

Nova Scotia Atlee Perinatal Database Report of Indicators

2005–2014



Acknowledgements

The Perinatal Epidemiology Research Unit is pleased to present an updated Nova Scotia Atlee Perinatal Database Report. It was developed and prepared by members of the Perinatal Epidemiology Research Unit in collaboration with the Reproductive Care Program (RCP) of Nova Scotia. All members of RCP provided valuable input, but we would like to especially acknowledge John Fahey (Research Analyst), Becky Attenborough (Manager), and Irene Gagnon (Clinical Data Coordinator). We would also like to thank Bryan Maguire, whose expertise in computer programming will ensure that future reports can be produced easily on a regular basis. Of course, all of the health information professionals, health care providers, and administrators at participating hospitals are invaluable to maintaining the high quality data found within the Atlee Perinatal Database.

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Introduction

The Perinatal Epidemiology Research Unit is pleased to present an updated Nova Scotia Atlee Perinatal Database Report for the years 2005 to 2014. This report is modeled on our previous report that included deliveries from 2002 to 2011 but many indicators have been added as a result of feedback on our previous report.

Purpose of Report

The data presented in this Report are meant to provide a quick reference to the sentinel indicators of perinatal health and care among Nova Scotia residents. In addition, we hope that the data in this Report will assist with the development and monitoring of standards of care and will trigger research questions that can be pursued in the future.

Nova Scotia Atlee Perinatal Database

The Nova Scotia Atlee Perinatal Database (NSAPD) is a population-based database that contains detailed province-wide clinical and demographic information from 1988 onwards. Data are abstracted on-site in Nova Scotia health care facilities by health information professionals and are contributed to the NSAPD by these facilities. The Reproductive Care Program (RCP), a program of the Nova Scotia Department of Health and Wellness, is the NSAPD custodian.

The population in the NSAPD includes all reported liveborn and stillborn infants at a gestational age of at least 20 weeks or having a birth weight of at least 500 g. Every effort is made to ensure that the Nova Scotia Atlee Perinatal Database includes perinatal events for all Nova Scotia residents. Events that occurred in Nova Scotia facilities that do not have active maternity services are collected, as are events that occur in New Brunswick facilities where Nova Scotia residents regularly seek care. Home births have been included in the NSAPD since the introduction of regulated midwifery in 2009.

Important Notes Regarding Definitions and Figures

A Glossary of all terms can be found at the end of this report.

The term "birth" is differentiated from "delivery". A delivery refers to the completed pregnancy, regardless of the number of infants born. Birth refers to the live born or stillborn infant. For example, when a woman delivers twins, one delivery and two births are represented.

The definition of gestational age, which is detailed in the Glossary, incorporates information on ultrasound measurements, as well as last menstrual period date and clinical estimate of gestational age.

It is important to note the scale that is used in the Figures. In some instances, the rate of a particular indicator will appear to vary greatly from year to year, but the apparent variation may be due to a narrow range for the scale.

Future Reports

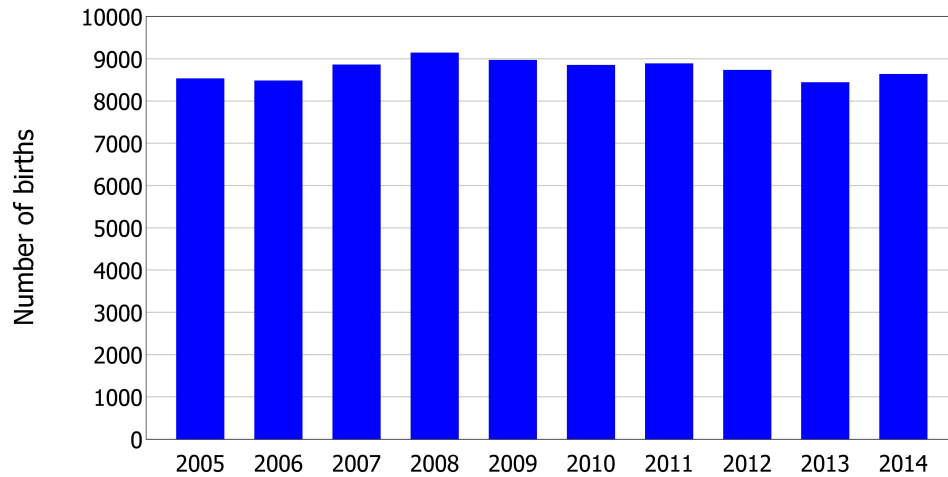
We plan to produce similar reports on a regular basis. Updated reports will be posted on the RCP web site (<http://rcp.nshealth.ca>). As always, we welcome comments and suggestions for additional indicators to be included in these future reports (peru@dal.ca).

Section 1:
Deliveries and Births

1.1 Number of deliveries (live births and stillbirths) to residents by year, Nova Scotia, 2005-2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Singleton	8276	8229	8580	8846	8665	8544	8608	8444	8164	8340
Multiple	126	127	140	145	152	154	139	145	139	149
Total deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489

1.2 Number of births by year, Nova Scotia, 2005-2014



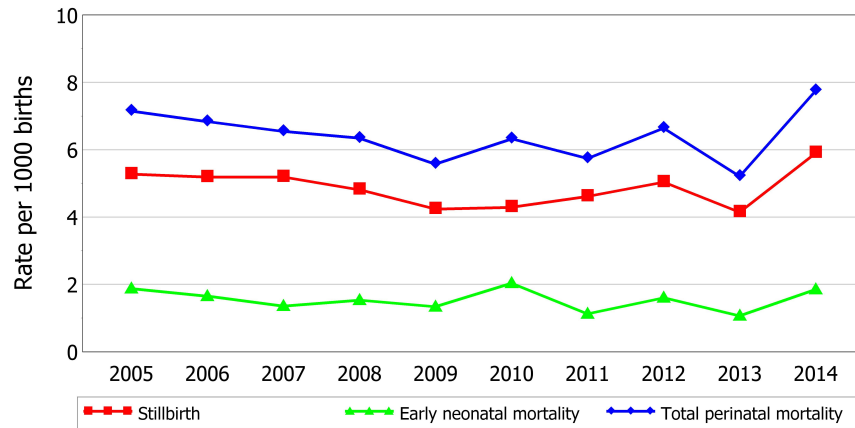
1.3 Number of births by outcome, sex, and year, Nova Scotia, 2005-2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Male live births	4422	4351	4539	4660	4618	4526	4503	4462	4327	4355
Male stillbirths	26	23	16	25	23	19	16	22	16	26
Male births*	4448	4374	4555	4685	4641	4545	4519	4484	4343	4381
Female live births	4068	4090	4279	4440	4314	4290	4343	4229	4083	4232
Female stillbirths	19	20	28	17	14	17	23	21	18	23
Female births*	4087	4110	4307	4457	4328	4307	4366	4250	4101	4255
Total live births	8490	8441	8818	9100	8932	8816	8846	8692	8410	8588
Total stillbirths	45	44	46	44	38	38	41	44	35	51
Total births	8535	8485	8864	9144	8970	8854	8887	8736	8445	8639

* Sex could not be determined in some infants and these infants are not included in the male or female categories.

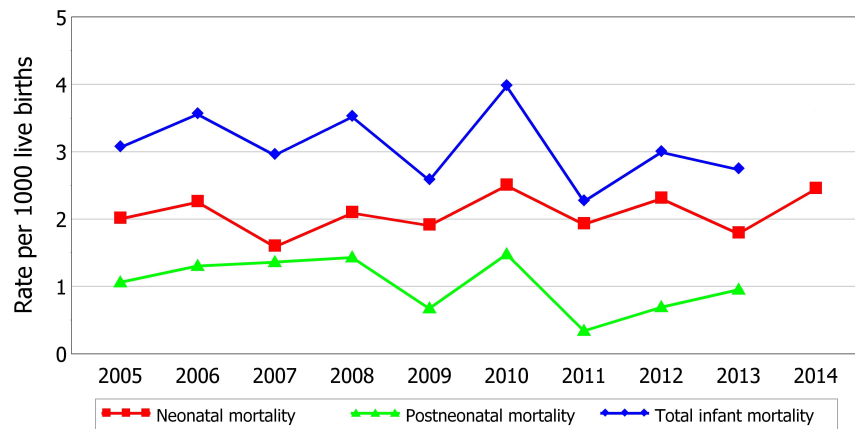
Section 2: Perinatal and Infant Mortality

2.1 Perinatal mortality by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# births	8535	8485	8864	9144	8970	8854	8887	8736	8445	8639
Rate per 1000 births:										
Stillbirth	5.3	5.2	5.2	4.8	4.2	4.3	4.6	5	4.1	5.9
Early neonatal mortality	1.9	1.6	1.4	1.5	1.3	2	1.1	1.6	1.1	1.9
Total perinatal mortality	7.1	6.8	6.5	6.3	5.6	6.3	5.7	6.6	5.2	7.8

2.2 Infant mortality by year, Nova Scotia, 2005-2014

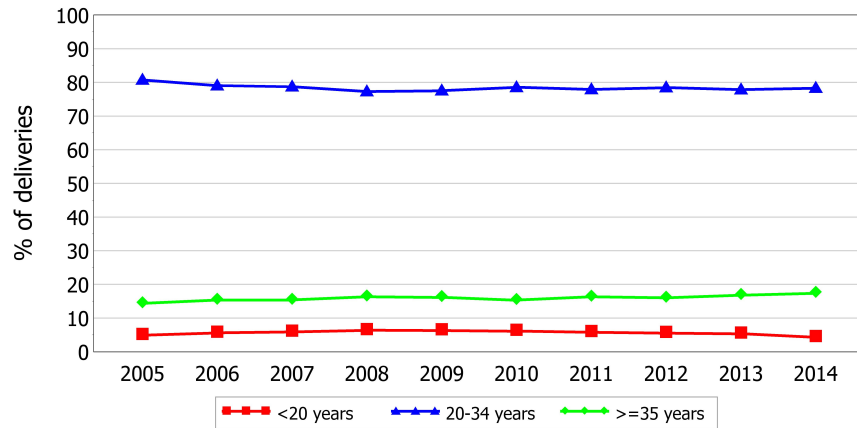


	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births	8490	8441	8818	9100	8932	8816	8846	8692	8410	8588
Rate per 1000 live births:										
Neonatal mortality	2.0	2.3	1.6	2.1	1.9	2.5	1.9	2.3	1.8	2.4
Postneonatal mortality	1.1	1.3	1.4	1.4	0.7	1.5	0.3	0.7	1.0	*
Total infant mortality	3.1	3.6	2.9	3.5	2.6	4.0	2.3	3.0	2.7	*

* Ascertainment of postneonatal deaths for births occurring in 2014 is not yet complete.

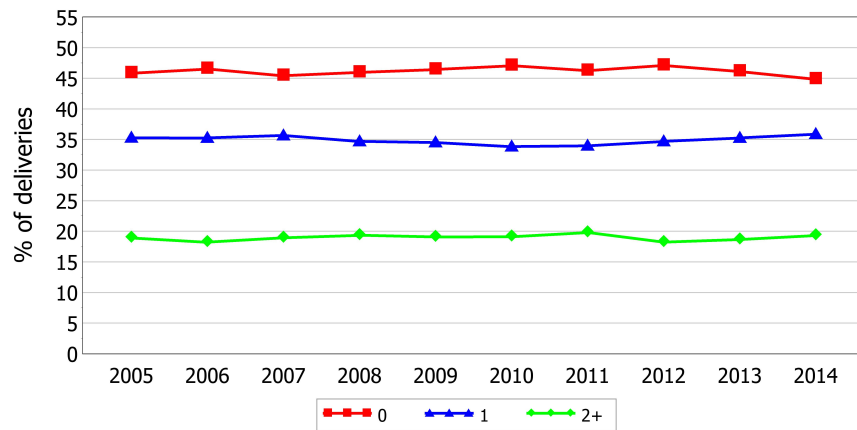
Section 3:
Determinants of Maternal, Fetal, and Infant Health

3.1 Maternal age by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489
<20 years	4.9%	5.6%	5.9%	6.4%	6.3%	6.1%	5.8%	5.5%	5.3%	4.3%
20-34 years	80.7%	79.1%	78.7%	77.3%	77.5%	78.5%	77.9%	78.5%	77.9%	78.3%
≥35 years	14.4%	15.4%	15.4%	16.3%	16.2%	15.3%	16.3%	16.0%	16.8%	17.4%

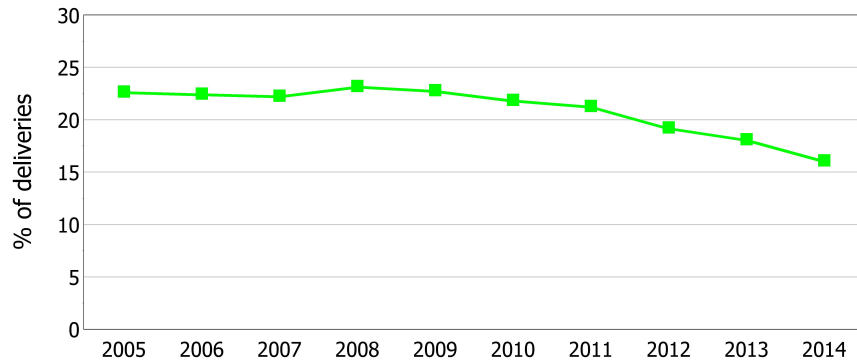
3.2 Maternal parity by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries*	8402	8356	8720	8991	8815	8697	8747	8588	8301	8489
0	45.8%	46.5%	45.4%	46.0%	46.4%	47.1%	46.2%	47.1%	46.1%	44.8%
1	35.3%	35.3%	35.7%	34.7%	34.5%	33.8%	34.0%	34.7%	35.2%	35.9%
2+	18.9%	18.2%	18.9%	19.4%	19.1%	19.1%	19.8%	18.2%	18.6%	19.3%

* With known parity.

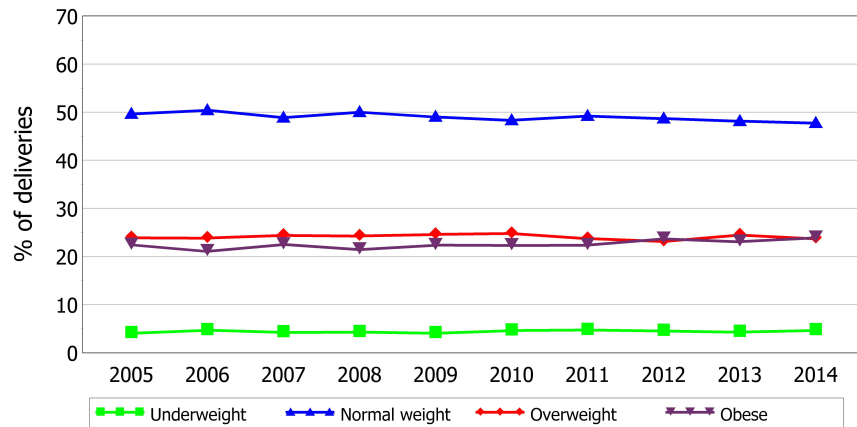
3.3 Maternal smoking during pregnancy by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries*	8315	8305	8656	8898	8732	8623	8694	8511	8195	8414
Smoking	22.6%	22.4%	22.2%	23.1%	22.7%	21.8%	21.2%	19.2%	18.0%	16.0%

* With known smoking status.

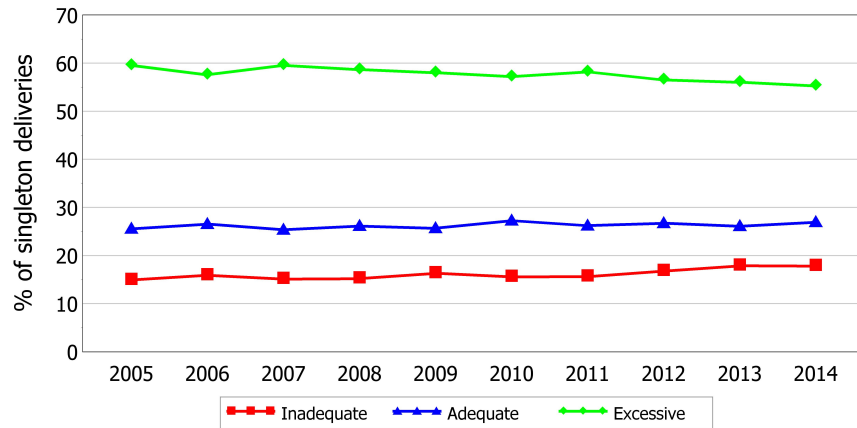
3.4 Pre-pregnancy body mass index by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries*	5169	5840	6435	6803	6854	6844	7019	7042	6820	6943
Underweight	4.0%	4.7%	4.2%	4.3%	4.0%	4.6%	4.7%	4.5%	4.3%	4.7%
Normal weight	49.6%	50.4%	48.9%	50.0%	49.0%	48.3%	49.2%	48.7%	48.2%	47.7%
Overweight	23.9%	23.8%	24.4%	24.3%	24.6%	24.8%	23.7%	23.1%	24.5%	23.7%
Obese	22.4%	21.1%	22.5%	21.4%	22.4%	22.3%	22.4%	23.7%	23.1%	23.9%

* With known pre-pregnancy weight and height.

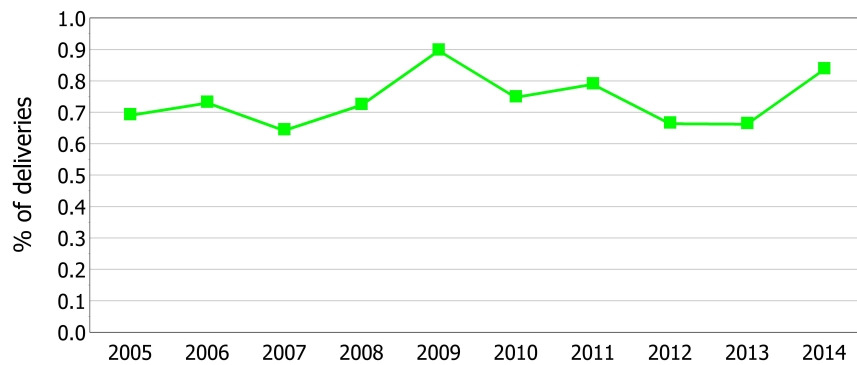
3.5 Gestational weight gain according to recommendations, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# singleton deliveries*	4453	5137	5713	6044	5941	6048	6148	6101	5986	5998
Inadequate	14.9%	15.9%	15.1%	15.2%	16.3%	15.6%	15.6%	16.8%	17.9%	17.8%
Adequate	25.6%	26.5%	25.3%	26.1%	25.7%	27.2%	26.2%	26.7%	26.1%	26.9%
Excessive	59.5%	57.6%	59.5%	58.7%	58.0%	57.2%	58.2%	56.5%	56.0%	55.3%

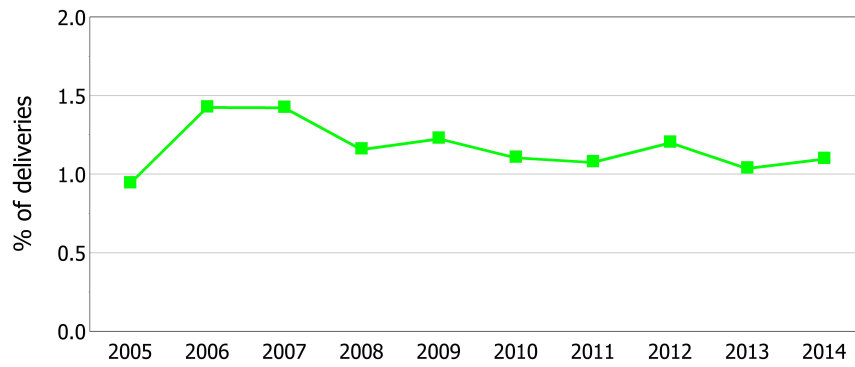
* With known pre-pregnancy and delivery weights and height. Gestational weight gain according to recommendations made by Health Canada.

3.6 Pre-existing diabetes by year, Nova Scotia, 2005-2014



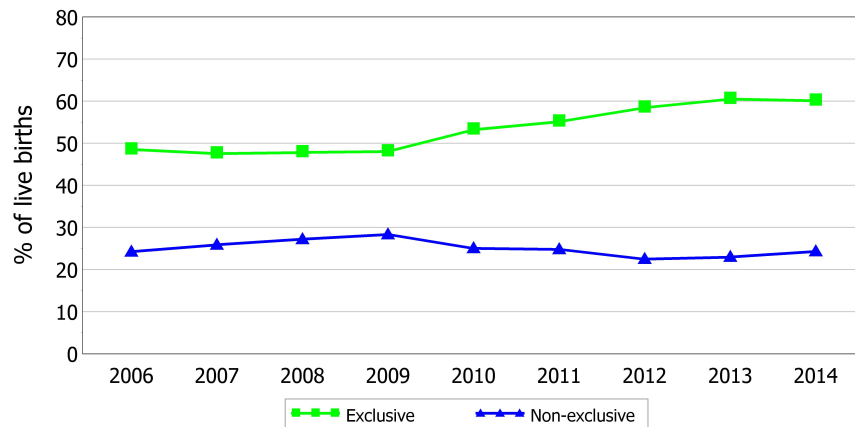
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489
Pre-existing diabetes	0.7%	0.7%	0.6%	0.7%	0.9%	0.7%	0.8%	0.7%	0.7%	0.8%

3.7 Pre-existing hypertension by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489
Pre-existing hypertension	0.9%	1.4%	1.4%	1.2%	1.2%	1.1%	1.1%	1.2%	1.0%	1.1%

3.8 Breastfeeding status during hospital stay by year, Nova Scotia, 2006-2014

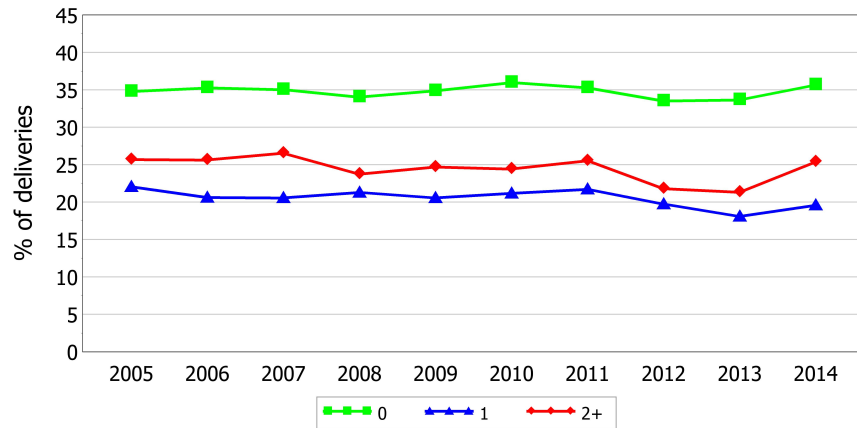


	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births*	8395	8781	9061	8888	8745	8794	8645	8366	8542
Exclusive	48.5%	47.6%	47.8%	48.1%	53.2%	55.1%	58.5%	60.5%	60.1%
Non-exclusive	24.2%	25.9%	27.2%	28.3%	25.0%	24.8%	22.5%	23.0%	24.3%
Total breastfed	72.8%	73.4%	75.0%	76.4%	78.3%	79.9%	81.0%	83.5%	84.5%

* With known breastfeeding status.

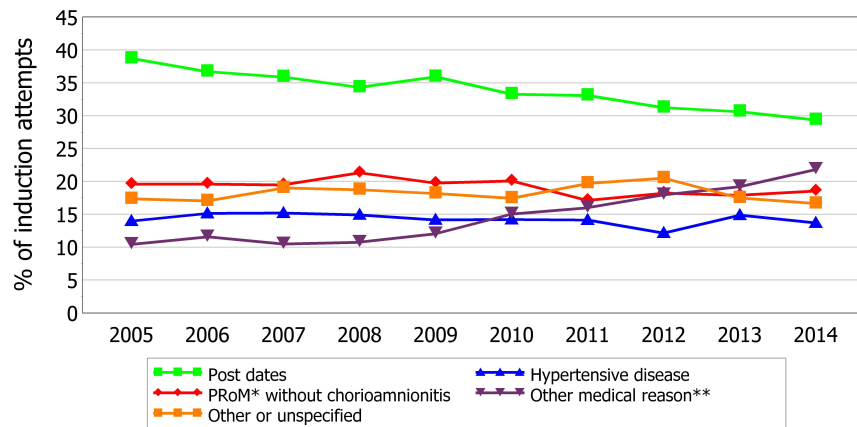
Section 4:
Labour and Birth Processes

4.1 Attempts at labour induction by parity and year, Nova Scotia, 2005-2014



Parity		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
0	# deliveries	3850	3888	3960	4132	4093	4092	4044	4044	3827	3806
	% induction attempted	34.8%	35.3%	35.0%	34.0%	34.9%	36.0%	35.3%	33.5%	33.7%	35.7%
1	# deliveries	2963	2946	3109	3119	3041	2943	2971	2979	2926	3044
	% induction attempted	22.0%	20.6%	20.6%	21.3%	20.6%	21.2%	21.7%	19.7%	18.1%	19.6%
2+	# deliveries	1589	1522	1651	1740	1681	1662	1732	1565	1548	1639
	% induction attempted	25.7%	25.6%	26.5%	23.7%	24.7%	24.4%	25.5%	21.8%	21.3%	25.4%

4.2 Indication for labour induction by parity and year, Nova Scotia, 2005-2014

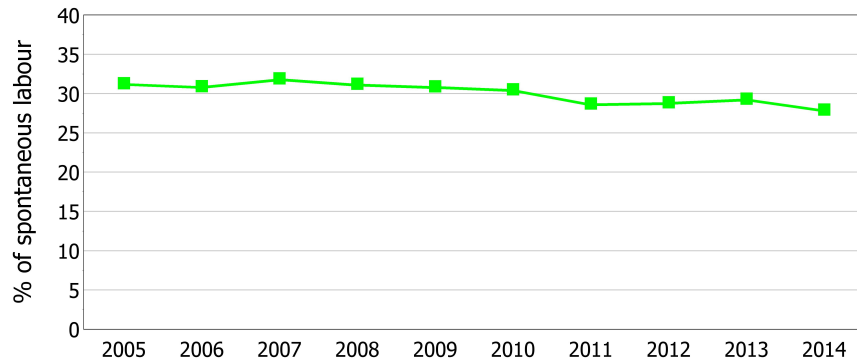


	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# induction attempts	2400	2368	2464	2483	2467	2501	2513	2284	2147	2369
Post dates	38.7%	36.7%	35.9%	34.3%	35.9%	33.3%	33.1%	31.2%	30.6%	29.3%
Hypertensive disease	14.0%	15.1%	15.2%	14.9%	14.1%	14.2%	14.1%	12.1%	14.9%	13.7%
PRoM* without chorioamnionitis	19.6%	19.6%	19.5%	21.3%	19.7%	20.1%	17.1%	18.2%	17.9%	18.5%
Other medical reason**	10.4%	11.6%	10.5%	10.8%	12.0%	15.0%	16.0%	18.0%	19.2%	21.8%
Other or unspecified	17.3%	17.0%	19.0%	18.7%	18.2%	17.4%	19.7%	20.5%	17.5%	16.6%

* PRoM: Prelabour rupture of membranes.

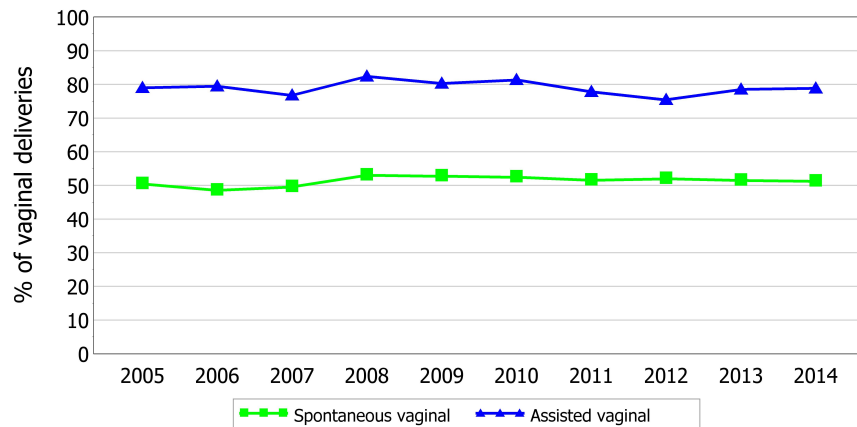
** Please see Glossary under 'Indication for labour induction' for complete list.

4.3 Medical augmentation of labour among women with spontaneous onset of labour by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# spontaneous labour	4790	4790	5013	5162	5094	4931	5032	5117	4917	4883
Augmented	31.2%	30.8%	31.8%	31.1%	30.8%	30.4%	28.6%	28.7%	29.2%	27.8%

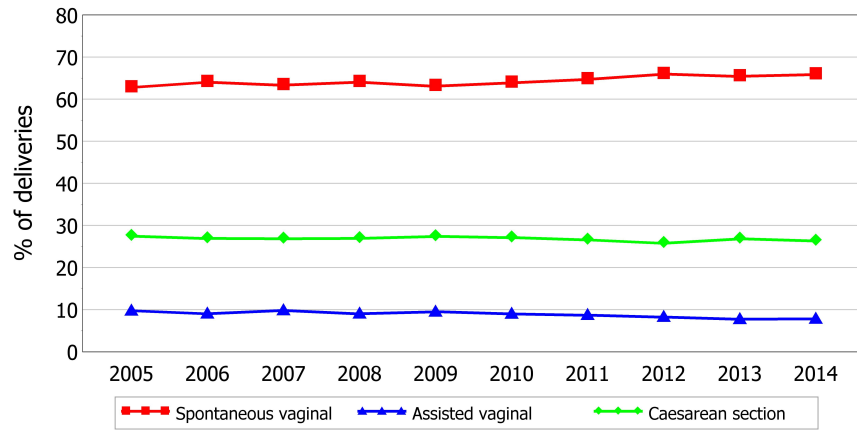
4.4 Use of regional anesthesia with vaginal delivery by year, Nova Scotia, 2005-2014



Type of delivery		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Spontaneous	# deliveries	5276	5352	5524	5757	5564	5558	5661	5667	5433	5592
	% anesthesia*	50.4%	48.5%	49.5%	53.0%	52.7%	52.4%	51.5%	52.0%	51.5%	51.2%
Assisted	# deliveries	818	754	856	811	837	782	761	708	642	661
	% anesthesia*	79.0%	79.4%	76.8%	82.4%	80.3%	81.3%	77.8%	75.4%	78.5%	78.8%

* Regional.

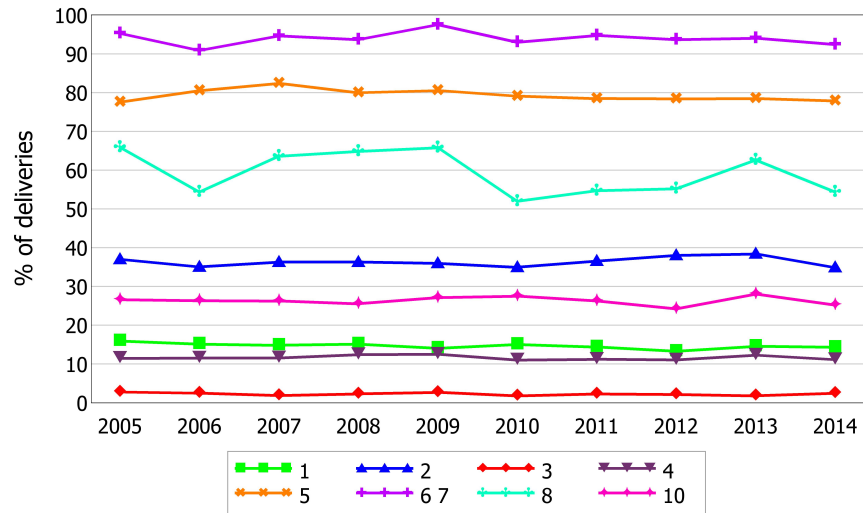
4.5 Type of delivery by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries*	8402	8354	8720	8988	8817	8698	8746	8589	8303	8488
Spontaneous vaginal	62.8%	64.1%	63.3%	64.1%	63.1%	63.9%	64.7%	66.0%	65.4%	65.9%
Assisted vaginal	9.7%	9.0%	9.8%	9.0%	9.5%	9.0%	8.7%	8.2%	7.7%	7.8%
Caesarean section	27.5%	26.9%	26.8%	26.9%	27.4%	27.1%	26.6%	25.8%	26.8%	26.3%

* With known type of delivery.

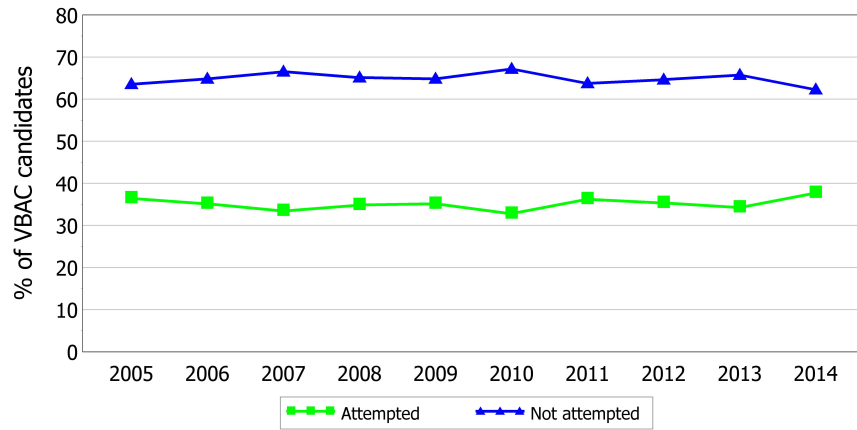
4.6 Caesarean delivery by Robson group and year, Nova Scotia, 2005-2014



Robson group		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
1	Nulliparous, singleton, cephalic, term, spontaneous labour	# deliveries Caesarean	1950 15.9%	1960 15.1%	2092 14.8%	2186 15.1%	2139 14.0%	2065 15.0%	2109 14.4%	2211 13.3%	2043 14.5%	1955 14.3%
2	Nulliparous, singleton, cephalic, term, induced or no labour	# deliveries Caesarean	1279 37.0%	1333 35.0%	1337 36.3%	1353 36.3%	1316 35.9%	1388 34.9%	1383 36.5%	1284 38.0%	1237 38.4%	1302 34.9%
3	Multiparous, singleton, cephalic, term, no previous CS, spontaneous labour	# deliveries Caesarean	2109 2.8%	2071 2.5%	2267 1.9%	2235 2.3%	2175 2.7%	2115 1.7%	2186 2.2%	2228 2.1%	2226 1.8%	2199 2.5%
4	Multiparous, singleton, cephalic, term, no previous CS, induced or no labour	# deliveries Caesarean	978 11.5%	903 11.5%	979 11.5%	999 12.4%	937 12.5%	919 11.0%	955 11.2%	807 11.0%	767 12.3%	874 11.1%
5	Multiparous, singleton, cephalic, term, previous CS	# deliveries Caesarean	855 77.5%	933 80.5%	989 82.4%	988 80.0%	966 80.5%	856 79.1%	914 78.4%	884 78.4%	906 78.5%	1030 77.9%
6 7	Nulliparous and multiparous, singleton, breech	# deliveries Caesarean	359 95.3%	328 90.9%	334 94.6%	363 93.7%	321 97.5%	342 93.0%	324 94.8%	331 93.7%	335 94.0%	302 92.4%
8	Multiple pregnancy	# deliveries Caesarean	126 65.9%	127 54.3%	140 63.6%	145 64.8%	152 65.8%	154 51.9%	139 54.7%	145 55.2%	139 62.6%	149 54.4%
10	Singleton, cephalic, preterm	# deliveries Caesarean	497 26.6%	536 26.3%	503 26.2%	533 25.5%	502 27.1%	462 27.5%	484 26.2%	471 24.2%	471 28.0%	524 25.2%

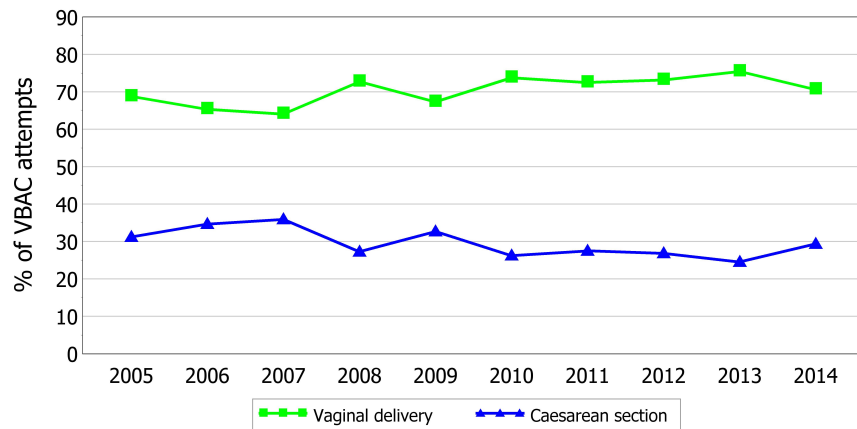
Refer to: Robson MS. Classification of caesarean sections. Fetal and Maternal Medicine Review 2001;12(1):23-39.

4.7 Attempt at vaginal delivery among candidates for vaginal birth after Caesarean (VBAC) by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# VBAC candidates	818	862	891	852	862	814	803	812	797	912
Attempted	36.4%	35.2%	33.4%	34.9%	35.2%	32.8%	36.2%	35.3%	34.3%	37.7%
Not attempted	63.6%	64.8%	66.6%	65.1%	64.8%	67.2%	63.8%	64.7%	65.7%	62.3%

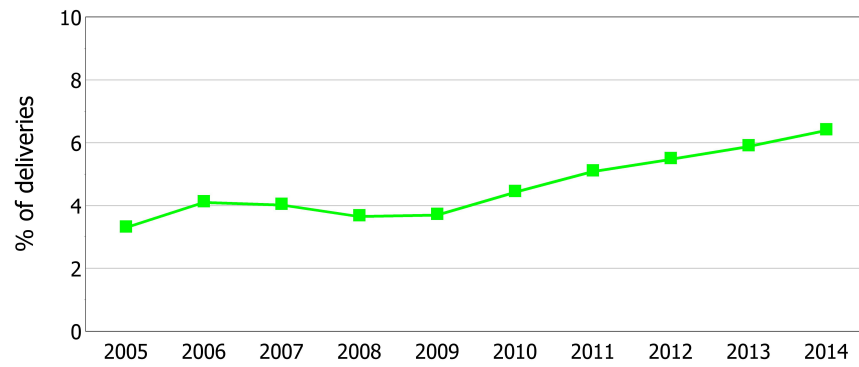
4.8 Type of delivery among candidates for vaginal birth after Caesarean (VBAC) attempting VBAC by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# VBAC attempts	298	303	298	297	303	267	291	287	273	344
Vaginal delivery	68.8%	65.3%	64.1%	72.7%	67.3%	73.8%	72.5%	73.2%	75.5%	70.6%
Caesarean section	31.2%	34.7%	35.9%	27.3%	32.7%	26.2%	27.5%	26.8%	24.5%	29.4%

Section 5:
Maternal Health Outcomes

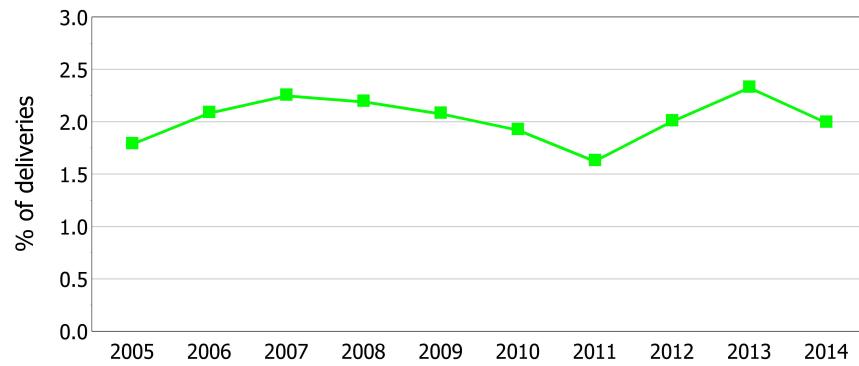
5.1 Gestational diabetes by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries*	8344	8295	8664	8926	8738	8633	8678	8532	8248	8418
Gestational diabetes	3.3%	4.1%	4.0%	3.7%	3.7%	4.4%	5.1%	5.5%	5.9%	6.4%

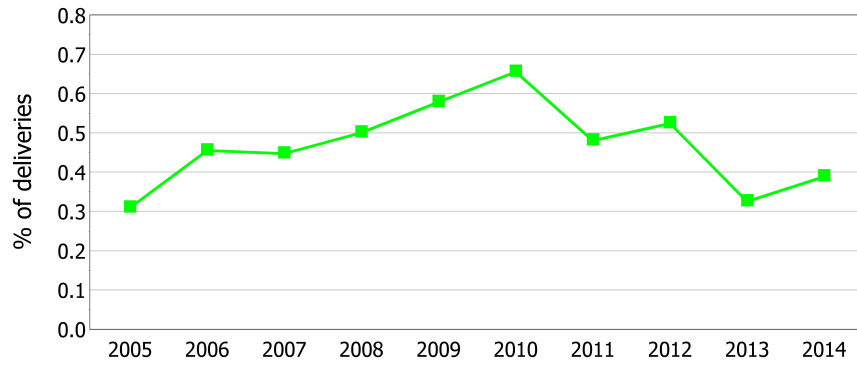
* Among women without pre-existing diabetes.

5.2 Pre-eclampsia by year, Nova Scotia, 2005-2014



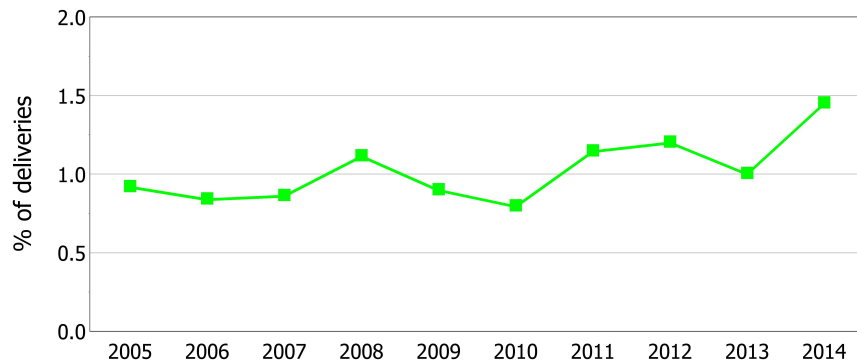
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489
Pre-eclampsia	1.8%	2.1%	2.2%	2.2%	2.1%	1.9%	1.6%	2.0%	2.3%	2.0%

5.3 Placenta previa by year, Nova Scotia, 2005-2014



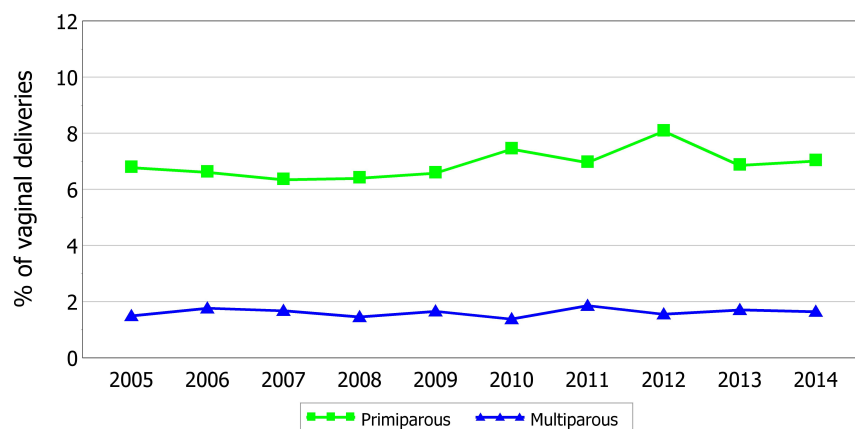
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489
Placenta previa	0.3%	0.5%	0.4%	0.5%	0.6%	0.7%	0.5%	0.5%	0.3%	0.4%

5.4 Placental abruption by year, Nova Scotia, 2005-2014



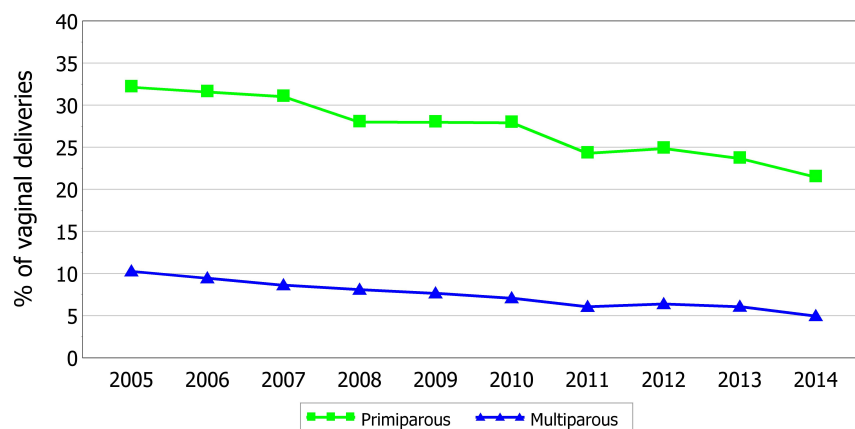
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489
Placental abruption	0.9%	0.8%	0.9%	1.1%	0.9%	0.8%	1.1%	1.2%	1.0%	1.4%

5.5 3rd or 4th degree laceration among vaginal deliveries by parity and year, Nova Scotia, 2005-2014



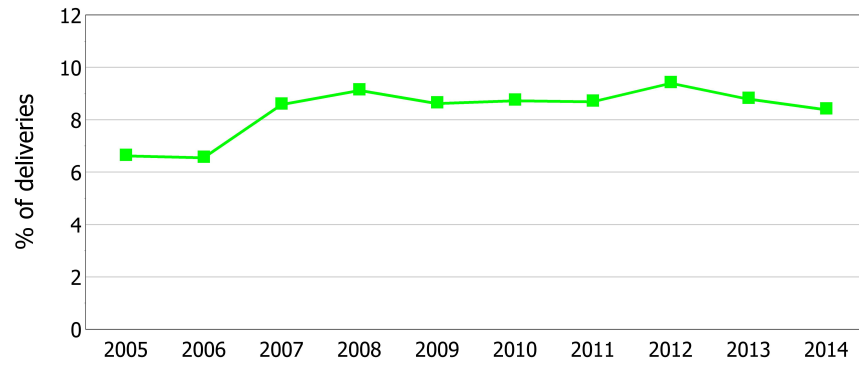
Parity		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Primiparous	# vaginal deliveries	2732	2816	2853	2987	2949	2932	2919	2961	2729	2781
	% 3rd or 4th deg. laceration	6.8%	6.6%	6.3%	6.4%	6.6%	7.4%	7.0%	8.1%	6.9%	7.0%
Multiparous	# vaginal deliveries	3362	3290	3527	3581	3450	3407	3503	3413	3344	3472
	% 3rd or 4th deg. laceration	1.5%	1.8%	1.7%	1.5%	1.7%	1.4%	1.9%	1.6%	1.7%	1.6%

5.6 Episiotomy by parity and year, Nova Scotia, 2005-2014



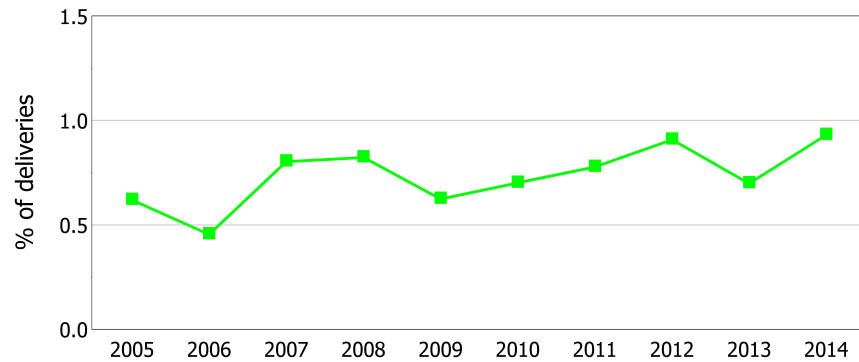
Parity		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Primiparous	# vaginal deliveries	2732	2816	2853	2987	2949	2932	2919	2961	2729	2781
	% episiotomy	32.1%	31.6%	31.0%	28.0%	28.0%	27.9%	24.3%	24.9%	23.7%	21.5%
Multiparous	# vaginal deliveries	3362	3290	3527	3581	3450	3407	3503	3413	3344	3472
	% episiotomy	10.3%	9.5%	8.6%	8.1%	7.7%	7.1%	6.1%	6.4%	6.1%	5.0%

5.7 Postpartum hemorrhage by year, Nova Scotia, 2005-2014



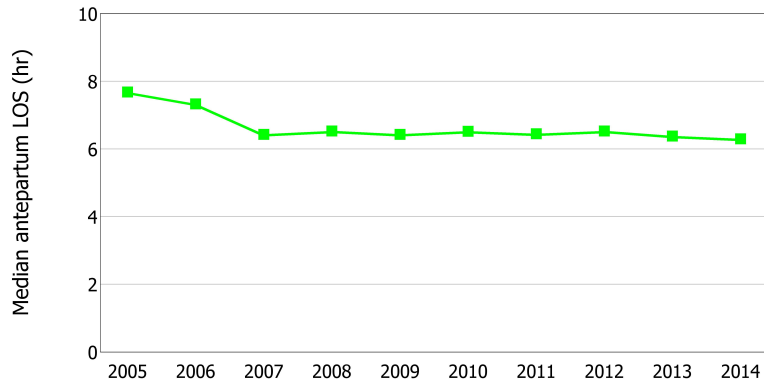
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489
Postpartum hemorrhage	6.6%	6.5%	8.6%	9.1%	8.6%	8.7%	8.7%	9.4%	8.8%	8.4%

5.8 Maternal blood transfusion by year, Nova Scotia, 2005-2014



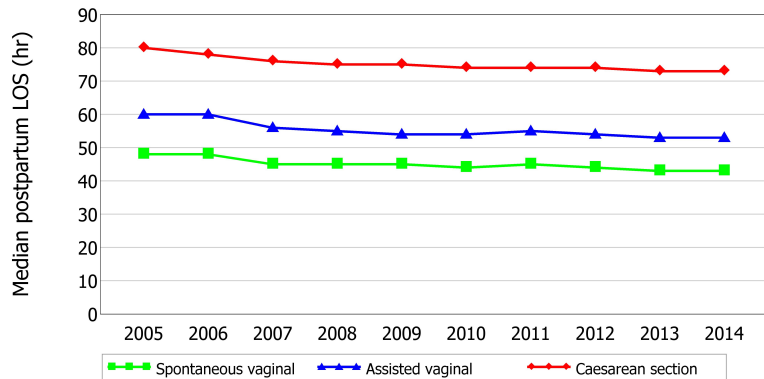
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489
Blood transfusion	0.6%	0.5%	0.8%	0.8%	0.6%	0.7%	0.8%	0.9%	0.7%	0.9%

5.9 Maternal antepartum hospital length of stay (hours) by year, Nova Scotia, 2005-2014



Length of stay	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# deliveries	8402	8356	8720	8991	8817	8698	8747	8589	8303	8489
Median	7.7	7.3	6.4	6.5	6.4	6.5	6.4	6.5	6.4	6.3
Mean	17.8	18.0	15.5	16.0	15.7	14.7	16.2	15.8	15.8	15.6

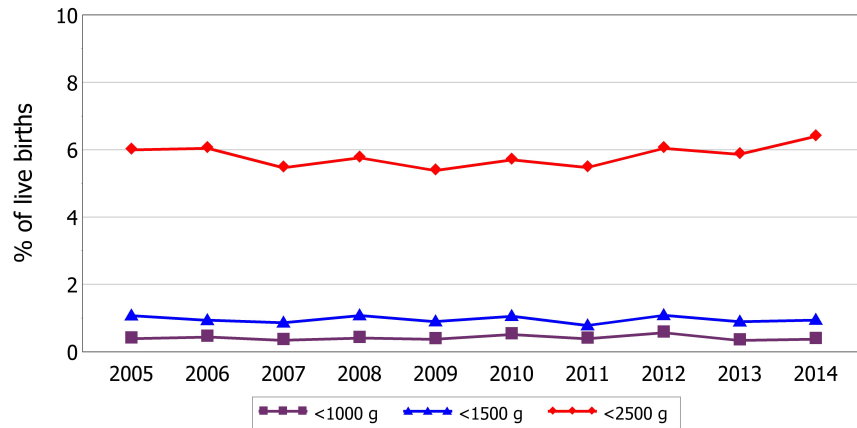
5.10 Maternal postpartum hospital length of stay (hours) by type of delivery and year, Nova Scotia, 2005-2014



Type of delivery		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Spontaneous vaginal	N	5276	5352	5524	5757	5564	5558	5661	5667	5433	5592
	Median	48.1	47.9	45.4	45.2	44.8	44.3	45.1	44.1	43.4	42.7
	Mean	53.2	52.1	49.8	49.2	48.4	48.4	49.9	48.7	47.5	48.8
Assisted vaginal	N	818	754	856	811	837	782	761	708	642	661
	Median	59.7	60.1	55.6	55.4	54.2	53.9	55.3	54.4	53.0	53.2
	Mean	65.6	65.0	60.3	61.0	59.6	59.5	60.9	60.9	59.2	61.0
Caesarean section	N	2308	2248	2340	2420	2416	2358	2324	2214	2228	2235
	Median	79.6	77.6	75.6	75.0	74.8	74.2	74.2	74.0	73.3	72.6
	Mean	86.6	84.9	81.4	79.3	79.1	76.5	77.0	76.8	75.0	74.1

Section 6:
Fetal and Infant Health Outcomes

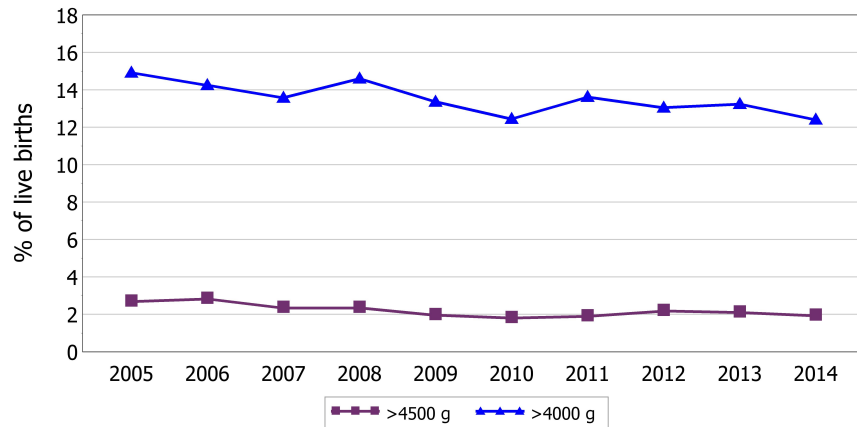
6.1 Low birth weight by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births*	8488	8437	8817	9097	8920	8807	8843	8691	8406	8585
<1000 g	0.4%	0.4%	0.3%	0.4%	0.4%	0.5%	0.4%	0.6%	0.3%	0.4%
<1500 g	1.1%	0.9%	0.9%	1.1%	0.9%	1.1%	0.8%	1.1%	0.9%	0.9%
<2500 g	6.0%	6.0%	5.5%	5.8%	5.4%	5.7%	5.5%	6.0%	5.9%	6.4%

* With known birth weight.

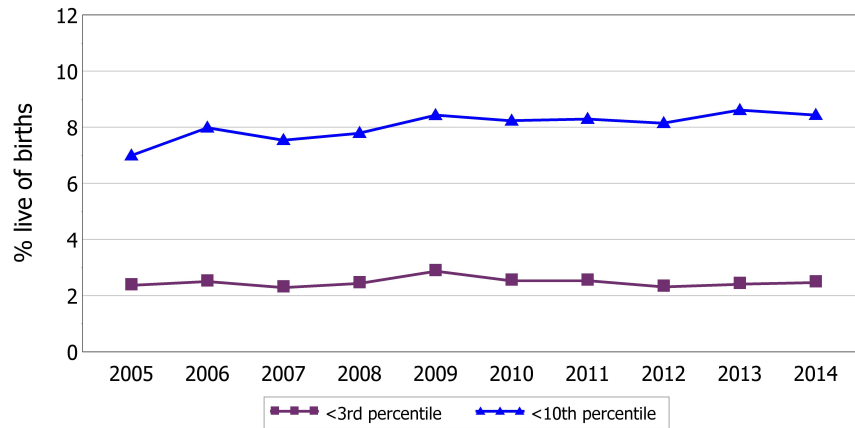
6.2 Macrosomia by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births*	8488	8437	8817	9097	8920	8807	8843	8691	8406	8585
>4500 g	2.7%	2.8%	2.3%	2.3%	2.0%	1.8%	1.9%	2.2%	2.1%	1.9%
>4000 g	14.9%	14.2%	13.6%	14.6%	13.4%	12.4%	13.6%	13.0%	13.2%	12.4%

* With known birth weight.

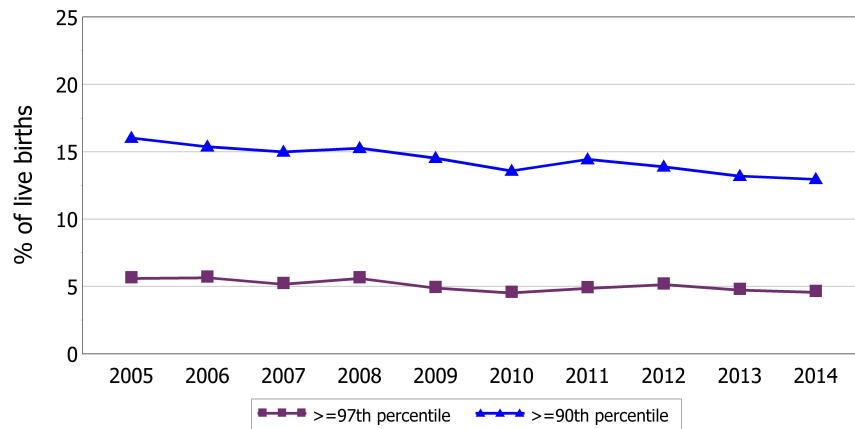
6.3 Small for gestational age by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births*	8464	8404	8793	9073	8881	8779	8815	8652	8384	8560
<3rd percentile	2.4%	2.5%	2.3%	2.4%	2.9%	2.5%	2.5%	2.3%	2.4%	2.5%
<10th percentile	7.0%	8.0%	7.5%	7.8%	8.4%	8.2%	8.3%	8.1%	8.6%	8.4%

* With known birth weight and gestational age.

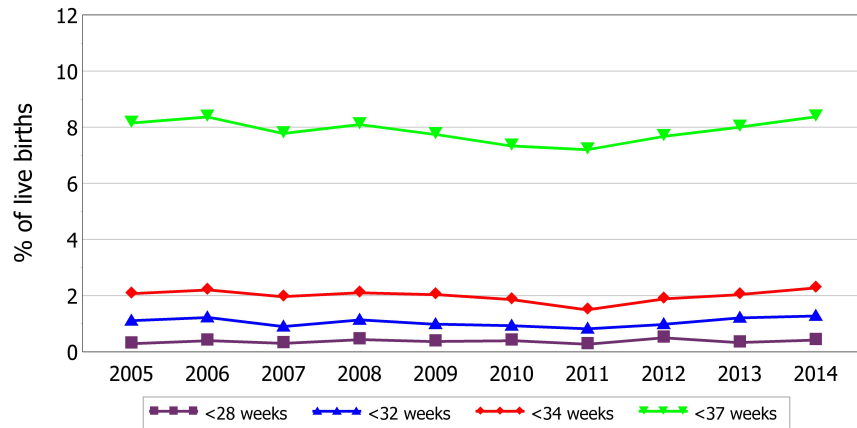
6.4 Large for gestational age by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births*	8464	8404	8793	9073	8881	8779	8815	8652	8384	8560
≥97th percentile	5.6%	5.6%	5.2%	5.6%	4.9%	4.5%	4.9%	5.1%	4.7%	4.6%
≥90th percentile	16.0%	15.4%	15.0%	15.3%	14.5%	13.6%	14.4%	13.9%	13.2%	13.0%

* With known birth weight and gestational age.

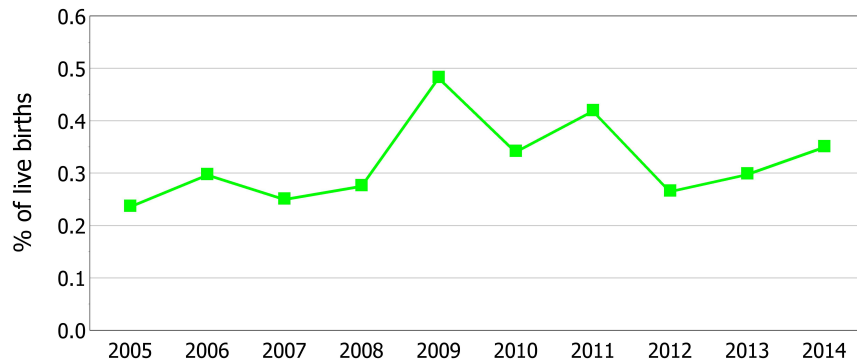
6.5 Preterm births by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births*	8414	8352	8715	8990	8779	8654	8691	8492	8291	8476
<28 weeks	0.3%	0.4%	0.3%	0.4%	0.4%	0.4%	0.3%	0.5%	0.3%	0.4%
<32 weeks	1.1%	1.2%	0.9%	1.1%	1.0%	0.9%	0.8%	1.0%	1.2%	1.3%
<34 weeks	2.1%	2.2%	2.0%	2.1%	2.0%	1.9%	1.5%	1.9%	2.0%	2.3%
<37 weeks	8.2%	8.4%	7.8%	8.1%	7.7%	7.3%	7.2%	7.7%	8.0%	8.4%

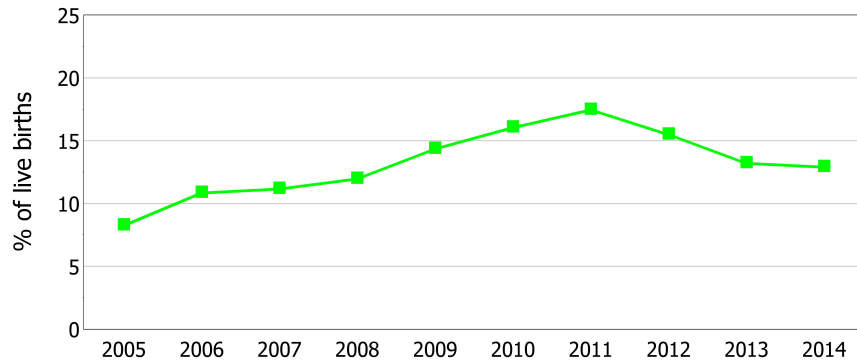
* With known gestational age.

6.6 Birth injury by year, Nova Scotia, 2005-2014



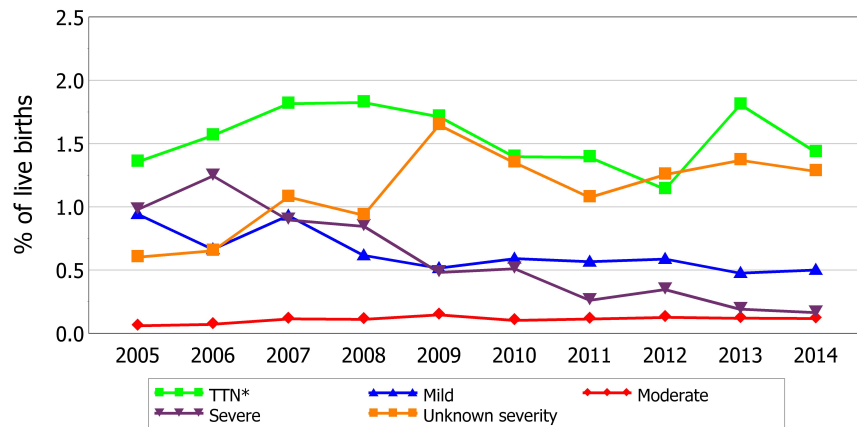
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births	8490	8441	8818	9100	8932	8816	8846	8692	8410	8588
Birth injury	0.2%	0.3%	0.2%	0.3%	0.5%	0.3%	0.4%	0.3%	0.3%	0.3%

6.7 Phototherapy by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births	8490	8441	8818	9100	8932	8816	8846	8692	8410	8588
Received phototherapy	8.2%	10.8%	11.2%	12.0%	14.3%	16.0%	17.5%	15.5%	13.2%	12.9%

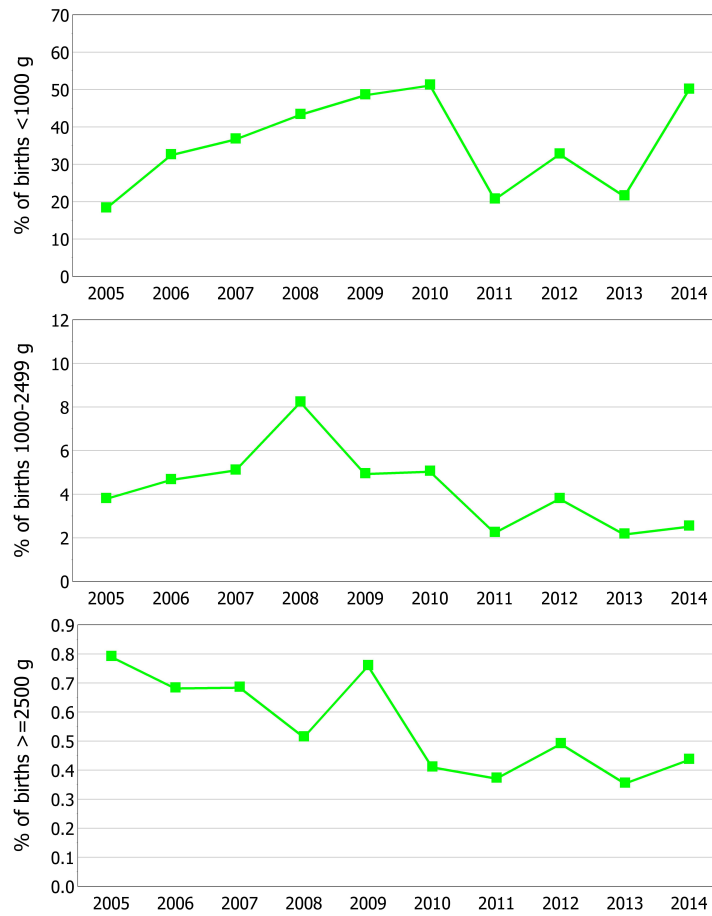
6.8 Type of respiratory distress syndrome by year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births	8490	8441	8818	9100	8932	8816	8846	8692	8410	8588
TTN*	1.4%	1.6%	1.8%	1.8%	1.7%	1.4%	1.4%	1.1%	1.8%	1.4%
Mild	0.9%	0.7%	0.9%	0.6%	0.5%	0.6%	0.6%	0.6%	0.5%	0.5%
Moderate	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Severe	1.0%	1.2%	0.9%	0.8%	0.5%	0.5%	0.3%	0.3%	0.2%	0.2%
Unknown severity	0.6%	0.7%	1.1%	0.9%	1.6%	1.3%	1.1%	1.3%	1.4%	1.3%
Total RDS	3.9%	4.2%	4.8%	4.3%	4.5%	3.9%	3.4%	3.5%	4.0%	3.5%

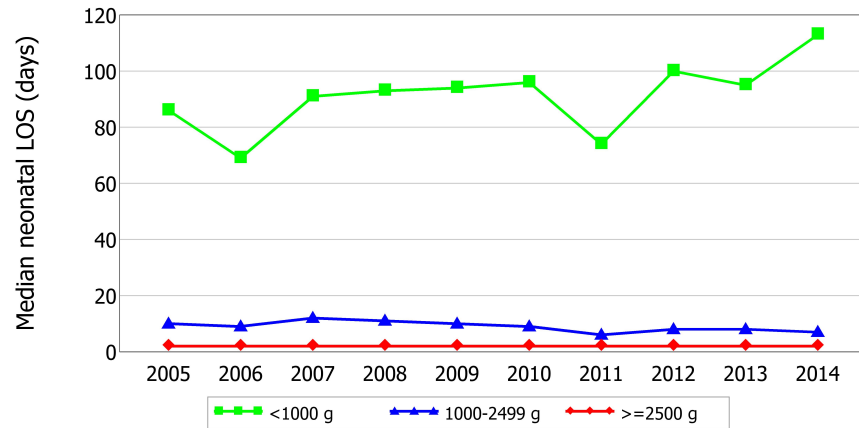
* Transient tachypnea of the newborn.

6.9 Neonatal sepsis by birth weight and year, Nova Scotia, 2005-2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
# live births <1000 g	33	37	30	37	33	45	34	49	28	32
Neonatal sepsis	18.2%	32.4%	36.7%	43.2%	48.5%	51.1%	20.6%	32.7%	21.4%	50.0%
# live births 1000-2499 g	476	473	452	487	447	457	450	476	465	517
Neonatal sepsis	3.8%	4.7%	5.1%	8.2%	4.9%	5.0%	2.2%	3.8%	2.2%	2.5%
# live births ≥2500 g	7979	7927	8335	8573	8440	8305	8359	8166	7913	8036
Neonatal sepsis	0.8%	0.7%	0.7%	0.5%	0.8%	0.4%	0.4%	0.5%	0.4%	0.4%

6.10 Newborn length of stay (days) by birth weight and year, Nova Scotia, 2005-2014



Birth weight		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1000 g	N*	22	23	16	26	26	32	29	37	20	20
	Median	85.9	68.8	90.7	93.0	94.5	96.2	73.8	99.8	95.5	112.8
	Mean	83.0	75.1	90.4	107.4	89.0	135.8	81.6	96.3	118.9	125.0
1000-2499 g	N*	471	467	449	483	439	454	445	469	463	513
	Median	10.0	8.6	11.9	10.5	10.2	8.6	5.6	8.2	7.6	7.1
	Mean	17.4	17.7	17.7	20.4	19.1	17.5	13.9	15.6	17.7	15.8
≥2500 g	N*	7974	7925	8335	8572	8438	8297	8355	8165	7908	8027
	Median	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1
	Mean	2.9	2.9	2.8	2.8	2.7	2.7	2.8	2.8	2.6	2.7

* Number of births of infants who survived to hospital discharge.

Glossary

Assisted vaginal delivery

Vaginal delivery involving the use of forceps and/or vacuum.

Birth

Birth refers to the live born or stillborn infant. "Births" are differentiated from "deliveries". For example, a woman who had twins is counted as having one delivery and two births.

Birth injury

Any injury to the infant such as fracture (e.g., femur, clavicle, rib, humerus, depressed skull) or central nervous system trauma (e.g., cerebral hemorrhage, spinal cord hemorrhage, brachial plexus palsy) occurring during delivery.

Body mass index (BMI)

Calculated as weight in kilograms divided by the square of height in metres.

Underweight: BMI <18.5 kg/m²

Normal weight: BMI 18.5 to 24.9 kg/m²

Overweight: BMI 25.0 to 29.9 kg/m²

Obese: BMI ≥30.0 kg/m²

Breastfeeding status

Describes the method of infant feeding during the hospital stay. Breastfeeding refers to when the infant was given breast milk: Exclusive denotes that the infant received only breast milk and non-exclusive denotes that the infant received breast milk with supplementation.

Caesarean section delivery

Delivery of the fetus through an incision in the abdominal and uterine walls.

Delivery

A delivery marks the end of pregnancy, regardless of the number of infants born. For example, a woman who had twins is counted as having one delivery and two births.

Early neonatal mortality

Death of a liveborn infant, occurring up to the sixth completed day of life (6 days, 23 hours and 59 minutes).

Episiotomy

A mediolateral or midline incision made in the perineum during childbirth.

Gestational age

Gestational age is calculated from an algorithm that incorporates information from early ultrasound measurements (before 25 weeks), the first day of the last normal menstrual period (LMP), and a clinical estimate based on a physical examination of the infant shortly after birth. The derivation is primarily based on the date of the mother's last menstrual period (LMP). If LMP is unknown or LMP-estimated gestational age is discordant with that estimated by early fetal ultrasound measurements, then gestational age based on early fetal ultrasound measurements is used. If early fetal ultrasound measurements are unavailable and gestational age based on LMP is discordant from that clinically estimated by the neonatal physical exam, then the clinically estimated gestational age is used.

Gestational diabetes

Diabetes mellitus arising in pregnancy as recorded in the medical record. Please note that the criteria for the diagnosis of gestational diabetes were revised by the Canadian Diabetes Association in 2013. Therefore, the rates of gestational diabetes are expected to increase as the new criteria begin to be adopted across Nova Scotia, starting approximately in late 2014. [Ref: Canadian Diabetes Association Clinical Practice Guidelines Expert Committee. Canadian Diabetes Association 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. Canadian Journal of Diabetes. 2013;37(suppl1):S1-12.]

Gestational weight gain

Gestational weight gain guidelines set by the US Institute of Medicine and Health Canada are specific to a woman's pre-pregnancy BMI category: Underweight, 12.5 to 18 kg; Normal weight, 11.5 to 16 kg; Overweight, 7 to 11.5 kg; Obese, 5 to 9 kg.

Inadequate: Below the recommended range

Adequate: Within the recommended range

Excessive: Above the recommended range

Indication for labour induction

Reason for induction of labour as documented on the medical chart. The 'Other medical reason' category includes maternal diabetes, maternal history of precipitate labour, pruritic urticarial papules and plaques of pregnancy (PUPP), thrombocytopenia, maternal seizure, vaginal bleeding, premature rupture of membranes with clinical chorioamnionitis, isoimmunization, concern for fetal well being (abnormal biophysical profile, abnormal or atypical non-stress test, abnormal Doppler), oligohydramnios (decreased amniotic fluid), polyhydramnios (increased amniotic fluid), multiple pregnancy, and positive group B Streptococcus with rupture of membranes.

Infant mortality

Death of a liveborn infant occurring within the first year of life.

Labour induction

The initiation of contractions in a pregnant woman who is not in labour to help her achieve a vaginal birth within 24 to 48 hours.

Laceration

Maternal perineal laceration, rupture or tear during delivery involving the anal sphincter (3rd degree) or rectal mucosa (4th degree).

Large for gestational age

See Size for gestational age.

Live birth

Live birth refers to birth of an infant with signs of life.

Macrosomia

Refers to birth weight beyond two specific thresholds, 4000 g and 4500 g. The American College of Obstetricians and Gynecologists supports use of the 4500 g threshold for diagnosis of macrosomia because morbidity increases sharply beyond this weight, but acknowledges there is some increased risk of morbidity at weights >4000 g. [Ref: ACOG Practice Bulletin No.22: Fetal Macrosomia. American College of Obstetricians and Gynecologists, Washington DC 2000]

Maternal antepartum hospital length of stay

Hours between maternal admission to the birth facility and delivery.

Maternal blood transfusion

One or more maternal transfusions of red blood cells in the antepartum, intrapartum, or postpartum periods.

Maternal postpartum hospital length of stay

Hours between delivery and discharge of the mother from the birth facility.

Medical augmentation

Use of oxytocin to improve contractions after labour has started spontaneously.

Neonatal mortality

Death of a liveborn infant, occurring up to the 27th completed day of life (27 days, 23 hours and 59 minutes).

Neonatal sepsis

Pneumonia (intrauterine or postnatal) or positive blood/cerebrospinal fluid cultures.

Newborn length of stay

The total number of days a baby stayed in the delivery hospital and transfer hospital(s) (if applicable) before being discharged home. This calculation does not include newborns who have died in-hospital or who have not yet been discharged home.

Parity

Number of pregnancies, excluding the present pregnancy, which resulted in the delivery of 1 or more infants weighing 500 grams or more at birth (regardless of the outcome of such infants).

Perinatal mortality

Death of an infant, occurring up to the sixth completed day of life (6 days, 23 hours and 59 minutes). Includes stillbirths and early neonatal deaths.

Phototherapy

Exposure of the neonate to coloured light in hospital (birth hospital or readmission in the neonatal period). Phototherapy is given for known or suspected hyperbilirubinemia (jaundice).

Placenta previa

Placenta entirely or partially covering the internal os. The diagnosis is not made on ultrasound alone and must be confirmed clinically.

Placental abruption

Bleeding from the placental site due to the partial or complete separation of the placenta (diagnosis not made on ultrasound alone must be confirmed clinically).

Postneonatal mortality

Death of a liveborn infant weighing 500 g or more at birth, occurring from 28 days to 1 year of life.

Postpartum hemorrhage

After the delivery of the fetus, excessive maternal bleeding from the genital tract with an estimated blood loss of greater than 500 mL for vaginal deliveries or 1000 mL for Caesarean section deliveries.

Pre-eclampsia

Gestational hypertension with proteinuria, or pre-existing hypertension with superimposed proteinuria. Includes HELLP syndrome (Hemolysis, Elevated Liver Enzymes, Low Platelets).

Pre-existing diabetes

Maternal history of either Type 1 or Type 2 diabetes mellitus prior to the current pregnancy.

Pre-existing hypertension

Maternal history of hypertensive disease prior to the current pregnancy or prior to 20 weeks gestation in the current pregnancy.

Regional anesthesia

Use of epidural, spinal, and/or pudendal anesthesia during labour and/or delivery.

Respiratory Distress Syndrome (RDS)

Grunting, retractions, and decreased air entry - occurring before 3 hours of age and persisting beyond 6 hours of age and not explained by any other disease. Severity of RDS is categorized by the treatment given by the physician as recorded in the medical record:

Mild: <35% oxygen

Moderate: 35% oxygen or continuous positive airway pressure (CPAP)

Severe: Ventilated

TTN: Transient tachypnea of the newborn

Note that as medical practice changes with respect to the type of treatment given, the proportion of RDS that is of unknown severity will increase.

Robson group

The Robson criteria for the classification of deliveries into ten mutually exclusive groups by maternal characteristics allows comparison of Caesarean section rates at regional and national levels. Please note that for the purposes of this report: (1) group 6 (nulliparous breeches) and group 7 (multiparous breeches) are combined; (2) group 9 (abnormal lies excluding breeches) is omitted due to small numbers. [Ref: Robson MS. Classification of caesarean sections. Fetal and Maternal Medicine Review 2001;12(1):23-39]

Size for gestational age

Sex-specific percentiles of birth weight for gestational age relative to a Canadian reference population [Ref: Kramer MS, Platt RW, Wen SW, Joseph KS, Allen A, Abrahamowitz M, Blondel B, Brart G. A New and Improved Population-Based Canadian Reference for Birth Weight for Gestational Age. Pediatrics 2001; 108 (2):e35. <http://pediatrics.aappublications.org/content/108/2/e35.full.html>]

Small for gestational age

See Size for gestational age.

Spontaneous vaginal delivery

Vaginal delivery without the use of forceps or vacuum.

Stillbirth

The complete expulsion or extraction from its mother after at least 20 weeks pregnancy, or after attaining a weight of 500 g or more, of a fetus in which, after such expulsion or extraction, there is no breathing, beating of the heart, pulsation of the umbilical cord, or unmistakable movement of voluntary muscle.

Vaginal Birth After Caesarean (VBAC) candidate

A woman who has had no more than one previous Caesarean section delivery (and that one involved a transverse incision); whose current pregnancy is a singleton in vertex presentation; and who has no contraindications for labour.