

PERINATAL HEALTH INDICATORS FOR CANADA 2017

A REPORT FROM THE CANADIAN PERINATAL
SURVEILLANCE SYSTEM



PROTECTING CANADIANS FROM ILLNESS



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**TO PROMOTE AND PROTECT THE HEALTH OF CANADIANS THROUGH LEADERSHIP, PARTNERSHIP,
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To obtain additional information, please contact:

Public Health Agency of Canada
Address Locator 0900C2
Ottawa, ON K1A 0K9
Tel.: 613-957-2991
Toll free: 1-866-225-0709
Fax: 613-941-5366
TTY: 1-800-465-7735
E-mail: cpss-scsp@phac-aspc.gc.ca

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CONTRIBUTORS

PUBLIC HEALTH AGENCY OF CANADA

Jenna Coles
Paromita Deb-Rinker
Mary Lou Decou
Susie Dzakpasu
Juan Andres Leon
Shiliang Liu
Wei Luo
Myuri Manogaran
Chantal Nelson
Victoria Otterman
Jocelyn Rouleau
Manal Salibi
Judy Snider

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FOR EXTERNAL DATA USED IN THIS REPORT:

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Statistics Canada (Vital Statistics)

INTRODUCTION

This report was produced by the Canadian Perinatal Surveillance System (CPSS) to update data on key perinatal health indicators and provide current information on major determinants and outcomes of maternal, fetal and infant health in Canada. The data used for this update are from the birth and death registries up to 2011 (vital statistics), linked birth-death data up to 2010 (vital statistics) and the Canadian Institution for Health Information (CIHI) Discharge Abstract Database (DAD) up to 2014/2015 fiscal year. Numbers based on vital statistics or hospital databases may be different in this report from those published by Statistics Canada or CIHI because of database updating (e.g., elimination of duplicates) or because of differences in inclusion and exclusion criteria.

Indicators presented in this report are among the top 16 based on the priority ranking published by CPSS in 2000,¹ with the addition of the rate of live births to older mothers, which has increased since 2000.

Changes were made to the data sources for most indicators in the 2016 edition of the Perinatal Health Indicators Report (PHI) as more timely data were available. Specifically, after testing trends for specific indicators that were historically reported using vital statistics data, it was found that CIHI data produced very comparable trends for all indicators based on vital statistics data in the 2013 PHI, with the exception of postneonatal and infant mortality. Further, gestational age based indicators are more accurately captured using CIHI data compared to

Vital Statistics data (gestational age is a clinical determination and is part of the hospitalisation record). The timely availability of CIHI data (up to 2014/2015 fiscal year data are available) also permit more up-to-date reporting.

Indicators calculated from vital statistics data (neonatal, postneonatal and infant mortality) exclude Ontario because of data quality concerns.¹ Similarly, rates of cesarean delivery, severe maternal morbidity, maternal mortality, live births to teenage mothers, live births to older mothers, preterm and post-term birth, small- and large-for-gestational age, fetal mortality, congenital anomalies and multiple births exclude Quebec because this province does not contribute data to the DAD from which these indicators were calculated.

Breastfeeding rates, as well as maternal smoking and alcohol consumption during pregnancy rates are not included in this version of the PHI. The most up-to-date data have been published in the 2013 edition of the PHI, and newer data will become available as part of the 2017 cycle of the Canadian Community Health Survey (CCHS). Consequently, these indicators will return in future editions of the PHI.

Detailed data tables for all indicators, and general data limitations are included as appendices.

REFERENCE

1. Public Health Agency of Canada. Canadian Perinatal Health Report. 2008 Edition. 2008. Ottawa.

CHAPTER 1

RATE OF LIVE BIRTHS TO TEENAGE MOTHERS

The rate of live births to mothers aged 10–14 remained stable at 0.1 (95% CI: 0.1–0.1) per 1,000 females from 2005 to 2014. The rate of live births to mothers aged 15–17 years increased from 7.7 (95% CI: 7.4–7.9) per 1,000 females in 2005 to 8.4 (95% CI: 8.1–8.6) per 1,000 females in 2007 then decreased steadily to 5.3 (95% CI: 5.0–5.5) per 1,000 females in 2014. The rate of live births to mothers aged 18–19 years increased slightly from 25.5 (95% CI: 24.9–26.0) per 1,000 females in 2005 to 27.2 (95% CI: 26.7–27.8) per 1,000 in 2007 and decreased steadily to 18.6 (95% CI: 18.1–19.0) per 1,000 females in 2014.

DEFINITION

The age-specific rate of live births to teenage mothers is defined as the number of live births to mothers aged 10–14, 15–17 or 18–19 years per 1,000 females in the same age category. The proportion of live births to teenage mothers refers to the number of live births to mothers aged 10–14, 15–17 or 18–19 years, expressed as a percentage of all live births.

DATA SOURCES

Rates of live births to teenage mothers were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). The denominators for the age-specific rate of live birth were population estimates¹ for the corresponding age category for the specific calendar year. Data from Quebec were excluded because they do not contribute to DAD.

RESULTS

The rate of live births to mothers aged 15–17 years increased from 7.7 (95% CI: 7.4–7.9) per 1,000 females in 2005 to 8.4 (95% CI: 8.1–8.6) per 1,000 females in 2007 then decreased steadily to 5.3 (95% CI: 5.0–5.5) per 1,000 females in 2014. The rate of live births to mothers aged 18–19 years increased slightly from 25.5 (95% CI: 24.9–26.0) per 1,000

females in 2005 to 27.2 (95% CI: 26.7–27.8) per 1,000 in 2007 and decreased steadily to 18.6 (95% CI: 18.1–19.0) per 1,000 females in 2014. The rate of live births to mothers aged 10–14 remained stable at 0.1 (95% CI: 0.1–0.1) per 1,000 females from 2005 to 2014 (Figure 1.1).

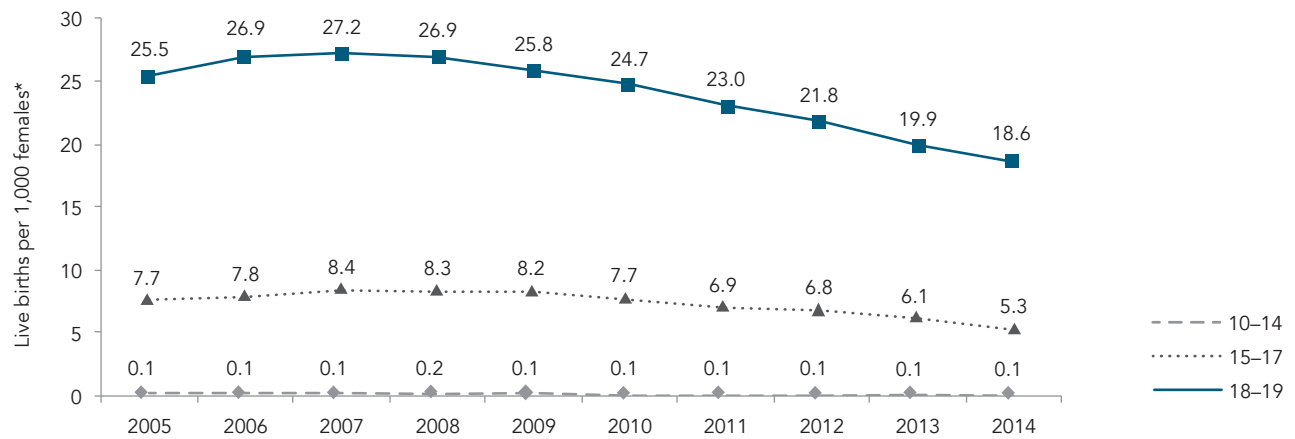
The proportion of live births to mothers aged 10–14 years fluctuated between 0.02% and 0.04% of total births between 2005 and 2014. The proportion of live births to mothers aged 15–17 years increased from 1.4% to 1.5% between 2005 and 2007, then decreased steadily to 0.9% of total births in 2014. The proportion of live births to mothers aged 18–19 years fluctuated from 3.2% to 3.3% of total births between 2005 and 2008, then decreased steadily to 2.3% of total births in 2014 (Figure 1.2).

In 2010–2014, age-specific live birth rates ranged from 1.7 per 1,000 females (95% CI: 1.6–1.7) in British Columbia to 26.8 per 1,000 females (95% CI: 24.0–29.8) in Nunavut among women aged 10 to 17 years. Age-specific birth rates ranged from 13.8 per 1,000 females (95% CI: 13.4–14.2) in British Columbia to 128.5 per 1,000 females (95% CI: 117.2–140.4) in Nunavut in women aged 18–19 years (Figure 1.3).

The proportions of births to mothers aged 10–17 and 18–19 years ranged from 0.8% and 1.8% in British Columbia to 8.4% and 10.6% in Nunavut respectively (Figure 1.4).

FIGURE 1.1

AGE-SPECIFIC BIRTH RATES OF YOUNGER MOTHERS, CANADA (EXCLUDING QUEBEC), 2005–2014



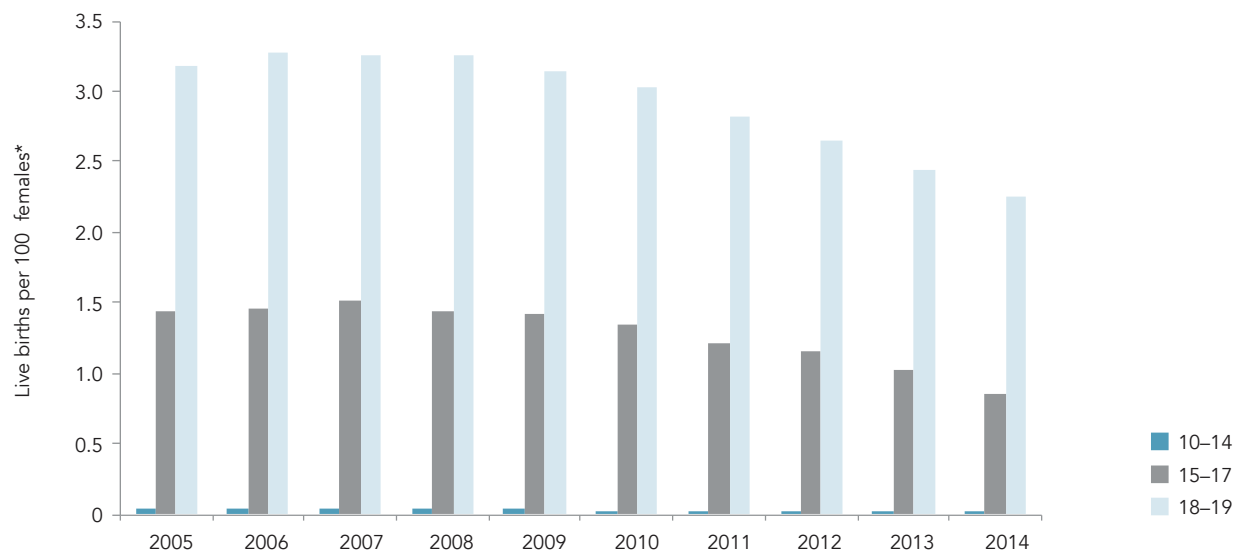
Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* CANSIM Table 051-0001 (number of women by age group).

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 1.2

PROPORTION (%) OF LIVE BIRTHS, BY MATERNAL AGE, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014



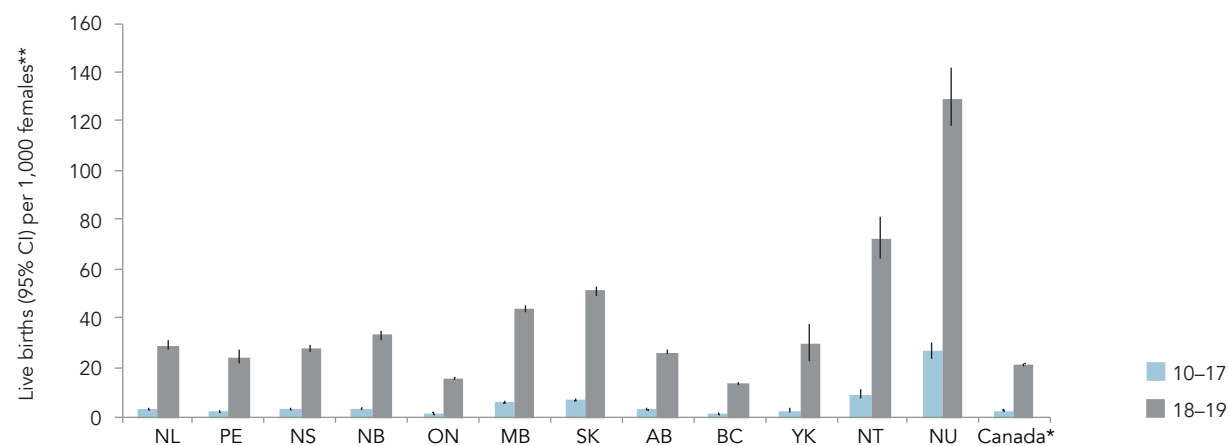
Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Excludes live births to mothers aged 50 years and over, and those with unknown maternal age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 1.3

AGE-SPECIFIC BIRTH RATES, FEMALES AGED 10–17 AND 18–19 YEARS, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

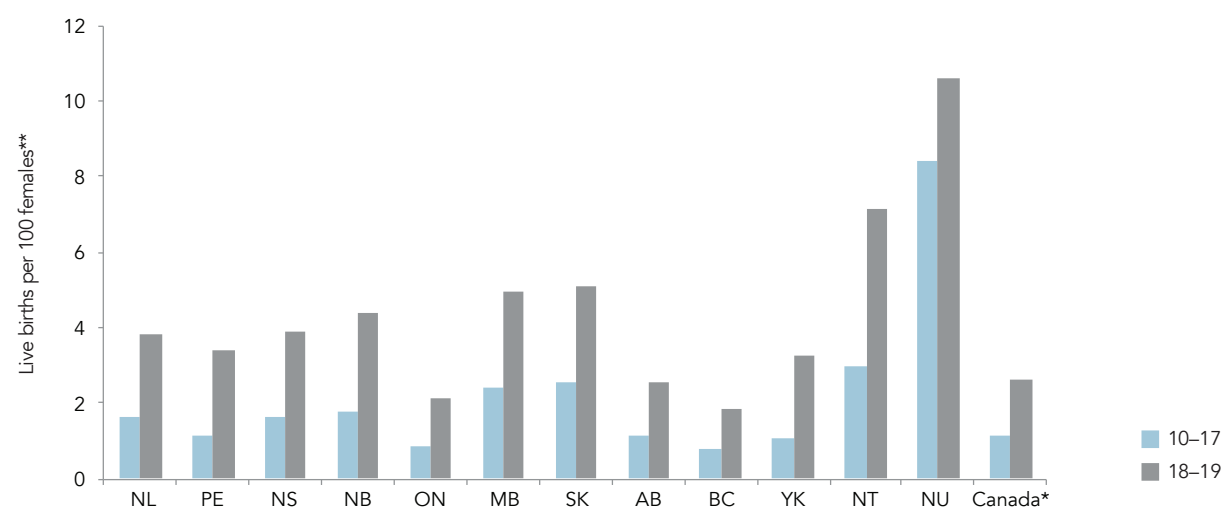
** CANSIM Table 051-0001 (number of women by age group)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 1.4

PROPORTION (%) OF LIVE BIRTHS TO MOTHERS AGED 10–17 AND 18–19 YEARS, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2005–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Excludes live births to mothers aged 50 years and over, and those with unknown maternal age

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

LIMITATIONS

Please refer to Appendix B for general data limitations using CIHI-DAD.

The rates of live births to teenage mothers do not reflect the total number of pregnancies to teenagers as they exclude stillbirths, ectopic pregnancies and aborted pregnancies.

REFERENCE

1. Statistics Canada. Table 051–0001—Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted), CANSIM (database). (accessed: July 2016).

CHAPTER 2

RATE OF LIVE BIRTHS TO OLDER MOTHERS

The rate of live births to older mothers increased steadily between 2005 and 2014. Thus, the age-specific live birth rates to mothers aged 35–39 years increased from 44.2 (95% CI: 43.8–44.6) to 53.6 (95% CI: 53.1–54.0) per 1,000 females. For mothers aged 40–44 years, the rate increased from 7.5 (95% CI: 7.3–7.6) to 10.7 (95% CI: 10.5–10.9) per 1,000 females, and for mothers aged 45–49 years from 0.3 (95% CI: 0.3–0.4) to 0.6 (95% CI: 0.6–0.7) per 1,000 females.

DEFINITION

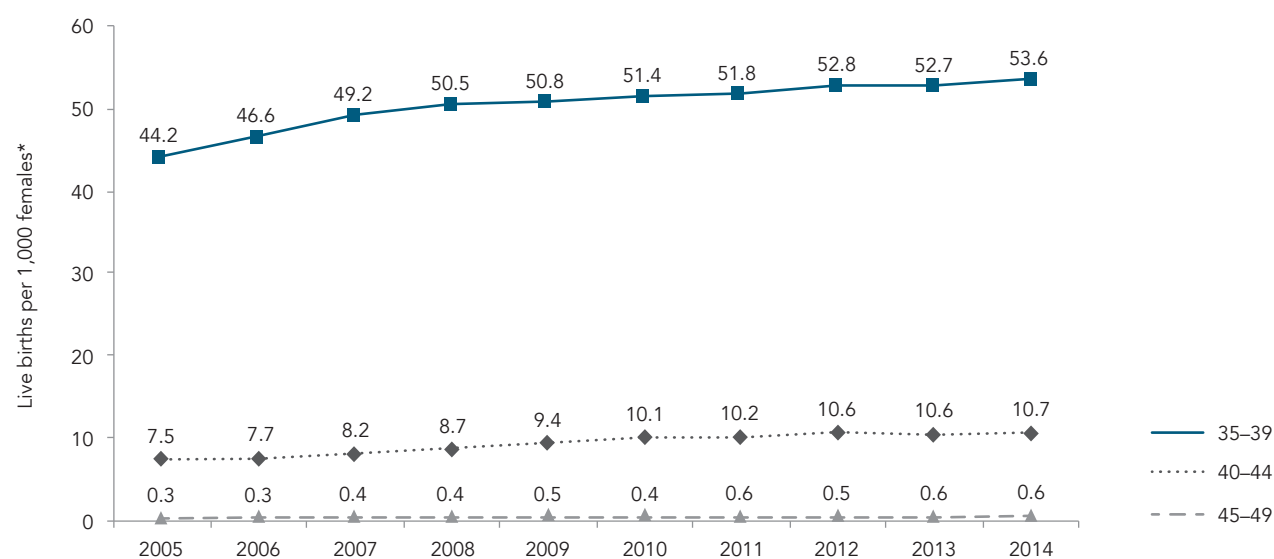
The age-specific rate of live births to older mothers is defined as the number of live births to mothers aged 35–39, 40–44 or 45–49 years per 1,000 females in the same age category. The proportion of live births to older mothers refers to the number of live births to mothers aged 35–39, 40–44 or 45–49 years, expressed as a percentage of all live births.

DATA SOURCES

Rates of live births to older mothers were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). The denominators for the age-specific rate of live birth were population estimates¹ for the corresponding age category for the specific calendar year. Data from Quebec were excluded because they do not contribute to DAD.

FIGURE 2.1

AGE-SPECIFIC BIRTH RATES OF OLDER MOTHERS, CANADA (EXCLUDING QUEBEC), 2005–2014



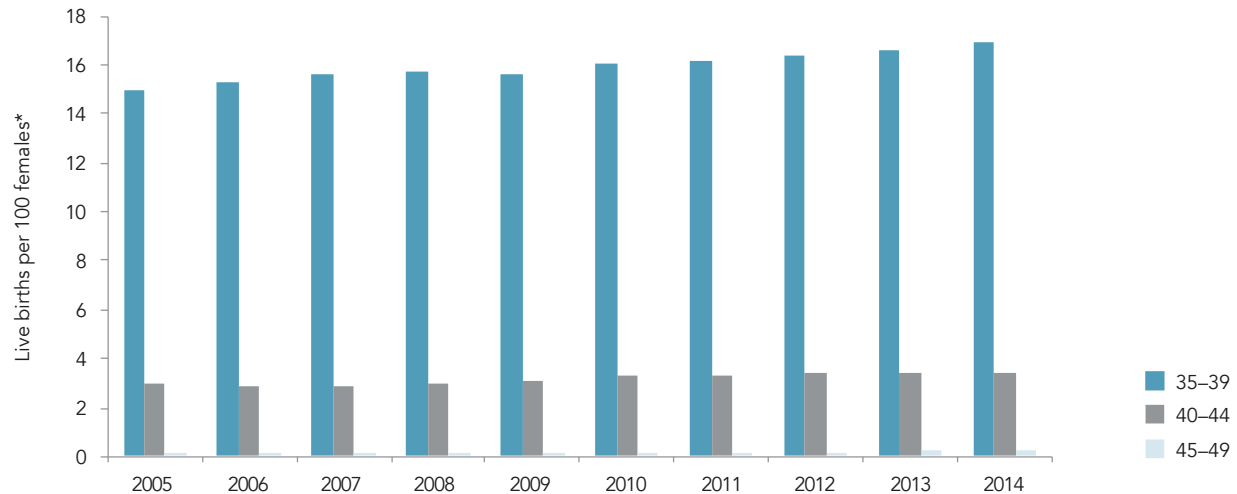
Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* CANSIM Table 051–0001 (number of women by age group).

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 2.2

PROPORTION (%) OF LIVE BIRTHS, BY MATERNAL AGE, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014



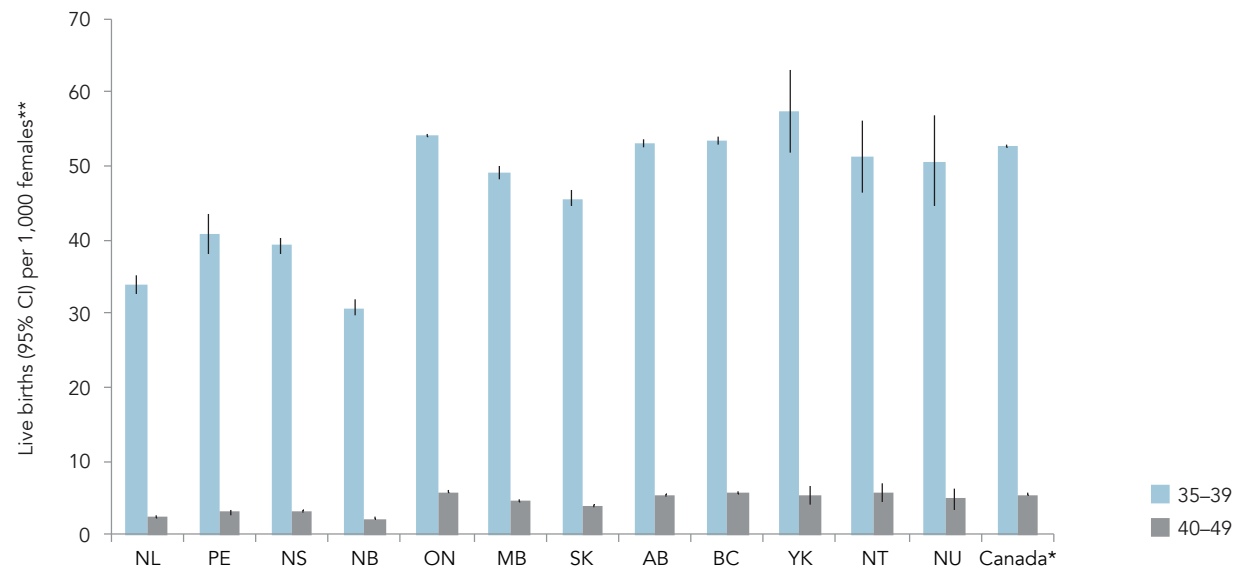
Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Excludes live births to mothers aged 50 years and over, and those with unknown maternal age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 2.3

AGE-SPECIFIC BIRTH RATES, FEMALES AGED 35–39 AND 40–49 YEARS, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

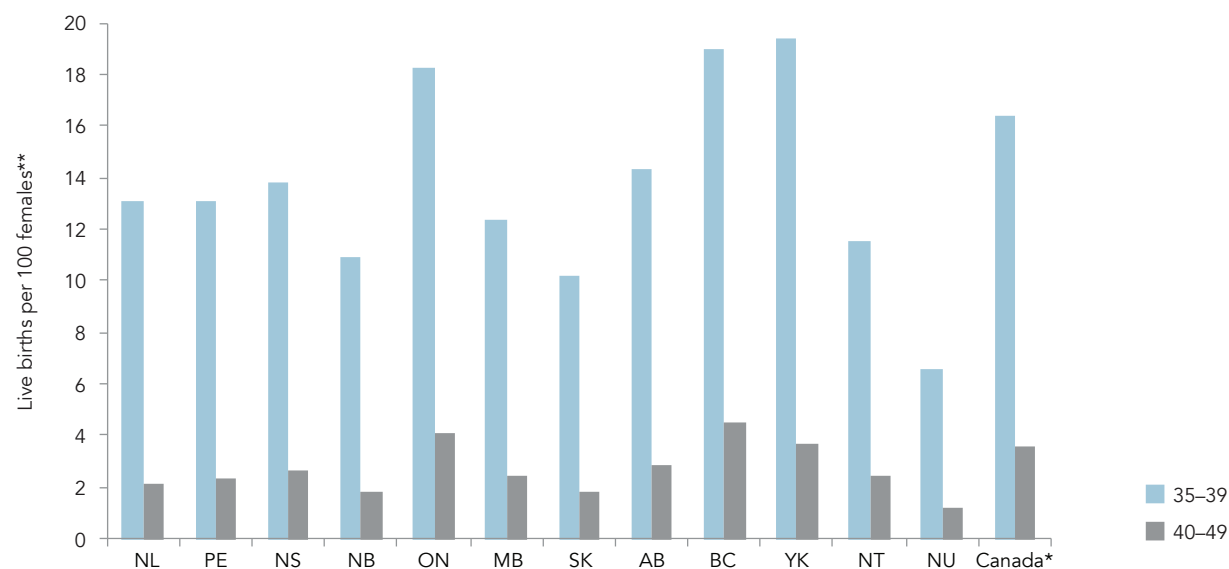
** CANSIM Table 051–0001 (number of women by age group)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 2.4

PROPORTION (%) OF LIVE BIRTHS TO MOTHERS AGED 35–39 AND 40–49 YEAR, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Excludes live births to mothers aged 50 years and over, and those with unknown maternal age

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

RESULTS

Between 2005 and 2014, the live birth rate to mothers aged 35–39 years, 40–44 years and 45–49 increased steadily from 44.2 (95% CI: 43.8–44.6) to 53.6 (95% CI: 53.1–54.0) per 1,000 females, from 7.5 (95% CI: 7.3–7.6) to 10.7 (95% CI: 10.5–10.9) per 1,000 females, and from 0.3 (95% CI: 0.3–0.4) to 0.6 (95% CI: 0.6–0.7) per 1,000 females, respectively (Figure 2.1). Similarly, the proportion of live births to women aged 35–39 and 40–44 and 45–49 increased steadily from 14.9% to 16.9% of live births, from 2.9% to 3.5% of live births, and from 0.1% to 0.2% respectively (Figure 2.2).

The live birth rate to mothers aged 35–39 years ranged from 30.7 per 1,000 females (95% CI: 29.7–31.7) in New Brunswick to 57.2 per 1,000 females (95% CI: 51.8–63.0) in Yukon, and the live birth rate to mothers aged 40–49 years ranged from 2.2 per 1,000 females (95% CI: 2.1–2.4) in New Brunswick to 5.6 per 1,000 females in both British Columbia and the Northwest Territories (95% CI:

5.5–5.8 and 4.5–6.9 respectively) (Figure 2.3). In 2010–2014, the proportion of live births to mothers aged 35–39 years ranged from 6.6% in Nunavut to 19.4% in Yukon, and the proportion of live births to mothers aged 40–49 years ranged from 1.2% in Nunavut to 4.5% in British Columbia (Figure 2.4).

LIMITATIONS

Please refer to Appendix B for general data limitations using CIHI-DAD.

The rates of live births to older mothers do not reflect the total number of pregnancies to older women as they exclude stillbirths, ectopic pregnancies and aborted pregnancies.

REFERENCE

1. Statistics Canada. Table 051–0001—Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted), CANSIM (database). (accessed: July 2016).

CHAPTER 3

RATE OF CESAREAN DELIVERY

The rate of cesarean delivery increased between 2005/2006 and 2014/2015, from 27.3 (95% CI: 27.1 to 27.5) to 28.4 (95% CI: 28.2 to 28.5) per 100 hospital deliveries, respectively.

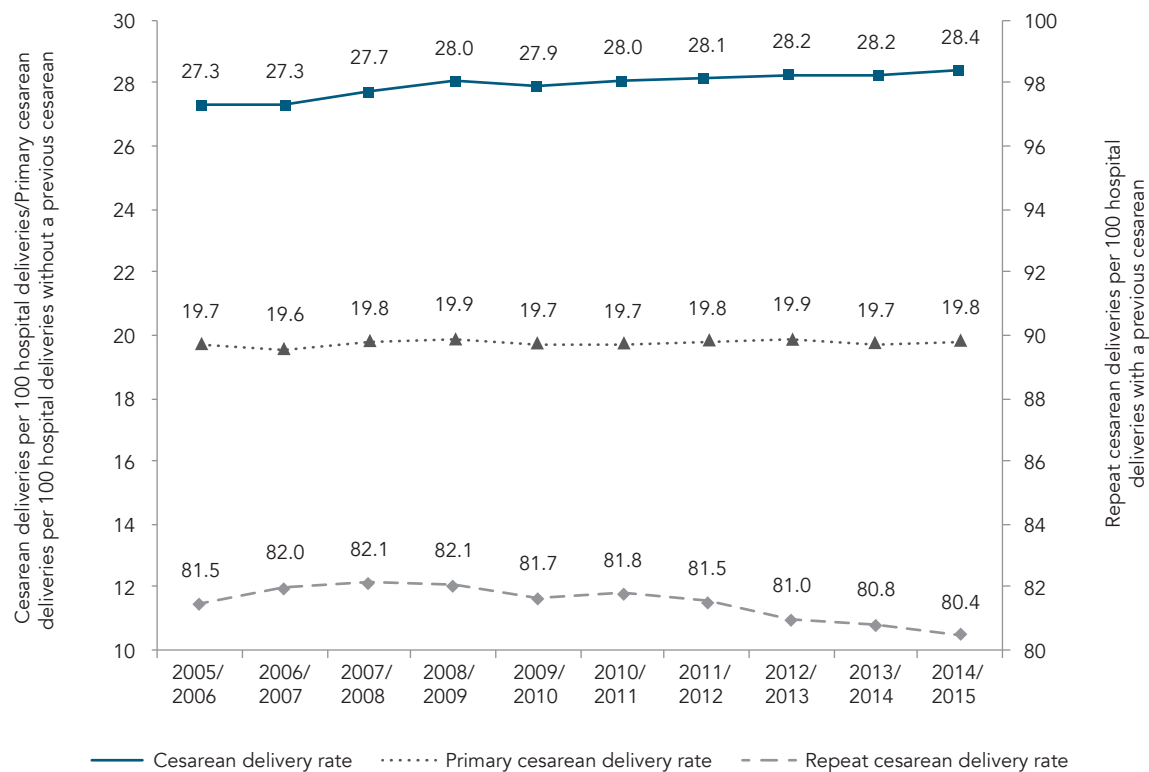
DEFINITION

The cesarean delivery rate is defined as the number of cesarean deliveries expressed as a percentage of the total number of hospital deliveries. The primary cesarean delivery rate is the number of cesarean deliveries to women who have not had a previous cesarean delivery, expressed as a percentage of all

deliveries to women who have not had a cesarean delivery previously. This rate includes deliveries to primiparous (i.e., women giving birth for the first time) and multiparous (i.e., women who have given birth one or more times previously) women. The repeat cesarean delivery rate is the percentage of cesarean deliveries among women who have previously had a cesarean delivery.

FIGURE 3.1

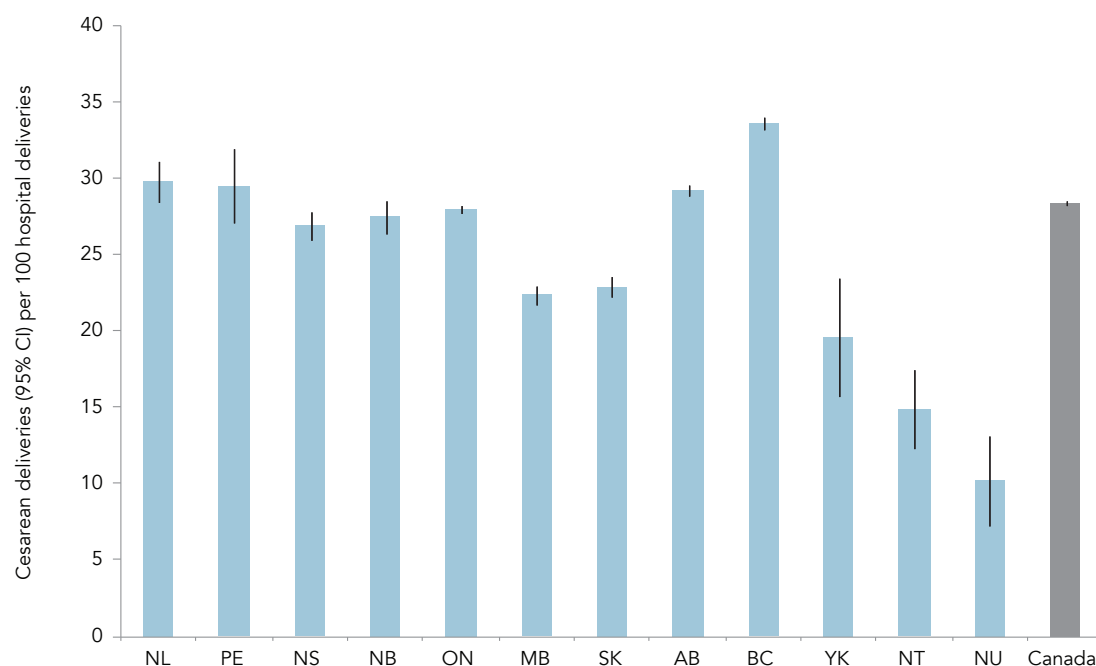
RATES OF CESAREAN DELIVERY, PRIMARY AND REPEAT CESAREAN DELIVERY BY FISCAL YEAR, CANADA (EXCLUDING QUEBEC), 2005/2006 TO 2014/2015



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)
Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 3.2

RATE OF CESAREAN DELIVERY BY PROVINCE/TERRITORY OF OCCURRENCE, CANADA (EXCLUDING QUEBEC), 2014/2015 FISCAL YEAR



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

DATA SOURCE

Cesarean delivery rates were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Data from Quebec were excluded because they do not contribute to DAD. Rates were calculated by fiscal year (April 1 to March 31). Provincial and territorial rates are based on province or territory of occurrence (i.e., not province or territory of residence).

RESULTS

The rate of cesarean delivery increased from 27.3 (95% CI: 27.1 to 27.5) to 28.4 (95% CI: 28.2 to 28.5) per 100 hospital deliveries between 2005/2006 and 2014/2015. The primary cesarean rate remained relatively stable during this time, fluctuating between 19.6 (95% CI: 19.4 to 19.7) and 19.8 (95% CI: 19.7 to 20.0) per 100 hospital deliveries

among women without a previous cesarean delivery. For repeat cesarean delivery, rates declined from 81.5 (95% CI: 81.0 to 81.9) to 80.4 (95% CI: 80.1 to 80.8) per 100 hospital deliveries between 2005/2006 and 2014/2015. In 2014/2015, the rate was 80.4 per 100 hospital deliveries among women with a previous cesarean delivery (Figure 3.1).

In 2014/2015, the lowest rates of cesarean delivery were observed in the three territories: 10.2 (95% CI: 7.2–13.2) per 100 hospital deliveries in Nunavut, 14.9 (95% CI: 12.4–17.5) per 100 hospital deliveries in the Northwest Territories and 19.6 (95% CI: 15.7–23.5) per 100 hospital deliveries in the Yukon. The highest rates were observed in British Columbia (33.6 per 100 hospital deliveries, 95% CI: 33.2–34.1), Newfoundland and Labrador (29.8 per 100 hospital deliveries 95% CI: 28.5–31.2) and Prince Edward Island (29.5 per 100 hospital deliveries, 95% CI: 27.1–31.9) (Figure 3.2).

LIMITATIONS

Out-of-hospital deliveries were not included in the calculation of cesarean delivery rates. In addition, data do not allow determination of the reason for which cesareans were performed, which limits the interpretation of the results.

Please refer to Appendix B for general data limitations using CIHI-DAD.

CHAPTER 4

SEVERE MATERNAL MORBIDITY RATE

The overall rate of severe maternal morbidity (SMM) increased from 14.0 (95% CI: 13.5 to 14.4) to 16.4 (95% CI: 15.9 to 16.9) per 1,000 deliveries between 2005/2006 to 2012/2013, then declined to 14.2 (95% CI: 13.7 to 14.6) per 1,000 in 2014/2015. The most common severe maternal morbidities from 2010/2011 to 2014/2015 were blood transfusion with or without comorbidity (e.g. postpartum hemorrhage); cardiac arrest/failure, myocardial infarction or pulmonary edema; embolization or ligation of pelvic vessels or suturing of uterus and postpartum hemorrhage; and hysterectomy.

DEFINITION

The Canadian Perinatal Surveillance System uses a pragmatic definition for severe maternal morbidity (SMM) which includes disease-specific (e.g., eclampsia), intervention specific (e.g., blood transfusion) and organ dysfunction-based (e.g., acute renal failure) criteria. The SMM rate is expressed per 1,000 deliveries. The list of conditions and interventions included in the SMM indicator can be found in other publications.^{1,2}

DATA SOURCE

Rates of SMM were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Data from Quebec were excluded because they do not contribute to the DAD. Rates are calculated based on fiscal years (April 1 to March 31). Provincial and territorial rates are based on province or territory of occurrence (i.e. not province or territory of residence). Provincial and territorial rates of SMM, and rates of the most common SMMs, are reported for the five most recent years combined to increase stability of the rates.

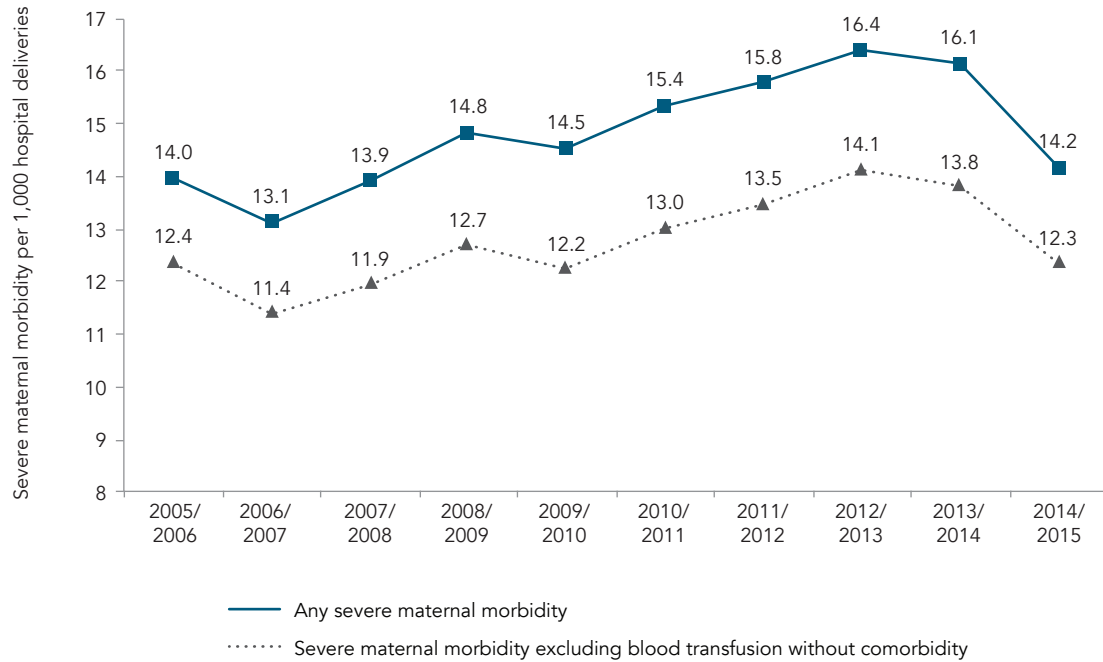
RESULTS

The overall rate of SMM increased from 14.0 (95% CI: 13.5 to 14.4) to 16.4 (95% CI: 15.9 to 16.9) per 1,000 deliveries between 2005/2006 to 2012/2013, then declined to 14.2 (95% CI: 13.7 to 14.6) per 1,000 in 2014/2015 (Figure 4.1). The severity of morbidity is uncertain when blood transfusion is not accompanied by a comorbid diagnosis. The rate of SMM excluding blood transfusion without a comorbid diagnosis was lower than the overall SMM rate, but followed a similar trend to the overall SMM rate (Figure 4.1).

Between 2010/2011 to 2014/2015, the highest SMM rates were observed in Nunavut and the Yukon, and the lowest rates were observed in the Northwest Territories (Figure 4.2). During this period, the most common SMMs were blood transfusion with or without comorbidity (e.g. postpartum hemorrhage); cardiac arrest/failure, myocardial infarction or pulmonary edema; embolization or ligation of pelvic vessels or suturing of uterus and postpartum hemorrhage; and hysterectomy (Figure 4.3).

FIGURE 4.1

RATE OF SEVERE MATERNAL MORBIDITY, BY FISCAL YEAR, CANADA (EXCLUDING QUEBEC), 2005/2006 TO 2014/2015

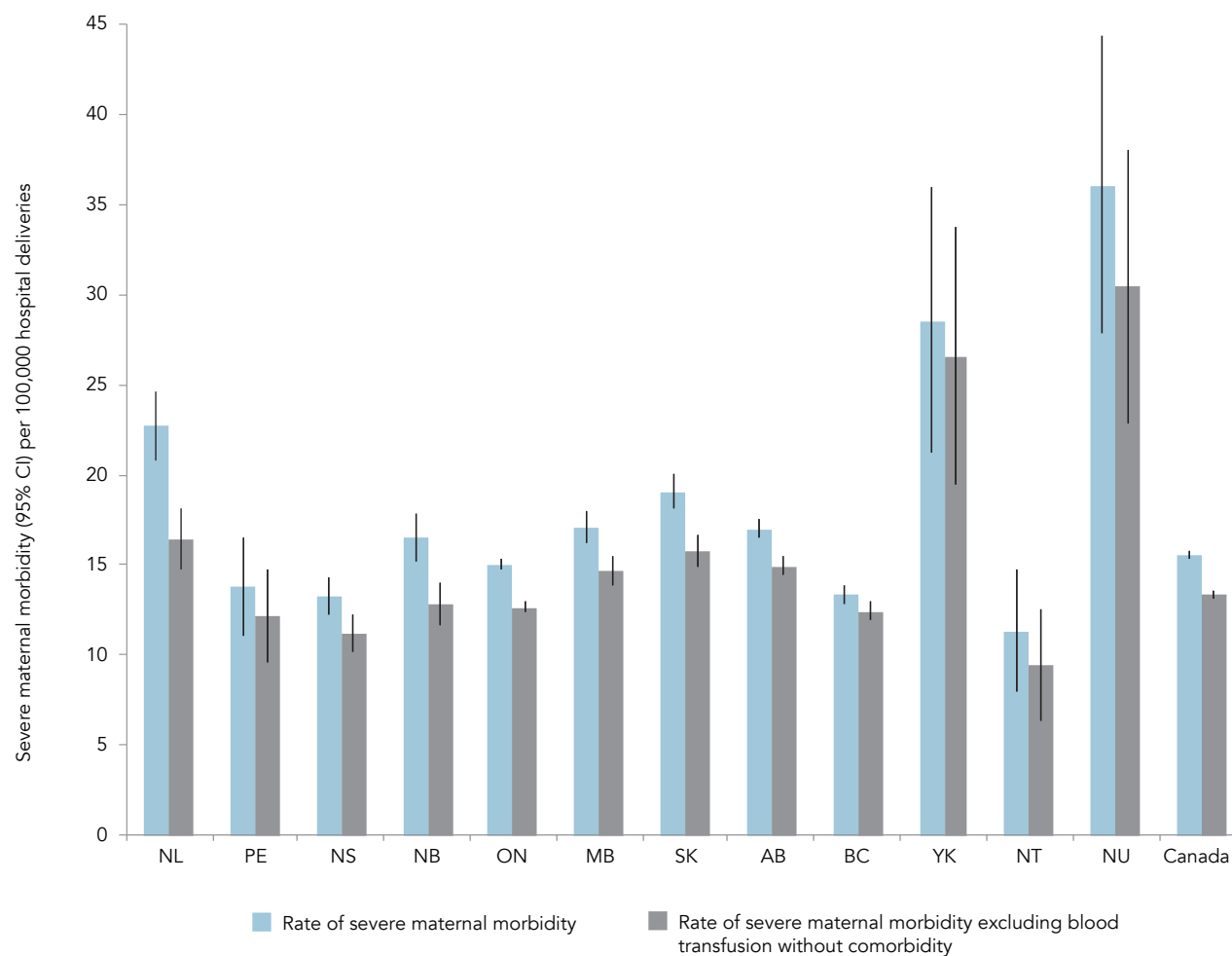


Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 4.2

RATES OF SEVERE MATERNAL MORBIDITY, BY PROVINCE/TERRITORY OF OCCURRENCE, CANADA (EXCLUDING QUEBEC), 2010/2011 TO 2014/2015



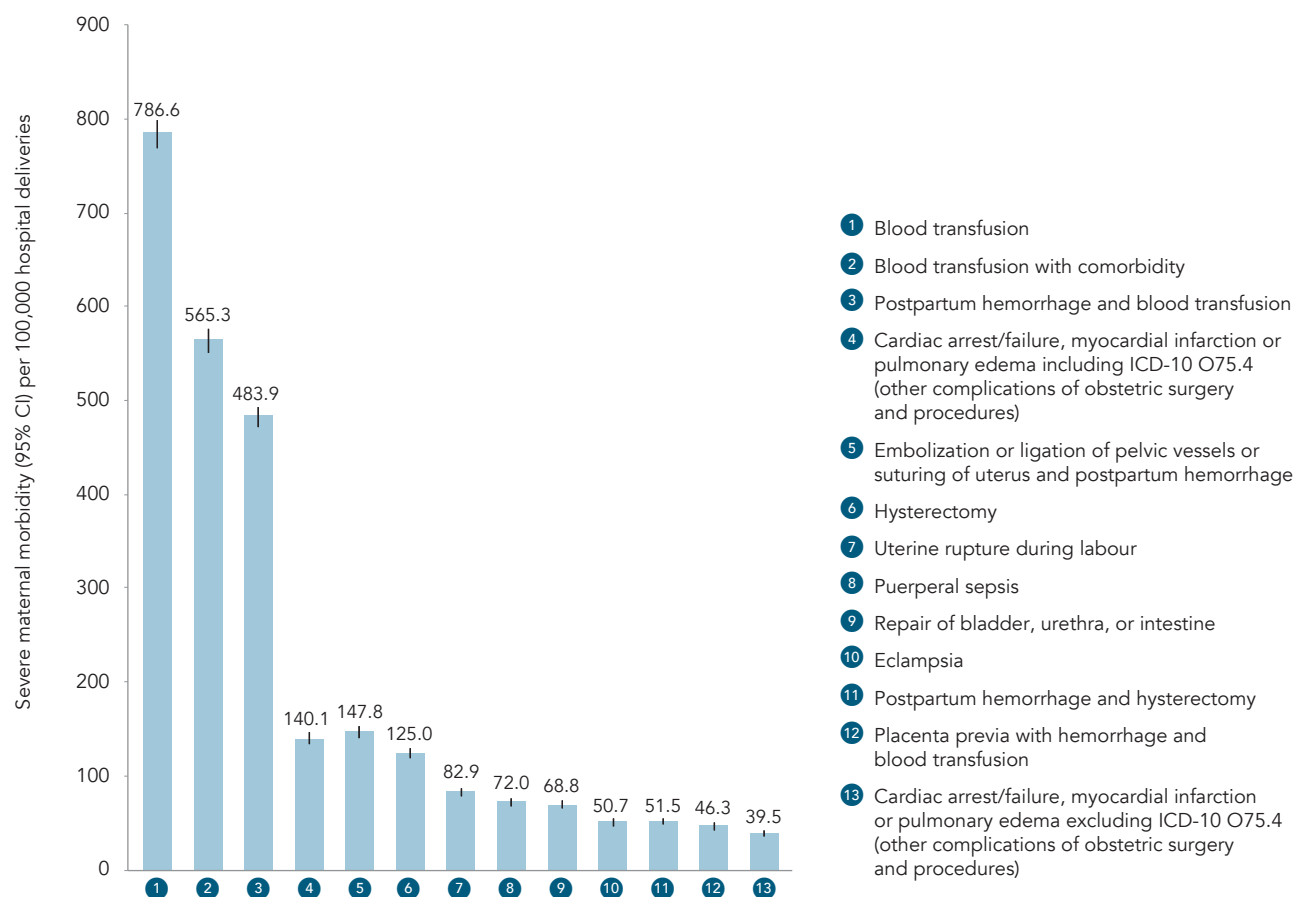
Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 4.3

RATES OF MOST COMMON SEVERE MATERNAL MORBIDITIES, CANADA (EXCLUDING QUEBEC), 2010/2011 TO 2014/2015



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD).

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

LIMITATIONS

The severity of some maternal conditions could not be distinguished due to limitations of ICD-10 codes.

Please refer to Appendix B for general data limitations using CIHI-DAD.

REFERENCES

1. Joseph KS, Liu S, Rouleau J, Kirby RS, Kramer MS, Sauve R, et al. Severe maternal morbidity in Canada, 2003 to 2007: surveillance using routine hospitalization data and ICD-10CA codes. *J Obstet Gynaecol Can* 2010;32(9):837–846.
2. Liu S, Joseph KS, Bartholomew S, Fahey J, Lee L, Allen AC, et al. Temporal trends and regional variations in severe maternal morbidity in Canada, 2003 to 2007. *J Obstet Gynaecol Can* 2010;32(9):847–855.

CHAPTER 5

PREGNANCY-RELATED MORTALITY RATE

Between 1999/2000 and 2014/2015, pregnancy-related mortality fluctuated between 5.1 (95% CI: 3.2 to 6.9) and 11.9 (95% CI: 8.8 to 15.0) per 100,000 pregnancies. Between 2002/2003 and 2014/2015, the most common diagnostic categories associated with pregnancy-related deaths were: diseases of the circulatory system; other indirect causes; postpartum hemorrhage; hypertension complicating pregnancy, childbirth and the puerperium; and obstetric embolism.

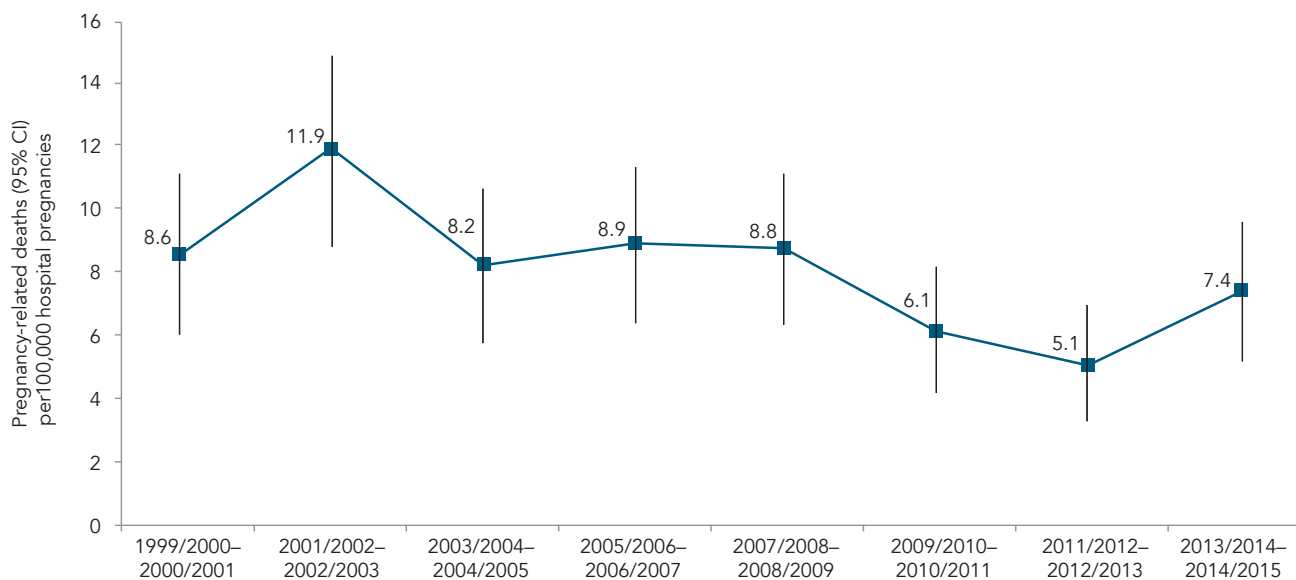
DEFINITION

The definition of pregnancy-related mortality under the International Statistical Classification of Diseases, Tenth Revision (ICD-10) is: "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death (obstetric and non-obstetric)."¹ In this report, the pregnancy-related mortality rate is expressed as the number of these deaths in hospital per 100,000

pregnancies (hospital births, ectopic pregnancies, miscarriages and terminations). This measure differs from the commonly reported maternal mortality ratio, which is defined per 100,000 live births, as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes".¹

FIGURE 5.1

PREGNANCY-RELATED MORTALITY RATE, BY FISCAL YEAR, CANADA (EXCLUDING QUEBEC), 1999/2000 TO 2014/2015



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Manitoba data, which were incomplete for earlier years, were included from 2004/2005.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI= confidence interval

DATA SOURCE

Data from the Canadian Institute of Health Information (CIHI)'s Discharge Abstract Database (DAD) were used to identify in-hospital deaths among women of reproductive age (15–54 years) in Canada. Data from Quebec were excluded because they do not contribute to the DAD. CIHI data were used instead of the more traditional vital statistics data because studies by the Canadian Perinatal Surveillance System have shown that hospitalization data are more comprehensive and timely.^{2,3} Methods used are described in detail elsewhere.³ The most responsible diagnostic category associated with each death was determined based on clinical expertise. In the assessment of temporal trends, the unit of analysis was two fiscal years rather than one, because of the small number of events. Manitoba data, which were incomplete for earlier years, were included from fiscal year 2004/2005.

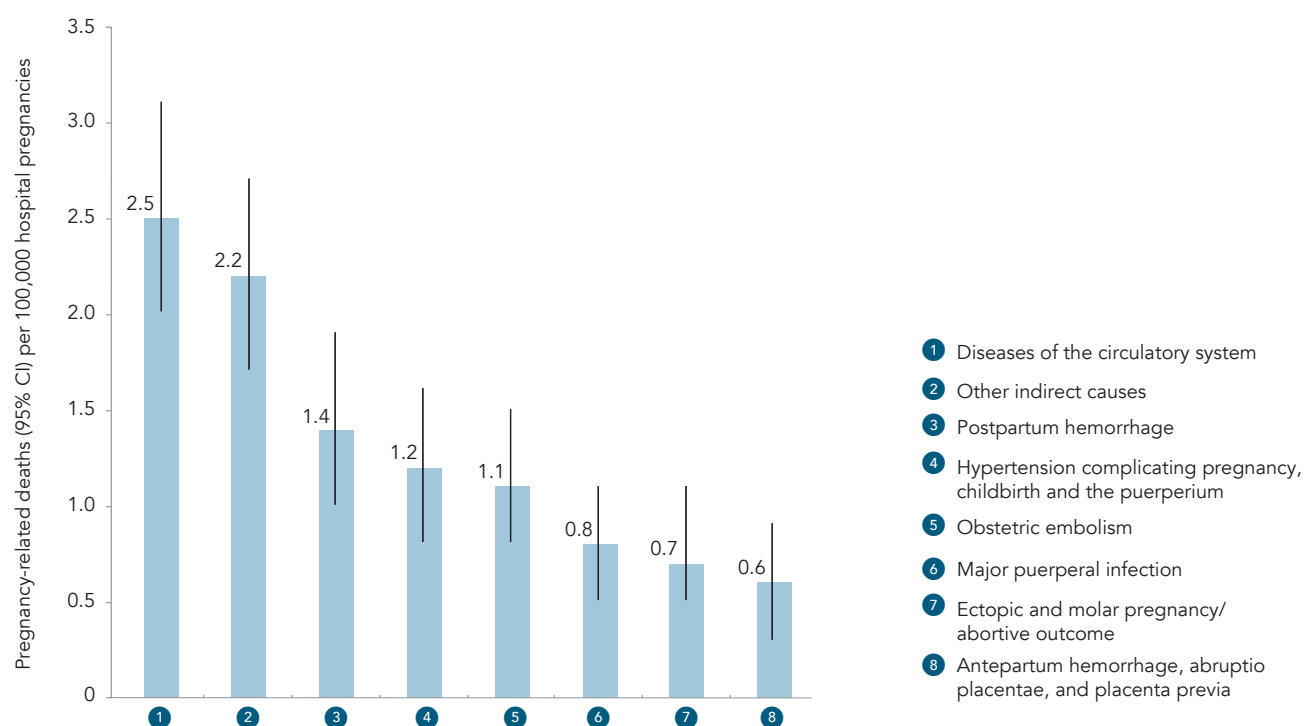
RESULTS

Between 1999/2000 and 2014/2015, pregnancy-related mortality fluctuated between 5.1 (95% CI: 3.2 to 6.9) and 11.9 (95% CI: 8.8 to 15.0) per 100,000 pregnancies (Figure 5.1). These rate fluctuations were usually not statistically significant (Table 5.1).

The most common diagnostic categories associated with these deaths in 2002/2003 to 2014/2015 were diseases of the circulatory system; other indirect causes (e.g., diseases of the digestive system, mental disorders and diseases of the nervous system complicating pregnancy, childbirth and the puerperium); postpartum hemorrhage; hypertension complicating pregnancy, childbirth and the puerperium; and obstetric embolism (Figure 5.2). The rates are of diagnoses associated with each death rather than of the underlying cause as the

FIGURE 5.2

DIAGNOSTIC CATEGORIES ASSOCIATED WITH PREGNANCY-RELATED DEATHS, CANADA (EXCLUDING QUEBEC), 2002/2003 TO 2014/2015



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

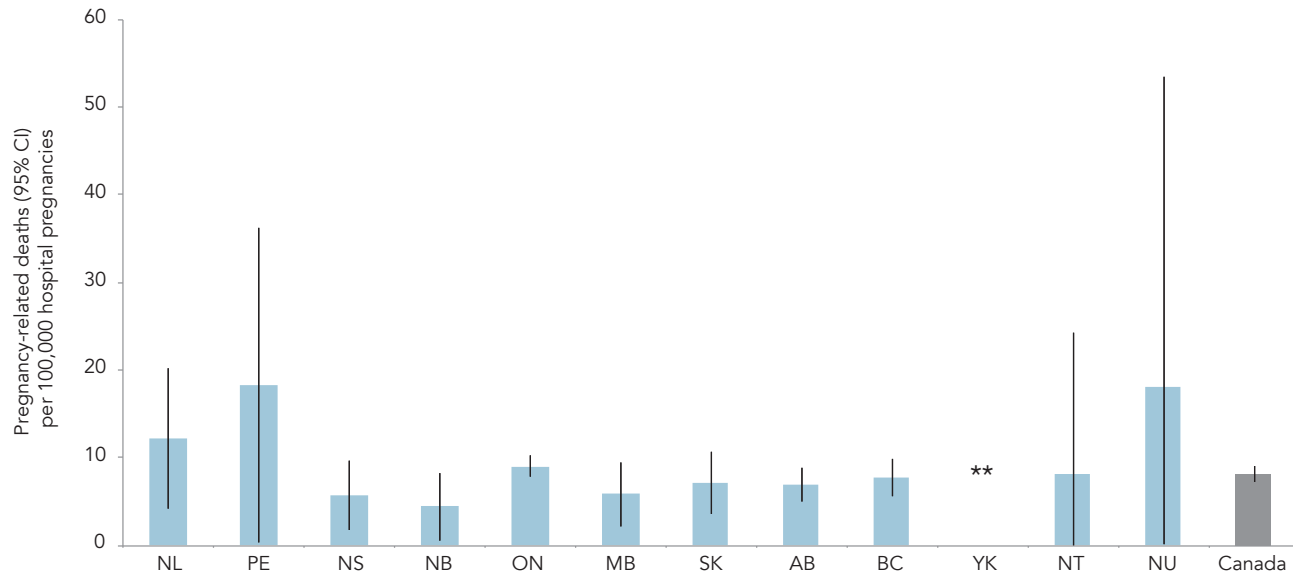
Manitoba data, which were incomplete for earlier years, were included from 2004/2005.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 5.3

PREGNANCY-RELATED MORTALITY, BY PROVINCE/TERRITORY OF OCCURRENCE, CANADA (EXCLUDING QUEBEC), 1999/2000 TO 2014/2015



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** No pregnancy-related deaths were recorded in the Yukon during this time period.

Manitoba data, which were incomplete for earlier years, were included from 2004/2005.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

DAD does not report the underlying cause of death. Multiple diagnoses could be coded for each death.

Between 1999/2000 and 2014/2015, the highest pregnancy-related mortality rates were observed in Prince Edward Island and Nunavut; the lowest rates were observed in New Brunswick, Manitoba and Nova Scotia (Figure 5.3). No pregnancy-related deaths were recorded in the Yukon during this time period. Provincial and territorial rates must be interpreted with caution due to a high degree of uncertainty as a result of the small number of maternal deaths in some jurisdictions.

LIMITATIONS

Deaths that occurred outside the hospital were not included in this analysis. The DAD data include multiple diagnostic codes for each death, but do not assign an underlying cause of death. Therefore, the more commonly reported maternal mortality ratio

which takes into consideration the underlying cause of death cannot be presented from these data.

Please refer to Appendix B for general data limitations using CIHI-DAD.

REFERENCES

1. World Health Organization. The WHO Application of ICD-10 to deaths during pregnancy, childbirth and the puerperium: ICD-MM. Geneva: World Health Organization; 2012.
2. Lisonkova S, Bartholomew S, Rouleau J, Liu S, Liston RM, Joseph KS. Temporal trends in maternal mortality in Canada I: estimates based on vital statistics data. *J Obstet Gynaecol Can* 2011;33(10):1011–1019.
3. Lisonkova S, Liu S, Bartholomew S, Liston RM, Joseph KS. Temporal trends in maternal mortality in Canada II: estimates based on hospitalization data. *J Obstet Gynaecol Can* 2011;33(10):1020–1030.

CHAPTER 6

PRETERM BIRTH RATE

The rate of preterm birth in Canada fluctuated between 8.0 (95% CI: 7.9–8.1) and 8.3 (95% CI: 8.2–8.4) per 100 live births between 2005 and 2014. The rate of preterm birth was 8.1 per 100 live births in 2014.

DEFINITION

The preterm birth rate is defined as the number of live births with a gestational age at birth of less than 37 completed weeks (<259 days), expressed as a proportion of all live births.

DATA SOURCE

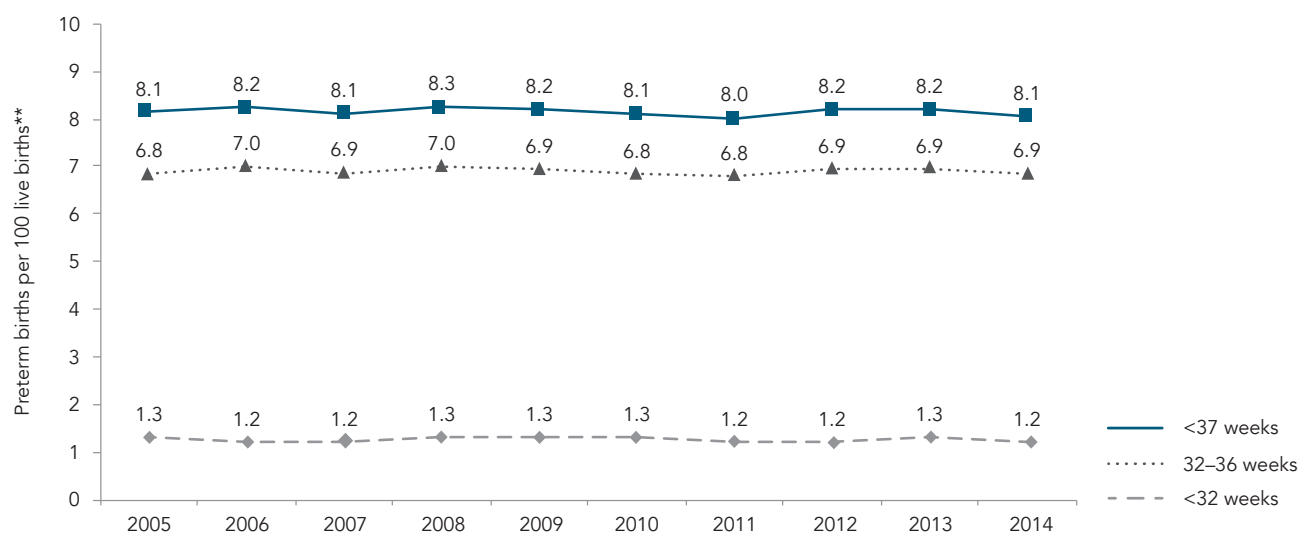
Preterm birth rates were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Data from Quebec were excluded because they do not contribute to DAD.

RESULTS

The rate of preterm births fluctuated between 8.0 (95% CI: 7.9–8.1) and 8.3 (95% CI: 8.2–8.4) per 100 live births between 2005 and 2014. Most preterm births were delivered between 32 and 36 weeks gestation, with the rate ranging from 6.8 (95% CI: 6.8–6.9) to 7.0 (95% CI: 6.9–7.1) per 100 live births. During the same period, the rate of very preterm birth (<32 weeks) remained stable at 1.2 (95% CI: 1.2–1.3) to 1.3 (95% CI: 1.2–1.3) per 100 live births (Figure 6.1).

FIGURE 6.1

RATE OF PRETERM BIRTH, CANADA (EXCLUDING QUEBEC), 2005–2014



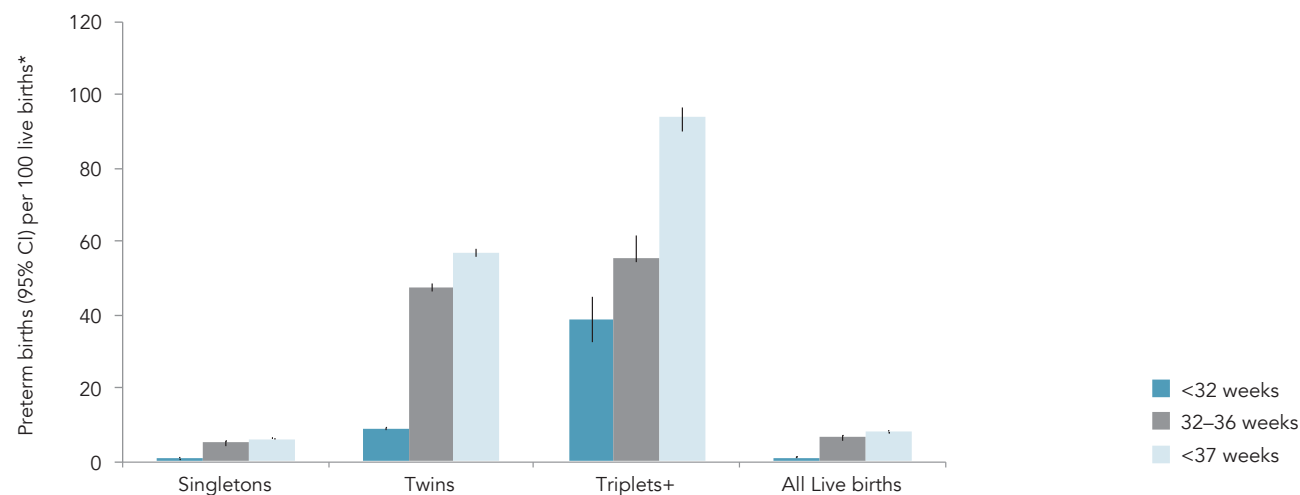
Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Excludes live births with unknown gestational age

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 6.2

RATE OF PRETERM BIRTH BY PLURALITY, CANADA (EXCLUDING QUEBEC), 2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

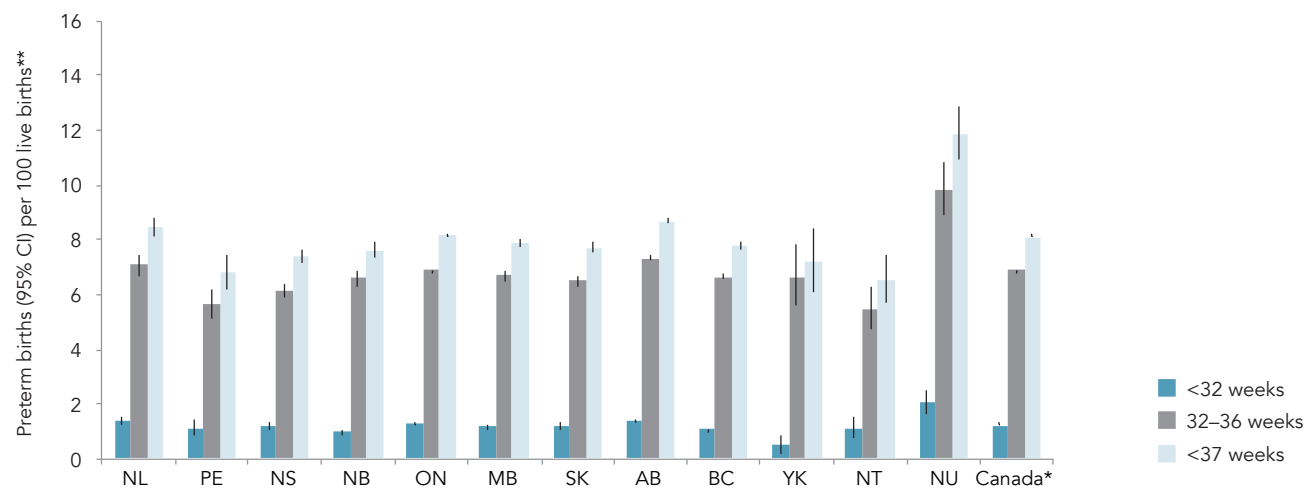
* Excludes live births with unknown gestational age

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 6.3

RATE OF PRETERM BIRTH, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data for unknown provinces and territories

** Excludes live births with unknown gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

Preterm birth rates were substantially higher among multiple births. In 2014, preterm birth rates among singleton, twin, and triplet or higher order live births were 6.3 (95% CI: 6.2–6.4), 56.7 (95% CI: 55.7–57.7), and 93.8 (95% CI: 90.1–96.4) per 100 live births, respectively (Figure 6.2).

From 2010 to 2014, preterm birth rates ranged from 6.5 per 100 live births in the Northwest Territories (95% CI: 5.7–7.4) to 11.9 per 100 live births (95% CI: 10.9–12.9) in Nunavut (Figure 6.3).

LIMITATIONS

An important limitation of data on preterm birth is error in reporting of gestational age, particularly

when it is based on menstrual dates. These errors have diminished in recent decades as ultrasound confirmation of gestational age is widely used across Canada; however, dating ultrasounds performed in the first trimester are more accurate than in the second trimester.¹

Please refer to Appendix B for general data limitations using CIHI-DAD.

REFERENCE

1. Butt K, Lim K. Determination of gestational age by ultrasound. *J Obstet Gynaecol Can* 2014;36(2):171–181.

CHAPTER 7

POST-TERM BIRTH RATE

The rate of post-term birth fluctuated in Canada between 0.3 (95% CI: 0.3–0.4) and 0.5 (95% CI: 0.4–0.5) per 100 live births between 2005 and 2014. The rate of post-term birth rate was 0.3 per 100 live births in 2014.

DEFINITION

The post-term birth rate is defined as the number of live births that occur at a gestational age of 42 or more completed weeks (≥ 294 days) of pregnancy, expressed as a proportion of all live births.

DATA SOURCE

The rates of post-term birth were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Data from Quebec were excluded because they do not contribute to DAD.

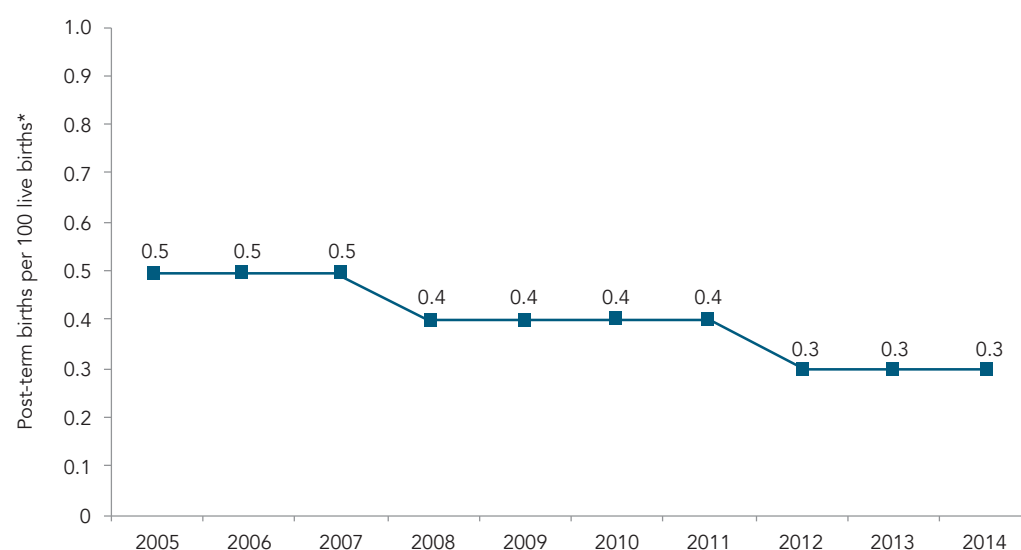
RESULTS

The post-term birth rate declined between 0.5 (95% CI: 0.4–0.5) and 0.3 (95% CI: 0.3–0.4) per 100 live births between 2005 and 2014. (Figure 7.1).

Between 2010–2014, the Canadian average was 0.4 per 100 live births. Rates ranged from 0.1 per 100 live births (95% CI: 0.0–0.3) in Nunavut to 1.5 per 100 live births (95% CI: 1.0–2.1) in Yukon (Figure 7.2).

FIGURE 7.1

RATE OF POST-TERM BIRTH, CANADA (EXCLUDING QUEBEC), 2005–2014



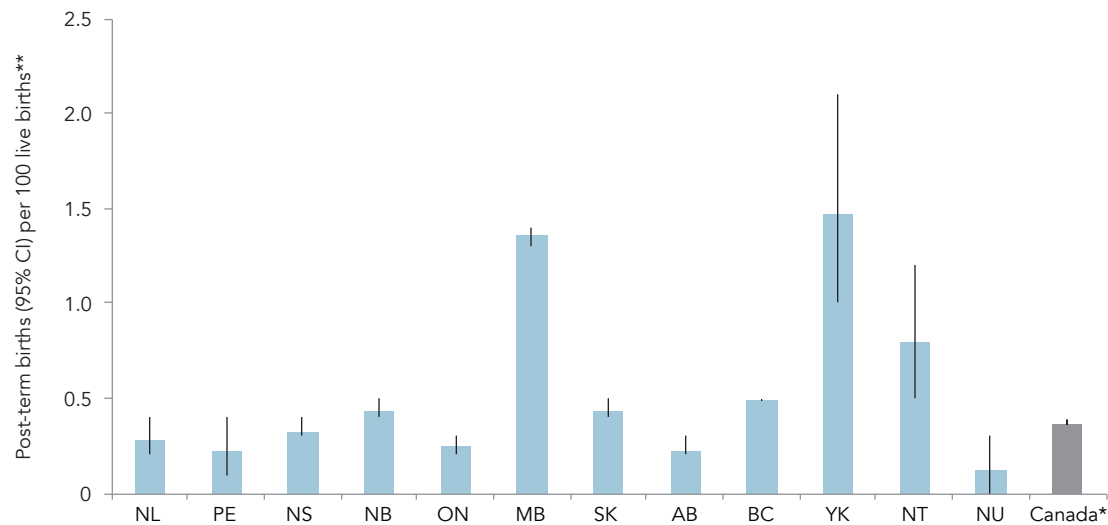
Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Excludes live births with unknown gestational age

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 7.2

RATE OF POST-TERM BIRTH, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data for unknown provinces and territories

** Excludes live births with unknown gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

LIMITATIONS

An important limitation of data on post-term birth is error in reporting of gestational age, particularly when it is based on menstrual dates. These errors have diminished in recent decades as ultrasound confirmation of gestational age is widely used across Canada; however, dating ultrasounds offered in the first trimester are more accurate than in the second trimester.¹

Please refer to Appendix B for general data limitations using CIHI-DAD.

REFERENCE

1. Butt K, Lim K. Determination of gestational age by ultrasound. *J Obstet Gynaecol Can* 2014;36(2):171–181.

CHAPTER 8

SMALL-FOR-GESTATIONAL-AGE BIRTH RATE

The birth rate of small-for-gestational-age (SGA) among singleton infants fluctuated between 8.2 (95% CI: 8.1–8.3) and 8.4 (95% CI: 8.3–8.5) per 100 singleton live births between 2005 and 2008, and then increased steadily between 2008 and 2014, from 8.2 (95% CI: 8.1–8.3) to 9.1 (95% CI: 9.0–9.2) per 100 singleton live births. The rate of SGA was 9.1 per 100 singleton live births in 2014.

DEFINITION

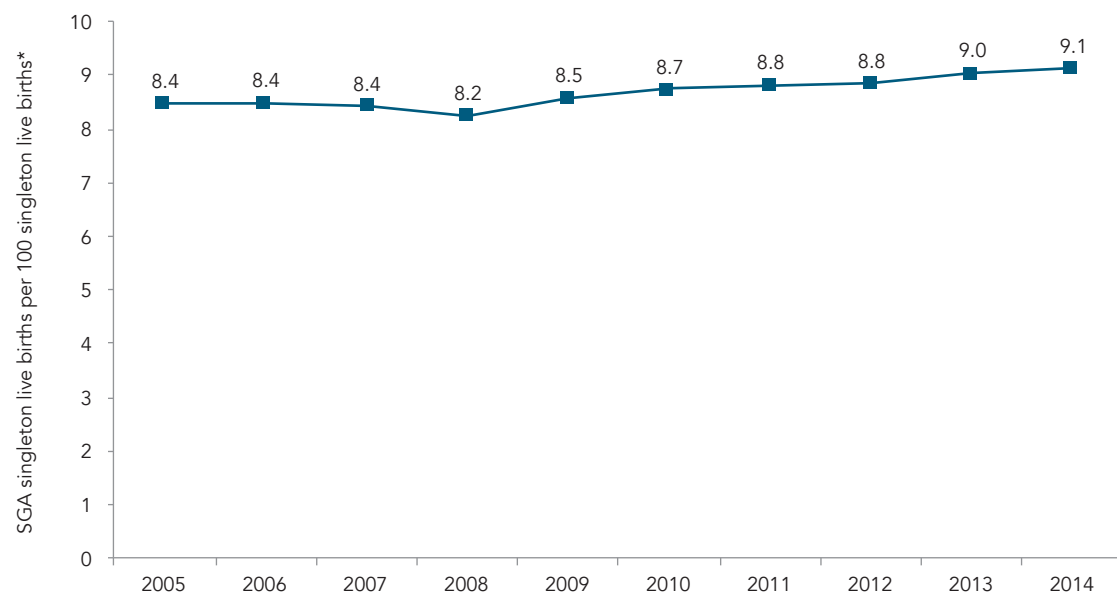
The small-for-gestational-age (SGA) birth rate is defined as the number of live births for which birth weight is below the 10th percentile of the sex and gestation-specific birth weight, expressed as a proportion of all singleton live births. The reference used for this report was the most recent population-based Canadian reference of birth weight for sex and gestational age, based on singleton live births delivered at gestational ages 22–43 weeks in the period 1994–1996.¹

DATA SOURCE

The birth rates of SGA were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Data from Quebec were excluded because they do not contribute to DAD. Live births with unknown gestational age, live births with gestational age less than 22 weeks or greater than 43 weeks, live births with unknown birth weights, and multiple births were excluded from these calculations.

FIGURE 8.1

RATE OF SMALL-FOR-GESTATIONAL-AGE, CANADA (EXCLUDING QUEBEC), 2005–2014



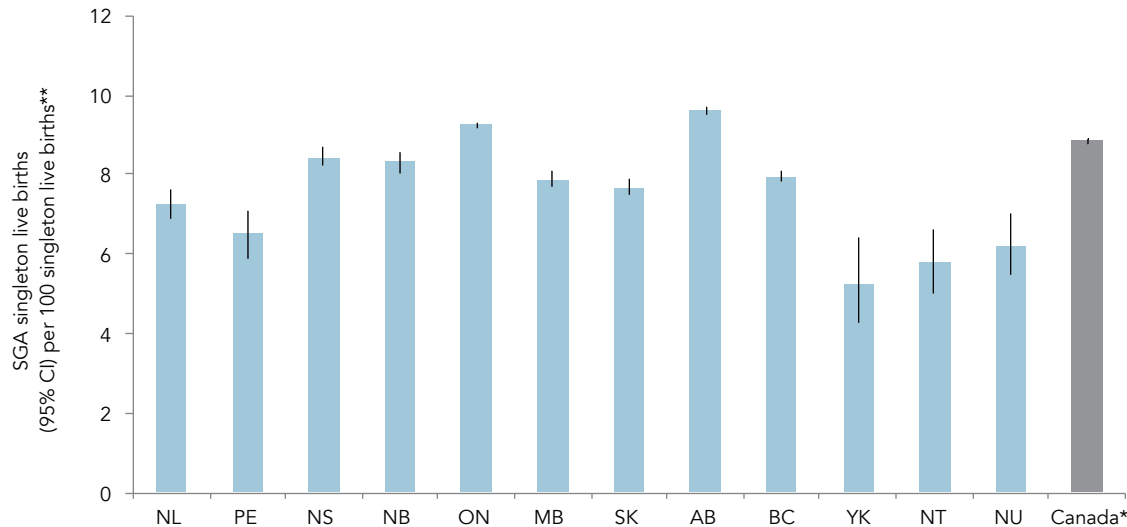
Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Excludes live births with unknown gestational age or birth weight, live births with gestational age <22 weeks or >43 weeks, and multiple births. SGA cut-off is based on the 10th percentile of the sex-specific birth weight for gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 8.2

RATE OF SMALL-FOR-GESTATIONAL-AGE, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Excludes live births with unknown gestational age or birth weight, live births with gestational age <22 weeks or >43 weeks, and multiple births.

SGA cut-off is based on the 10th percentile of the sex-specific birth weight for gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

RESULTS

The birth rate of SGA fluctuated between 8.2 (95% CI: 8.1–8.3) and 8.4 (95% CI: 8.3–8.5) per 100 singleton live births between 2005 and 2008. Between 2008 and 2014, the rate gradually increased from 8.2 (95% CI: 8.1–8.3) to 9.1 (95% CI: 9.0–9.2) per 100 singleton live births. The SGA birth rate was 9.1 (95% CI: 9.0–9.2) per 100 singleton live births in 2014 (Figure 8.1). Between 2010 and 2014, rates ranged from 5.3 per 100 singleton live births (95% CI: 4.3–6.4) in Yukon to 9.6 (95% CI: 9.5–9.7) in Alberta (Figure 8.2).

LIMITATIONS

An important limitation of data on SGA is error in reporting of gestational age, particularly when it is based on menstrual dates. These errors have diminished in recent decades as ultrasound

confirmation of gestational age is widely used across Canada; however, dating ultrasounds offered in the first trimester are more accurate than in the second trimester.²

Please refer to Appendix B for general data limitations using CIHI-DAD.

REFERENCES

1. Kramer MS, Platt RW, Wen SW, Joseph KS, Allen A, Abrahamowicz M, Blondel B, Bréart G. Fetal/Infant Health Study Group of the Canadian Perinatal Surveillance System A new and improved population-based Canadian reference for birth weight for gestational age. *Pediatrics* 2001 Aug;108(2):E35.
2. Butt K, Lim K. Determination of gestational age by ultrasound. *J Obstet Gynaecol Can* 2014;36(2):171–181.

CHAPTER 9

LARGE-FOR-GESTATIONAL-AGE BIRTH RATE

The birth rate of large-for-gestational-age (LGA) among singleton infants decreased from 11.6 (95% CI: 11.5–11.7) to 10.2 (95% CI: 10.1–10.3) per 100 singleton live births between 2005 and 2014. The birth rate of LGA was 10.2 in 2014.

DEFINITION

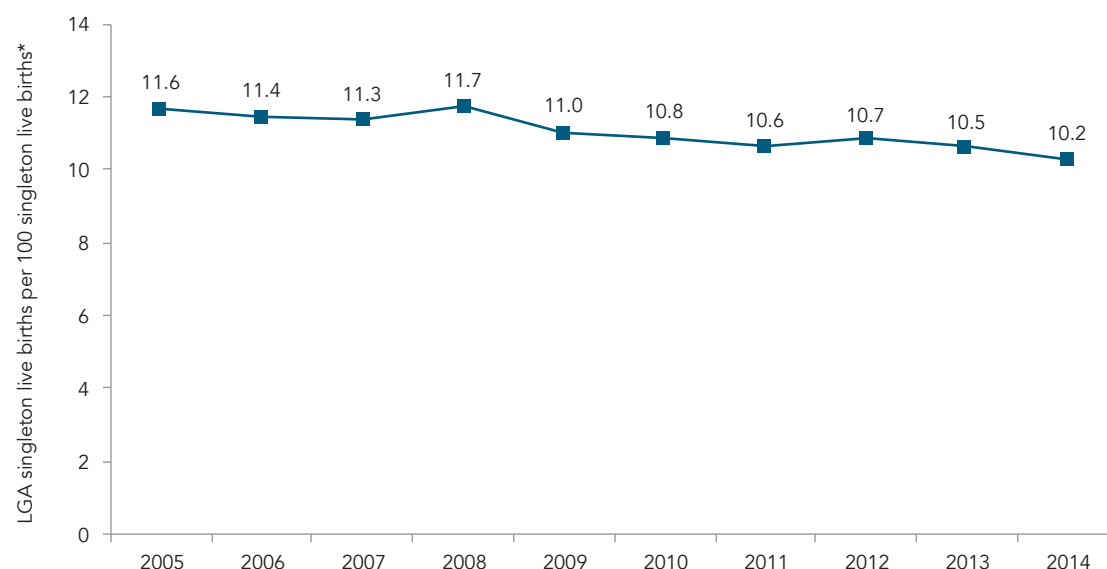
The birth rate of large-for-gestational-age (LGA) is defined as the number of live born singleton whose birth weight is above the 90th percentile of the sex- and gestation-specific birth weight for gestational age, expressed as a proportion of all singleton live births. The reference used for this report was the most recent population-based Canadian reference of birth weight for sex and gestational age, based on singleton live births delivered at gestational ages 22–43 weeks in the period 1994–1996.¹

DATA SOURCE

The LGA birth rates were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Data from Quebec were excluded as they do not contribute to DAD. Live births with unknown gestational age, live births with gestational age less than 22 weeks or greater than 43 weeks, live births with unknown birth weights, and multiple births were excluded from these calculations.

FIGURE 9.1

RATE OF LARGE-FOR-GESTATIONAL-AGE, CANADA (EXCLUDING QUEBEC), 2005–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

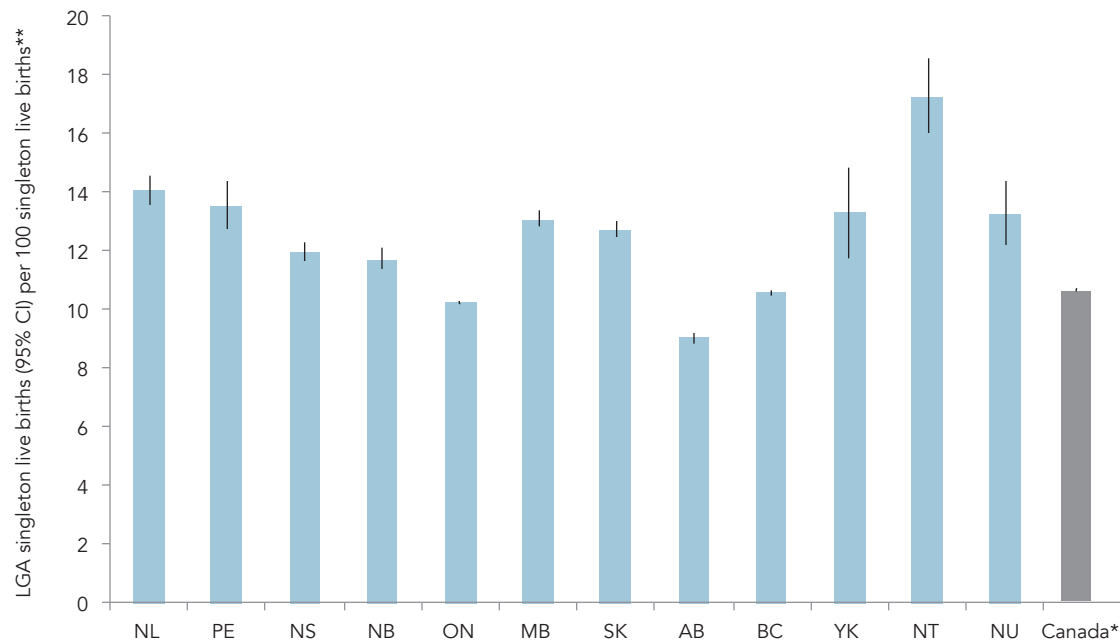
* Excludes live births with unknown gestational age or birth weight, live births with gestational age <22 weeks or >43 weeks, and multiple births.

LGA cut-off is based on the 90th percentile of the sex-specific birth weight for gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 9.2

RATE OF LARGE-FOR-GESTATIONAL-AGE, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Excludes live births with unknown gestational age or birth weight, live births with gestational age <22 weeks or >43 weeks, and multiple births.

LGA cut-off is based on the 90th percentile of the sex-specific birth weight for gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

RESULTS

The birth rate of LGA decreased from 11.6 (95% CI: 11.5–11.7) to 10.2 (95% CI: 10.1–10.3) per 100 singleton live births between 2005 and 2014 (Figure 9.1). Between 2010 and 2014, the birth rates for LGA ranged from 9.1 per 100 singleton live births (95% CI: 8.9–9.2) in Alberta to 17.3 (95% CI: 16.0–18.6) in the Northwest Territories (Figure 9.2).

LIMITATIONS

An important limitation of data on LGA is error in reporting of gestational age, particularly when it is based on menstrual dates. These errors have diminished in recent decades as ultrasound confirmation of gestational age is widely used across Canada; however, dating ultrasounds offered in the first trimester are more accurate than in the second trimester.²

Please refer to Appendix B for general data limitations using CIHI-DAD.

REFERENCES

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CHAPTER 10

FETAL MORTALITY RATE

According to the Canadian definition, the fetal mortality rate among births ≥ 500 g birth weight or ≥ 20 weeks gestation at delivery fluctuated between 7.5 (95% CI: 7.1–7.8) and 8.1 (95% CI: 7.8–8.5) per 1,000 total births between 2005 and 2014.

According to the World Health Organization's definition:

- The fetal mortality rate among births ≥ 500 g birth weight (or ≥ 22 weeks gestation if birth weight was missing) fluctuated between 4.1 (95% CI: 3.9–4.4) and 4.7 (95% CI: 4.4–5.0) per 1,000 total births between 2005 and 2014.
- The fetal mortality rate among births $\geq 1,000$ g birth weight (or ≥ 28 weeks gestation if birth weight was missing) fluctuated between 2.9 (95% CI: 2.7–3.1) to 3.4 (95% CI: 3.2–3.6) per 1,000 total births between 2005 and 2014.
- In 2014, the rates of fetal death per the three above-mentioned definitions were 8.1 (95% CI: 7.8–8.5), 4.4 (95% CI: 4.2–4.6) and 3.1 (95% CI: 2.9–3.3) per 1,000 total births respectively.

DEFINITIONS

The fetal mortality rate is defined as the number of fetal deaths per 1,000 total births (live births and stillbirths). In all provinces and territories (excluding Quebec*), all stillbirths, including those following pregnancy termination, with a birth weight ≥ 500 g or a gestational age at delivery ≥ 20 weeks must be registered.

Fetal mortality rates were calculated based on the Canadian definition of stillbirth i.e., births with a birth weight ≥ 500 g or a gestational age at delivery of ≥ 20 weeks that show no evidence of life at birth. Fetal mortality rates were also calculated according to the World Health Organization's¹ recommendations (for international comparisons):

- Stillbirths with a birth weight of ≥ 500 g or if birth weight is missing, those with a gestational age at delivery ≥ 22 weeks; and
- Stillbirths among births with a birth weight $\geq 1,000$ g, or if birth weight is missing, those with a gestational age at delivery ≥ 28 weeks.

For the cause-specific fetal death rates, the cause categories used were those described in the Canadian Perinatal Health Report, 2008 Edition.²

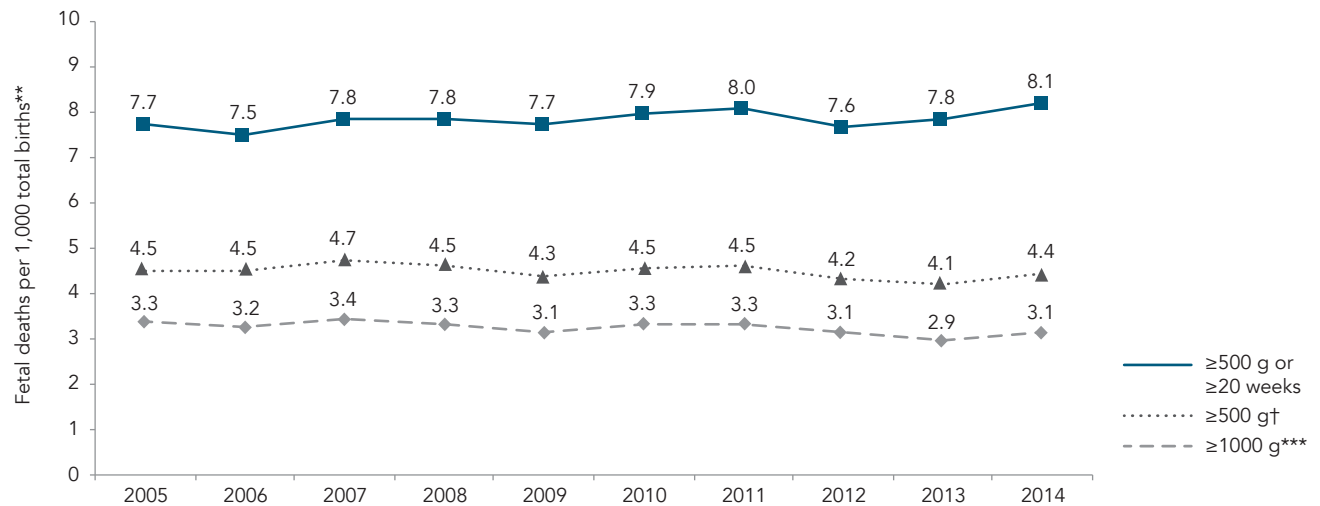
DATA SOURCES

Fetal death rates were calculated using Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Cause-specific fetal death rates were calculated using the International Statistical Classification of Diseases, 10th Revision.¹ Data from Quebec were excluded because they do not contribute to DAD.

* Quebec requires the registration of stillbirths with a birth weight ≥ 500 g (i.e., Quebec does not use a gestational age criterion)

FIGURE 10.1

FETAL MORTALITY RATE, CANADA (EXCLUDING QUEBEC), 2005–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

† Includes fetal deaths with a gestational age ≥ 22 weeks if birth weight is unknown

** Includes live births and stillbirths

***Includes fetal deaths with a gestational age ≥ 28 weeks if birth weight is unknown

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

RESULTS

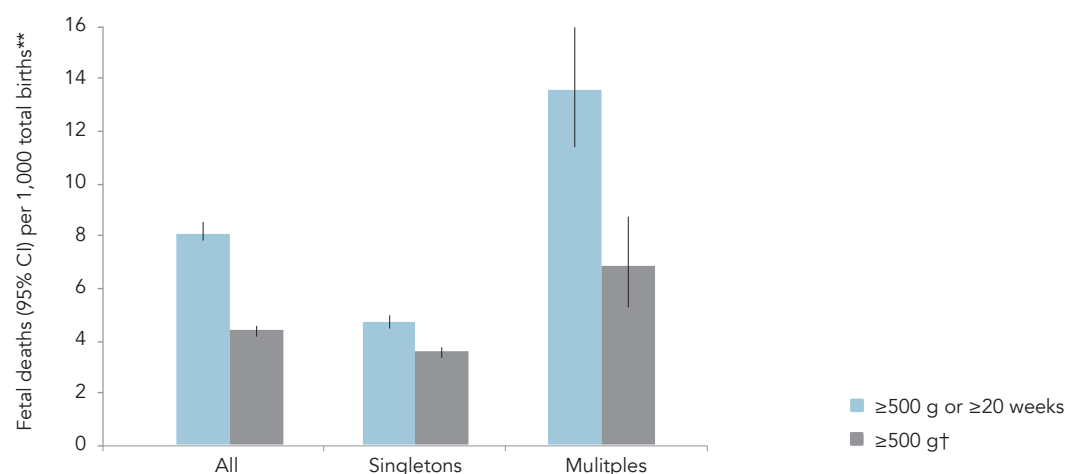
The overall rate of fetal mortality among births ≥ 500 g birth weight or ≥ 20 weeks gestation at delivery fluctuated between 7.5 (95% CI: 7.1–7.8) and 8.1 (95% CI: 7.8–8.5) per 1,000 total births between 2005 and 2014. The fetal mortality rate among births ≥ 500 g birth weight (or ≥ 22 weeks gestation if birth weight was missing) fluctuated between 4.1 (95% CI: 3.9–4.4) and 4.7 (95% CI: 4.4–5.0) per 1,000 total births between 2005 and 2014. The fetal mortality rate among births $\geq 1,000$ g birth weight (or ≥ 28 weeks gestational age if birth weight was missing) fluctuated between 2.9 (95% CI: 2.7–3.1) to 3.4 (95% CI: 3.2–3.6) per 1,000 total births between 2005 and 2014. In 2014, the rates of

fetal death per the three above-mentioned definitions were 8.1 (95% CI: 7.8–8.5), 4.4 (95% CI: 4.2–4.6) and 3.1 (95% CI: 2.9–3.3) per 1,000 total births respectively (Figure 10.1).

In 2014, the fetal mortality rate among births ≥ 500 g birth weight or ≥ 20 weeks gestation at delivery was significantly higher among multiple births (13.5 per 1,000 total births, 95% CI: 11.4–16.0) than among singletons (4.8, 95% CI: 4.5–5.0). The rates (according to the WHO definition) among births ≥ 500 g birth weight (or ≥ 22 weeks gestation if birth weight was missing) were 6.8 (95% CI: 5.3–8.7) among multiples and 3.6 (95% CI: 3.3–3.8) among singletons (Figure 10.2).

FIGURE 10.2

FETAL MORTALITY RATE, BY PLURALITY, CANADA (EXCLUDING QUEBEC), 2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

† Includes fetal deaths with a gestational age ≥22 weeks if birth weight is unknown

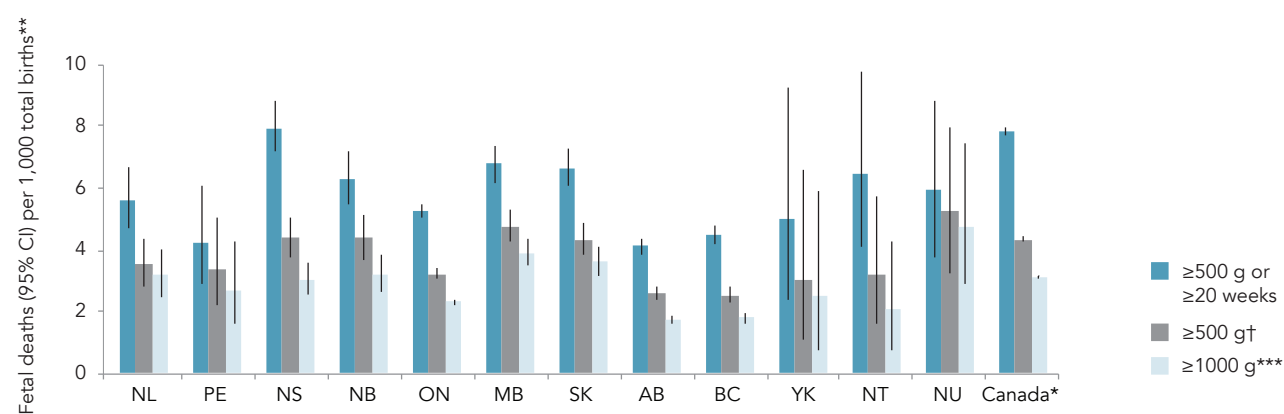
** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 10.3

FETAL MORTALITY RATE, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

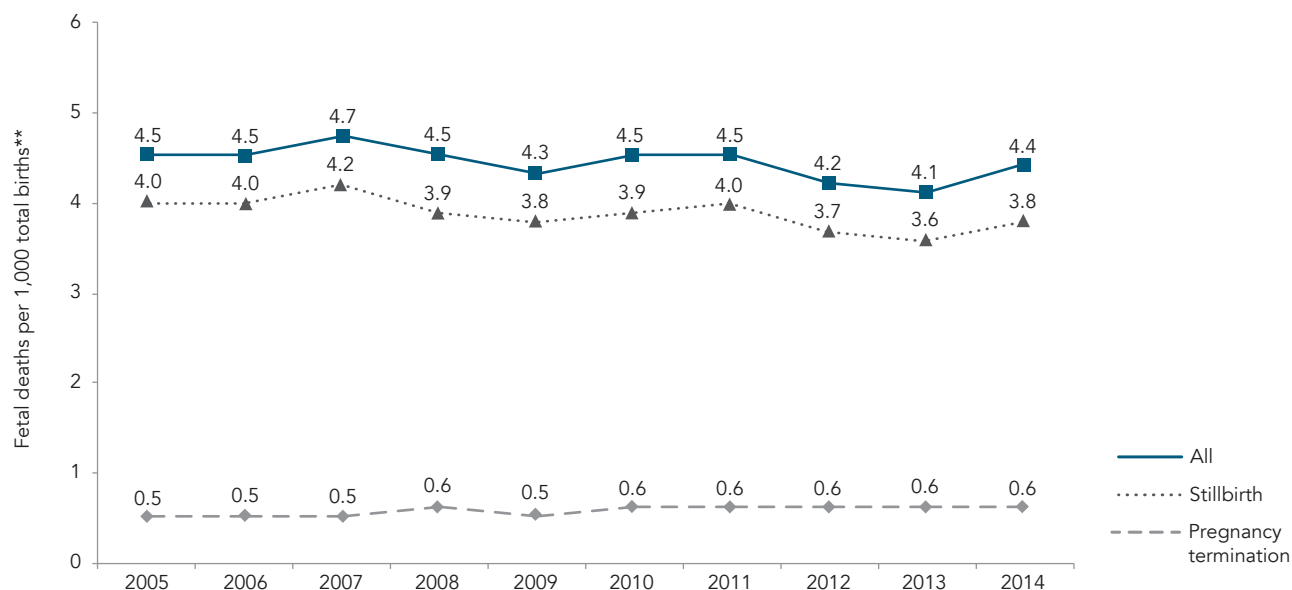
† Includes fetal deaths with a gestational age ≥22 weeks if birth weight is unknown

** Includes live births and stillbirths

***Includes fetal deaths with a gestational age ≥28 weeks if birth weight is unknown

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 10.4MORTALITY RATE IN FETUSES ≥ 500 G† BY TYPE, CANADA (EXCLUDING QUEBEC), 2005–2014

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths

† Includes fetal deaths with a gestational age ≥ 22 weeks if birth weight is unknown

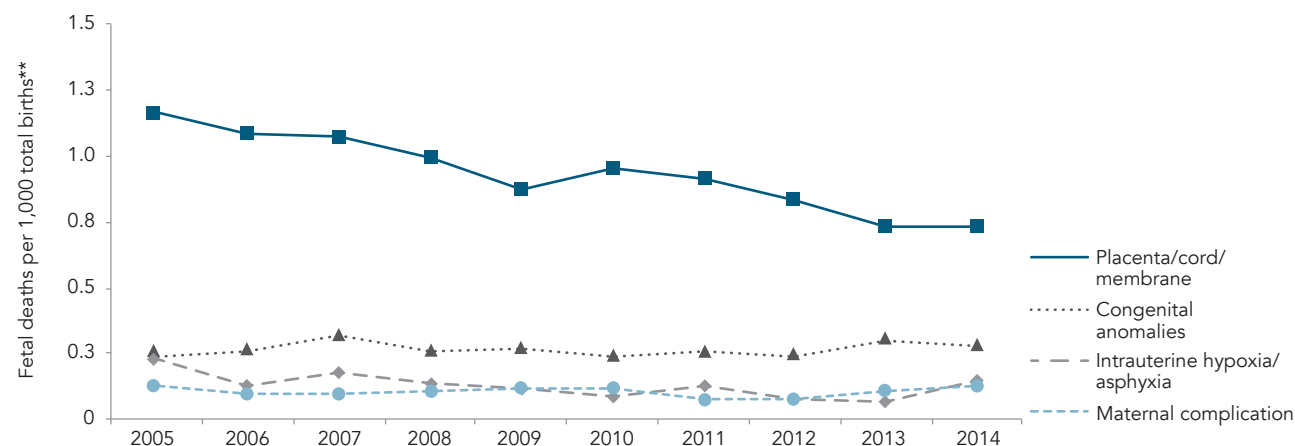
Data for Quebec were excluded because they do not contribute to CIHI-DAD.

In 2010–2014, fetal mortality rates among births ≥ 500 g birth weight or ≥ 20 weeks gestation ranged from 4.1 per 1,000 total births (95% CI: 3.9–4.4) in Alberta to 8.0 (95% CI: 7.2–8.9) in Nova Scotia (Figure 10.3). During the same time period, fetal mortality rates among births ≥ 500 g birth weight (or ≥ 22 weeks gestation if birth weight was missing) ranged from 2.5 per 1,000 births (95% CI: 2.3–2.8) in British Columbia to 5.3 per 1,000 births (95% CI: 3.3–8.0) in Nunavut. In 2010–2014 fetal mortality rates among births $\geq 1,000$ g birth weight (or ≥ 28 weeks gestational age if birth weight was missing) ranged from 1.8 per 1,000 births (95% CI: 1.6–1.9) in Alberta to 4.8 per 1,000 births (95% CI: 2.9–7.5) in Nunavut.

The fetal mortality among births ≥ 500 g birth weight at delivery (or ≥ 22 weeks gestation if birth weight was missing) excluding terminations of pregnancy fluctuated from 3.6 (95% CI: 3.4–3.8) to 4.2 (95% CI: 4.0–4.4) deaths per 1,000 total births between 2005 and 2014. The rate of termination of pregnancy with a birth weight ≥ 500 g or ≥ 20 weeks gestational age remained steady from 0.5 (95% CI: 0.4–0.5) per 1,000 total births in 2005 to 0.6 (95% CI: 0.5–0.7) per 1,000 total births in 2014 (Figure 10.4). The rate of fetal mortality for causes related to the placenta/cord/membranes decreased from 1.2 (95% CI: 1.0–1.3) to 0.7 (95% CI: 0.6–0.8) per 1,000 total births during the same period. Other cause-specific fetal mortality rates were stable (Figure 10.5).

FIGURE 10.5

MORTALITY RATE IN FETUSES ≥ 500 G† (EXCLUDING TERMINATION OF PREGNANCIES), BY CAUSE, CANADA (EXCLUDING QUEBEC), 2005–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths

† Includes fetal deaths with a gestational age ≥ 22 weeks if birth weight is unknown

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

LIMITATIONS

Causes of fetal death are not always discernable. Data may be affected by temporal and regional variations in birth registration practices, particularly for stillbirths and live births at the low end of the birth weight or gestational age range.³ Pregnancy terminations due to congenital anomaly diagnosis cannot be distinguish from those motivated by other indications.

Please refer to Appendix B for general data limitations using CIHI-DAD.

REFERENCES

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2. Public Health Agency of Canada. Canadian Perinatal Health Report, 2008 Edition. Ottawa, 2008.
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CHAPTER 11A

INFANT MORTALITY RATE

The rate of infant mortality fluctuated between 4.9 (95% CI: 4.6–5.1) and 5.4 (95% CI: 5.1–5.7) per 1,000 live births between 2002 and 2011. The infant mortality rate among live births ≥ 500 g fluctuated between 3.7 (95% CI: 3.5–4.0) and 4.2 (95% CI: 3.9–4.5) per 1,000 live births between 2001 and 2010. Neonatal death accounted for 73% of infant deaths in 2011. Between 2007 and 2011, immaturity and congenital anomalies were the leading causes of neonatal death, while congenital anomalies were the leading cause of postneonatal death.

DEFINITIONS

The infant mortality rate is defined as the number of deaths of live born babies in the first year after birth per 1,000 live births. Infant deaths can be subdivided into neonatal deaths (0–27 days) and postneonatal deaths (28–364 days). For postneonatal mortality, the denominator is the

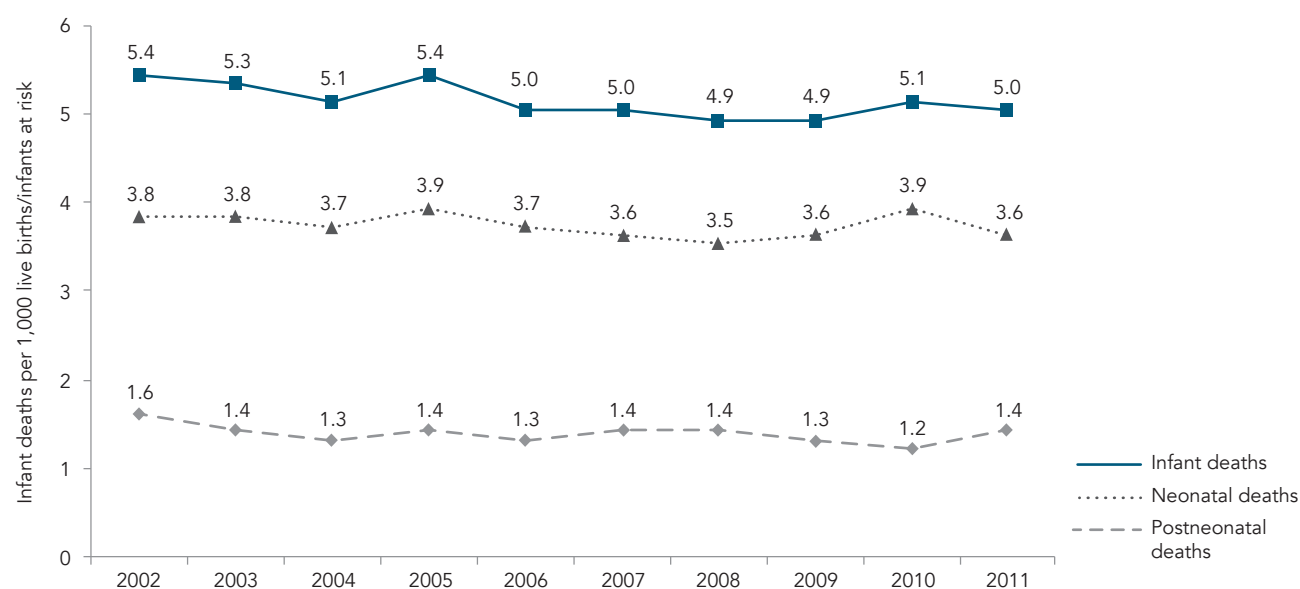
number of neonatal survivors, i.e., those who survived 28 days.

DATA SOURCES

Infant mortality rates were calculated from vital statistics data (death registrations). Data from Ontario were excluded because of data quality concerns.¹ Cause-specific infant mortality was

FIGURE 11A.1A

CRUDE MORTALITY RATES, CANADA (EXCLUDING ONTARIO), 2002–2011



Source: Statistics Canada, Vital Statistics

Data from Ontario were excluded because of data quality concerns.

defined according to modified International Collaborative Effort (ICE) groupings comprising of eight categories: congenital anomalies, asphyxia, immaturity, infection, sudden infant death syndrome (SIDS), other sudden or unexplained infant death, external causes, and other conditions.²

RESULTS

The rate of infant mortality fluctuated between 4.9 (95% CI: 4.6–5.1) and 5.4 (95% CI: 5.1–5.7) per 1,000 live births between 2002 and 2011 (Figure 11A.1A). During that period, neonatal mortality rates fluctuated between 3.5 (95% CI: 3.3–3.7) and 3.9 (95% CI: 3.6–4.1) per 1,000 live births, while postneonatal mortality rates fluctuated between 1.2 (95% CI: 1.1–1.4) and 1.6 (95% CI: 1.5–1.8) per 1,000 neonatal survivors. Neonatal mortality accounted for 73% of infant deaths in 2011.

The infant mortality rate among live births ≥ 500 g fluctuated between 3.7 (95% CI: 3.5–4.0) and 4.2 (95% CI: 3.9–4.5) per 1,000 live births between 2001

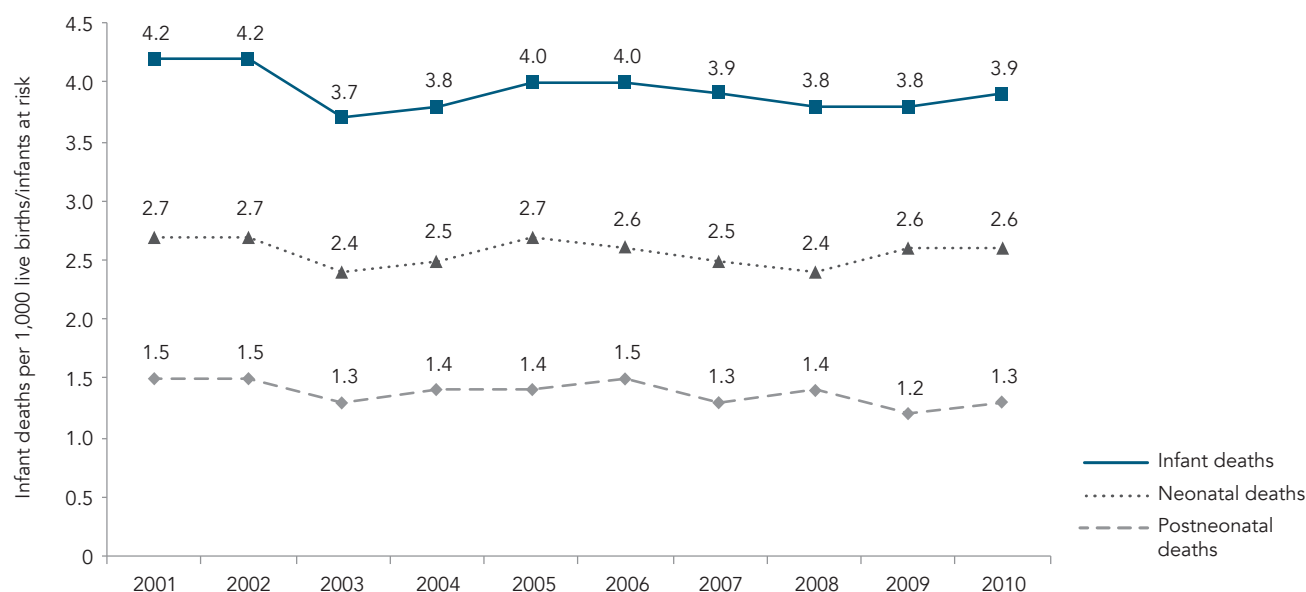
and 2010 (Figure 11A.1B). It was 3.9 (95% CI: 3.6–4.1) per 1,000 live births in 2010. Neonatal and postneonatal mortality rates fluctuated between 2.4 (95% CI: 2.2–2.7) and 2.7 (95% CI: 2.5–2.9) per 1,000 live births, and from 1.2 (95% CI: 1.0–1.3) and 1.5 (95% CI: 1.3–1.7) per 1,000 neonatal survivors.

Between 2002 and 2011, the infant mortality rate ranged from 3.6 per 1,000 live births (95% CI: 2.4–5.3) in Prince Edward Island to 17.9 per 1,000 live births (95% CI: 14.1–22.4) in Nunavut (Figure 11A.2).

For overall infant deaths, during the period 2007–2011, the leading causes of death were immaturity (29.6%), congenital anomalies (21.7%) and other/unknown (20.3%) (Figure 11A.3A). The leading causes of neonatal death were immaturity (37.6%) and congenital anomalies (21.4%) (Figure 11A.3B). The leading causes of postneonatal death were congenital anomalies (22.3%) and sudden infant death syndrome (SIDS) (19.6%) (Figure 11A.3C).

FIGURE 11A.1B

INFANT MORTALITY RATES FOR BIRTHS ≥ 500 G†, CANADA (EXCLUDING ONTARIO), 2001–2010



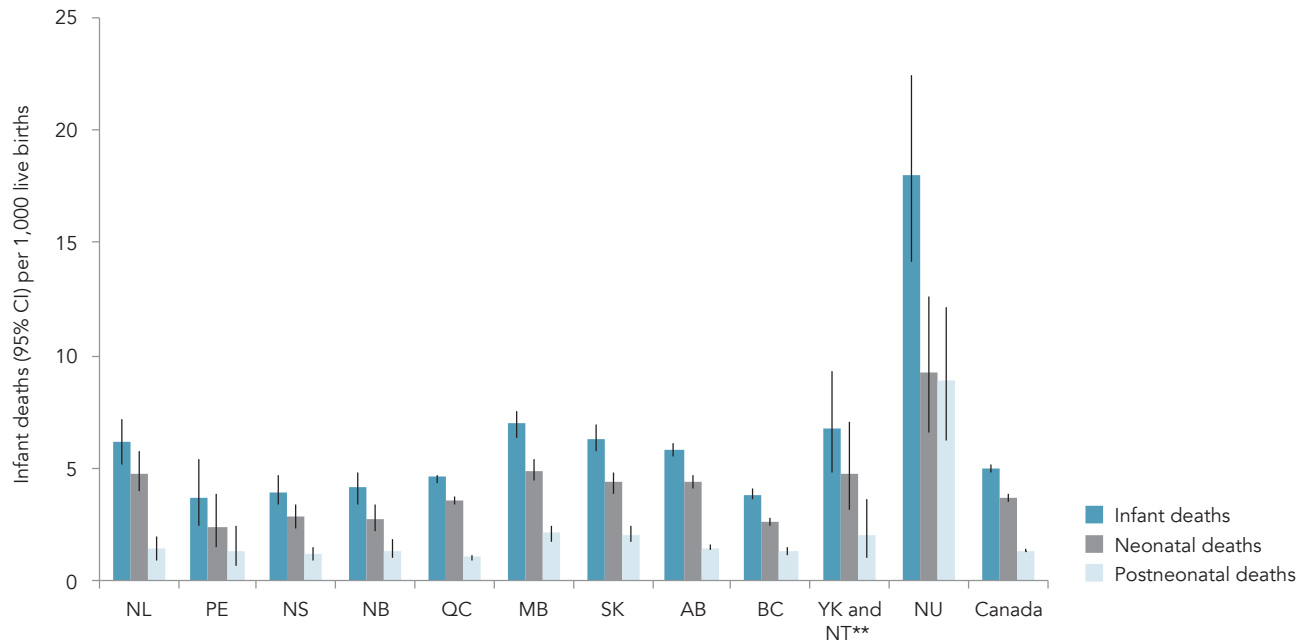
Source: Statistics Canada, Vital Statistics, Birth-Death linked file

† Includes deaths occurring to births weighing ≥ 500 g for the specified calendar year (cohort calculation). Unlinked infant deaths (i.e., infants whose death registration could not be linked to their birth registration) and live births/infant deaths with missing birth weight were also included, but live births/infant deaths with a missing birth weight and a gestational age < 22 weeks were excluded.

Data from Ontario were excluded because of data quality concerns.

FIGURE 11A.2

CRUDE MORTALITY RATES, BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO), 2007–2011



Source: Statistics Canada, Vital Statistics

Data from Ontario were excluded because of data quality concerns.

** Combined due to low cell counts

CI = confidence interval

FIGURE 11A.3A

PROPORTION (%) OF INFANT DEATHS BY CAUSE, CANADA (EXCLUDING ONTARIO), 2007–2011

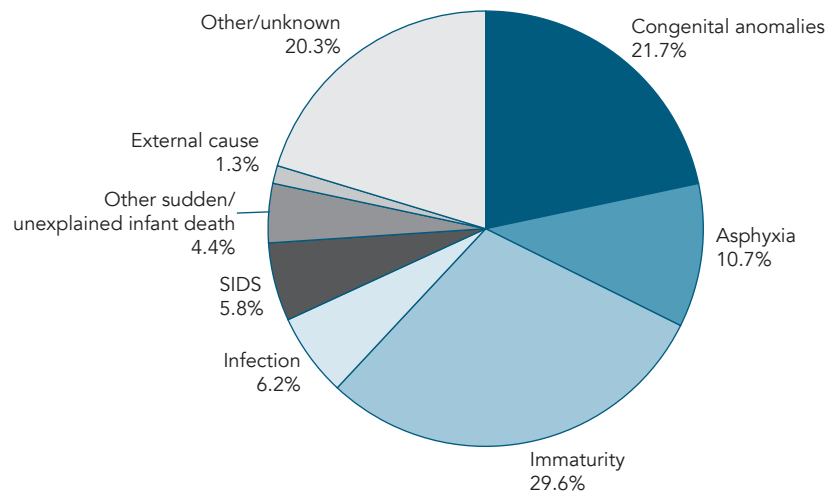
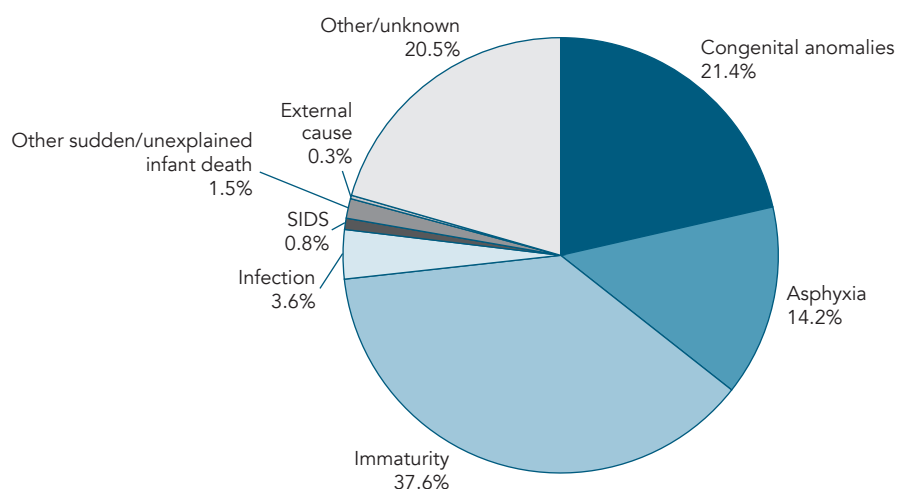
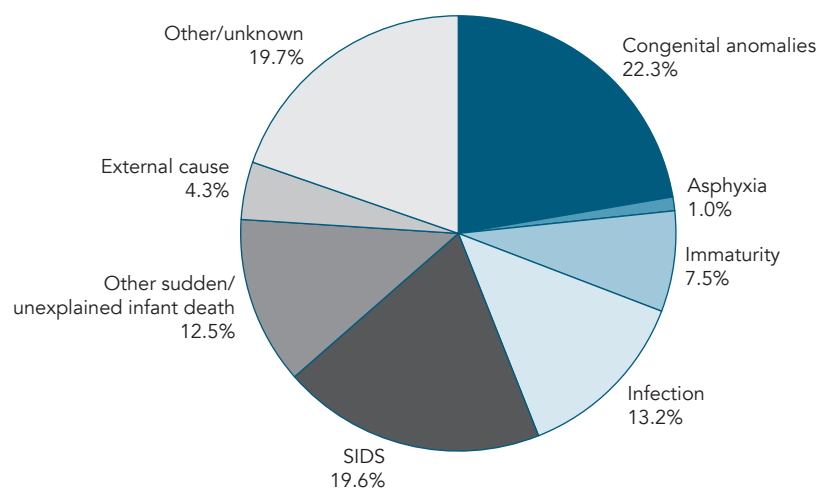


FIGURE 11A.3B

PROPORTION (%) OF NEONATAL DEATHS BY CAUSE, CANADA (EXCLUDING ONTARIO), 2007–2011

**FIGURE 11A.3C**

PROPORTION (%) OF POSTNEONATAL DEATHS BY CAUSE, CANADA (EXCLUDING ONTARIO), 2007–2011



Source: Statistics Canada, Vital Statistics

Data from Ontario were excluded because of data quality concerns.

LIMITATION

Vital statistics data have been found to be affected by regional variations in birth registration, particularly for extremely small, immature newborns.^{3–5}

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CHAPTER 11B

NEONATAL MORTALITY RATE

Between 2005 and 2014, the neonatal mortality rates fluctuated between 3.5 (95% CI: 3.3–3.7) and 4.0 (95% CI: 3.8–4.3) per 1,000 live births. Immaturity, congenital anomalies and asphyxia were the leading causes of neonatal deaths.

DEFINITION

Neonatal mortality rate is defined as the number of deaths among infants <28 days of age per 1,000 live births.

DATA SOURCES

Rates of neonatal mortality were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Cause-specific fetal death rates were calculated using the International Statistical Classification of Diseases, 10th Revision.¹ Data from Quebec were excluded because they do not contribute to DAD.

RESULTS

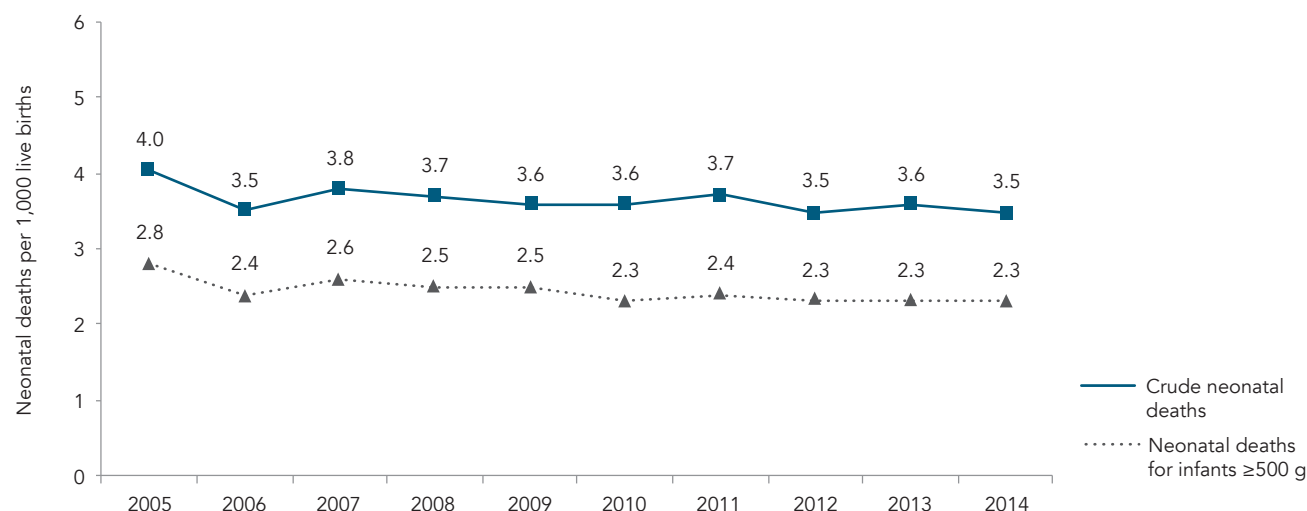
Between 2005 and 2014, the crude neonatal mortality rates fluctuated between 3.5 (95% CI: 3.3–3.7) and 4.0 (95% CI: 3.8–4.3) per 1,000 live births (Figure 11B.1).

The neonatal mortality rate among live births ≥ 500 g fluctuated between 2.3 (95% CI: 2.1–2.5) and 2.8 (95% CI: 2.6–3.0) per 1,000 live births between 2005 and 2014 (Figure 11B.1).

In 2005–2014, the neonatal mortality rate ranged from 2.3 (95% CI: 1.3–3.7) per 1,000 live births in Prince Edward Island to 8.5 (95% CI: 5.9–11.7) per 1,000 live births in Nunavut (Figure 11B.2).

FIGURE 11B.1

NEONATAL MORTALITY IN CANADA (EXCLUDING QUEBEC), 2005–2014

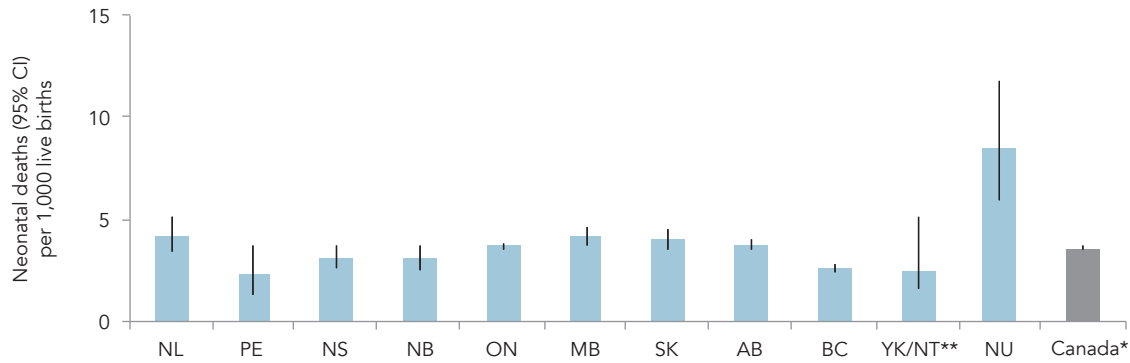


Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 11B.2

NEONATAL MORTALITY RATES BY PROVINCE AND TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

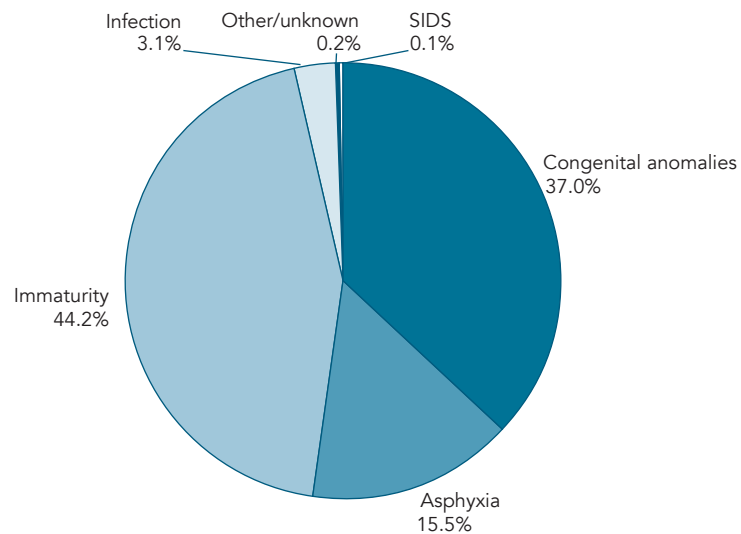
** Combined due to low cell counts

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 11B.3

PROPORTION (%) OF NEONATAL DEATHS BY CAUSE, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

The leading causes of neonatal death (Figure 11B.3) were immaturity (42.9%), congenital anomalies (37.3%) and asphyxia (16.2%).

LIMITATIONS

Data from CIHI-DAD are not directly comparable to infant mortality measures based on vital statistics data as they come from a different data source, and span a different time period.

See Appendix B for general limitations using CIHI-DAD.

REFERENCE

1. World Health Organization. (1992). International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10). Geneva: WHO.

CHAPTER 12

BIRTH PREVALENCE OF CONGENITAL ANOMALIES

The prevalence at birth of congenital anomalies decreased from 402.1 (95% CI: 394.5–409.7) to 377.5 (95% CI: 370.4–384.6) per 10,000 total births between 2005 and 2007 then increased to 430.5 (95% CI: 423.0–438.1) per 10,000 total births in 2014.

DEFINITION

Congenital anomalies, birth defects and congenital malformations are synonymous terms that describe an abnormality of structure or function present at birth.¹ However, some congenital anomalies may not be diagnosed until months or years after birth. The prevalence of congenital anomalies at birth is defined as the number of live-born or stillborn births diagnosed with at least one anomaly, expressed as a proportion of the total number of live births and stillbirths. In addition to overall congenital anomaly rates, the birth prevalence rates of three of the anomalies most commonly recognized prenatally or at birth, namely Down syndrome, neural tube defects

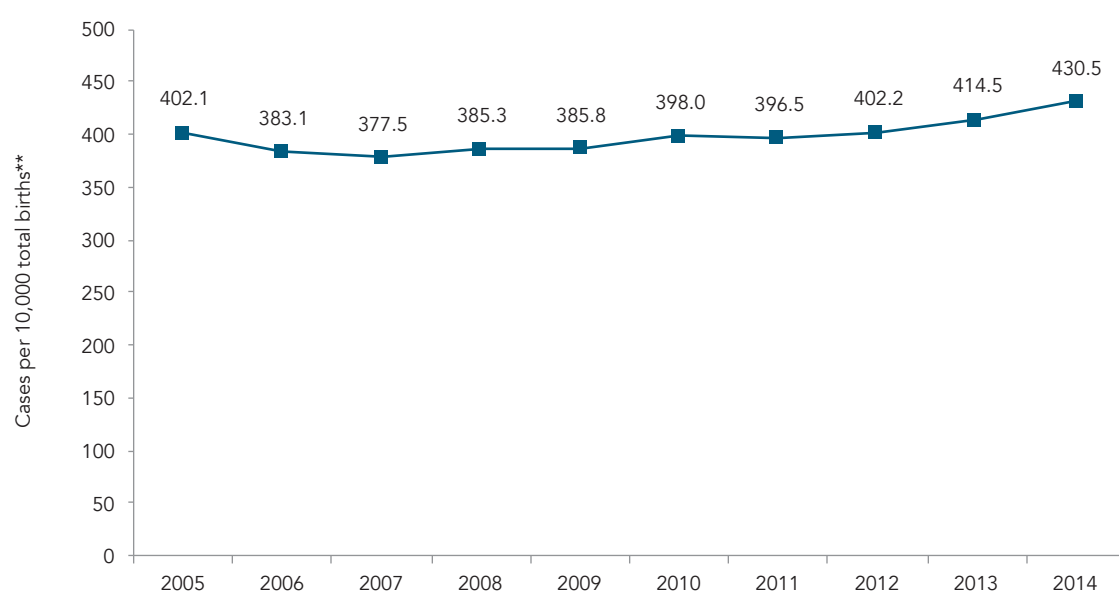
(NTDs) and orofacial clefts, are presented. Information on neural tube defects and orofacial clefts lack precise data on whether these defects are isolated or occurring in a recognized or unrecognized pattern of multiple malformations.

DATA SOURCE

Congenital anomaly prevalence rates were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Data from Quebec were excluded because they do not contribute to DAD. Provincial and territorial rates were based on province or territory of maternal residence.

FIGURE 12.1

BIRTH PREVALENCE OF CONGENITAL ANOMALIES, CANADA (EXCLUDING QUEBEC), 2005–2014



Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

RESULTS

The prevalence at birth of congenital anomalies decreased from 402.1 (95% CI: 394.5–409.7) to 377.5 (95% CI: 370.4–384.6) per 10,000 total births between 2005 and 2007 then increased to 430.5 (95% CI: 423.0–438.1) per 10,000 total births between 2007 and 2014 (Figure 12.1).

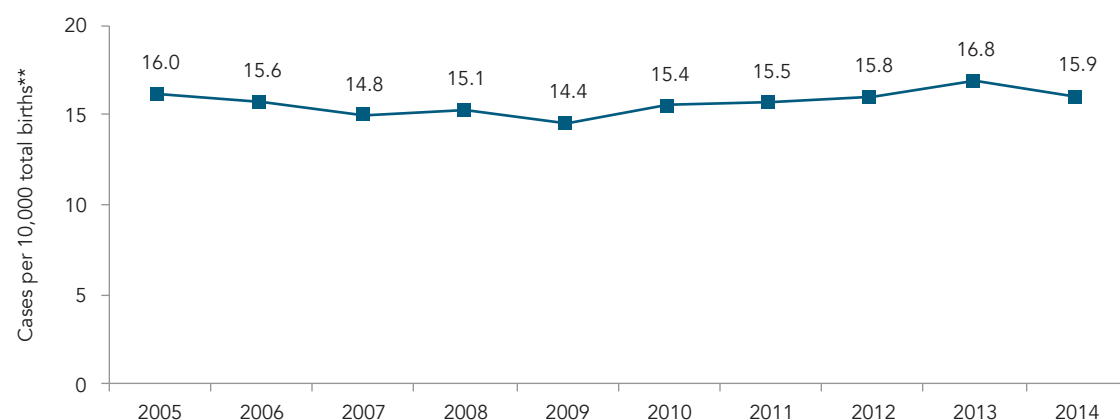
Between 2005 and 2014, the prevalence at birth of Down syndrome fluctuated between 14.4 (95% CI: 13.1–15.8) and 16.8 (95% CI: 15.3–18.3) per 10,000 total births. It was 15.9 (95% CI: 14.5–17.4) per 10,000 total births in 2014 (Figure 12.2). Provincial/territorial rates ranged from 12.1 (95% CI: 6.4–20.7) per 10,000 total births in Yukon and Northwest Territories, to 17.9 (95% CI: 9.8–30.0) in Nunavut (Figure 12.3). The prevalence at birth of neural tube defects (NTD) increased from 4.9 (95% CI: 4.1–5.8) to 5.7 (95% CI: 4.8–6.6) per 10,000 total births between 2005 and 2010, decreased to 4.4 (95% CI: 3.6–5.2) per 10,000 total births between 2010 and 2013, and increased again to 5.7 (95% CI: 4.8–6.6) per 10,000 total births in 2014. The rate of spina bifida fluctuated between 2.8 (95% CI: 2.2–3.5) and 3.2 (95% CI: 2.6–3.9) per 10,000 total births between 2005 and 2008, increased steadily to 3.8 (95% CI: 3.1–4.6) per 10,000 total births in 2011, decreased to 2.6 (95% CI: 2.0–3.2) per 10,000 total births in 2013 and increased to 3.6 (95% CI: 2.9–4.4) per 10,000 total births in 2014. The rate of anencephaly and similar anomalies fluctuated between 0.9 (95%

CI: 0.6–1.4) and 1.6 (95% CI: 1.2–2.1) per 10,000 total births between 2005 and 2014 (Figure 12.4). Provincial/territorial rates of all NTD ranged from 3.3 (95% CI: 2.1–4.9) per 10,000 total births in New Brunswick, to 7.8 (95% CI: 3.9–14.0) in Prince Edward Island. Provincial/territorial rates of spina bifida ranged from 2.3 (95% CI: 1.3–3.7) per 10,000 total births in New Brunswick, to 7.1 (95% CI: 3.4–13.1) in Prince Edward Island (Figure 12.5).

The rate of cleft lip with or without cleft palate fluctuated from 9.5 (95% CI: 8.3–10.7) to 10.4 (95% CI: 9.2–11.6) per 10,000 total births between 2005 and 2009, and then fluctuated from 9.9 (95% CI: 8.8–11.1) to 10.2 (95% CI: 9.0–11.4) per 10,000 total births between 2010 and 2014. The rate of cleft lip with or without cleft palate was 10.2 (95% CI: 9.0–11.4) per 10,000 total births in 2014. The rate of cleft palate fluctuated between 6.5 (95% CI: 5.6–7.5) and 7.5 (95% CI: 6.5–8.6) per 10,000 total births between 2005 and 2008, decreased to 5.6 (95% CI: 4.8–6.5) per 10,000 total births in 2009, and fluctuated between 5.8 (95% CI: 5.0–6.8) and 6.6 (95% CI: 5.7–7.6) per 10,000 births between 2010 and 2014. The rate of cleft palate was 5.8 (95% CI: 5.0–6.8) per 10,000 total births in 2014 (Figure 12.6). Nunavut had the highest rate of cleft lip with or without cleft palate 17.9 (95% CI 9.8–30.0) per 10,000 total births, while Manitoba had the highest rate of cleft palate 9.1 (95% CI 7.6–10.7) per 10,000 total births (Figure 12.7).

FIGURE 12.2

BIRTH PREVALENCE OF DOWN SYNDROME, CANADA (EXCLUDING QUEBEC), 2005–2014



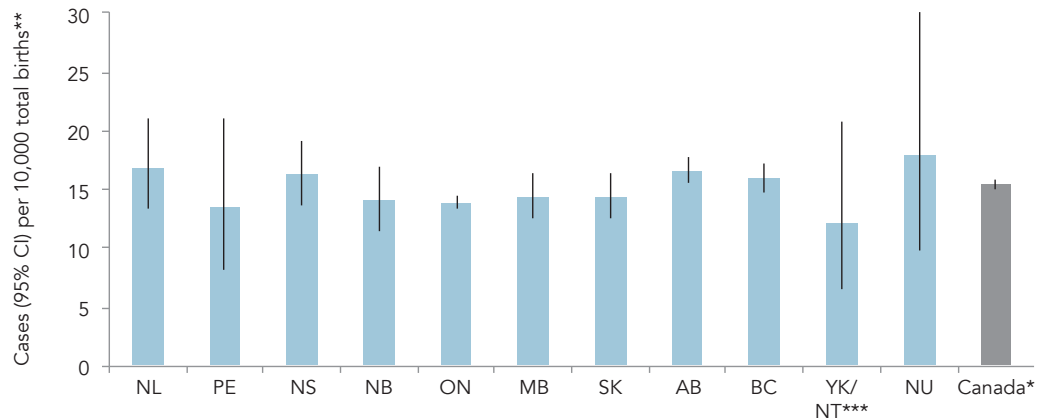
Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 12.3

BIRTH PREVALENCE OF DOWN SYNDROME, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2005–2014



Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Includes live births and stillbirths

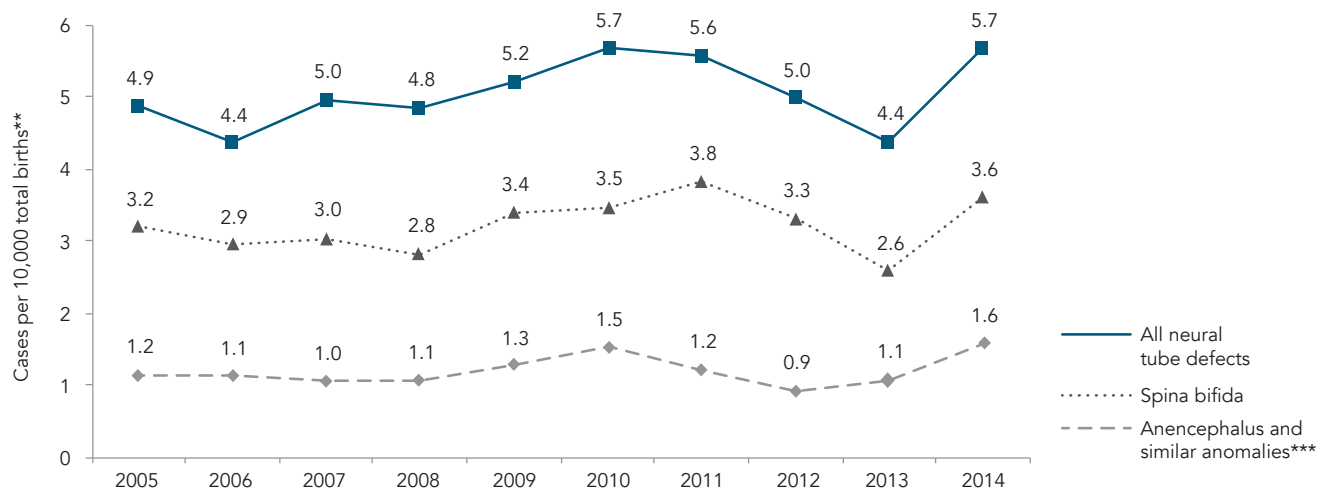
***Combined due to low cell counts

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 12.4

BIRTH PREVALENCE OF NEURAL TUBE DEFECTS, CANADA (EXCLUDING QUEBEC), 2005–2014



Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

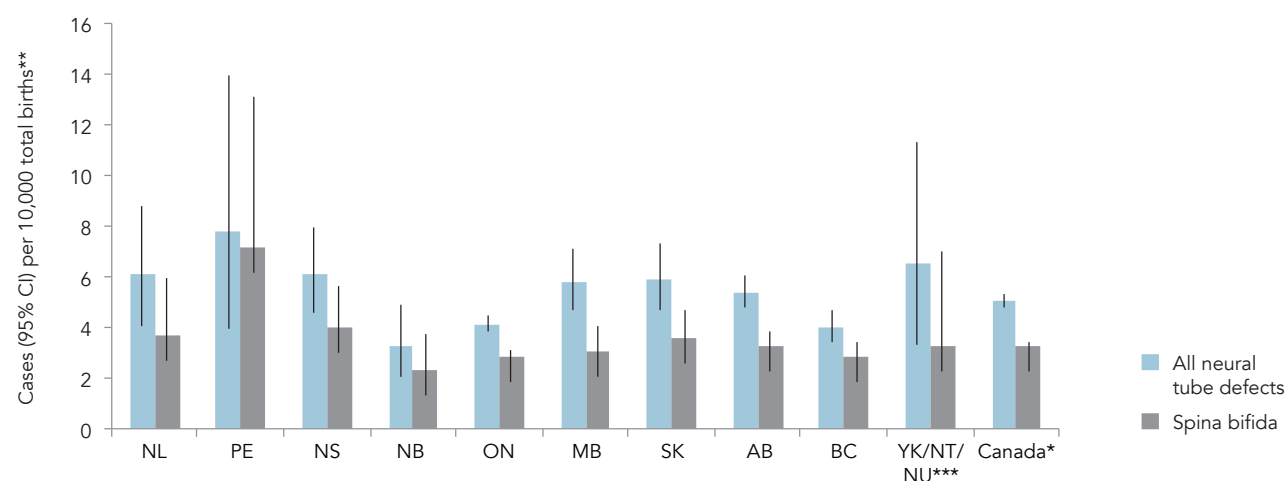
** Includes live births and stillbirths

***Anencephalus and similar anomalies include craniochisis, anencephaly and other neural tube defects.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 12.5

BIRTH PREVALENCE OF NEURAL TUBE DEFECTS, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2005–2014



Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Includes live births and stillbirths

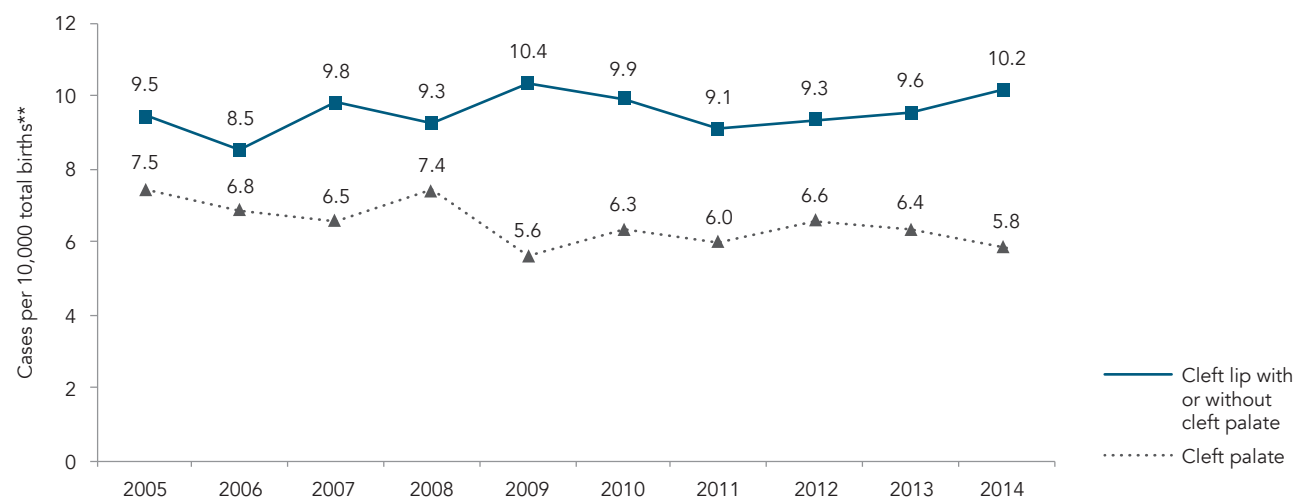
***Combined due to low cell counts

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

FIGURE 12.6

BIRTH PREVALENCE OF CLEFT PALATE AND CLEFT LIP WITH/WITHOUT CLEFT PALATE, CANADA (EXCLUDING QUEBEC), 2005–2014



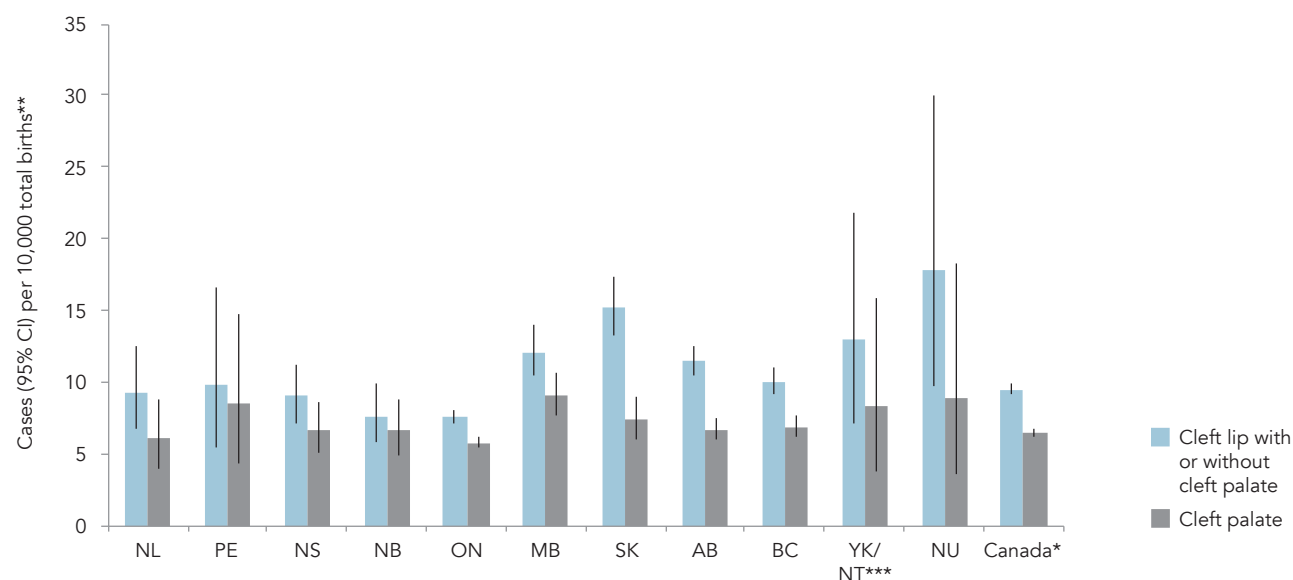
Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 12.7

BIRTH PREVALENCE OF CLEFT PALATE AND CLEFT LIP WITH OR WITHOUT CLEFT PALATE, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2005–2014



Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Includes live births and stillbirths

***Combined due to low cell counts

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

LIMITATIONS

Incomplete ascertainment of cases and inconsistent coding practices due to lack of standardized case definitions are important limitations for population-based congenital anomalies surveillance systems. Another important limitation is the lack of data on early pregnancy terminations. The DAD captures the majority of natural stillbirths and terminations of pregnancy, but terminations outside hospital and spontaneous losses are not identified, even if the fetus had a congenital anomaly. This results in an underestimation of the incidence of congenital anomalies, such as neural tube defects and Down syndrome, and also limits the interpretation of temporal and geographical patterns and the impact of prenatal diagnosis and termination of affected pregnancies. Comparisons of rates of neural tube defects from the seven-province study² with those identified by the DAD³ clearly indicate that hospitalization data are incomplete. A further limitation to the information on NTD and orofacial

clefts presented here is the lack of precise data on what proportion of these defects are isolated compared to those occurring in a recognized or unrecognized pattern of multiple malformations.

Please refer to Appendix B for general data limitations using CIHI-DAD.

REFERENCES

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2. De Wals P, Tairou F, Van Allen MI, Uh SH, Lowry RB, Sibbald B, et al. Reduction in neural-tube defects after folic acid fortification in Canada. *N Engl J Med* 2007;357(2):135–142.
3. Public Health Agency of Canada. Canadian Perinatal Health Report, 2008 Edition. Ottawa, 2008.

CHAPTER 13

MULTIPLE BIRTH RATE

The rates of multiple births fluctuated from 3.1 (95% CI: 3.1–3.2) to 3.4 (95% CI: 3.4–3.5) per 100 total births between 2005 and 2014. The rate of multiple births was 3.3 per 100 total births in 2014.

DEFINITION

The multiple birth rate is defined as the number of live births and stillbirths following a multiple gestation pregnancy, expressed as a proportion of total births (live births and stillbirths).

DATA SOURCE

Multiple birth rates were calculated using the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD). Data includes live births and stillbirths and excludes unknown plurality. Data from Quebec were excluded because they do not contribute to the DAD.

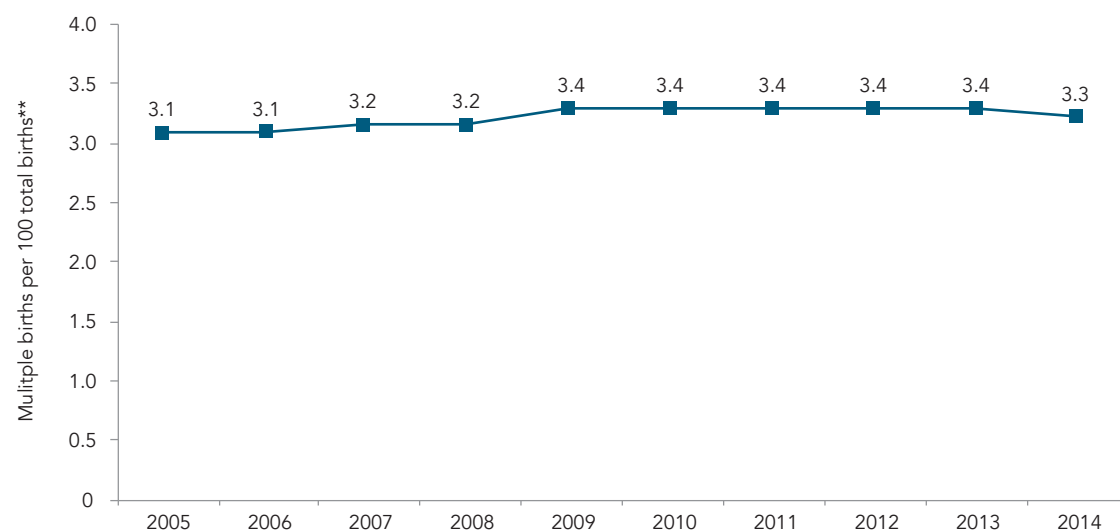
RESULTS

Between 2005 and 2014, the rates of multiple births fluctuated between 3.1 (95% CI: 3.1–3.2) per 100 total births and 3.4 (95% CI: 3.4–3.5) per 100 total births. The rate of multiple births was 3.3 (95% CI: 3.3–3.4) per 100 total births in 2014 (Figure 13.1).

Between 2005 and 2014, rates of multiple births varied across provinces and territories. Nunavut had the lowest multiple birth rate at 2.0 (95% CI: 1.6–2.5) per 100 total births, while Ontario had the highest rate at 3.6 (95% CI: 3.6–3.6) per 100 total births (Figure 13.2).

FIGURE 13.1

RATE OF MULTIPLE BIRTH, CANADA (EXCLUDING QUEBEC), 2005–2014



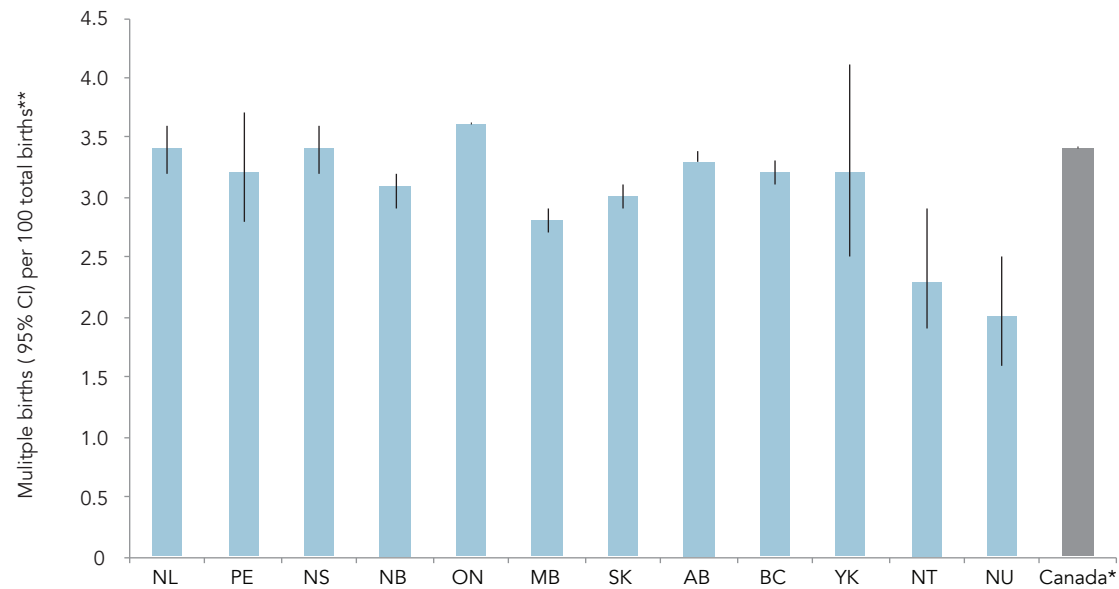
Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths, excludes unknown plurality

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

FIGURE 13.2

RATE OF MULTIPLE BIRTH BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014



Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data for unknown provinces and territories

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

LIMITATIONS

Data on multiple births in Canada were obtained from CIHI-DAD (excluding Quebec). Data may be subject to transcribing errors. There is limited information on the use of assisted reproductive technologies (ART), and therefore multiple gestations conceived through ART cannot be distinguished from those conceived spontaneously. This limits interpreting any temporal trends in multiple birth rates.

Please refer to appendix B for general data limitations using CIHI-DAD.

APPENDIX A: DATA TABLES

CHAPTER 1: RATE OF LIVE BIRTHS TO TEENAGE MOTHERS

TABLE 1.1

AGE-SPECIFIC LIVE BIRTH RATES, FEMALES AGED 10–14, 15–17 AND 18–19 YEARS, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	10–14			15–17			18–19		
	Number of females**	Number of live births	Rate of live births per 1,000 females (95% CI)	Number of females**	Number of live births	Rate of live births per 1,000 females (95% CI)	Number of females**	Number of live births	Rate of live births per 1,000 females (95% CI)
2005	800,317	112	0.1 (0.1–0.2)	497,362	3,819	7.7 (7.4–7.9)	332,242	8,459	25.5 (24.9–26.0)
2006	792,381	113	0.1 (0.1–0.2)	508,711	3,973	7.8 (7.6–8.1)	332,795	8,950	26.9 (26.3–27.4)
2007	781,092	117	0.1 (0.1–0.2)	509,553	4,272	8.4 (8.1–8.6)	338,119	9,201	27.2 (26.7–27.8)
2008	770,344	123	0.2 (0.1–0.2)	503,758	4,174	8.3 (8.0–8.5)	348,831	9,392	26.9 (26.4–27.5)
2009	759,444	110	0.1 (0.1–0.2)	499,679	4,120	8.2 (8.0–8.5)	352,624	9,109	25.8 (25.3–26.4)
2010	747,818	88	0.1 (0.1–0.1)	497,944	3,849	7.7 (7.5–8.0)	350,312	8,646	24.7 (24.2–25.2)
2011	732,955	81	0.1 (0.1–0.1)	497,137	3,448	6.9 (6.7–7.2)	349,066	8,044	23.0 (22.5–23.5)
2012	723,413	77	0.1 (0.1–0.1)	489,635	3,313	6.8 (6.5–7.0)	349,083	7,613	21.8 (21.3–22.3)
2013	716,641	61	0.1 (0.1–0.1)	478,837	2,913	6.1 (5.9–6.3)	349,730	6,954	19.9 (19.4–20.4)
2014	715,328	62	0.1 (0.1–0.1)	467,652	2,457	5.3 (5.0–5.5)	350,525	6,510	18.6 (18.1–19.0)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** CANSIM Table 051-0001 (number of women by age group).

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 1.2

PROPORTION (%) OF LIVE BIRTHS, BY MATERNAL AGE, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	10–14		15–17		18–19		Total number of live births**
	Number of live births	Proportion (%) of total live births	Number of live births	Proportion (%) of total live births	Number of live births	Proportion (%) of total live births	
2005	112	0.04	3,819	1.4	8,459	3.2	266,874
2006	113	0.04	3,973	1.5	8,950	3.3	273,101
2007	117	0.04	4,272	1.5	9,201	3.2	283,328
2008	123	0.04	4,174	1.4	9,392	3.3	288,519
2009	110	0.04	4,120	1.4	9,109	3.1	289,639
2010	88	0.03	3,849	1.3	8,646	3.0	285,215
2011	81	0.03	3,448	1.2	8,044	2.8	284,599
2012	77	0.03	3,313	1.2	7,613	2.6	287,294
2013	61	0.02	2,913	1.0	6,954	2.4	285,170
2014	62	0.02	2,457	0.9	6,510	2.3	288,369

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Excludes live births to mothers aged 50 years and over, and those with unknown maternal age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

TABLE 1.3

AGE-SPECIFIC LIVE BIRTH RATES, FEMALES AGED 10–17 AND 18–19 YEARS, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	10–17			18–19		
	Number of females**	Number of live births	Rate of live births per 1,000 females per year (95% CI)	Number of females**	Number of live births	Rate of live births per 1,000 females per year (95% CI)
Newfoundland and Labrador	108,493	373	3.4 (3.1–3.8)	29,978	868	29.0 (27.1–30.9)
Prince Edward Island	33,331	80	2.4 (1.9–3.0)	9,618	236	24.5 (21.5–27.8)
Nova Scotia	197,011	695	3.5 (3.3–3.8)	58,460	1,641	28.1 (26.7–29.4)
New Brunswick	157,293	604	3.8 (3.5–4.2)	45,513	1,510	33.2 (31.6–34.9)
Ontario	3,094,165	5,764	1.9 (1.8–1.9)	905,165	14,278	15.8 (15.5–16.0)
Manitoba	318,640	1,926	6.0 (5.8–6.3)	88,827	3,910	44.0 (42.7–45.4)
Saskatchewan	265,827	1,861	7.0 (6.7–7.3)	71,908	3,667	51.0 (49.4–52.6)
Alberta	896,854	2,845	3.2 (3.1–3.3)	248,850	6,576	26.4 (25.8–27.1)
British Columbia	963,543	1,594	1.7 (1.6–1.7)	281,307	3,876	13.8 (13.4–14.2)
Yukon	7,997	22	2.8 (1.7–4.2)	2,236	66	29.5 (22.9–37.4)
Northwest Territories	11,707	108	9.2 (7.6–11.1)	3,561	256	71.9 (63.6–80.9)
Nunavut	12,499	335	26.8 (24.0–29.8)	3,293	423	128.5 (117.2–140.4)
Canada*	6,067,360	16,349	2.7 (2.7–2.7)	1,748,716	37,767	21.6 (21.4–21.8)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** CANSIM Table 051-0001 (number of women by age group)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 1.4

PROPORTION (%) OF LIVE BIRTHS TO MOTHERS AGED 10–17 AND 18–19 YEARS,
BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

	10–17		18–19		
Province/territory	Number of live births	Proportion (%) of total live births	Number of live births	Proportion (%) of total live births	Total number of live births**
Newfoundland and Labrador	373	1.7	868	3.8	22,558
Prince Edward Island	80	1.2	236	3.4	6,953
Nova Scotia	695	1.6	1,641	3.9	42,445
New Brunswick	604	1.7	1,510	4.4	34,638
Ontario	5,764	0.9	14,278	2.1	672,111
Manitoba	1,926	2.4	3,910	4.9	79,267
Saskatchewan	1,861	2.6	3,667	5.1	72,587
Alberta	2,845	1.1	6,576	2.6	256,037
British Columbia	1,594	0.8	3,876	1.8	210,252
Yukon	22	1.1	66	3.3	2,020
Northwest Territories	108	3.0	256	7.1	3,601
Nunavut	335	8.4	423	10.6	3,985
Canada*	16,349	1.1	37,767	2.6	1,430,647

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Excludes live births to mothers aged 50 years and over, and those with unknown maternal age
Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CHAPTER 2: RATE OF LIVE BIRTHS TO OLDER MOTHERS

TABLE 2.1

AGE-SPECIFIC LIVE BIRTH RATES, FEMALES AGED 35–39, 40–44 AND 45–49 YEARS, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	35–39			40–44			45–49		
	Number of females**	Number of live births	Rate of live births per 1,000 females (95% CI)	Number of females**	Number of live births	Rate of live births per 1,000 females (95% CI)	Number of females**	Number of live births	Rate of live births per 1,000 females (95% CI)
2005	902,282	39,875	44.2 (43.8–44.6)	1,049,786	7,845	7.5 (7.3–7.6)	990,836	317	0.3 (0.3–0.4)
2006	897,064	41,801	46.6 (46.2–47.0)	1,034,856	7,928	7.7 (7.5–7.8)	1,011,010	347	0.3 (0.3–0.4)
2007	895,786	44,085	49.2 (48.8–49.7)	1,008,685	8,223	8.2 (8.0–8.3)	1,028,184	410	0.4 (0.4–0.4)
2008	896,281	45,264	50.5 (50.0–51.0)	977,738	8,509	8.7 (8.5–8.9)	1,047,128	446	0.4 (0.4–0.5)
2009	893,471	45,354	50.8 (50.3–51.2)	950,119	8,938	9.4 (9.2–9.6)	1,061,962	496	0.5 (0.4–0.5)
2010	891,274	45,841	51.4 (51.0–51.9)	931,137	9,375	10.1 (9.9–10.3)	1,062,488	473	0.4 (0.4–0.5)
2011	884,822	45,819	51.8 (51.3–52.2)	930,048	9,500	10.2 (10.0–10.4)	1,040,936	578	0.6 (0.5–0.6)
2012	890,122	47,020	52.8 (52.4–53.3)	931,018	9,915	10.6 (10.4–10.9)	1,017,393	544	0.5 (0.5–0.6)
2013	898,047	47,366	52.7 (52.3–53.2)	929,584	9,840	10.6 (10.4–10.8)	988,972	585	0.6 (0.5–0.6)
2014	911,094	48,806	53.6 (53.1–54.0)	924,924	9,927	10.7 (10.5–10.9)	964,485	613	0.6 (0.6–0.7)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** CANSIM Table 051-0001 (number of women by age group).

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 2.2

PROPORTION (%) OF LIVE BIRTHS, BY MATERNAL AGE, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	35–39		40–44		45–49		Total number of live births**
	Number of live births	Proportion (%) of total live births	Number of live births	Proportion (%) of total live births	Number of live births	Proportion (%) of total live births	
2005	39,875	14.9	7,845	2.9	317	0.1	266,874
2006	41,801	15.3	7,928	2.9	347	0.1	273,101
2007	44,085	15.6	8,223	2.9	410	0.1	283,328
2008	45,264	15.7	8,509	2.9	446	0.2	288,519
2009	45,354	15.7	8,938	3.1	496	0.2	289,639
2010	45,841	16.1	9,375	3.3	473	0.2	285,215
2011	45,819	16.1	9,500	3.3	578	0.2	284,599
2012	47,020	16.4	9,915	3.5	544	0.2	287,294
2013	47,366	16.6	9,840	3.5	585	0.2	285,170
2014	48,806	16.9	9,927	3.4	613	0.2	288,369

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Excludes live births to mothers aged 50 years and over, and those with unknown maternal age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

TABLE 2.3

AGE-SPECIFIC LIVE BIRTH RATES, FEMALES AGED 35–39 AND 40–49 YEARS, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	35–39			40–49		
	Number of females**	Number of live births	Rate of live births per 1,000 females per year (95% CI)	Number of females**	Number of live births	Rate of live births per 1,000 females per year (95% CI)
Newfoundland and Labrador	87,322	2,956	33.9 (32.7–35.1)	203,577	487	2.4 (2.2–2.6)
Prince Edward Island	22,397	909	40.6 (38.0–43.3)	52,730	160	3.0 (2.6–3.5)
Nova Scotia	149,634	5,856	39.1 (38.2–40.1)	346,682	1,120	3.2 (3.0–3.4)
New Brunswick	122,741	3,766	30.7 (29.7–31.7)	280,552	624	2.2 (2.1–2.4)
Ontario	2,267,435	122,653	54.1 (53.8–54.4)	5,009,887	27,652	5.5 (5.5–5.6)
Manitoba	200,725	9,832	49.0 (48.0–49.9)	419,416	1,920	4.6 (4.4–4.8)
Saskatchewan	161,699	7,370	45.6 (44.6–46.6)	339,621	1,348	4.0 (3.8–4.2)
Alberta	695,599	36,770	52.9 (52.3–53.4)	1,350,841	7,359	5.4 (5.3–5.6)
British Columbia	747,602	39,909	53.4 (52.9–53.9)	1,678,140	9,467	5.6 (5.5–5.8)
Yukon	6,851	392	57.2 (51.8–63.0)	14,141	75	5.3 (4.2–6.6)
Northwest Territories	8,140	417	51.2 (46.5–56.2)	15,647	87	5.6 (4.5–6.9)
Nunavut	5,214	263	50.4 (44.7–56.7)	9,751	47	4.8 (3.5–6.4)
Canada*	4,475,359	234,852	52.5 (52.3–52.7)	9,720,985	51,350	5.3 (5.2–5.3)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** CANSIM Table 051-0001 (number of women by age group)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 2.4

PROPORTION (%) OF LIVE BIRTHS TO MOTHERS AGED 35–39 AND 40–49 YEARS,
BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	35–39		40–49		Total number of live births**
	Number of live births	Proportion (%) of total live births	Number of live births	Proportion (%) of total live births	
Newfoundland and Labrador	2,956	13.1	487	2.2	22,558
Prince Edward Island	909	13.1	160	2.3	6,953
Nova Scotia	5,856	13.8	1,120	2.6	42,445
New Brunswick	3,766	10.9	624	1.8	34,638
Ontario	122,653	18.2	27,652	4.1	672,111
Manitoba	9,832	12.4	1,920	2.4	79,267
Saskatchewan	7,370	10.2	1,348	1.9	72,587
Alberta	36,770	14.4	7,359	2.9	256,037
British Columbia	39,909	19.0	9,467	4.5	210,252
Yukon	392	19.4	75	3.7	2,020
Northwest Territories	417	11.6	87	2.4	3,601
Nunavut	263	6.6	47	1.2	3,985
Canada*	234,852	16.4	51,350	3.6	1,430,647

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Excludes live births to mothers aged 50 years and over, and those with unknown maternal age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CHAPTER 3: RATE OF CESAREAN DELIVERY

TABLE 3.1

RATES OF CESAREAN DELIVERY, PRIMARY AND REPEAT CESAREAN DELIVERY BY FISCAL YEAR, CANADA (EXCLUDING QUEBEC), 2005/2006 TO 2014/2015

Fiscal year	Number of hospital deliveries	Number of cesarean deliveries	Rate of cesarean deliveries per 100 hospital deliveries (95% CI)	Number of hospital deliveries without a previous cesarean delivery	Number of primary cesarean deliveries	Rate of primary cesarean deliveries per 100 hospital deliveries without a previous cesarean delivery (95% CI)	Number of hospital deliveries with previous cesarean delivery	Number of repeat cesarean deliveries	Rate of repeat cesarean deliveries per 100 hospital deliveries with previous cesarean delivery (95% CI)
2005/2006	265,880	72,542	27.3 (27.1–27.5)	233,140	45,871	19.7 (19.5–19.8)	32,740	26,671	81.5 (81.0–81.9)
2006/2007	273,786	74,744	27.3 (27.1–27.5)	239,870	46,926	19.6 (19.4–19.7)	33,916	27,818	82.0 (81.6–82.4)
2007/2008	284,573	78,952	27.7 (27.6–27.9)	248,198	49,077	19.8 (19.6–19.9)	36,375	29,875	82.1 (81.7–82.5)
2008/2009	286,079	80,198	28.0 (27.9–28.2)	248,598	49,435	19.9 (19.7–20.0)	37,481	30,763	82.1 (81.7–82.5)
2009/2010	287,622	80,145	27.9 (27.7–28.0)	249,704	49,173	19.7 (19.5–19.8)	37,918	30,972	81.7 (81.3–82.1)
2010/2011	282,438	79,207	28.0 (27.9–28.2)	244,390	48,090	19.7 (19.5–19.8)	38,048	31,117	81.8 (81.4–82.2)
2011/2012	284,296	79,968	28.1 (28.0–28.3)	245,778	48,565	19.8 (19.6–19.9)	38,518	31,403	81.5 (81.1–81.9)
2012/2013	285,406	80,614	28.2 (28.1–28.4)	246,413	49,034	19.9 (19.7–20.1)	38,993	31,580	81.0 (80.6–81.4)
2013/2014	283,431	79,996	28.2 (28.1–28.4)	243,901	48,042	19.7 (19.5–19.9)	39,530	31,954	80.8 (80.4–81.2)
2014/2015	286,281	81,230	28.4 (28.2–28.5)	245,843	48,698	19.8 (19.7–20.0)	40,438	32,532	80.4 (80.1–80.8)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 3.2

RATE OF CESAREAN DELIVERY BY PROVINCE/TERRITORY OF OCCURRENCE, CANADA
(EXCLUDING QUEBEC), 2014/2015 FISCAL YEAR

Province/territory	Number of hospital deliveries	Number of cesarean deliveries	Rate of cesarean deliveries per 100 hospital deliveries (95% CI)
Newfoundland and Labrador	4,465	1,332	29.8 (28.5–31.2)
Prince Edward Island	1,353	399	29.5 (27.1–31.9)
Nova Scotia	8,394	2,257	26.9 (25.9–27.8)
New Brunswick	6,844	1,881	27.5 (26.4–28.5)
Ontario	136,120	38,101	28.0 (27.8–28.2)
Manitoba	16,513	3,692	22.4 (21.7–23.0)
Saskatchewan	15,287	3,500	22.9 (22.2–23.6)
Alberta	53,516	15,634	29.2 (28.8–29.6)
British Columbia	42,245	14,204	33.6 (33.2–34.1)
Yukon	398	78	19.6 (15.7–23.5)
Northwest Territories	744	111	14.9 (12.4–17.5)
Nunavut	402	41	10.2 (7.2–13.2)
Canada	286,281	81,230	28.4 (28.2–28.5)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

CHAPTER 4: SEVERE MATERNAL MORBIDITY RATE

TABLE 4.1

RATE OF SEVERE MATERNAL MORBIDITY, BY FISCAL YEAR, CANADA (EXCLUDING QUEBEC),
2005/2006 TO 2014/2015

Fiscal Year	Number of hospital deliveries	Number of cases of severe maternal morbidity	Rate of severe maternal morbidity per 1,000 hospital deliveries (95% CI)	Number of cases of severe maternal morbidity excluding blood transfusions without comorbidity	Rate of severe maternal morbidity excluding blood transfusions without comorbidity per 1,000 hospital deliveries (95% CI)
2005/2006	265,880	3,712	14.0 (13.5–14.4)	3,288	12.4 (11.9–12.8)
2006/2007	273,786	3,595	13.1 (12.7–13.6)	3,117	11.4 (11.0–11.8)
2007/2008	284,573	3,958	13.9 (13.5–14.3)	3,398	11.9 (11.5–12.3)
2008/2009	286,079	4,247	14.8 (14.4–15.3)	3,639	12.7 (12.3–13.1)
2009/2010	287,622	4,181	14.5 (14.1–15.0)	3,517	12.2 (11.8–12.6)
2010/2011	282,438	4,336	15.4 (14.9–15.8)	3,677	13.0 (12.6–13.4)
2011/2012	284,296	4,484	15.8 (15.3–16.2)	3,830	13.5 (13.0–13.9)
2012/2013	285,406	4,680	16.4 (15.9–16.9)	4,028	14.1 (13.7–14.5)
2013/2014	283,431	4,577	16.1 (15.7–16.6)	3,921	13.8 (13.4–14.3)
2014/2015	286,281	4,058	14.2 (13.7–14.6)	3,533	12.3 (11.9–12.7)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 4.2

RATES OF SEVERE MATERNAL MORBIDITY, BY PROVINCE/TERRITORY OF OCCURRENCE,
CANADA (EXCLUDING QUEBEC), 2010/2011 TO 2014/2015

Province/territory	Number of deliveries	Number of cases of severe maternal morbidity	Rate of severe maternal morbidity per 1,000 hospital deliveries (95% CI)	Number of cases of severe maternal morbidity excluding blood transfusions without comorbidity	Rate of severe maternal morbidity excluding blood transfusions without comorbidity per 1,000 hospital deliveries (95% CI)
Newfoundland and Labrador	22,479	510	22.7 (20.7–24.6)	369	16.4 (14.8–18.1)
Prince Edward Island	6,755	93	13.8 (11.0–16.5)	82	12.1 (9.5–14.8)
Nova Scotia	42,758	566	13.2 (12.2–14.3)	479	11.2 (10.2–12.2)
New Brunswick	35,049	579	16.5 (15.2–17.9)	451	12.9 (11.7–14.0)
Ontario	687,068	10,303	15.0 (14.7–15.3)	8,690	12.6 (12.4–12.9)
Manitoba	81,182	1,387	17.1 (16.2–18.0)	1,190	14.7 (13.8–15.5)
Saskatchewan	73,566	1,400	19.0 (18.0–20.0)	1,157	15.7 (14.8–16.6)
Alberta	254,557	4,317	17.0 (16.5–17.5)	3,804	14.9 (14.5–15.4)
British Columbia	210,709	2,810	13.3 (12.8–13.8)	2,619	12.4 (12.0–12.9)
Yukon	1,962	56	28.5 (21.2–35.9)	52	26.5 (19.4–33.6)
Northwest Territories	3,794	43	11.3 (8.0–14.7)	36	9.5 (6.4–12.6)
Nunavut	1,973	71	36.0 (27.8–44.2)	60	30.4 (22.8–38.0)
Canada	1,421,852	22,135	15.6 (15.4–15.8)	18,989	13.4 (13.2–13.5)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 4.3

RATES OF SEVERE MATERNAL MORBIDITY, BY CAUSE, CANADA (EXCLUDING QUEBEC),
2010/2011 TO 2014/2015

Maternal Morbidity	Number of deliveries	Number of cases	Rate of severe maternal morbidity per 100,000 hospital deliveries (95% CI)
Blood transfusion	1,421,852	11,184	786.6 (772.1–801.1)
Blood transfusion with comorbidity	1,421,852	8,038	565.3 (553.0–577.6)
Postpartum hemorrhage and blood transfusion	1,421,852	6,881	483.9 (472.5–495.4)
Cardiac arrest/failure, myocardial infarction or pulmonary edema including ICD-10 O75.4 (other complications of obstetric surgery and procedures)	1,421,852	1,992	140.1 (134.0–146.2)
Embolization or ligation of pelvic vessels or suturing of uterus and postpartum hemorrhage	1,421,852	2,101	147.8 (141.5–154.1)
Hysterectomy	1,421,852	1,778	125.0 (119.2–130.9)
Uterine rupture during labour	1,421,852	1,179	82.9 (78.2–87.7)
Puerperal sepsis	1,421,852	1,024	72.0 (67.6–76.4)
Repair of bladder, urethra, or intestine	1,421,852	978	68.8 (64.5–73.1)
Eclampsia	1,421,852	721	50.7 (47.0–54.4)
Postpartum hemorrhage and hysterectomy	1,421,852	732	51.5 (47.8–55.2)
Placenta previa with hemorrhage and blood transfusion	1,421,852	658	46.3 (42.7–49.8)
Cardiac arrest/failure, myocardial infarction or pulmonary oedema excluding ICD-10 O75.4 (other complications of obstetric surgery and procedures)	1,421,852	561	39.5 (36.2–42.7)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

CHAPTER 5: PREGNANCY-RELATED MORTALITY RATE

TABLE 5.1

PREGNANCY-RELATED MORTALITY RATE, BY FISCAL YEAR, CANADA (EXCLUDING QUEBEC), 1999/2000 TO 2014/2015

Fiscal Year	Number of hospital pregnancies	Number of pregnancy-related deaths	Rate of pregnancy-related deaths per 100,000 hospital pregnancies (95% CI)
1999/2000–2000/2001	490,147	42	8.6 (6.0–11.2)
2001/2002–2002/2003	487,537	58	11.9 (8.8–15.0)
2003/2004–2004/2005	511,720	42	8.2 (5.7–10.7)
2005/2006–2006/2007	539,988	48	8.9 (6.4–11.4)
2007/2008–2008/2009	571,348	50	8.8 (6.3–11.2)
2009/2010–2010/2011	570,633	35	6.1 (4.1–8.2)
2011/2012–2012/2013	570,141	29	5.1 (3.2–6.9)
2013/2014–2014/2015	570,075	42	7.4 (5.1–9.6)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD. Manitoba data, which were incomplete for earlier years, were included from 2004/2005.

CI = confidence interval

TABLE 5.2

MOST COMMON DIAGNOSTIC CATEGORIES ASSOCIATED WITH PREGNANCY-RELATED DEATHS, CANADA (EXCLUDING QUEBEC), 2002/2003 TO 2014/2015

Diagnosis	Number of pregnancy-related deaths	Rate of pregnancy-related deaths per 100,000 hospital pregnancies (95% CI)
Diseases of the circulatory system	89	2.5 (2.0–3.1)
Other indirect causes	78	2.2 (1.7–2.7)
Postpartum hemorrhage	49	1.4 (1.0–1.8)
Hypertension complicating pregnancy, childbirth and the puerperium	42	1.2 (0.8–1.6)
Obstetric embolism	39	1.1 (0.8–1.5)
Major puerperal infection	27	0.8 (0.5–1.1)
Ectopic and molar pregnancy/abortive outcome	26	0.7 (0.5–1.1)
Antepartum hemorrhage, abruptio placentae, and placenta previa	21	0.6 (0.3–0.9)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD. Manitoba data, which were incomplete for earlier years, were included from 2004/2005.

Note: total deaths = 371; total deliveries = 3,576,649

CI = confidence interval

TABLE 5.3

PREGNANCY-RELATED MORTALITY, BY PROVINCE/TERRITORY OF OCCURRENCE,
CANADA (EXCLUDING QUEBEC), 1999/2000 TO 2014/2015

Province/territory	Number of pregnancies	Number of pregnancy-related deaths	Rate of pregnancy-related deaths per 100,000 hospital pregnancies (95% CI)
Newfoundland and Labrador	73,718	9	12.2 (4.2–20.2)
Prince Edward Island	**	**	18.3 (0.4–36.3)
Nova Scotia	139,072	8	5.8 (1.8–9.7)
New Brunswick	**	**	4.4 (0.5–8.2)
Ontario	2,180,855	196	9.0 (7.7–10.2)
Manitoba	171,507	10	5.8 (2.2–9.4)
Saskatchewan	211,626	15	7.1 (3.5–10.7)
Alberta	717,273	49	6.8 (4.9–8.7)
British Columbia	657,872	51	7.8 (5.6–9.9)
Yukon	5,708	0	0.0 (0.0–0.0)
Northwest Territories	**	**	8.2 (0.0–24.2)
Nunavut	**	**	18.0 (0.0–53.4)
Canada	4,311,589	349	8.1 (7.2–8.9)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Number suppressed for privacy reasons (cell size <5).

Data for Quebec were excluded because they do not contribute to CIHI-DAD. Manitoba data, which were incomplete for earlier years, were included from 2004/2005. There were no recorded pregnancy-related deaths in the Yukon in this time period.

CI = confidence interval

CHAPTER 6: PRETERM BIRTH RATE

TABLE 6.1

RATE OF PRETERM BIRTH, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of live births**	Number of preterm births <32 weeks	Rate of preterm births <32 weeks per 100 live births (95% CI)	Number of preterm births 32–36 weeks	Rate of preterm births 32–36 weeks per 100 live births (95% CI)	Number of preterm births <37 weeks	Rate of preterm births <37 weeks per 100 live births (95% CI)
2005	265,686	3,411	1.3 (1.2–1.3)	18,198	6.8 (6.8–6.9)	21,609	8.1 (8.0–8.2)
2006	273,335	3,410	1.2 (1.2–1.3)	19,109	7.0 (6.9–7.1)	22,519	8.2 (8.1–8.3)
2007	283,731	3,521	1.2 (1.2–1.3)	19,480	6.9 (6.8–7.0)	23,001	8.1 (8.0–8.2)
2008	288,353	3,631	1.3 (1.2–1.3)	20,162	7.0 (6.9–7.1)	23,793	8.3 (8.2–8.4)
2009	289,982	3,651	1.3 (1.2–1.3)	20,087	6.9 (6.8–7.0)	23,738	8.2 (8.1–8.3)
2010	285,509	3,656	1.3 (1.2–1.3)	19,524	6.8 (6.7–6.9)	23,180	8.1 (8.0–8.2)
2011	284,890	3,485	1.2 (1.2–1.3)	19,362	6.8 (6.7–6.9)	22,847	8.0 (7.9–8.1)
2012	287,402	3,572	1.2 (1.2–1.3)	19,951	6.9 (6.8–7.0)	23,523	8.2 (8.1–8.3)
2013	285,236	3,580	1.3 (1.2–1.3)	19,772	6.9 (6.8–7.0)	23,352	8.2 (8.1–8.3)
2014	288,286	3,472	1.2 (1.2–1.2)	19,750	6.9 (6.8–6.9)	23,222	8.1 (8.0–8.2)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Excludes live births with unknown gestational age

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 6.2

RATE OF PRETERM BIRTH, BY PLURALITY, CANADA (EXCLUDING QUEBEC), 2014

Plurality	Number of live births**	Number of preterm birth <32 weeks	Rate of preterm birth <32 weeks per 100 live births (95% CI)	Number of preterm birth 32–36 weeks	Rate of preterm birth 32–36 weeks per 100 live births (95% CI)	Number of preterm birth <37 weeks	Rate of preterm birth <37 weeks per 100 live births (95% CI)
Singletons	278,607	2,518	0.9 (0.9–0.9)	15,122	5.4 (5.3–5.5)	17,640	6.3 (6.2–6.4)
Twins	9,422	855	9.1 (8.5–9.7)	4,486	47.6 (46.6–48.6)	5,341	56.7 (55.7–57.7)
Triplets+	257	99	38.5 (32.5–44.8)	142	55.3 (48.9–61.4)	241	93.8 (90.1–96.4)
All live births	288,286	3,472	1.2 (1.2–1.2)	19,750	6.9 (6.8–6.9)	23,222	8.1 (8.0–8.2)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Excludes live births with unknown gestational age

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 6.3

RATE OF PRETERM BIRTH, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	Number of live births**	Number of preterm births <32 weeks	Rate of preterm births <32 weeks per 100 live births (95% CI)	Number of preterm births 32–36 weeks	Rate of preterm births 32–36 weeks per 100 live births (95% CI)	Number of preterm births <37 weeks	Rate of preterm births <37 weeks per 100 live births (95% CI)
Newfoundland and Labrador	22,645	314	1.4 (1.2–1.5)	1,598	7.1 (6.7–7.4)	1,912	8.4 (8.1–8.8)
Prince Edward Island	6,968	80	1.1 (0.9–1.4)	395	5.7 (5.1–6.2)	475	6.8 (6.2–7.4)
Nova Scotia	42,346	511	1.2 (1.1–1.3)	2,612	6.2 (5.9–6.4)	3,123	7.4 (7.1–7.6)
New Brunswick	34,567	336	1.0 (0.9–1.1)	2,283	6.6 (6.3–6.9)	2,619	7.6 (7.3–7.9)
Ontario	687,076	8,708	1.3 (1.2–1.3)	47,304	6.9 (6.8–6.9)	56,012	8.2 (8.1–8.2)
Manitoba	78,627	915	1.2 (1.1–1.2)	5,257	6.7 (6.5–6.9)	6,172	7.8 (7.7–8.0)
Saskatchewan	72,681	875	1.2 (1.1–1.3)	4,717	6.5 (6.3–6.7)	5,592	7.7 (7.5–7.9)
Alberta	256,712	3,473	1.4 (1.3–1.4)	18,775	7.3 (7.2–7.4)	22,248	8.7 (8.6–8.8)
British Columbia	212,135	2,301	1.1 (1.0–1.1)	14,135	6.7 (6.6–6.8)	16,436	7.7 (7.6–7.9)
Yukon	1,971	10	0.5 (0.2–0.9)	131	6.6 (5.6–7.8)	141	7.2 (6.1–8.4)
Northwest Territories	3,382	37	1.1 (0.8–1.5)	184	5.4 (4.7–6.3)	221	6.5 (5.7–7.4)
Nunavut	3,973	81	2.0 (1.6–2.5)	390	9.8 (8.9–10.8)	471	11.9 (10.9–12.9)
Canada*	1,431,323	17,765	1.2 (1.2–1.3)	98,359	6.9 (6.8–6.9)	116,124	8.1 (8.1–8.2)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data for unknown provinces and territories

** Excludes live births with unknown gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

CHAPTER 7: POST-TERM BIRTH RATE

TABLE 7.1

RATE OF POST-TERM BIRTH, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of live births**	Number of post-term births ≥ 42 weeks	Rate of post-term births 42 weeks or more per 100 live births (95% CI)
2005	265,686	1,233	0.5 (0.4–0.5)
2006	273,335	1,241	0.5 (0.4–0.5)
2007	283,731	1,334	0.5 (0.4–0.5)
2008	288,353	1,213	0.4 (0.4–0.4)
2009	289,982	1,240	0.4 (0.4–0.5)
2010	285,509	1,192	0.4 (0.4–0.4)
2011	284,890	1,058	0.4 (0.3–0.4)
2012	287,402	973	0.3 (0.3–0.4)
2013	285,236	1,074	0.4 (0.4–0.4)
2014	288,286	1,001	0.3 (0.3–0.4)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Excludes live births with unknown gestational age

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 7.2

RATE OF POST-TERM BIRTH, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	Number of live births**	Number of post-term births ≥ 42 weeks	Rate of post-term births 42 weeks or more per 100 live births (95% CI)
Newfoundland and Labrador	22,645	64	0.3 (0.2–0.4)
Prince Edward Island	6,968	16	0.2 (0.1–0.4)
Nova Scotia	42,346	137	0.3 (0.3–0.4)
New Brunswick	34,567	151	0.4 (0.4–0.5)
Ontario	687,076	1,764	0.3 (0.2–0.3)
Manitoba	78,627	1,073	1.4 (1.3–1.4)
Saskatchewan	72,681	320	0.4 (0.4–0.5)
Alberta	256,712	598	0.2 (0.2–0.3)
British Columbia	212,135	1,059	0.5 (0.5–0.5)
Yukon	1,971	29	1.5 (1.0–2.1)
Northwest Territories	3,382	27	0.8 (0.5–1.2)
Nunavut	3,973	5	0.1 (0.0–0.3)
Canada*	1,431,323	5,298	0.4 (0.4–0.4)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data for unknown provinces and territories

** Excludes live births with unknown gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

CHAPTER 8: SMALL-FOR-GESTATIONAL-AGE BIRTH RATE

TABLE 8.1

RATE OF SMALL-FOR-GESTATIONAL-AGE (SGA), BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of singleton live births**	Number of SGA singleton live births	Rate of SGA live births per 100 singleton live births (95% CI)
2005	257,456	21,675	8.4 (8.3–8.5)
2006	264,829	22,364	8.4 (8.3–8.6)
2007	274,677	23,019	8.4 (8.3–8.5)
2008	279,214	22,917	8.2 (8.1–8.3)
2009	279,944	23,888	8.5 (8.4–8.6)
2010	275,559	23,942	8.7 (8.6–8.8)
2011	274,964	24,132	8.8 (8.7–8.9)
2012	277,327	24,429	8.8 (8.7–8.9)
2013	275,167	24,754	9.0 (8.9–9.1)
2014	278,395	25,288	9.1 (9.0–9.2)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Excludes live births with unknown gestational age or birth weight, live births with gestational age <22 weeks or >43 weeks, and multiple births.

SGA cut-off is based on the 10th percentile of the sex-specific birth weight for gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 8.2

RATE OF SMALL-FOR-GESTATIONAL-AGE (SGA), BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	Number of singleton live births**	Number of SGA singleton live births	Rate of SGA live births per 100 singleton live births (95% CI)
Newfoundland and Labrador	21,860	1,587	7.3 (6.9–7.6)
Prince Edward Island	6,749	440	6.5 (5.9–7.1)
Nova Scotia	40,895	3,446	8.4 (8.2–8.7)
New Brunswick	33,504	2,790	8.3 (8.0–8.6)
Ontario	661,789	61,355	9.3 (9.2–9.3)
Manitoba	76,367	6,017	7.9 (7.7–8.1)
Saskatchewan	70,457	5,407	7.7 (7.5–7.9)
Alberta	247,858	23,779	9.6 (9.5–9.7)
British Columbia	204,904	16,320	8.0 (7.8–8.1)
Yukon	1,915	101	5.3 (4.3–6.4)
Northwest Territories	3,301	190	5.8 (5.0–6.6)
Nunavut	3,892	242	6.2 (5.5–7.0)
Canada*	1,381,412	122,545	8.9 (8.8–8.9)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Excludes live births with unknown gestational age or birth weight, live births with gestational age <22 weeks or >43 weeks, and multiple births.

SGA cut-off is based on the 10th percentile of the sex-specific birth weight for gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

CHAPTER 9: LARGE-FOR-GESTATIONAL-AGE BIRTH RATE

TABLE 9.1

RATE OF LARGE-FOR-GESTATIONAL-AGE (LGA), BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of singleton live births**	Number of LGA singleton live births	Rate of LGA live births per 100 singleton live births (95% CI)
2005	257,456	29,882	11.6 (11.5–11.7)
2006	264,829	30,131	11.4 (11.3–11.5)
2007	274,677	30,956	11.3 (11.2–11.4)
2008	279,214	32,565	11.7 (11.5–11.8)
2009	279,944	30,688	11.0 (10.8–11.1)
2010	275,559	29,782	10.8 (10.7–10.9)
2011	274,964	29,073	10.6 (10.5–10.7)
2012	277,327	29,699	10.7 (10.6–10.8)
2013	275,167	28,906	10.5 (10.4–10.6)
2014	278,395	28,373	10.2 (10.1–10.3)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Excludes live births with unknown gestational age or birth weight, live births with gestational age <22 weeks or >43 weeks, and multiple births. LGA cut-off is based on the 90th percentile of the sex-specific birth weight for gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 9.2

RATE OF LARGE-FOR-GESTATIONAL-AGE (LGA), BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	Number of singleton live births**	Number of LGA singleton live births	Rate of LGA live births per 100 singleton live births (95% CI)
Newfoundland and Labrador	21,860	3,081	14.1 (13.6–14.6)
Prince Edward Island	6,749	917	13.6 (12.8–14.4)
Nova Scotia	40,895	4,894	12.0 (11.7–12.3)
New Brunswick	33,504	3,937	11.8 (11.4–12.1)
Ontario	661,789	67,813	10.2 (10.2–10.3)
Manitoba	76,367	10,013	13.1 (12.9–13.4)
Saskatchewan	70,457	8,972	12.7 (12.5–13.0)
Alberta	247,858	22,462	9.1 (8.9–9.2)
British Columbia	204,904	21,742	10.6 (10.5–10.7)
Yukon	1,915	255	13.3 (11.8–14.9)
Northwest Territories	3,301	571	17.3 (16.0–18.6)
Nunavut	3,892	516	13.3 (12.2–14.4)
Canada*	1,381,412	145,833	10.6 (10.5–10.6)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Excludes live births with unknown gestational age or birth weight, live births with gestational age <22 weeks or >43 weeks, and multiple births. LGA cut-off is based on the 90th percentile of the sex-specific birth weight for gestational age.

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

CHAPTER 10: FETAL MORTALITY RATE

TABLE 10.1

FETAL MORTALITY RATE, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	≥500 g or ≥20 weeks			≥500 g†			≥1,000 g***		
	Number of total births**	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of total births**	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of total births**	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)
2005	269,585	2,068	7.7 (7.3–8.0)	268,377	1,197	4.5 (4.2–4.7)	267,188	886	3.3 (3.1–3.5)
2006	275,783	2,055	7.5 (7.1–7.8)	274,656	1,226	4.5 (4.2–4.7)	273,499	879	3.2 (3.0–3.4)
2007	286,149	2,227	7.8 (7.5–8.1)	284,930	1,338	4.7 (4.4–5.0)	283,668	965	3.4 (3.2–3.6)
2008	290,774	2,266	7.8 (7.5–8.1)	289,506	1,311	4.5 (4.3–4.8)	288,266	946	3.3 (3.1–3.5)
2009	292,359	2,244	7.7 (7.4–8.0)	291,080	1,266	4.3 (4.1–4.6)	289,800	900	3.1 (2.9–3.3)
2010	287,882	2,280	7.9 (7.6–8.3)	286,549	1,285	4.5 (4.2–4.7)	285,306	937	3.3 (3.1–3.5)
2011	287,298	2,301	8.0 (7.7–8.3)	285,961	1,299	4.5 (4.3–4.8)	284,698	937	3.3 (3.1–3.5)
2012	289,846	2,207	7.6 (7.3–7.9)	288,527	1,222	4.2 (4.0–4.5)	287,300	891	3.1 (2.9–3.3)
2013	287,753	2,239	7.8 (7.5–8.1)	286,327	1,185	4.1 (3.9–4.4)	285,099	831	2.9 (2.7–3.1)
2014	291,113	2,367	8.1 (7.8–8.5)	289,694	1,273	4.4 (4.2–4.6)	288,428	900	3.1 (2.9–3.3)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

† Includes fetal deaths with a gestational age ≥22 weeks if birth weight is unknown

** Includes live births and stillbirths

***Includes fetal deaths with a gestational age ≥28 weeks if birth weight is unknown

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 10.2

FETAL MORTALITY, BY PLURALITY, CANADA (EXCLUDING QUEBEC), 2014

Plurality	≥500 g or ≥20 weeks			≥500 g†		
	Number of total births**	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of total births**	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)
All	291,113	2,367	8.1 (7.8–8.5)	289,694	1,273	4.4 (4.2–4.6)
Singletons	280,398	1,335	4.8 (4.5–5.0)	279,821	998	3.6 (3.3–3.8)
Multiples	9,816	133	13.5 (11.4–16.0)	9,664	66	6.8 (5.3–8.7)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

† Includes fetal deaths with a gestational age ≥22 weeks if birth weight is unknown

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 10.3

FETAL MORTALITY RATE, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	≥500 g or ≥20 weeks			≥500 g†			≥1,000 g***		
	Number of total births**	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of total births**	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of total births**	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)
Newfoundland and Labrador	22,782	128	5.6 (4.7–6.7)	22,692	81	3.6 (2.8–4.4)	22,615	72	3.2 (2.5–4.0)
Prince Edward Island	6,998	30	4.3 (2.9–6.1)	6,987	24	3.4 (2.2–5.1)	6,963	19	2.7 (1.6–4.3)
Nova Scotia	43,172	345	8.0 (7.2–8.9)	42,960	191	4.4 (3.8–5.1)	42,784	131	3.1 (2.6–3.6)
New Brunswick	34,796	221	6.4 (5.5–7.2)	34,707	153	4.4 (3.7–5.2)	34,597	112	3.2 (2.7–3.9)
Ontario	690,898	3,651	5.3 (5.1–5.5)	688,625	2,218	3.2 (3.1–3.4)	685,738	1,594	2.3 (2.2–2.4)
Manitoba	79,539	541	6.8 (6.2–7.4)	79,301	381	4.8 (4.3–5.3)	79,008	311	3.9 (3.5–4.4)
Saskatchewan	73,204	488	6.7 (6.1–7.3)	72,947	317	4.3 (3.9–4.9)	72,669	266	3.7 (3.2–4.1)
Alberta	257,819	1,067	4.1 (3.9–4.4)	257,063	675	2.6 (2.4–2.8)	255,962	449	1.8 (1.6–1.9)
British Columbia	213,141	965	4.5 (4.2–4.8)	212,547	538	2.5 (2.3–2.8)	211,868	384	1.8 (1.6–2.0)
Yukon	1,981	10	5.0 (2.4–9.3)	1,977	6	3.0 (1.1–6.6)	1,973	5	2.5 (0.8–5.9)
Northwest Territories	3,406	22	6.5 (4.1–9.8)	3,392	11	3.2 (1.6–5.8)	3,377	7	2.1 (0.8–4.3)
Nunavut	3,998	24	6.0 (3.8–8.9)	3,987	21	5.3 (3.3–8.0)	3,967	19	4.8 (2.9–7.5)
Canada*	1,443,892	11,394	7.9 (7.7–8.0)	1,437,058	6,264	4.4 (4.3–4.5)	1,430,831	4,496	3.1 (3.1–3.2)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

† Includes fetal deaths with a gestational age ≥22 weeks if birth weight is unknown

* Includes data from unknown provinces and territories

** Includes live births and stillbirths

***Includes fetal deaths with a gestational age ≥28 weeks if birth weight is unknown

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 10.4MORTALITY RATE IN FETUSES ≥ 500 G† BY TYPE, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of total births**	Stillbirth		Pregnancy termination		All	
		Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)
2005	268,377	1,075	4.0 (3.8–4.3)	122	0.5 (0.4–0.5)	1,197	4.5 (4.2–4.7)
2006	274,656	1,093	4.0 (3.7–4.2)	133	0.5 (0.4–0.6)	1,226	4.5 (4.2–4.7)
2007	284,930	1,195	4.2 (4.0–4.4)	143	0.5 (0.4–0.6)	1,338	4.7 (4.4–5.0)
2008	289,506	1,137	3.9 (3.7–4.2)	174	0.6 (0.5–0.7)	1,311	4.5 (4.3–4.8)
2009	291,080	1,107	3.8 (3.6–4.0)	159	0.5 (0.5–0.6)	1,266	4.3 (4.1–4.6)
2010	286,549	1,113	3.9 (3.7–4.1)	172	0.6 (0.5–0.7)	1,285	4.5 (4.2–4.7)
2011	285,961	1,138	4.0 (3.8–4.2)	161	0.6 (0.5–0.7)	1,299	4.5 (4.3–4.8)
2012	288,527	1,059	3.7 (3.5–3.9)	163	0.6 (0.5–0.7)	1,222	4.2 (4.0–4.5)
2013	286,327	1,025	3.6 (3.4–3.8)	160	0.6 (0.5–0.7)	1,185	4.1 (3.9–4.4)
2014	289,694	1,091	3.8 (3.5–4.0)	182	0.6 (0.5–0.7)	1,273	4.4 (4.2–4.6)

Source: Canadian Institute for Health Information-Discharge Abstract Database, newborn linked records

† Includes fetal deaths with a gestational age ≥ 22 weeks if birth weight is unknown

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 10.5MORTALITY RATE IN FETUSES ≥ 500 G† (EXCLUDING TERMINATION OF PREGNANCIES) BY CAUSE, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of total births**	Maternal complication		Placenta/cord/membrane		Congenital anomalies		Intrauterine hypoxia/asphyxia		Other or unspecified causes	
		Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)	Number of fetal deaths	Rate of fetal deaths per 1,000 total births (95% CI)
2005	268,377	34	0.1 (0.1–0.2)	312	1.2 (1.0–1.3)	64	0.2 (0.2–0.3)	62	0.2 (0.2–0.3)	603	2.2 (2.1–2.4)
2006	274,656	28	0.1 (0.1–0.1)	298	1.1 (1.0–1.2)	70	0.3 (0.2–0.3)	36	0.1 (0.1–0.2)	661	2.4 (2.2–2.6)
2007	284,930	28	0.1 (0.1–0.1)	305	1.1 (1.0–1.2)	92	0.3 (0.3–0.4)	52	0.2 (0.1–0.2)	718	2.5 (2.3–2.7)
2008	289,506	31	0.1 (0.1–0.2)	288	1.0 (0.9–1.1)	74	0.3 (0.2–0.3)	41	0.1 (0.1–0.2)	703	2.4 (2.3–2.6)
2009	291,080	34	0.1 (0.1–0.2)	253	0.9 (0.8–1.0)	79	0.3 (0.2–0.3)	33	0.1 (0.1–0.2)	708	2.4 (2.3–2.6)
2010	286,549	35	0.1 (0.1–0.2)	272	0.9 (0.8–1.1)	68	0.2 (0.2–0.3)	26	0.1 (0.1–0.1)	712	2.5 (2.3–2.7)
2011	285,961	21	0.1 (0.0–0.1)	262	0.9 (0.8–1.0)	74	0.3 (0.2–0.3)	35	0.1 (0.1–0.2)	746	2.6 (2.4–2.8)
2012	288,527	21	0.1 (0.0–0.1)	241	0.8 (0.7–0.9)	68	0.2 (0.2–0.3)	22	0.1 (0.0–0.1)	707	2.5 (2.3–2.6)
2013	286,327	31	0.1 (0.1–0.2)	211	0.7 (0.6–0.8)	86	0.3 (0.2–0.4)	19	0.1 (0.0–0.1)	678	2.4 (2.2–2.6)
2014	289,694	36	0.1 (0.1–0.2)	213	0.7 (0.6–0.8)	81	0.3 (0.2–0.3)	42	0.1 (0.1–0.2)	719	2.5 (2.3–2.7)

Source: Canadian Institute for Health Information-Discharge Abstract Database, newborn linked records

† Includes fetal deaths with a gestational age ≥ 22 weeks if birth weight is unknown

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

CHAPTER 11A: INFANT MORTALITY RATE

TABLE 11A.1A

RATES OF CRUDE INFANT, NEONATAL AND POSTNEONATAL DEATHS, BY YEAR,
CANADA (EXCLUDING ONTARIO), 2002–2011

Year	Number of live births	Number of neonatal deaths	Rate of neonatal deaths per 1,000 live births (95% CI)	Number of infant deaths	Rate of infant deaths per 1,000 live births (95% CI)	Number of neonatal survivors	Number of post-neonatal deaths	Rate of postneonatal deaths per 1,000 neonatal survivors (95% CI)
2002	200,270	757	3.8 (3.5–4.1)	1,081	5.4 (5.1–5.7)	199,513	324	1.6 (1.5–1.8)
2003	204,273	781	3.8 (3.6–4.1)	1,073	5.3 (4.9–5.6)	203,492	292	1.4 (1.3–1.6)
2004	204,515	766	3.7 (3.5–4.0)	1,039	5.1 (4.8–5.4)	203,749	273	1.3 (1.2–1.5)
2005	208,416	819	3.9 (3.7–4.2)	1,118	5.4 (5.1–5.7)	207,597	299	1.4 (1.3–1.6)
2006	219,016	804	3.7 (3.4–3.9)	1,096	5.0 (4.7–5.3)	218,212	292	1.3 (1.2–1.5)
2007	229,427	836	3.6 (3.4–3.9)	1,158	5.0 (4.8–5.3)	228,591	322	1.4 (1.3–1.6)
2008	237,094	830	3.5 (3.3–3.7)	1,154	4.9 (4.6–5.2)	236,264	324	1.4 (1.2–1.5)
2009	240,486	863	3.6 (3.4–3.8)	1,167	4.9 (4.6–5.1)	239,623	304	1.3 (1.1–1.4)
2010	237,581	918	3.9 (3.6–4.1)	1,207	5.1 (4.8–5.4)	236,663	289	1.2 (1.1–1.4)
2011	237,501	860	3.6 (3.4–3.9)	1,185	5.0 (4.7–5.3)	236,641	325	1.4 (1.2–1.5)

Source: Statistics Canada, Vital Statistics

Data from Ontario were excluded because of data quality concerns.

CI = confidence interval

TABLE 11A.1B

RATES OF INFANT, NEONATAL AND POSTNEONATAL DEATHS (FOR BIRTHS ≥ 500 G†), BY YEAR, CANADA (EXCLUDING ONTARIO), 2001–2010

Year	Number of live births	Number of neonatal deaths	Rate of neonatal deaths per 1,000 live births (95% CI)	Number of infant deaths	Rate of infant deaths per 1,000 live births (95% CI)	Number of neonatal survivors	Number of post-neonatal deaths	Rate of postneonatal deaths per 1,000 neonatal survivors (95% CI)
2001	201,845	548	2.7 (2.5–3.0)	849	4.2 (3.9–4.5)	201,297	301	1.5 (1.3–1.7)
2002	200,069	540	2.7 (2.5–2.9)	842	4.2 (3.9–4.5)	199,529	301	1.5 (1.3–1.7)
2003	204,036	499	2.4 (2.2–2.7)	758	3.7 (3.5–4.0)	203,537	259	1.3 (1.1–1.4)
2004	204,254	507	2.5 (2.3–2.7)	783	3.8 (3.6–4.1)	203,747	276	1.4 (1.2–1.5)
2005	208,157	561	2.7 (2.5–2.9)	843	4.0 (3.8–4.3)	207,596	282	1.4 (1.2–1.5)
2006	218,766	559	2.6 (2.3–2.8)	885	4.0 (3.8–4.3)	218,207	326	1.5 (1.3–1.7)
2007	229,172	582	2.5 (2.3–2.8)	886	3.9 (3.6–4.1)	228,590	304	1.3 (1.2–1.5)
2008	236,827	566	2.4 (2.2–2.6)	907	3.8 (3.6–4.1)	236,261	341	1.4 (1.3–1.6)
2009	240,256	630	2.6 (2.4–2.8)	909	3.8 (3.5–4.0)	239,626	279	1.2 (1.0–1.3)
2010	237,268	616	2.6 (2.4–2.8)	923	3.9 (3.6–4.1)	236,652	307	1.3 (1.2–1.5)

Source: Statistics Canada, Vital Statistics, Birth-Death linked file

† Includes deaths occurring to births weighing ≥ 500 g for the specified calendar year (cohort calculation). Unlinked infant deaths (i.e., infants whose death registration could not be linked to their birth registration) and live births/infant deaths with missing birth weight were also included, but live births/infant deaths with a missing birth weight and a gestational age < 22 weeks were excluded.

Data from Ontario were excluded because of data quality concerns.

CI = confidence interval

TABLE 11A.2

RATES OF CRUDE INFANT, NEONATAL AND POSTNEONATAL DEATHS, BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO), 2007–2011

Province/territory	Number of live births	Number of neonatal deaths	Rate of neonatal deaths per 1,000 live births (95% CI)	Number of infant deaths	Rate of infant deaths per 1,000 live births (95% CI)	Number of neonatal survivors	Number of post-neonatal deaths	Rate of postneonatal deaths per 1,000 neonatal survivors (95% CI)
Newfoundland and Labrador	23,744	112	4.7 (3.9–5.7)	144	6.1 (5.1–7.1)	23,632	32	1.4 (0.9–1.9)
Prince Edward Island	7,168	17	2.4 (1.4–3.8)	26	3.6 (2.4–5.3)	7,151	9	1.3 (0.6–2.4)
Nova Scotia	44,778	125	2.8 (2.3–3.3)	176	3.9 (3.4–4.6)	44,653	51	1.1 (0.9–1.5)
New Brunswick	36,418	100	2.7 (2.2–3.3)	148	4.1 (3.4–4.8)	36,318	48	1.3 (1.0–1.8)
Quebec	438,123	1,538	3.5 (3.3–3.7)	1,986	4.5 (4.3–4.7)	436,585	448	1.0 (0.9–1.1)
Manitoba	78,106	379	4.9 (4.4–5.4)	538	6.9 (6.3–7.5)	77,727	159	2.0 (1.7–2.4)
Saskatchewan	69,791	300	4.3 (3.8–4.8)	439	6.3 (5.7–6.9)	69,491	139	2.0 (1.7–2.4)
Alberta	253,492	1,101	4.3 (4.1–4.6)	1,463	5.8 (5.5–6.1)	252,391	362	1.4 (1.3–1.6)
British Columbia	220,857	571	2.6 (2.4–2.8)	840	3.8 (3.6–4.1)	220,286	269	1.2 (1.1–1.4)
Yukon and Northwest Territories**	5,471	26	4.8 (3.1–7.0)	37	6.8 (4.8–9.3)	5,445	11	2.0 (1.0–3.6)
Nunavut	4,141	38	9.2 (6.5–12.6)	74	17.9 (14.1–22.4)	4,103	36	8.8 (6.2–12.1)
Canada	1,182,089	4,307	3.6 (3.5–3.8)	5,871	5.0 (4.8–5.1)	1,177,782	1,564	1.3 (1.3–1.4)

Source: Statistics Canada, Vital Statistics

** Combined due to low cell counts

Data from Ontario were excluded because of data quality concerns.

CI = confidence interval

TABLE 11A.3

CAUSES OF INFANT DEATH, CANADA (EXCLUDING ONTARIO), 2007–2011

Causes	Number of neonatal deaths	Proportion (%) of deaths among all neonatal deaths	Number of infant deaths	Proportion (%) of deaths among all infant deaths	Number of postneonatal deaths	Proportion (%) of deaths among all postneonatal deaths
Congenital anomalies	923	21.4	1,272	21.7	349	22.3
Asphyxia	611	14.2	627	10.7	16	1.0
Immaturity	1,621	37.6	1,738	29.6	117	7.5
Infection	157	3.6	363	6.2	206	13.2
SIDS	36	0.8	342	5.8	306	19.6
Other sudden/unexplained infant death	63	1.5	258	4.4	195	12.5
External cause	11	0.3	78	1.3	67	4.3
Other/unknown	885	20.5	1,193	20.3	308	19.7
Total	4,307	100.0	5,871	100.0	1,564	100.0

Source: Statistics Canada, Vital Statistics

Data from Ontario were excluded because of data quality concerns.

TABLE 11A.4

CAUSE-SPECIFIC RATES OF INFANT DEATH, BY YEAR, CANADA (EXCLUDING ONTARIO), 2007–2011

	2007		2008		2009		2010		2011	
Causes	Number of infant deaths	Rate of infant deaths per 1,000 live births (95% CI)	Number of infant deaths	Rate of infant deaths per 1,000 live births (95% CI)	Number of infant deaths	Rate of infant deaths per 1,000 live births (95% CI)	Number of infant deaths	Rate of infant deaths per 1,000 live births (95% CI)	Number of infant deaths	Rate of infant deaths per 1,000 live births (95% CI)
Congenital anomalies	258	1.1 (1.0–1.3)	237	1.0 (0.9–1.1)	254	1.1 (0.9–1.2)	265	1.1 (1.0–1.3)	258	1.1 (1.0–1.2)
Asphyxia	130	0.6 (0.5–0.7)	129	0.5 (0.5–0.6)	121	0.5 (0.4–0.6)	135	0.6 (0.5–0.7)	112	0.5 (0.4–0.6)
Immaturity	342	1.5 (1.3–1.7)	325	1.4 (1.2–1.5)	332	1.4 (1.2–1.5)	379	1.6 (1.4–1.8)	360	1.5 (1.4–1.7)
Infection	81	0.4 (0.3–0.4)	77	0.3 (0.3–0.4)	78	0.3 (0.3–0.4)	67	0.3 (0.2–0.4)	60	0.3 (0.2–0.3)
SIDS	79	0.3 (0.3–0.4)	71	0.3 (0.2–0.4)	73	0.3 (0.2–0.4)	56	0.2 (0.2–0.3)	63	0.3 (0.2–0.3)
Other sudden/unexplained infant death	38	0.2 (0.1–0.2)	50	0.2 (0.2–0.3)	42	0.2 (0.1–0.2)	46	0.2 (0.1–0.3)	82	0.3 (0.3–0.4)
External cause	16	0.1 (0.0–0.1)	14	0.1 (0.0–0.1)	17	0.1 (0.0–0.1)	17	0.1 (0.0–0.1)	14	0.1 (0.0–0.1)
Other/unknown	214	0.9 (0.8–1.1)	251	1.1 (0.9–1.2)	250	1.0 (0.9–1.2)	242	1.0 (0.9–1.2)	236	1.0 (0.9–1.1)
Total	1,158	5.0 (4.8–5.3)	1,154	4.9 (4.6–5.2)	1,167	4.9 (4.6–5.1)	1,207	5.1 (4.8–5.4)	1,185	5.0 (4.7–5.3)
Number of live births	229,427		237,094		240,486		237,581		237,501	

Source: Statistics Canada, Vital Statistics

Data from Ontario were excluded because of data quality concerns.

CI = confidence interval

CHAPTER 11B: NEONATAL MORTALITY RATE

TABLE 11B.1

RATE OF NEONATAL DEATHS, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Crude neonatal deaths			Neonatal deaths for infants ≥ 500 g		
	Number of live births	Number of neonatal deaths	Rate of neonatal deaths per 1,000 live births (95% CI)	Number of live births	Number of neonatal deaths	Rate of neonatal deaths per 1,000 live births (95% CI)
2005	268,879	1,083	4.0 (3.8–4.3)	268,517	740	2.8 (2.6–3.0)
2006	275,044	962	3.5 (3.3–3.7)	274,718	650	2.4 (2.2–2.6)
2007	285,179	1,079	3.8 (3.6–4.0)	284,818	727	2.6 (2.4–2.7)
2008	290,246	1,071	3.7 (3.5–3.9)	289,895	731	2.5 (2.3–2.7)
2009	291,456	1,041	3.6 (3.4–3.8)	291,132	728	2.5 (2.3–2.7)
2010	286,990	1,030	3.6 (3.4–3.8)	286,604	657	2.3 (2.1–2.5)
2011	286,480	1,065	3.7 (3.5–3.9)	286,099	698	2.4 (2.3–2.6)
2012	289,291	1,009	3.5 (3.3–3.7)	288,929	659	2.3 (2.1–2.5)
2013	287,170	1,026	3.6 (3.4–3.8)	286,780	657	2.3 (2.1–2.5)
2014	290,434	1,010	3.5 (3.3–3.7)	290,089	680	2.3 (2.2–2.5)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 11B.2

RATE OF CRUDE NEONATAL DEATHS, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	Number of live births	Number of neonatal deaths	Rate of neonatal deaths per 1,000 live births (95% CI)
Newfoundland and Labrador	22,774	95	4.2 (3.4–5.1)
Prince Edward Island	7,003	16	2.3 (1.3–3.7)
Nova Scotia	43,007	133	3.1 (2.6–3.7)
New Brunswick	34,751	105	3.0 (2.5–3.7)
Ontario	690,259	2,528	3.7 (3.5–3.8)
Manitoba	79,588	329	4.1 (3.7–4.6)
Saskatchewan	73,284	291	4.0 (3.5–4.5)
Alberta	257,874	964	3.7 (3.5–4.0)
British Columbia	213,563	551	2.6 (2.4–2.8)
Yukon/Northwest Territories*	5,416	14	2.6 (1.4–4.3)
Nunavut	4,136	35	8.5 (5.9–11.7)
Canada	1,440,365	5,140	3.6 (3.5–3.7)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Combined due to low cell counts

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 11B.3

CAUSES OF NEONATAL DEATH, CANADA (EXCLUDING QUEBEC), 2005–2014

Causes	Number of neonatal deaths	Proportion (%) of deaths among all neonatal deaths
Congenital anomalies	1,900	37.0
Asphyxia	795	15.5
Immaturity	2,270	44.2
Infection	157	3.1
SIDS	7	0.1
Other sudden/unexplained infant death/external cause	11	0.21
Total	5,140	100.0

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CHAPTER 12: BIRTH PREVALENCE OF CONGENITAL ANOMALIES

TABLE 12.1

BIRTH PREVALENCE OF CONGENITAL ANOMALIES, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of total births**	Number of cases	Rate per 10,000 total births (95% CI)
2005	269,530	10,837	402.1 (394.5–409.7)
2006	275,737	10,564	383.1 (375.8–390.5)
2007	286,098	10,799	377.5 (370.4–384.6)
2008	290,725	11,203	385.3 (378.2–392.5)
2009	292,339	11,279	385.8 (378.7–393.0)
2010	287,865	11,457	398.0 (390.7–405.4)
2011	287,283	11,392	396.5 (389.3–403.9)
2012	289,899	11,659	402.2 (394.9–409.5)
2013	287,749	11,927	414.5 (407.1–422.0)
2014	291,117	12,533	430.5 (423.0–438.1)

Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 12.2

RATE OF DOWN SYNDROME, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of total births**	Number of cases	Rate per 10,000 total births (95% CI)
2005	269,530	432	16.0 (14.6–17.6)
2006	275,737	430	15.6 (14.2–17.1)
2007	286,098	423	14.8 (13.4–16.3)
2008	290,725	439	15.1 (13.7–16.6)
2009	292,339	421	14.4 (13.1–15.8)
2010	287,865	442	15.4 (14.0–16.9)
2011	287,283	445	15.5 (14.1–17.0)
2012	289,899	459	15.8 (14.4–17.4)
2013	287,749	482	16.8 (15.3–18.3)
2014	291,117	463	15.9 (14.5–17.4)

Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 12.3

RATE OF DOWN SYNDROME, BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC),
2005–2014

Province/territory	Number of total births**	Number of cases	Rate per 10,000 total births (95% CI)
Newfoundland and Labrador	46,056	78	16.9 (13.4–21.1)
Prince Edward Island	14,091	19	13.5 (8.1–21.1)
Nova Scotia	87,115	142	16.3 (13.7–19.2)
New Brunswick	70,079	98	14.0 (11.4–17.0)
Ontario	1,391,817	1,939	13.9 (13.3–14.6)
Manitoba	154,063	221	14.3 (12.5–16.4)
Saskatchewan	138,378	199	14.4 (12.5–16.5)
Alberta	493,970	819	16.6 (15.5–17.8)
British Columbia	424,283	675	15.9 (14.7–17.2)
Yukon/Northwest Territories***	10,731	13	12.1 (6.4–20.7)
Nunavut	7,829	14	17.9 (9.8–30.0)
Canada*	2,858,342	4,436	15.5 (15.1–16.0)

Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Includes live births and stillbirths

*** Combined due to low cell counts

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 12.4

RATE OF NEURAL TUBE DEFECTS, BY YEAR, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of total births**	All neural tube defects		Spina bifida		Anencephalus and similar anomalies***	
		Number of cases	Rate per 10,000 total births (95% CI)	Number of cases	Rate per 10,000 total births (95% CI)	Number of cases	Rate per 10,000 total births (95% CI)
2005	269,530	131	4.9 (4.1–5.8)	86	3.2 (2.6–3.9)	31	1.2 (0.8–1.6)
2006	275,737	120	4.4 (3.6–5.2)	81	2.9 (2.3–3.7)	31	1.1 (0.8–1.6)
2007	286,098	142	5.0 (4.2–5.9)	87	3.0 (2.4–3.8)	30	1.0 (0.7–1.5)
2008	290,725	141	4.8 (4.1–5.7)	82	2.8 (2.2–3.5)	31	1.1 (0.7–1.5)
2009	292,339	152	5.2 (4.4–6.1)	99	3.4 (2.8–4.1)	37	1.3 (0.9–1.7)
2010	287,865	163	5.7 (4.8–6.6)	100	3.5 (2.8–4.2)	44	1.5 (1.1–2.1)
2011	287,283	160	5.6 (4.7–6.5)	110	3.8 (3.1–4.6)	35	1.2 (0.8–1.7)
2012	289,899	144	5.0 (4.2–5.8)	96	3.3 (2.7–4.0)	27	0.9 (0.6–1.4)
2013	287,749	126	4.4 (3.6–5.2)	74	2.6 (2.0–3.2)	31	1.1 (0.7–1.5)
2014	291,117	165	5.7 (4.8–6.6)	105	3.6 (2.9–4.4)	46	1.6 (1.2–2.1)

Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths

*** Anencephalus and similar anomalies include craniochisis, anencephaly and other neural tube defects

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 12.5

RATE OF NEURAL TUBE DEFECTS, BY PROVINCE/TERRITORY, CANADA
(EXCLUDING QUEBEC), 2005–2014

Province/territory	Number of total births**	All neural tube defects		Spina bifida	
		Number of cases	Rate per 10,000 total births (95% CI)	Number of cases	Rate per 10,000 total births (95% CI)
Newfoundland and Labrador	46,056	28	6.1 (4.0–8.8)	17	3.7 (2.1–5.9)
Prince Edward Island	14,091	11	7.8 (3.9–14.0)	10	7.1 (3.4–13.1)
Nova Scotia	87,115	53	6.1 (4.6–8.0)	35	4.0 (2.8–5.6)
New Brunswick	70,079	23	3.3 (2.1–4.9)	16	2.3 (1.3–3.7)
Ontario	1,391,817	576	4.1 (3.8–4.5)	396	2.8 (2.6–3.1)
Manitoba	154,063	89	5.8 (4.6–7.1)	47	3.1 (2.2–4.1)
Saskatchewan	138,378	82	5.9 (4.7–7.4)	49	3.5 (2.6–4.7)
Alberta	493,970	267	5.4 (4.8–6.1)	161	3.3 (2.8–3.8)
British Columbia	424,283	170	4.0 (3.4–4.7)	120	2.8 (2.3–3.4)
Yukon/Northwest Territories/Nunavut***	18,560	12	6.5 (3.3–11.3)	6	3.2 (1.2–7.0)
Canada*	2,858,342	1,444	5.1 (4.8–5.3)	920	3.2 (3.0–3.4)

Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Includes live births and stillbirths

*** Combined due to low cell counts

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 12.6

RATE OF CLEFT PALATE AND CLEFT LIP WITH OR WITHOUT CLEFT PALATE, BY YEAR, CANADA
(EXCLUDING QUEBEC), 2005–2014

Year	Number of total births**	Cleft palate		Cleft lip with or without cleft palate	
		Number of cases	Rate per 10,000 total births (95% CI)	Number of cases	Rate per 10,000 total births (95% CI)
2005	269,530	201	7.5 (6.5–8.6)	255	9.5 (8.3–10.7)
2006	275,737	188	6.8 (5.9–7.9)	235	8.5 (7.5–9.7)
2007	286,098	187	6.5 (5.6–7.5)	281	9.8 (8.7–11.0)
2008	290,725	215	7.4 (6.4–8.5)	269	9.3 (8.2–10.4)
2009	292,339	164	5.6 (4.8–6.5)	303	10.4 (9.2–11.6)
2010	287,865	182	6.3 (5.4–7.3)	284	9.9 (8.8–11.1)
2011	287,283	171	6.0 (5.1–6.9)	261	9.1 (8.0–10.3)
2012	289,899	190	6.6 (5.7–7.6)	271	9.3 (8.3–10.5)
2013	287,749	183	6.4 (5.5–7.4)	275	9.6 (8.5–10.8)
2014	291,117	170	5.8 (5.0–6.8)	296	10.2 (9.0–11.4)

Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 12.7

RATE OF CLEFT PALATE AND CLEFT LIP WITH OR WITHOUT CLEFT PALATE,
BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2005–2014

Province/territory	Number of total births**	Cleft palate		Cleft lip with or without cleft palate	
		Number of cases	Rate per 10,000 total births (95% CI)	Number of cases	Rate per 10,000 total births (95% CI)
Newfoundland and Labrador	46,056	28	6.1 (4.0–8.8)	43	9.3 (6.8–12.6)
Prince Edward Island	14,091	12	8.5 (4.4–14.9)	14	9.9 (5.4–16.7)
Nova Scotia	87,115	58	6.7 (5.1–8.6)	79	9.1 (7.2–11.3)
New Brunswick	70,079	47	6.7 (4.9–8.9)	54	7.7 (5.8–10.1)
Ontario	1,391,817	808	5.8 (5.4–6.2)	1,070	7.7 (7.2–8.2)
Manitoba	154,063	140	9.1 (7.6–10.7)	187	12.1 (10.5–14.0)
Saskatchewan	138,378	102	7.4 (6.0–8.9)	211	15.2 (13.3–17.5)
Alberta	493,970	333	6.7 (6.0–7.5)	569	11.5 (10.6–12.5)
British Columbia	424,283	294	6.9 (6.2–7.8)	427	10.1 (9.1–11.1)
Yukon/ Northwest Territories***	10,731	9	8.4 (3.8–15.9)	14	13.0 (7.1–21.9)
Nunavut	7,829	7	8.9 (3.6–18.4)	14	17.9 (9.8–30.0)
Canada*	2,858,342	1,851	6.5 (6.2–6.8)	2,730	9.6 (9.2–9.9)

Source: Canadian Institute for Health Information- Discharge Abstract Database (CIHI-DAD)

* Includes data from unknown provinces and territories

** Includes live births and stillbirths

*** Combined due to low cell counts

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

CHAPTER 13: MULTIPLE BIRTH RATE

TABLE 13.1

RATE OF MULTIPLE BIRTH, CANADA (EXCLUDING QUEBEC), 2005–2014

Year	Number of total births**	Number of multiple births	Rate of multiple births per 100 total births (95% CI)
2005	268,632	8,403	3.1 (3.1–3.2)
2006	274,864	8,515	3.1 (3.0–3.2)
2007	285,230	9,095	3.2 (3.1–3.3)
2008	290,389	9,259	3.2 (3.1–3.3)
2009	291,451	9,798	3.4 (3.3–3.4)
2010	286,983	9,680	3.4 (3.3–3.4)
2011	286,405	9,668	3.4 (3.3–3.4)
2012	288,892	9,837	3.4 (3.3–3.5)
2013	286,787	9,859	3.4 (3.4–3.5)
2014	290,078	9,705	3.3 (3.3–3.4)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

** Includes live births and stillbirths, excludes unknown plurality

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

TABLE 13.2

RATE OF MULTIPLE BIRTH BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC), 2010–2014

Province/territory	Number of total births**	Number of multiple births	Rate of multiple births per 100 total births (95% CI)
Newfoundland and Labrador	22,696	768	3.4 (3.2–3.6)
Prince Edward Island	6,984	225	3.2 (2.8–3.7)
Nova Scotia	42,669	1,455	3.4 (3.2–3.6)
New Brunswick	34,820	1,065	3.1 (2.9–3.2)
Ontario	676,239	24,372	3.6 (3.6–3.6)
Manitoba	79,827	2,228	2.8 (2.7–2.9)
Saskatchewan	73,067	2,208	3.0 (2.9–3.1)
Alberta	257,468	8,611	3.3 (3.3–3.4)
British Columbia	211,326	6,783	3.2 (3.1–3.3)
Yukon	2,031	66	3.2 (2.5–4.1)
Northwest Territories	3,624	84	2.3 (1.9–2.9)
Nunavut	4,021	82	2.0 (1.6–2.5)
Canada*	1,439,145	48,749	3.4 (3.4–3.4)

Source: Canadian Institute for Health Information-Discharge Abstract Database (CIHI-DAD)

* Includes data for unknown provinces and territories

** Includes live births and stillbirths

Data for Quebec were excluded because they do not contribute to CIHI-DAD.

CI = confidence interval

APPENDIX B: DATA SOURCE

DATA SOURCE

The Canadian Institute for Health Information (CIHI) maintains the Discharge Abstract Database (DAD), which captures hospital separation information—transfer, discharge or death—from the majority of Canada’s acute care hospitals. The DAD is an electronic database that includes information on inpatient acute, chronic and rehabilitation care and day surgery, accounting for about 80% of all hospital inpatient discharges in Canada. The DAD contains considerable data on each hospitalization, including demographic and residence information, length of stay, most responsible diagnosis, secondary and co-morbid diagnoses, and procedures performed during the hospitalization. Beginning in 2001/2002, the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems for diagnoses (ICD-10-CA) and the Canadian Classification of Health Interventions for procedures (CCI) were gradually adopted by most jurisdictions. ICD-10-CA is an enhanced version of ICD-10 developed by CIHI for morbidity classification in Canada. Most women in Canada give birth in hospitals (98.3%), therefore the data contained within the database captures most deliveries in Canada except Quebec, and is the largest available source for diagnoses of newborn and maternal health conditions and conducting congenital anomaly surveillance activities.

LIMITATIONS OF THE CIHI-DAD

There are limitations with using the CIHI-DAD for perinatal surveillance which include, but are not restricted to: the use of ICD codes (i.e. changed from ICD-9 to ICD 10; unconfirmed diagnosis); the lack of data on maternal prenatal exposures and risk factors (i.e. obesity); improvements in data quality are needed for complicated diagnoses; accuracy is likely to be lower for codes other than the primary or most responsible diagnosis. Further the CIHI- DAD does not capture home births, which account for approximately 1.6% of total births in Canada.¹

There are limitations with using the CIHI-DAD for congenital anomalies surveillance which include, but are not restricted to: the use of ICD codes (i.e. changing from ICD-9 to ICD 10; unconfirmed diagnosis); the failure to capture congenital anomalies diagnosed after birth during an out-patient health care visit; the inability of completely eliminate duplication of readmission records; the lack of complete information on pregnancy terminations for fetal anomalies, which is an essential component of congenital anomalies surveillance; and the lack of data on maternal prenatal exposures and risk factors. Previously, data were based on an ascertainment period for cases with congenital anomalies of one year after birth. As of the fiscal year 2000/2001, new data access regulations made it impossible to ascertain such cases later than 30 days after birth. Despite these limitations, the DAD remains the best available source of data for national surveillance of congenital anomalies and efforts are being made to address these limitations.

REFERENCE

1. Statistics Canada. Table 102–4516—Live births and fetal deaths (stillbirths), by place of birth (hospital and non-hospital), Canada, provinces and territories, annual, CANSIM (database). (accessed: September 2016).