, but rather other feeding methods are used.

Table 10.1: Breastfeeding status (at discharge) of live infants born to Northern Ireland residents, 2010/11 - 2014/15

Year of birth		Infant breastfeeding status at discharge					Total	Infants breastfed (partial/total)
		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%	-	-	45.8%	
2011/12	n	9,369	1,610	13,879	362	25,220	10,979	
	%	37.7%	6.5%	55.8%	-	-	44.2%	
2012/13	n	9,011	1,777	13,658	465	24,911	10,788	
	%	36.9%	7.3%	55.9%	-	-	44.1%	
2013/14	n	9,148	1,838	12,886	297	24,169	10,986	
	%	38.3%	7.7%	54.0%	-	-	46.0%	
2014/15	n	9,293	1,768	12,989	259	24,309	11,061	
	%	38.6%	7.4%	54.0%	-	-	46.0%	

Source: Child Health System

Figure 10.1: % infants breastfed (total/partial) at discharge, Northern Ireland, 2010/11 – 2014/15



Source: Child Health System

Table 10.2: Breastfeeding status (at discharge) of live infants born to Northern Ireland residents, 2014/15

		Infant breastfeeding status at discharge					% infants breastfed (partial/total)
		Total	Partial	Not at all	Not known	Total	
Age Group of mother	Under 20	117	22	561	8	708	19.9%
	20 - 24	790	164	2,435	35	3,424	28.1%
	25 - 29	2,289	452	3,798	61	6,600	41.9%
	30 - 34	3,649	615	3,843	89	8,196	52.6%
	35 - 39	2,021	411	1,899	47	4,378	56.2%
	40 +	426	104	452	18	1,000	54.0%
	Not known	1	0	1	1	3	50.0%
	All ages	9,293	1,768	12,989	259	24,309	46.0%
Multiple births	Single	9,222	1,610	12,532	239	23,603	46.4%
	Multiple	71	158	457	20	706	33.4%
	All infants	9,293	1,768	12,989	259	24,309	46.0%
First time mothers	First time mother	3,733	890	4,689	108	9,420	49.6%
	Not a first time mother	5,472	852	8,131	141	14,596	43.7%
	Not known	88	26	169	10	293	40.3%
	All infants	9,293	1,768	12,989	259	24,309	46.0%
Ethnic group of mother	White	8,676	1,508	12,563	225	22,972	44.8%
	Asian	96	80	42	3	221	80.7%
	Black	66	30	15	1	112	86.5%
	Mixed	180	46	136	5	367	62.4%
	Other	146	72	67	5	290	76.5%
	Not stated / Blank	129	32	166	20	347	49.2%
	All ethnic groups	9,293	1,768	12,989	259	24,309	46.0%
Place of birth	Altnagelvin	867	63	1,790	7	2,727	34.2%
	Antrim	1,007	226	1,626	15	2,874	43.1%
	Causeway	470	36	672	3	1,181	43.0%
	Craigavon	1,651	299	1,971	73	3,994	49.7%
	Daisy Hill	722	117	951	30	1,820	46.9%
	Downe	35	≤3	27	≤3	65	57.1%
	Lagan Valley	83	8	89	4	184	50.6%
	Mater	86	≤3	108	≤3	195	44.6%
	Royal	2,007	586	3,239	78	5,910	44.5%
	SWAH	510	87	611	4	1,212	49.4%
	Ulster	1,839	343	1,900	26	4,108	53.5%
	Home/Other	16	1	5	17	39	77.3%
	All places of birth	9,293	1,768	12,989	259	24,309	46.0%
Trust of residence of mother	Belfast	1,726	466	2,475	35	4,702	47.0%
	Northern	2,182	407	3,182	51	5,822	44.9%
	South Eastern	1,741	324	2,196	43	4,304	48.5%
	Southern	2,233	415	2,712	119	5,479	49.4%
	Western	1,411	156	2,424	11	4,002	39.3%
	All infants	9,293	1,768	12,989	259	24,309	46.0%
Deprivation quintile based on residence of mother	Most deprived	1,437	308	3,795	50	5,590	31.5%
	2	1,911	356	2,965	61	5,293	43.3%
	3	2,031	364	2,689	54	5,138	47.1%
	4	2,043	381	2,250	54	4,728	51.9%
	Least deprived	1,871	359	1,290	40	3,560	63.4%
	All infants	9,293	1,768	12,989	259	24,309	46.0%

Source: Child Health System

Disclosure controls have been applied to the data

Table 10.3: Duration of breastfeeding of live infants born to Northern Ireland residents, 2013/14

		Total live infants born	% infants breastfed (total/partial) by time period					
			Discharge	Primary visit (10-14 days old)	6 weeks	3 months	6 months	12 months
Age Group of mother	Under 20	807	18.5%	11.6%	6.6%	4.0%	2.0%	0.9%
	20 - 24	3,451	27.7%	18.6%	12.1%	8.4%	4.5%	2.5%
	25 - 29	6,757	42.3%	32.1%	24.1%	17.2%	10.0%	4.4%
	30 - 34	7,919	52.8%	40.7%	33.2%	25.8%	14.5%	7.0%
	35 - 39	4,259	54.4%	43.2%	36.3%	28.1%	15.8%	7.9%
	40 +	975	54.4%	45.8%	39.8%	31.6%	15.2%	10.3%
	Not known	1	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%
	All infants	24,169	45.5%	34.8%	27.6%	20.8%	11.7%	5.7%
Multiple births	Single	23,428	45.8%	34.9%	27.7%	21.0%	11.7%	5.8%
	Multiple	741	35.8%	31.3%	23.2%	15.9%	9.7%	3.8%
	All infants	24,169	45.5%	34.8%	27.6%	20.8%	11.7%	5.7%
First time mothers	First time mother	9,502	48.3%	36.6%	28.0%	20.6%	11.3%	5.3%
	Not a first time mother	14,424	43.6%	33.7%	27.3%	21.0%	11.9%	6.0%
	Not known	243	42.8%	36.2%	27.2%	21.0%	10.7%	6.2%
	All infants	24,169	45.5%	34.8%	27.6%	20.8%	11.7%	5.7%
Ethnic group of mother	White	21,146	44.1%	33.5%	26.3%	19.9%	11.4%	5.5%
	Asian	248	75.4%	73.4%	64.9%	48.8%	26.2%	11.7%
	Black	94	86.2%	72.3%	59.6%	47.9%	31.9%	7.4%
	Mixed	292	63.4%	50.3%	41.8%	30.1%	20.2%	9.6%
	Other	277	75.1%	69.7%	59.2%	44.0%	23.5%	14.1%
	Not stated / Blank	2,112	47.1%	34.9%	28.8%	21.6%	9.0%	5.6%
	All infants	24,169	45.5%	34.8%	27.6%	20.8%	11.7%	5.7%
Place of birth	Altnagelvin	2,593	35.7%	27.0%	20.3%	14.7%	8.6%	4.2%
	Antrim	2,676	44.2%	37.4%	27.9%	22.0%	15.5%	8.5%
	Causeway	1,284	44.9%	34.3%	25.9%	19.9%	13.7%	6.5%
	Craigavon	4,002	49.6%	38.1%	30.8%	22.9%	13.9%	5.5%
	Daisy Hill	1,744	45.0%	33.8%	26.5%	20.0%	13.4%	6.0%
	Downe	73	46.6%	38.4%	28.8%	26.0%	8.2%	5.5%
	Lagan Valley	204	54.4%	46.1%	37.3%	32.8%	14.2%	10.8%
	Mater	193	34.2%	25.9%	19.7%	16.1%	9.8%	3.6%
	Royal	6,076	43.4%	32.9%	25.8%	19.3%	9.7%	4.2%
	SWAH	1,216	46.5%	36.9%	29.1%	21.6%	15.7%	7.2%
	Ulster	4,064	52.1%	37.3%	31.5%	23.9%	9.0%	6.0%
	Home/Other	44	13.6%	63.6%	47.7%	43.2%	27.3%	27.3%
All infants	24,169	45.5%	34.8%	27.6%	20.8%	11.7%	5.7%	
Trust of residence of mother	Belfast	4,732	44.6%	32.2%	27.1%	20.0%	9.7%	3.3%
	Northern	5,806	45.4%	37.2%	28.2%	22.3%	15.4%	7.4%
	South Eastern	4,301	48.8%	36.3%	28.3%	21.7%	6.4%	6.3%
	Southern	5,404	48.0%	36.5%	29.8%	22.2%	14.0%	5.7%
	Western	3,926	39.4%	30.4%	23.2%	16.8%	11.1%	5.3%
	All infants	24,169	45.5%	34.8%	27.6%	20.8%	11.7%	5.7%
Deprivation quintile based on residence of mother	Most deprived	5,536	30.1%	21.8%	16.0%	11.0%	6.1%	2.7%
	2	5,338	43.9%	33.2%	25.3%	18.5%	11.3%	5.2%
	3	5,099	47.9%	36.1%	28.9%	21.8%	12.8%	6.1%
	4	4,615	49.8%	39.9%	31.6%	24.8%	13.8%	7.5%
	Least deprived	3,581	62.4%	49.0%	41.7%	33.0%	16.3%	8.3%
All infants	24,169	45.5%	34.8%	27.6%	20.8%	11.7%	5.7%	

Source: Child Health System

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

Section 11: Childhood BMI

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*”⁴⁷.

WHO states that “*childhood obesity is associated with a higher chance of premature death and disability in adulthood*”⁴⁸. “*Obese children are more likely to be ill, be absent from school due to illness, experience health-related limitations and require more medical care than normal weight children*”⁴⁹. A child who is obese may have a greater risk of⁵⁰:

- Type 2 diabetes
- Asthma
- Musculoskeletal problems
- Low self-esteem/mental illness/eating disorders

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

What can be done?

“*Childhood obesity is mainly associated with unhealthy eating and low levels of physical activity, but the problem is linked not only to children's behaviour but also, increasingly, to social and economic development and policies in the areas of agriculture, transport, urban planning, the environment, food processing, distribution and marketing, as well as education. Unlike most adults, children and adolescents cannot choose the environment in which they live or the food they eat. They also have a limited ability to understand the long-term consequences of their behaviour. They therefore require special attention when fighting the obesity epidemic*” (WHO)⁵¹.

The Royal College of Paediatrics and Child Health (RCPCH) adds⁵²: “*Prevention and treatment of obesity depends on all levels of society and government taking action – from health professionals, in educating teachers, parents and children themselves, regulating and working with the food manufacturing industry, and using fiscal measures where appropriate. This has the objective of achieving the cultural shift in improved nutrition and increased exercise to achieve a sustained decrease in the numbers of children that are overweight or obese*”.

Further reading:

http://www.noo.org.uk/NOO_about_obesity/child_obesity

<https://www.gov.uk/government/policies/obesity-and-healthy-eating>

<https://www.nice.org.uk/guidance/cg189/resources/obesity-identification-assessment-and-management-35109821097925>

⁴⁷ World Health Organisation <http://www.who.int/dietphysicalactivity/childhood/en/>

⁴⁸ World Health Organisation http://www.who.int/dietphysicalactivity/childhood_consequences/en/

⁴⁹ Public Health England (National Obesity Observatory) “Health risks of childhood obesity” http://www.noo.org.uk/NOO_about_obesity/obesity_and_health/health_risk_child

⁵⁰ As⁴⁹

⁵¹ World Health Organisation http://www.who.int/dietphysicalactivity/childhood_why/en/

⁵² Royal College of Paediatrics and Child Health <http://www.rcpch.ac.uk/obesity>

Key Points

Primary 1

- Of those children measured in Primary 1 in 2014/15, 21.2% were considered overweight or obese. This figure has remained fairly steady since 2008/09. However although the proportion of overweight children has decreased slightly (from 16.7% to 15.7%), the proportion who were obese has increased a little over these years (from 5.1% to 5.5%). [Page 48].
- In 2014/15, a higher proportion of girls were overweight/obese (25.1%) compared to boys (17.5%). [Page 49].
- 23.9% of children living in the most deprived areas of Northern Ireland were measured as overweight/obese, compared to 17.5% of children from the least deprived areas. [Page 49].

Year 8

- In 2014/15, almost 28% of children were measured as overweight/obese. However, the figures do show a slight overall downward trend in the last five years. [Page 51].
- A larger proportion of children from more deprived areas in Northern Ireland were measured as overweight/obese (31.5%) in 2014/15, compared to those living in the least deprived areas (23.2%) [Page 52].

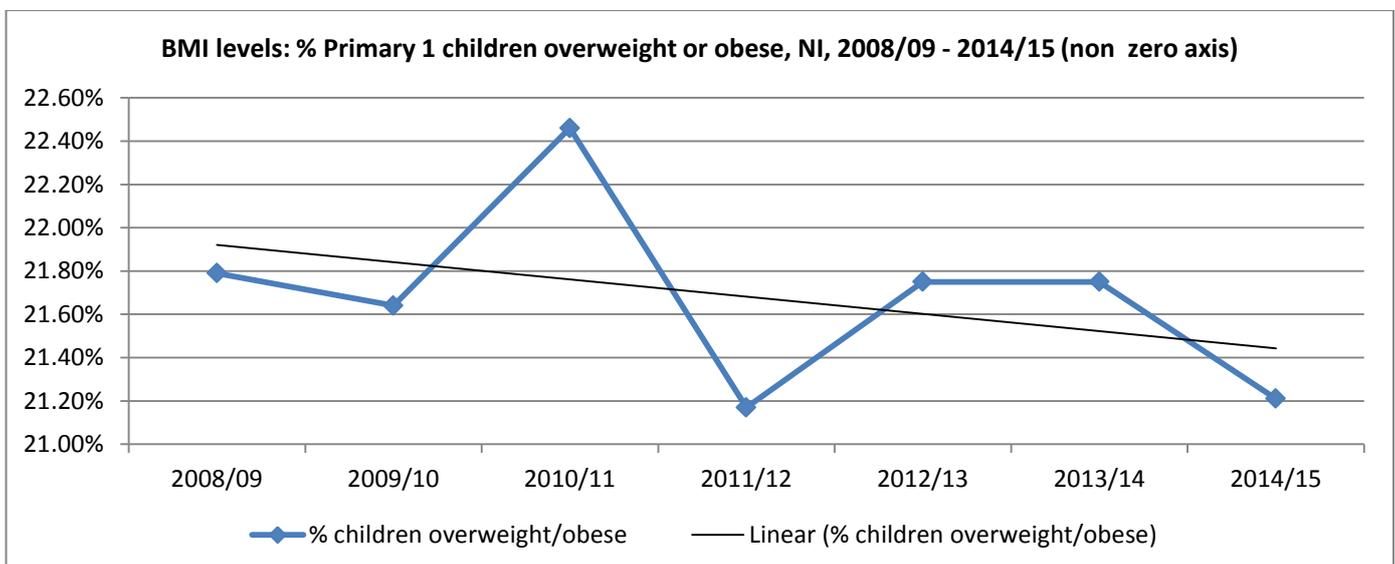
PRIMARY 1

Table 11.1: BMI levels in Primary 1 children across Northern Ireland, 2008/09 - 2014/15

BMI category	% Primary 1 children						
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Thinness grade 1 to 3	3.02%	3.24%	2.79%	3.54%	4.59%	3.44%	3.97%
Normal	75.19%	75.12%	74.75%	75.30%	73.66%	74.81%	74.82%
Overweight	16.72%	16.49%	17.04%	15.74%	16.51%	16.52%	15.71%
Obese	5.07%	5.15%	5.42%	5.43%	5.24%	5.23%	5.50%
% children overweight/obese	21.79%	21.64%	22.46%	21.17%	21.75%	21.75%	21.21%

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

Figure 11.1: % Primary 1 children overweight or obese, Northern Ireland, 2008/09 – 2014/15



Source: Child Health System Year refers to school year

Table 11.2: BMI levels in Primary 1 children across Northern Ireland, 2014/15

		No. of children by BMI category					% children overweight or obese
		Thinness grade 1 to 3	Normal	Overweight	Obese	Total	
Gender	Male	497	8,848	1,495	486	11,326	17.49%
	Female	383	7,741	1,989	733	10,846	25.10%
	All persons	880	16,589	3,484	1,219	22,172	21.21%
Trust of residence of child	Belfast	160	2,696	524	223	3,603	20.73%
	Northern	218	4,174	1,022	315	5,729	23.34%
	South Eastern	219	3,283	603	201	4,306	18.67%
	Southern	189	4,091	818	282	5,380	20.45%
	Western	92	2,278	500	196	3,066	22.70%
	Not known	2	67	17	2	88	21.59%
	All persons	880	16,589	3,484	1,219	22,172	21.21%
Council area (2014)	Antrim and Newtownabbey	65	1,270	337	100	1,772	24.66%
	Armagh, Banbridge and Craigavon	92	2,190	424	171	2,877	20.68%
	Belfast	161	2,598	524	223	3,506	21.31%
	Causeway Coast and Glens	57	1,201	294	93	1,645	23.53%
	Derry and Strabane	32	930	234	89	1,285	25.14%
	Fermanagh and Omagh	45	1,036	200	80	1,361	20.57%
	Lisburn and Castlereagh	94	1,313	221	82	1,710	17.72%
	Mid and East Antrim	71	1,132	254	85	1,542	21.98%
	Mid Ulster	64	1,589	349	111	2,113	21.77%
	Newry, Mourne and Down	113	1,883	379	114	2,489	19.81%
	North Down and Ards	83	1,378	251	69	1,781	17.97%
	Not known	3	69	17	2	91	20.88%
	All persons	880	16,589	3,484	1,219	22,172	21.21%
Deprivation quintile based on residence of child	Most deprived	169	2,910	657	310	4,046	23.90%
	2	163	3,435	792	269	4,659	22.77%
	3	186	3,637	801	282	4,906	22.08%
	4	201	3,553	703	205	4,662	19.48%
	Least deprived	159	2,987	514	151	3,811	17.45%
	Not known	2	67	17	2	88	21.59%
	All persons	880	16,589	3,484	1,219	22,172	21.21%

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

Table 11.3: BMI levels in Primary 1 children across Northern Ireland, by Sure Start area, 2014/15

Sure Start area	Total children	% children by BMI category				% children overweight or obese
		Thinness grade 1 to 3	Normal	Overweight	Obese	
Abbey	280	2.9%	68.2%	17.5%	11.4%	28.9%
Antrim	<100	2.7%	69.9%	23.3%	4.1%	27.4%
Ards	280	3.6%	76.1%	15.0%	5.4%	20.4%
ArKe	175	3.4%	74.3%	15.4%	6.9%	22.3%
Ballymena	195	7.2%	69.7%	15.4%	7.7%	23.1%
Bangor	117	6.0%	70.1%	17.1%	6.8%	23.9%
Beechmount	<100	0.0%	57.7%	30.8%	11.5%	42.3%
Blossom	271	2.2%	78.2%	12.9%	6.6%	19.6%
Cherish	260	5.4%	75.0%	14.6%	5.0%	19.6%
Clan Mor	<100	1.5%	67.2%	22.4%	9.0%	31.3%
Clogher Valley	170	2.4%	72.4%	18.8%	6.5%	25.3%
Coleraine	177	2.8%	66.1%	23.2%	7.9%	31.1%
Colin	305	6.6%	72.5%	15.4%	5.6%	21.0%
Dalriada	171	2.9%	74.9%	16.4%	5.8%	22.2%
Downpatrick	333	5.4%	73.3%	15.3%	6.0%	21.3%
Dungannon	366	2.7%	77.6%	15.6%	4.1%	19.7%
Dungiven	217	5.1%	73.7%	15.2%	6.0%	21.2%
East Belfast	416	4.3%	76.7%	12.7%	6.3%	19.0%
Edenballymore	<100	3.8%	66.7%	21.8%	7.7%	29.5%
Glenbrook	249	5.2%	73.1%	13.3%	8.4%	21.7%
Gold	259	3.1%	70.3%	20.8%	5.8%	26.6%
Horizon	178	5.1%	65.7%	18.0%	11.2%	29.2%
Kilkeel	<100	10.7%	78.6%	8.9%	1.8%	10.7%
LAST	197	0.5%	77.2%	14.7%	7.6%	22.3%
Lisburn	131	3.8%	70.2%	17.6%	8.4%	26.0%
Little Hands	<100	6.3%	71.9%	18.8%	3.1%	21.9%
Newry City	277	4.7%	71.5%	15.9%	7.9%	23.8%
Outer West Belfast	293	5.1%	70.6%	17.4%	6.8%	24.2%
Rainbow	148	0.7%	69.6%	19.6%	10.1%	29.7%
Saol Ur	139	4.3%	69.8%	20.9%	5.0%	25.9%
Shankill	235	3.8%	73.6%	16.2%	6.4%	22.6%
Shantallow	<100	2.3%	69.3%	20.5%	8.0%	28.4%
Smile	168	4.2%	67.3%	17.9%	10.7%	28.6%
South Armagh	381	1.0%	74.0%	19.9%	5.0%	24.9%
South Belfast	299	6.4%	72.6%	13.0%	8.0%	21.1%
Splash	343	3.5%	75.2%	14.6%	6.7%	21.3%
Star	<100	3.8%	75.0%	17.3%	3.8%	21.2%
Strabane	183	3.3%	67.2%	19.7%	9.8%	29.5%
Waterside	218	1.8%	73.4%	17.4%	7.3%	24.8%
Children living in Sure Start areas	7,935	3.9%	72.6%	16.6%	6.9%	23.5%
Children not living in Sure Start areas	14,237	4.0%	76.0%	15.2%	4.7%	19.9%
All children	22,172	4.0%	74.8%	15.7%	5.5%	21.2%

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

Disclosure controls have been applied to the data

YEAR 8

Table 11.4: BMI levels in Year 8 children across Northern Ireland, 2010/11 - 2014/15

BMI category	% Year 8 children				
	2010/11	2011/12	2012/13	2013/14	2014/15
Thinness grade 1 to 3	6.18%	6.36%	7.74%	6.05%	6.87%
Normal	64.89%	64.98%	65.44%	64.56%	65.38%
Overweight	21.53%	21.60%	20.00%	21.76%	20.61%
Obese	7.41%	7.05%	6.82%	7.64%	7.14%
% children overweight/obese	28.94%	28.65%	26.82%	29.40%	27.75%

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

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

Figure 11.2: % Year 8 children overweight or obese, Northern Ireland, 2010/11 – 2014/15

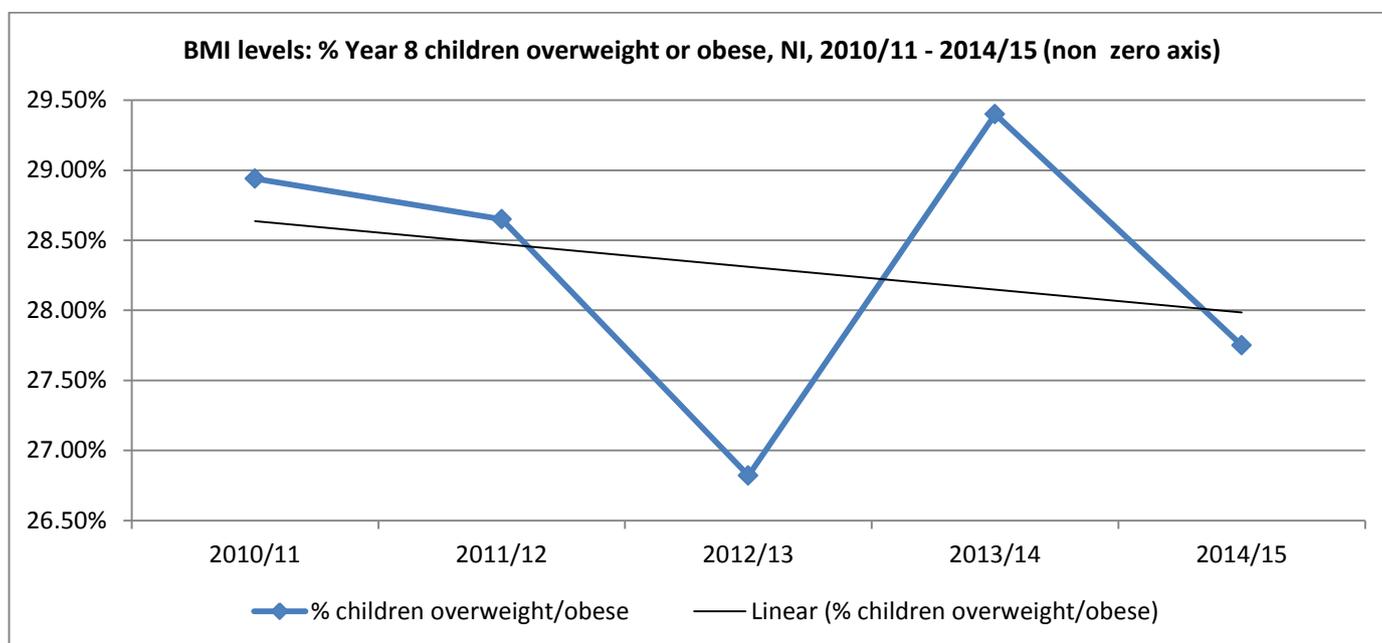


Table 11.5: BMI levels in Year 8 children across Northern Ireland, 2014/15

		No. of children by BMI category					% children overweight or obese
		Thinness grade 1 to 3	Normal	Overweight	Obese	Total	
Gender	Male	484	5,238	1,542	583	7,847	27.08%
	Female	603	5,103	1,717	546	7,969	28.40%
	All persons	1,087	10,341	3,259	1,129	15,816	27.74%
Trust of residence of child	Belfast	128	1,226	339	130	1,823	25.73%
	Northern	285	2,740	842	328	4,195	27.89%
	South Eastern	221	1,863	597	206	2,887	27.81%
	Southern	273	2,546	796	221	3,836	26.51%
	Western	174	1,892	664	239	2,969	30.41%
	Not known	6	74	21	5	106	24.53%
	All persons	1,087	10,341	3,259	1,129	15,816	27.74%
Council area (2014)	Antrim and Newtownabbey	74	634	189	69	966	26.71%
	Armagh, Banbridge and Craigavon	157	1,394	446	121	2,118	26.77%
	Belfast	117	1,187	349	133	1,786	26.99%
	Causeway Coast and Glens	84	899	317	140	1,440	31.74%
	Derry and Strabane	91	877	314	112	1,394	30.56%
	Fermanagh and Omagh	70	785	268	86	1,209	29.28%
	Lisburn and Castlereagh	93	628	159	53	933	22.72%
	Mid and East Antrim	85	875	258	109	1,327	27.66%
	Mid Ulster	91	918	265	79	1,353	25.42%
	Newry, Mourne and Down	118	1,166	374	125	1,783	27.99%
	North Down and Ards	101	903	299	97	1,400	28.29%
	Not known	6	75	21	5	107	24.30%
	All persons	1,087	10,341	3,259	1,129	15,816	27.74%
Deprivation quintile based on residence of child	Most deprived	167	1,583	554	249	2,553	31.45%
	2	220	2,117	758	230	3,325	29.71%
	3	241	2,475	753	269	3,738	27.34%
	4	238	2,221	678	242	3,379	27.23%
	Least deprived	215	1,871	495	134	2,715	23.17%
	Not known	6	74	21	5	106	24.53%
	All persons	1,087	10,341	3,259	1,129	15,816	27.74%

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

In Belfast Trust area, not all schools were visited and so the number of children measured is lower than in previous years

Table 11.6: BMI levels in Year 8 children across Northern Ireland, by Sure Start area, 2014/15

Sure Start area	Total children	% children by BMI category				% children overweight or obese
		Thinness grade 1 to 3	Normal	Overweight	Obese	
Abbey	132	9.1%	62.1%	20.5%	8.3%	28.8%
Antrim	<100	13.5%	59.5%	18.9%	8.1%	27.0%
Ards	210	6.7%	58.1%	24.3%	11.0%	35.2%
ArKe	112	8.0%	59.8%	25.0%	7.1%	32.1%
Ballymena	126	9.5%	59.5%	22.2%	8.7%	31.0%
Bangor	<100	6.1%	62.1%	21.2%	10.6%	31.8%
Beechmount	<100	14.0%	53.5%	23.3%	9.3%	32.6%
Blossom	154	8.4%	54.5%	27.9%	9.1%	37.0%
Cherish	214	3.7%	63.1%	24.8%	8.4%	33.2%
Clan Mor	<100	4.7%	67.4%	16.3%	11.6%	27.9%
Clogher Valley	117	9.4%	59.8%	21.4%	9.4%	30.8%
Coleraine	115	4.3%	59.1%	23.5%	13.0%	36.5%
Colin	163	4.9%	64.4%	23.3%	7.4%	30.7%
Dalriada	120	15.0%	50.8%	27.5%	6.7%	34.2%
Downpatrick	179	5.0%	59.2%	25.1%	10.6%	35.8%
Dungannon	160	5.0%	72.5%	18.1%	4.4%	22.5%
Dungiven	181	5.0%	63.0%	21.5%	10.5%	32.0%
East Belfast	184	6.5%	64.1%	18.5%	10.9%	29.3%
Edenballymore	112	2.7%	63.4%	25.9%	8.0%	33.9%
Glenbrook	<100	3.4%	57.3%	24.7%	14.6%	39.3%
Gold	156	4.5%	64.1%	26.3%	5.1%	31.4%
Horizon	123	3.3%	56.1%	27.6%	13.0%	40.7%
Kilkeel	<100	4.5%	72.7%	15.9%	6.8%	22.7%
LAST	177	5.1%	67.2%	19.8%	7.9%	27.7%
Lisburn	<100	13.2%	63.2%	10.3%	13.2%	23.5%
Little Hands	130	6.9%	67.7%	19.2%	6.2%	25.4%
Newry City	193	5.2%	66.3%	22.8%	5.7%	28.5%
Outer West Belfast	151	7.3%	60.3%	25.8%	6.6%	32.5%
Rainbow	125	6.4%	54.4%	31.2%	8.0%	39.2%
Saol Ur	126	7.1%	61.9%	15.9%	15.1%	31.0%
Shankill	150	8.0%	64.7%	20.7%	6.7%	27.3%
Shantallow	202	6.4%	63.4%	22.3%	7.9%	30.2%
Smile	<100	6.4%	64.1%	17.9%	11.5%	29.5%
South Armagh	260	5.4%	65.0%	23.1%	6.5%	29.6%
South Belfast	112	8.9%	63.4%	22.3%	5.4%	27.7%
Splash	213	7.5%	61.0%	23.9%	7.5%	31.5%
Star	<100	5.7%	71.7%	18.9%	3.8%	22.6%
Strabane	258	7.8%	67.1%	16.7%	8.5%	25.2%
Waterside	139	6.5%	58.3%	30.2%	5.0%	35.3%
Children living in Sure Start areas	5,315	6.6%	62.3%	22.6%	8.5%	31.1%
Children not living in Sure Start areas	10,501	7.0%	66.9%	19.6%	6.5%	26.1%
All children	15,816	6.9%	65.4%	20.6%	7.1%	27.7%

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

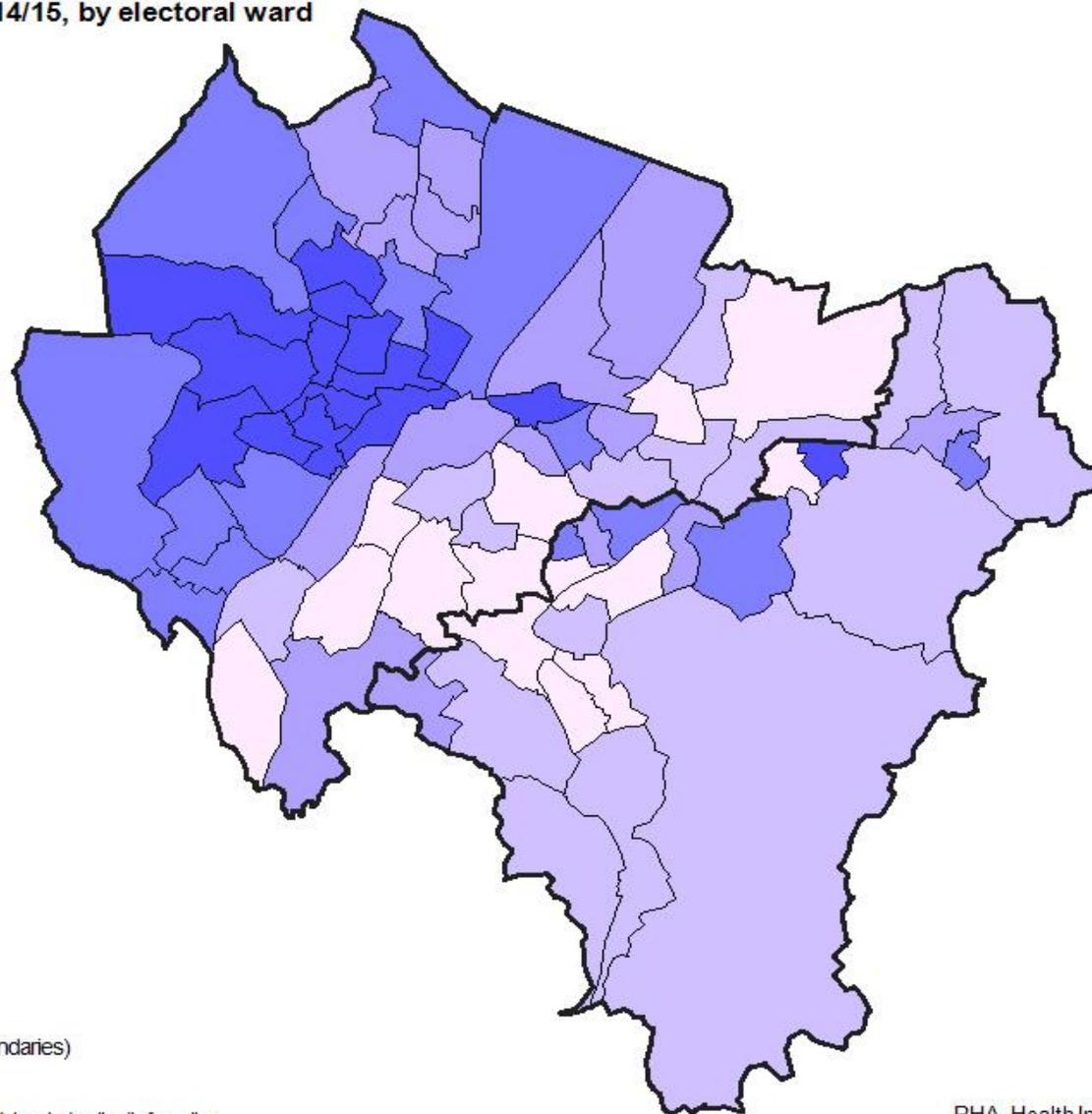
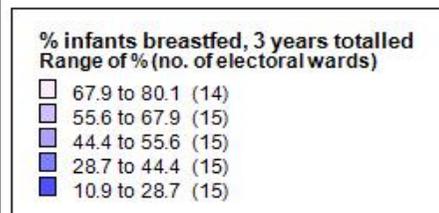
In Belfast Trust area, not all schools were visited and so the number of children measured is lower than in previous years

Disclosure controls have been applied to the data

Appendix 1: Breastfeeding at discharge

Public Health Agency
% infants breastfed at discharge, 2012/13 to 2014/15, by electoral ward

Belfast Local Commissioning Group



Local Government District boundary (1992 boundaries)

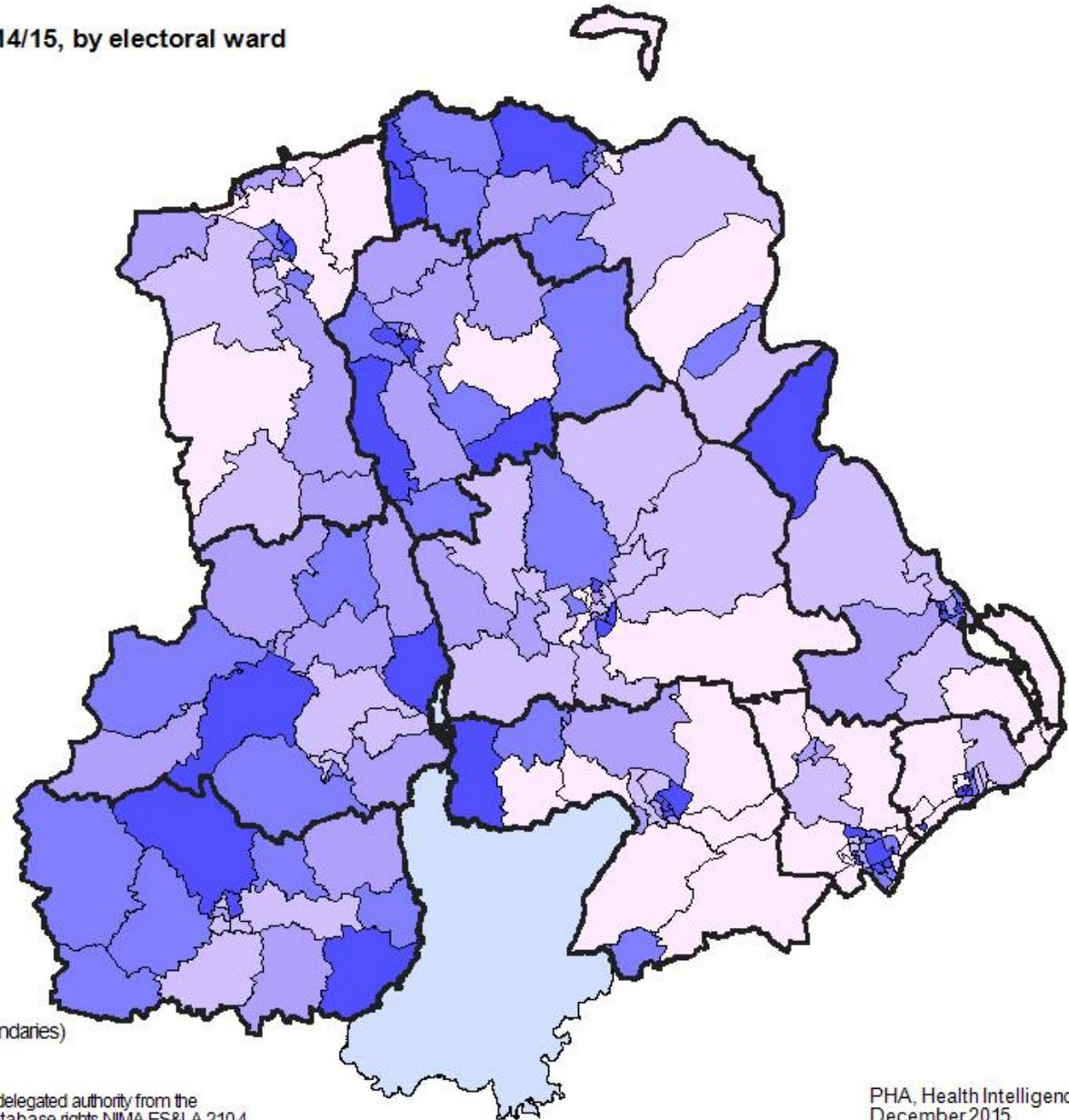
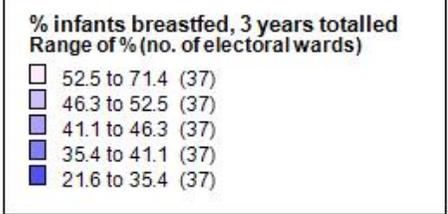
Source: Child Health System

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PHA, Health Intelligence
December 2015

Public Health Agency
% infants breastfed at discharge, 2012/13 to 2014/15, by electoral ward

Northern Local Commissioning Group

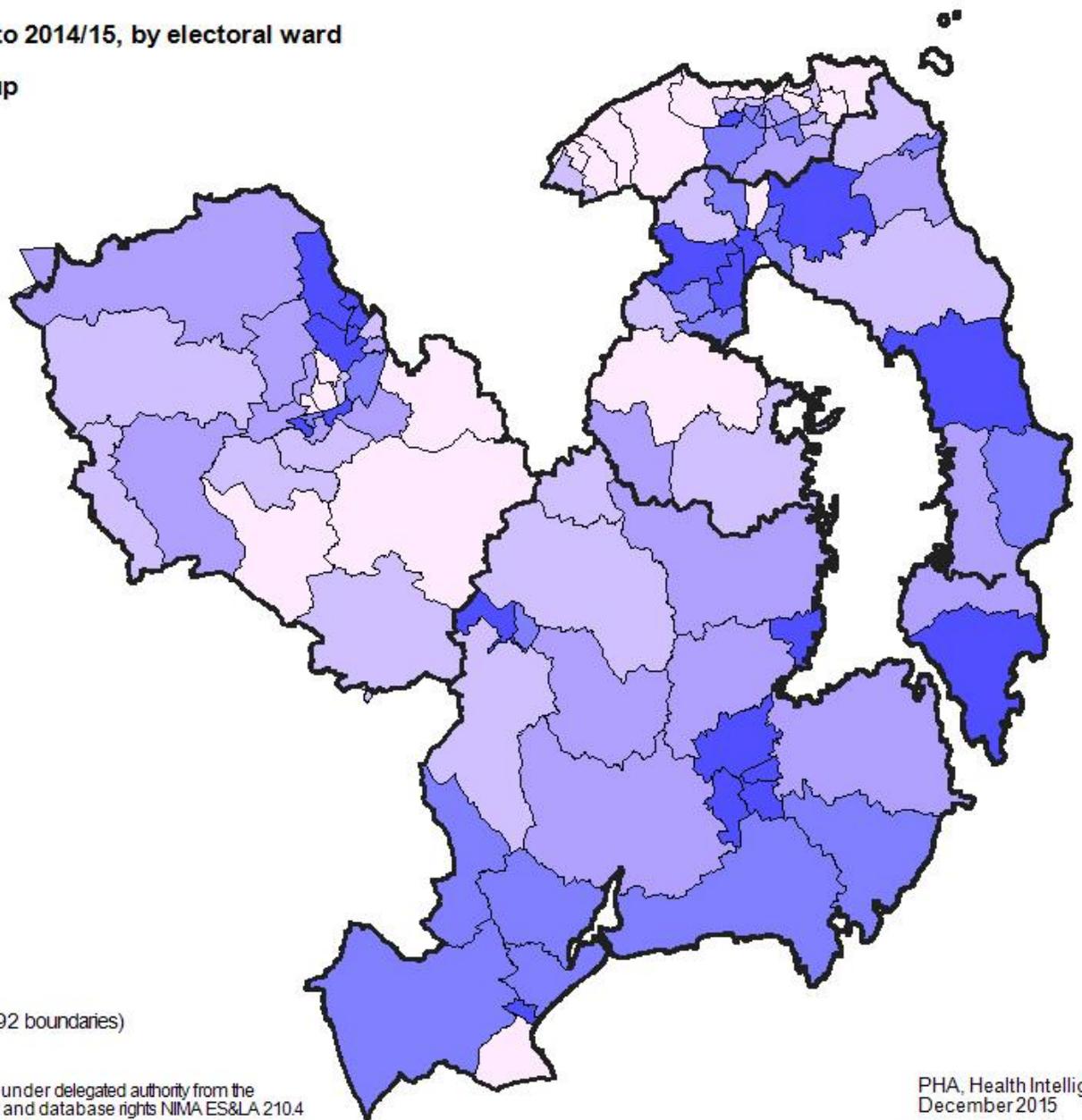
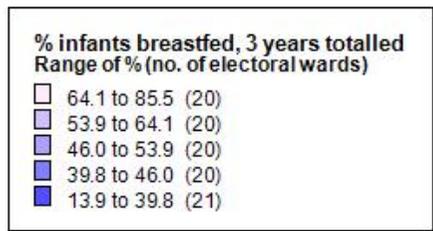


Local Government District boundary (1992 boundaries)

Source: Child Health System
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Public Health Agency
% infants breastfed at discharge, 2012/13 to 2014/15, by electoral ward

South Eastern Local Commissioning Group



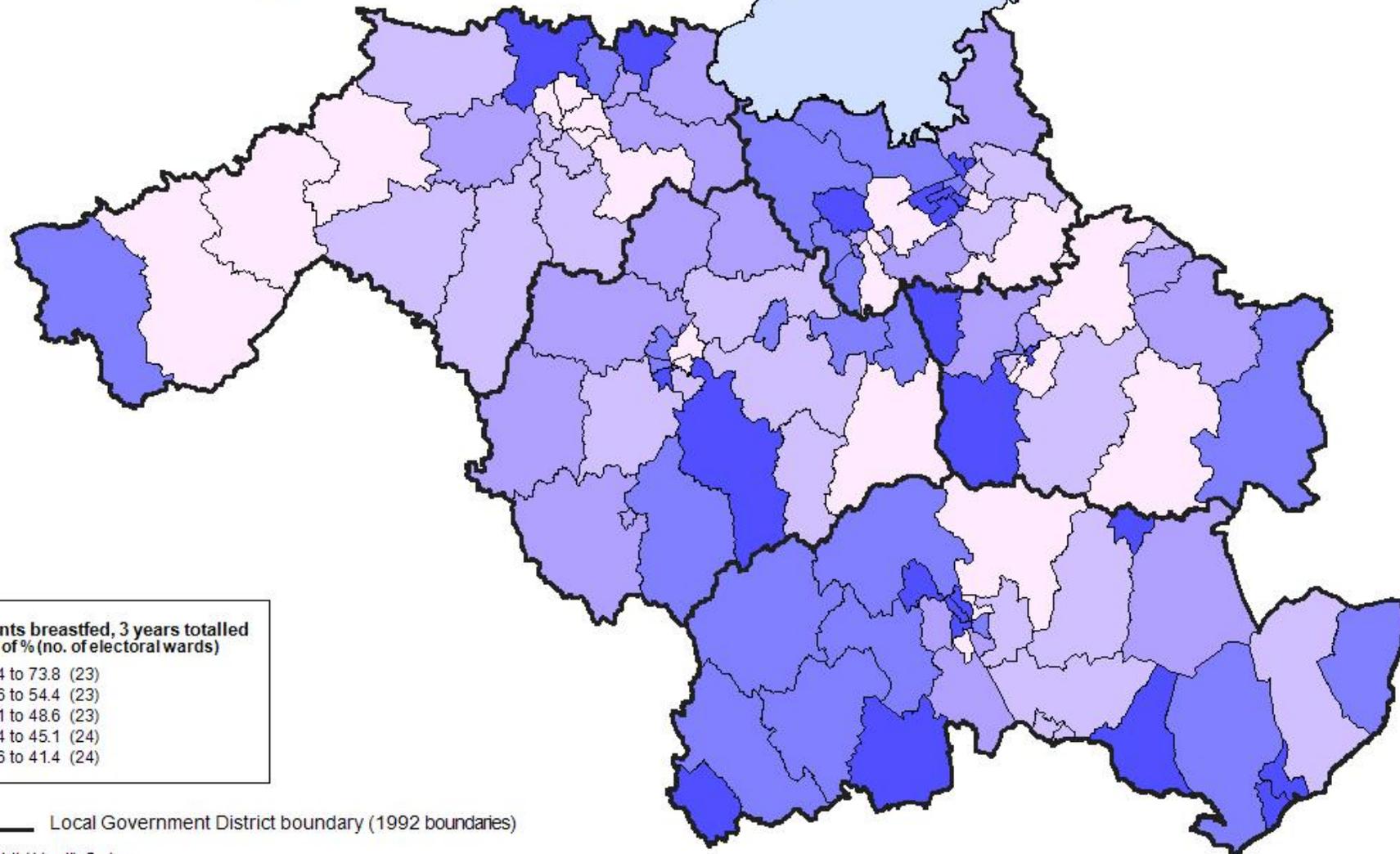
Local Government District boundary (1992 boundaries)

Source: Child Health System
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PHA, Health Intelligence
December 2015

Public Health Agency
% infants breastfed at discharge, 2012/13 to 2014/15, by electoral ward

Southern Local Commissioning Group



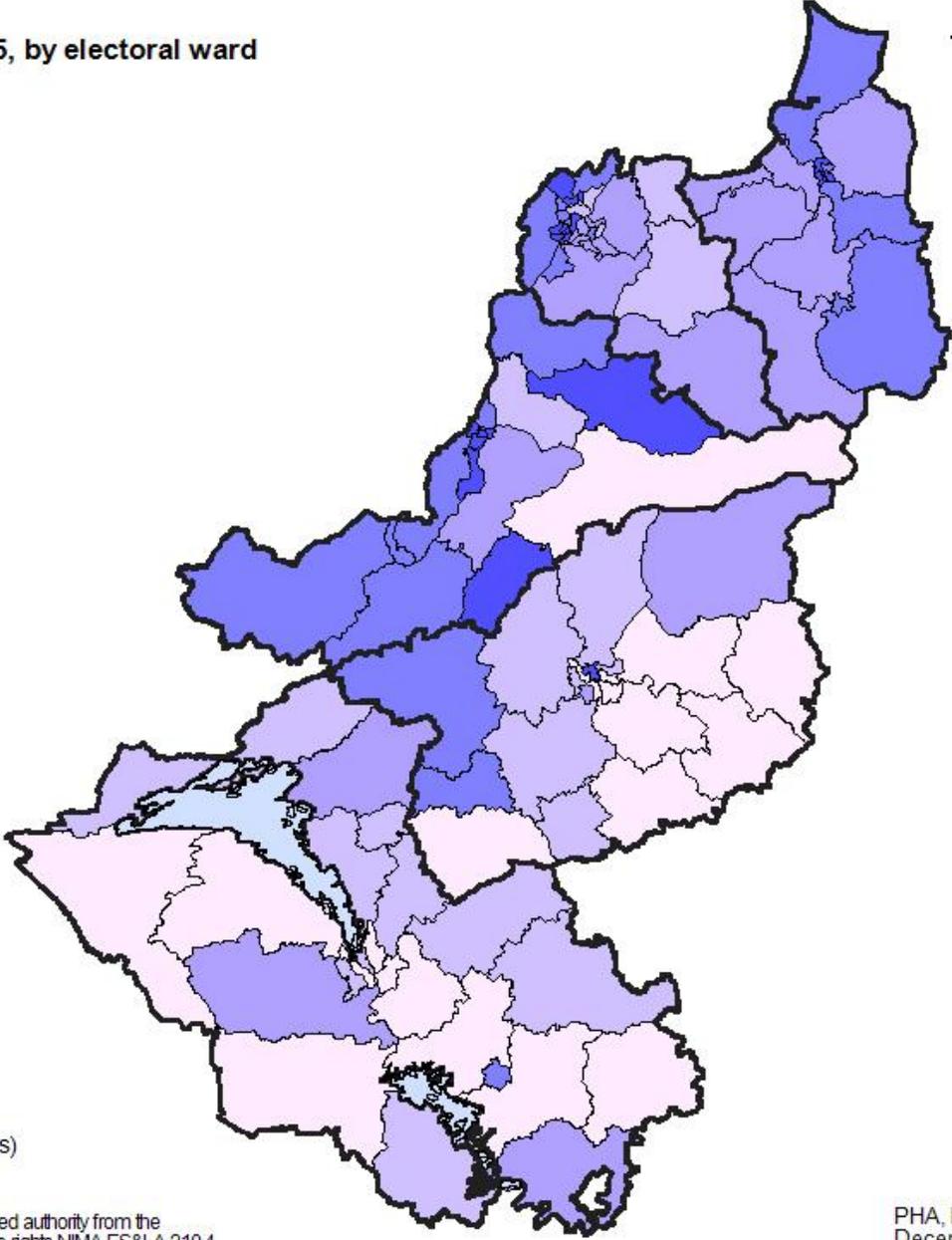
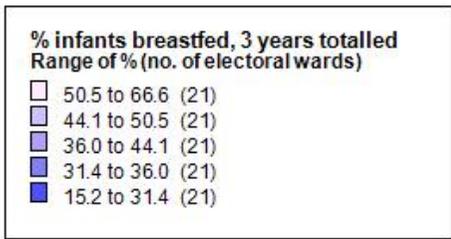
Source: Child Health System

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PHA, Health Intelligence
December 2015

Public Health Agency
% infants breastfed at discharge, 2012/13 to 2014/15, by electoral ward

Western Local Commissioning Group



Local Government District boundary (1992 boundaries)

Source: Child Health System

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**Produced by Public Health Agency
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