

# PERINATAL HEALTH INDICATORS FOR CANADA 2013

A REPORT FROM THE CANADIAN PERINATAL  
SURVEILLANCE SYSTEM



PROTECTING CANADIANS FROM ILLNESS



Public Health  
Agency of Canada

Agence de la santé  
publique du Canada

Canada

**TO PROMOTE AND PROTECT THE HEALTH OF CANADIANS THROUGH LEADERSHIP,  
PARTNERSHIP, INNOVATION AND ACTION IN PUBLIC HEALTH.**

— Public Health Agency of Canada

Également disponible en français sous le titre :  
*Indicateurs de la santé périnatale au Canada 2013*

To obtain additional copies, please contact:

Canadian Perinatal Surveillance System  
Public Health Agency of Canada  
785 Carling Avenue, A.L 6804A  
Ottawa, ON K1A 0K9  
Tel.: 613-941-6439  
Fax.: 613-941-2057  
E-mail: CPSS-SCSP@phac-aspc.gc.ca

This publication can be made available in alternative formats upon request.

**Suggested citation:**

Public Health Agency of Canada. Perinatal Health Indicators for Canada 2013: a Report of the Canadian Perinatal Surveillance System. Ottawa, 2013.

© Public Health Agency of Canada, 2013

Publication date: December 2013

This publication may be reproduced for personal or internal use only without permission provided the source is fully acknowledged. However, multiple copy reproduction of this publication in whole or in part for purposes of resale or redistribution requires the prior written permission from the Minister of Public Works and Government Services Canada, Ottawa, Ontario K1A 0S5 or [copyright.droitdauteur@pwgsc.gc.ca](mailto:copyright.droitdauteur@pwgsc.gc.ca).

ISBN: 978-1-100-23093-1  
Cat.: HP7-1/2013E-PDF  
Pub.: 130515

## TABLE OF CONTENTS

Contributors.....	ii
Introduction .....	1
Chapter 1 Rate of maternal smoking during pregnancy.....	2
Chapter 2 Rate of maternal alcohol consumption during pregnancy.....	4
Chapter 3 Rate of breastfeeding .....	7
Chapter 4 Rate of live births to teenage mothers.....	10
Chapter 5 Rate of live births to older mothers.....	13
Chapter 6 Rate of cesarean delivery.....	16
Chapter 7 Severe maternal morbidity rate.....	18
Chapter 8 Maternal mortality rate.....	20
Chapter 9 Preterm birth rate .....	23
Chapter 10 Postterm birth rate .....	26
Chapter 11 Small-for-gestational-age birth rate .....	28
Chapter 12 Large-for-gestational-age birth rate .....	30
Chapter 13 Fetal mortality rate .....	32
Chapter 14 Infant mortality rate .....	36
Chapter 15 Birth prevalence of congenital anomalies .....	40
Chapter 16 Multiple birth rate .....	45
Appendix: Data Tables	
A1 Rate of maternal smoking during pregnancy.....	47
A2 Rate of maternal alcohol consumption during pregnancy.....	48
A3 Rate of breastfeeding .....	49
A4 Rate of live births to teenage mothers.....	51
A5 Rate of live births to older mothers.....	54
A6 Rate of cesarean delivery .....	57
A7 Severe maternal morbidity rate.....	58
A8 Maternal mortality rate.....	60
A9 Preterm birth rate .....	62
A10 Postterm birth rate .....	64
A11 Small-for-gestational-age rate .....	65
A12 Large-for-gestational-age rate .....	66
A13 Fetal mortality rate .....	67
A14 Infant mortality rate .....	70
A15 Prevalence of congenital anomalies .....	74
A16 Multiple birth rate .....	78

## CONTRIBUTORS

### OVERSIGHT

Juan Andrés León, *Public Health Agency of Canada*

### PROJECT COORDINATION

Nicolas L. Gilbert, *Public Health Agency of Canada*

### WRITING

Sharon Bartholomew  
Paromita Deb-Rinker  
Susie Dzakpasu  
Nicolas L. Gilbert

Chantal Nelson  
Shiliang Liu  
(all with the *Public Health Agency of Canada*)

### DATA ANALYSIS

Nicolas L. Gilbert, *Public Health Agency of Canada*  
Sharon Bartholomew, *Public Health Agency of Canada*

Shiliang Liu, *Public Health Agency of Canada*  
Jocelyn Rouleau, *Public Health Agency of Canada*  
Tina Tao, *Statistics Canada*

### REVIEWERS

Nathalie Auger, *Institut national de santé publique du Québec*  
Jane Evans, *University of Manitoba*  
KS Joseph, *University of British Columbia*  
Michael S. Kramer, *McGill University*

Juan Andrés León, *Public Health Agency of Canada*  
Wei Luo, *Public Health Agency of Canada*  
Patricia Schembari, *Statistics Canada*

### ADMINISTRATION AND PRODUCTION

Victoria Otterman, *Public Health Agency of Canada*

### LAYOUT

Phil Russell

## INTRODUCTION

This document was produced by the Canadian Perinatal Surveillance System (CPSS) to update data on key perinatal health indicators and provide current information on major maternal, fetal and infant health determinants and outcomes in Canada. This report includes data from the birth and stillbirth databases up to 2010, the death database up to 2009, the Discharge Abstract Database (DAD) up to the 2010-2011 fiscal year, the Canadian Community Health Survey (CCHS) up to 2010 and the National Longitudinal Survey of Children and Youth (NLSCY) up to 2008, its final recruitment year. In this report, numbers based on vital statistics or hospital databases may be different 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 the top 13 based on the priority ranking published by CPSS in 2000,<sup>1</sup> with one exception: we added the rate of live births to older mothers, which has been deemed to be of increasing importance since 2000.

Indicators calculated from vital statistics data (live births to teenage mothers, preterm and postterm

birth, small- and large-for-gestational-age birth, fetal and infant death, and multiple birth) exclude Ontario because of data quality concerns previously described.<sup>2</sup> Similarly, rates of cesarean delivery, severe maternal morbidity and maternal mortality exclude Quebec because this province does not contribute data to the DAD, from which these indicators were calculated.

The breastfeeding data presented in this report are the same as in the 2011 report,<sup>3</sup> because no new CCHS two-year dataset has become available since then.

Detailed data tables for all indicators are included as appendices.

## REFERENCES

1. Health Canada. Perinatal Health Indicators for Canada. Ottawa: Health Canada.; 2000.
2. Public Health Agency of Canada. Canadian Perinatal Health Report. 2008 Edition. 2008.
3. Public Health Agency of Canada. Perinatal Health Indicators for Canada 2011. 2012.

CHAPTER 1

# RATE OF MATERNAL SMOKING DURING PREGNANCY

Maternal smoking during pregnancy decreased steadily between 1993-1996 and 2005-2008. The rate was 12.3% (95% CI: 11.2-13.5%) in 2005-2008. It decreased with age and was seven times higher in mothers under 20 years than in those 35 years or more.

DEFINITION

The rate of maternal smoking during pregnancy is defined as the number of pregnant women who smoked cigarettes during pregnancy, expressed as a proportion of all pregnant women.

DATA SOURCE

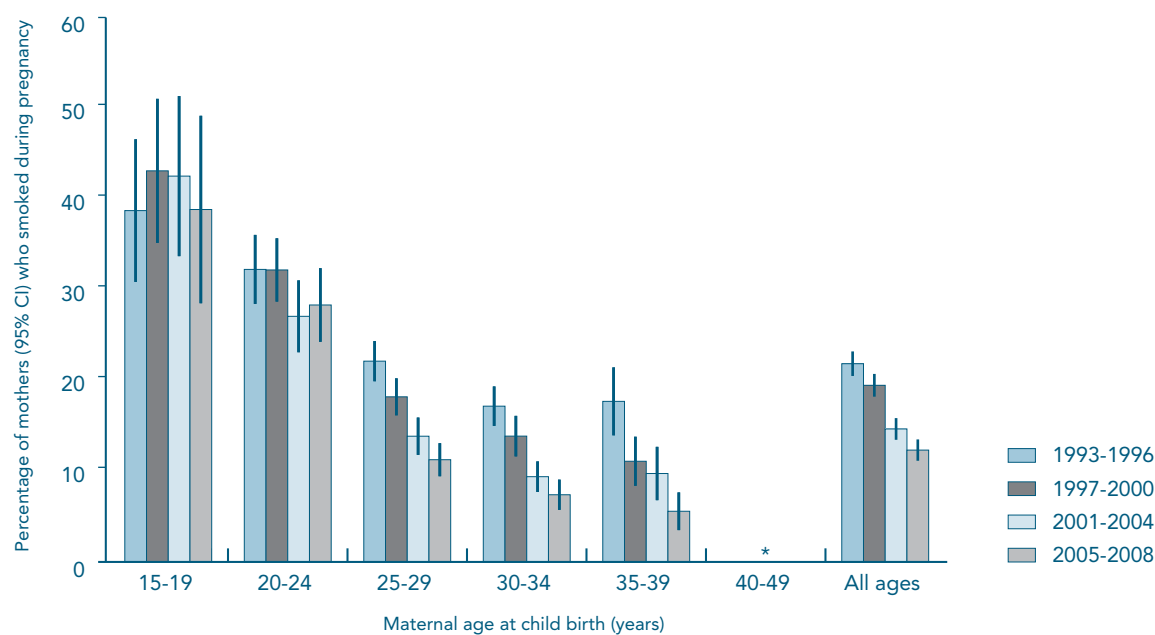
Rates of maternal smoking during pregnancy were estimated using data from the National Longitudinal Survey of Children and Youth (NLSCY),<sup>1</sup> as maternal smoking is no longer part of the core component

of the Canadian Community Health Survey (CCHS) previously used to compute this indicator.<sup>2</sup> Only biological mothers were included, and only if the interview took place within two years after the child's birth.

RESULTS

Maternal smoking during pregnancy decreased steadily from 21.9% (95% CI: 20.5–23.2%) in 1993–1996 to 12.3% (95% CI: 11.2–13.5%) in 2005–2008 (Figure 1.1).

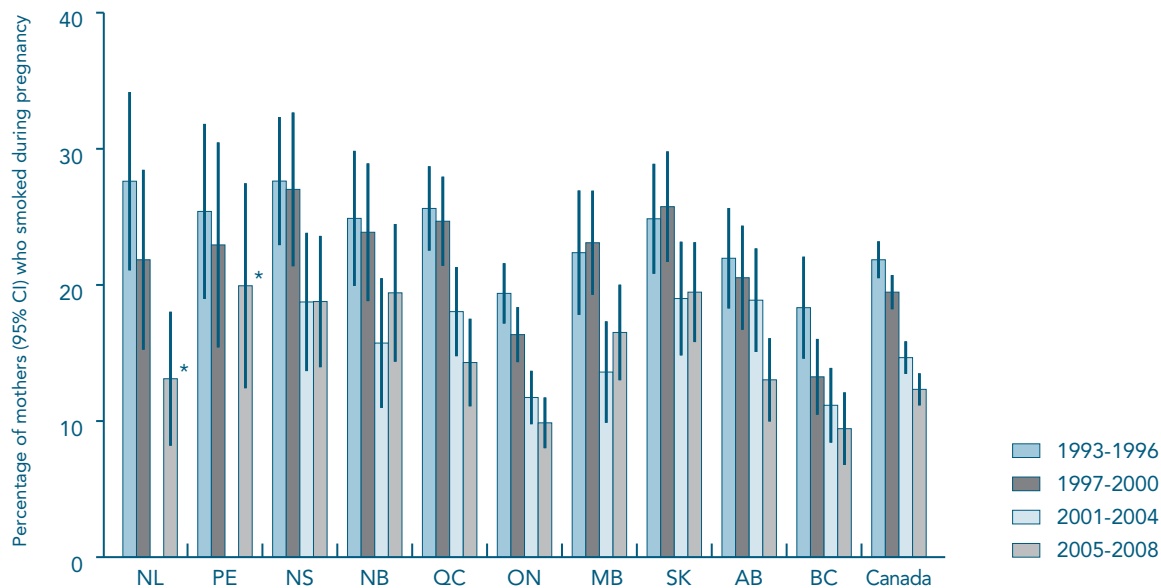
FIGURE 1.1  
RATE OF MATERNAL SMOKING DURING PREGNANCY  
BY AGE AND BIRTH YEAR, CANADA, 1993-2008



Source: Statistics Canada, National Longitudinal Survey of Children and Youth.  
Denominators exclude those who responded “don’t know” and those who refused to answer. Territories were excluded because the survey was not conducted there.  
\*Mothers aged 40-49 not shown because their number was too small to produce reliable estimates.  
CI=Confidence interval

**FIGURE 1.2**

RATE OF MATERNAL SMOKING DURING PREGNANCY  
BY PROVINCE OF RESIDENCE AND BIRTH YEAR, CANADA, 1998-2008



Source: Statistics Canada, National Longitudinal Survey of Children and Youth

Denominators exclude those who responded "don't know" and those who refused to answer. Territories excluded because the survey was not conducted there.

\* Rate not shown because of a numerator too small to produce a reliable estimate. CI=Confidence interval

The rate decreases with age; in 2005–2008, it was 38.8% (95% CI: 28.5–49.2%) among mothers aged 15–19, but only 5.6% (95% CI: 3.5–7.7%) among those aged 35–39 (Figure 1.1). The number of mothers aged 40–49 included in the NLSCY was too small to estimate a rate for that category.

Among provinces in 2005–2008, British Columbia had the lowest smoking rate (9.4%, 95% CI: 6.8–12.1%), followed by Ontario (9.9%, 95% CI: 8.0–11.7%). The highest rates were in Prince Edward Island (19.9%, 95% CI: 12.4–27.5%) and Saskatchewan (19.5%, 95% CI: 15.8–23.2%) (Figure 1.2).

### LIMITATIONS

Maternal smoking rates were estimated from a survey that recruited living children and interviewed their mothers. Therefore, pregnancies that resulted in stillbirths or infant deaths were not included. This may have led to underestimation of the smoking rate, as maternal smoking during pregnancy is associated with a higher risk of stillbirth<sup>3</sup> and infant mortality.<sup>4</sup>

Knowledge that smoking can adversely affect pregnancy outcome may have led mothers

to under-report smoking behaviour during pregnancy.<sup>5</sup> In addition, data from the territories were not available from the NLSCY.

### REFERENCES

1. Statistics Canada. National Longitudinal Survey of Children and Youth. Survey Overview for the 2008-2009 Data Collection. Cycle 8. 2008:1-43.
2. Public Health Agency of Canada. Canadian Perinatal Health Report, 2008 Edition. Ottawa, 2008.
3. Goy J, Dodds L, Rosenberg MW, King WD. Health-risk behaviours: examining social disparities in the occurrence of stillbirth. *Paediatr Perinat Epidemiol* 2008;22(4):314-320.
4. Dietz PM, England LJ, Shapiro-Mendoza CK, Tong VT, Farr SL, Callaghan WM. Infant morbidity and mortality attributable to prenatal smoking in the U.S. *Am J Prev Med* 2010;39(1):45-52.
5. Patrick DL, Cheadle A, Thompson DC, Diehr P, Koepsell T, Kinne S. The validity of self-reported smoking: a review and meta-analysis. *Am J Public Health* 1994;84(7):1086-1093.



## CHAPTER 2

## RATE OF MATERNAL ALCOHOL CONSUMPTION DURING PREGNANCY

The rate of maternal alcohol consumption during pregnancy remained stable between 1993–1996 and 2001–2004, but decreased in 2005–2008. The rate was 10.7% in 2005–2008.

### DEFINITION

The rate of maternal alcohol consumption during pregnancy is defined as the number of pregnant women who reported consuming any alcoholic beverages during pregnancy, expressed as a proportion of all pregnant women.

### DATA SOURCE

Rates of maternal alcohol consumption during pregnancy were estimated using data from the National Longitudinal Survey of Children and Youth

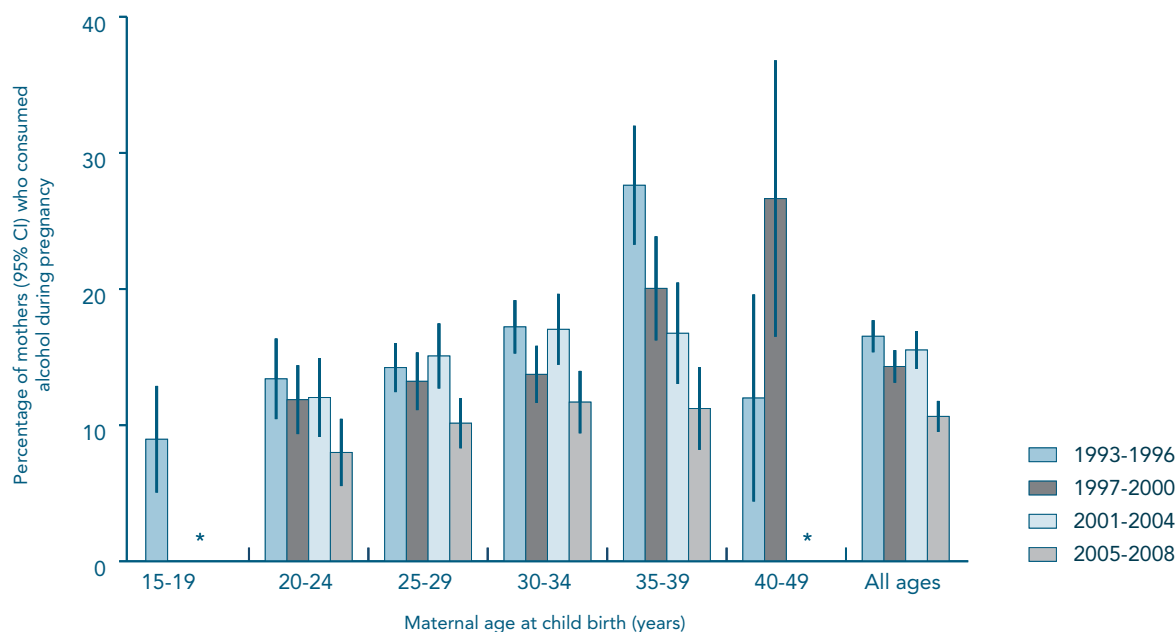
(NLSCY),<sup>1</sup> as maternal alcohol consumption was no longer part of the core component of the Canadian Community Health Survey (CCHS) previously used to compute this indicator.<sup>2</sup> Only biological mothers were included, and only if the interview took place within two years after child's birth.

### RESULTS

Maternal alcohol consumption during pregnancy remained stable between 1993–1996 and 2001–2004, and then dropped from 15.5% (95% CI: 14.1–

FIGURE 2.1

RATE OF MATERNAL ALCOHOL CONSUMPTION DURING PREGNANCY  
BY AGE AND BIRTH YEAR, CANADA, 1993-2008



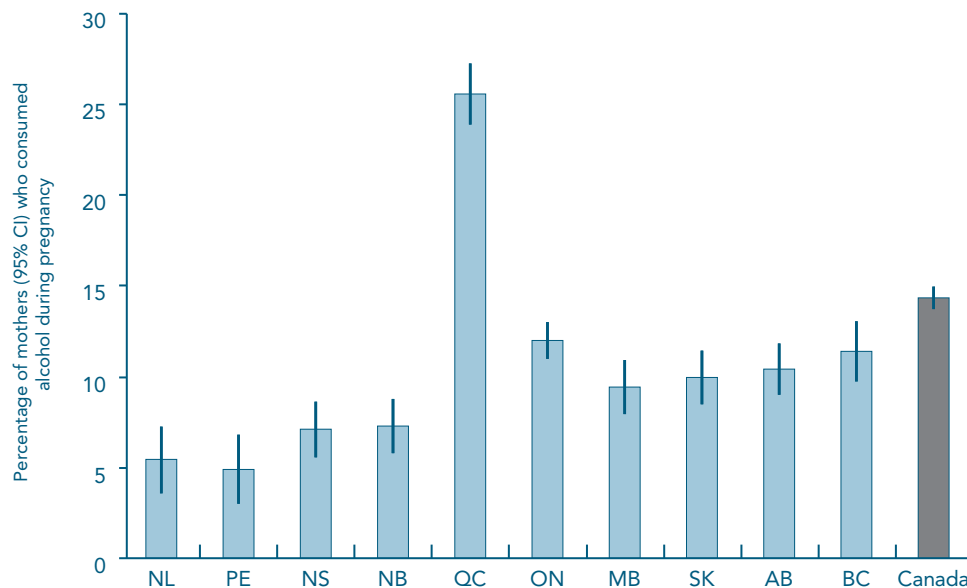
Source: Statistics Canada, National Longitudinal Survey of Children and Youth

Denominators exclude those who responded "don't know" and those who refused to answer. Territories were excluded because the survey was not conducted there. \* Missing bars are not shown because of numbers too small to produce reliable estimates. CI—Confidence interval



**FIGURE 2.2**

RATE OF MATERNAL ALCOHOL CONSUMPTION DURING PREGNANCY  
BY PROVINCE, CANADA (EXCLUDING TERRITORIES), 1993-2008



Source: Statistics Canada, National Longitudinal Survey of Children and Youth  
Denominators exclude those who responded “don’t know” and those who refused to answer. Territories were excluded because the survey was not conducted there. CI—Confidence interval

16.9%) in 2001–2004 to 10.7% (95% CI: 9.5–11.8%) in 2005–2008 (Figure 2.1).

The alcohol consumption rate increased with age; in 2005–2008, it was 8.0% (95% CI: 5.5–10.5%), 10.2% (95% CI: 8.3–12.0%), 11.7% (95% CI: 9.4–14.0%) and 11.2% (95% CI: 8.2–14.3%) among mothers aged 20–24, 25–29, 30–34 and 35–39 years, respectively (Figure 2.1). The number of mothers aged 15–19 and 40–49 included in the NLSCY was too small to estimate a rate for that category.

Among provinces, in 2005–2008, Prince Edward Island had the lowest maternal alcohol consumption rate (4.9%, 95% CI: 3.0–6.8%), followed by Newfoundland and Labrador (5.4%, 95% CI: 3.6–7.3%). The highest rates were in Ontario (12.0%, 95% CI: 11.0–13.0%) and Quebec (25.6%, 95% CI: 23.9–27.3%) (Figure 2.2).

### LIMITATIONS

The rate of alcohol consumption during pregnancy was estimated from a survey that recruited live children. Therefore, pregnancies that led to stillbirths or infant deaths were not included in the

survey. This may have led to an under-estimation of the rate as alcohol consumption during pregnancy is associated with a higher risk of stillbirth,<sup>3</sup> and heavy alcohol consumption is associated with higher infant mortality.<sup>4</sup>

There may also be systematic under-reporting of maternal alcohol consumption in surveys, because alcohol consumption during pregnancy is considered socially undesirable and known to incur risk to the fetus.<sup>5</sup> The degree of under-reporting may vary by province, as may the social acceptability of drinking during pregnancy. In addition, data from the territories were not available from the NLSCY.

### REFERENCES

1. Statistics Canada. National Longitudinal Survey of Children and youth. Survey Overview for the 2008-2009 Data Collection. Cycle 8. [http://www23.statcan.gc.ca/imdb-bmdi/document/4450\\_D2\\_T9\\_V4-eng.pdf](http://www23.statcan.gc.ca/imdb-bmdi/document/4450_D2_T9_V4-eng.pdf). 2008:1-43.
2. Public Health Agency of Canada. Canadian Perinatal Health Report, 2008 Edition. Ottawa, 2008.

3. Kesmodel U, Wisborg K, Olsen SF, Henriksen TB, Secher NJ. Moderate alcohol intake during pregnancy and the risk of stillbirth and death in the first year of life. *Am J Epidemiol* 2002;155:305-312.
4. Strandberg-Larsen K, Grønboek M, Andersen AM, Andersen PK, Olsen J. Alcohol drinking pattern during pregnancy and risk of infant mortality. *Epidemiology* 2009;20(6):884-891.
5. Stoler JM, Huntington KS, Peterson CM, Peterson KP, Daniel P, Aboagye KK, et al. The prenatal detection of significant alcohol exposure with maternal blood markers. *J Pediatr* 1998;133(3):346-352.

## CHAPTER 3

## RATE OF BREASTFEEDING

Between 2005 and 2009/2010, the rate of breastfeeding initiation remained stable between 87% and 88%, while the rate of exclusive breastfeeding for six months increased significantly from 20.3% to 25.9%

## DEFINITION

The rate of breastfeeding initiation is defined as the number of women who have given birth to a live-born child and ever breastfed that child, expressed as a proportion of all women who delivered a live-born child (in a given place and time). Exclusive breastfeeding is defined as breastfeeding with no other liquid or solid food given to the infant.

## DATA SOURCE

Breastfeeding rates were calculated using data from the 2005, 2007/2008 and 2009/2010 cycles of the Canadian Community Health Survey (CCHS).<sup>1</sup> In

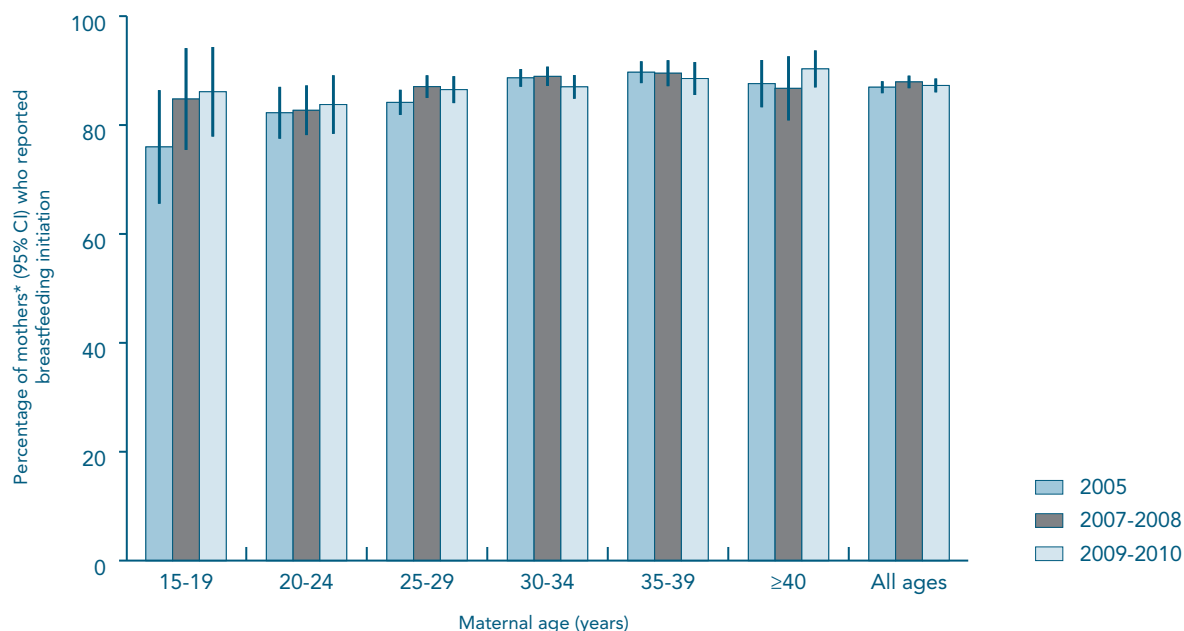
2007, the CCHS started collecting data continuously and releasing datasets for two-year periods.

## RESULTS

The rate of breastfeeding initiation remained stable at 87.0% in 2005, 87.9% in 2007/2008 and 87.3% in 2009/2010; there was no clear association with maternal age (Figure 3.1). In 2009/2010, breastfeeding initiation rates ranged from 61.5% (95% CI 53.1–69.9%) in Newfoundland and Labrador to 97.2% (95% CI: 94.2–100.0%) in Yukon (Figure 3.2). Western provinces had higher rates of breastfeeding initiation than eastern provinces.

FIGURE 3.1

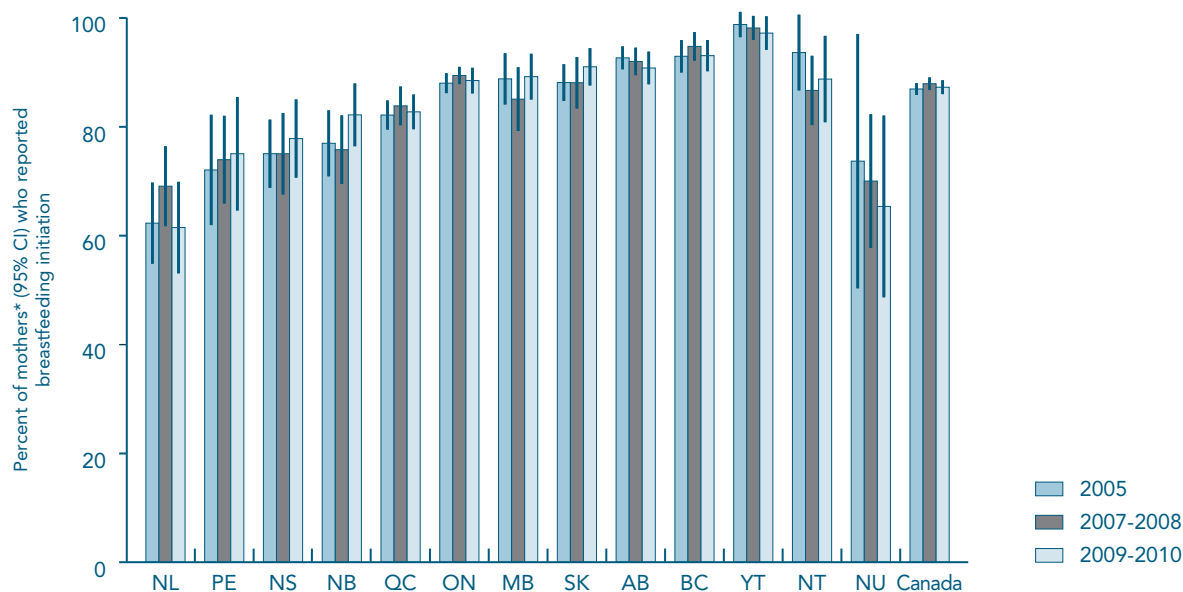
RATE OF BREASTFEEDING INITIATION  
BY MATERNAL AGE, CANADA, 2005, 2007-2008, AND 2009-2010



Source: Statistics Canada, Canadian Community Health Survey, 2005, 2007/08, and 2009/10.

Denominators exclude responses of "do not know", "not stated", and refusal to answer.

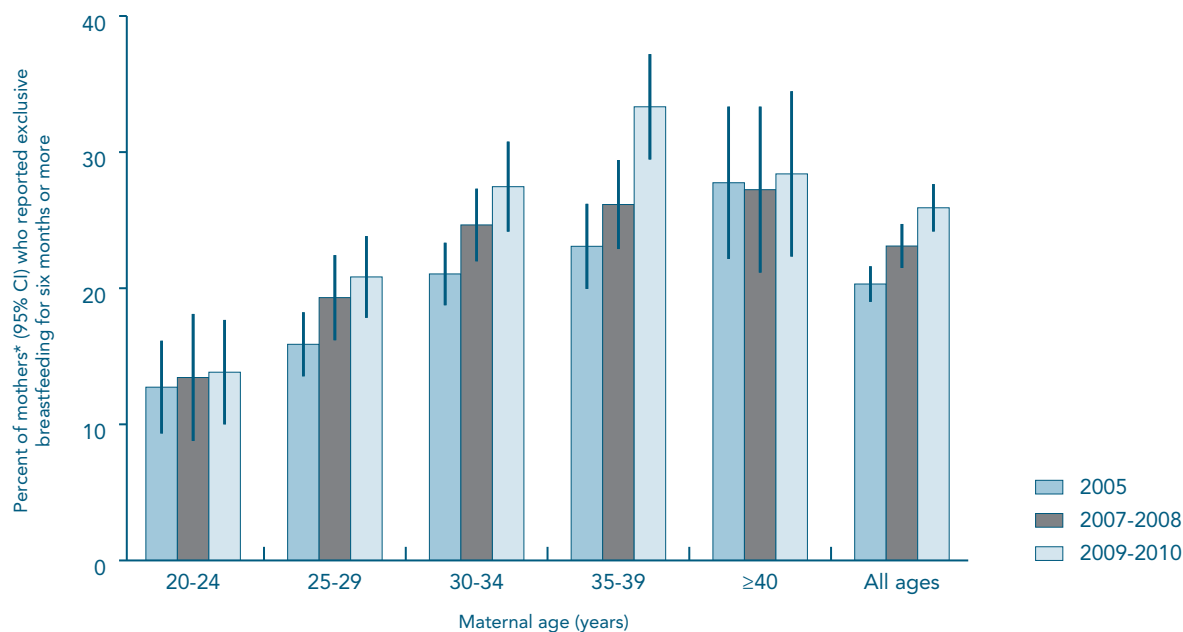
\* Women who gave birth in the five years preceding the survey CI—Confidence interval

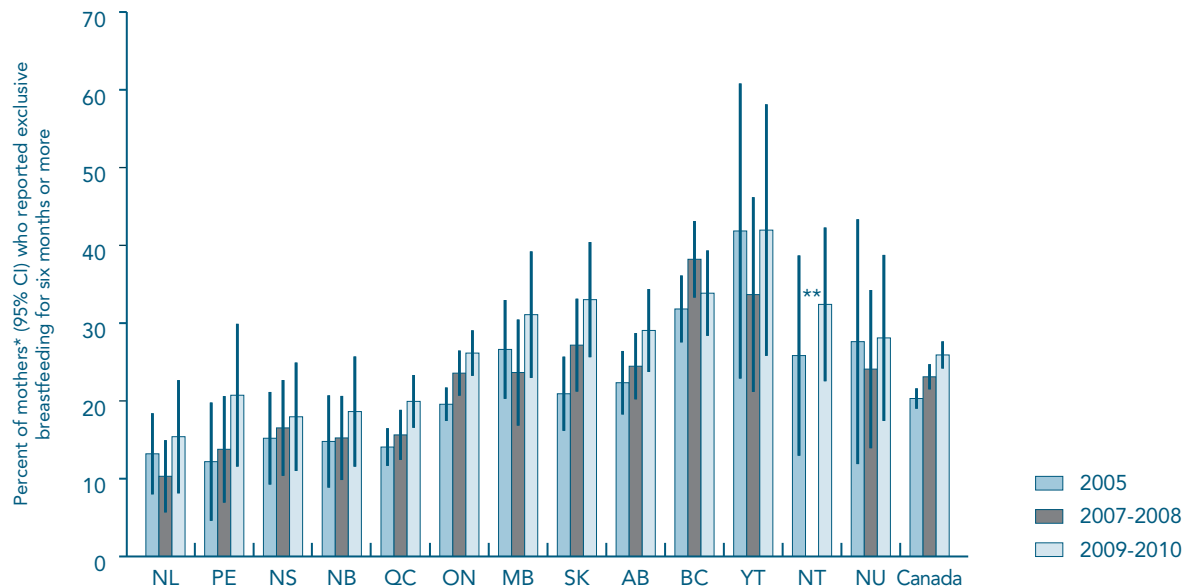
**FIGURE 3.2****RATE OF BREASTFEEDING INITIATION****BY PROVINCE AND TERRITORY, CANADA, 2005, 2007-2008, AND 2009-2010**

Source: Statistics Canada, Canadian Community Health Survey, 2005, 2007/08, and 2009/10.

Denominators exclude responses of "do not know", "not stated", and refusal to answer.

\* Women who gave birth in the five years preceding the survey. CI—Confidence interval

**FIGURE 3.3****RATE OF EXCLUSIVE BREASTFEEDING****BY MATERNAL AGE, CANADA, 2005, 2007-2008, AND 2009-2010**Source: Statistics Canada, Canadian Community Health Survey, 2007, 2007/08, and 2009/10. Data for the 15–19 year category not shown because of high coefficient of variation ( $\geq 33\%$ ). Denominators exclude responses of "do not know", "not stated", and refusal to answer. \* Women who gave birth in the five years preceding the survey. CI—Confidence interval

**FIGURE 3.4****RATE OF EXCLUSIVE BREASTFEEDING***BY PROVINCE AND TERRITORY, CANADA, 2005, 2007-2008, AND 2009-2010*

Source: Statistics Canada, Canadian Community Health Survey, 2005, 2007-2008, and 2009-2010.

Denominators exclude responses of "do not know", "not stated", and refusal to answer.

\* Women who gave birth in the five years preceding the survey. CI=Confidence interval

The rate of exclusive breastfeeding for at least six months increased from 20.3% in 2005 to 23.1% in 2007/2008 and 25.9% in 2009/2010 (Figure 3.3). Exclusive breastfeeding increased with maternal age. In 2009/2010, it was lowest at 13.8% (95% CI: 10.0–17.7%) in mothers aged 20–24 years, and highest at 33.3% (95% CI: 29.5–37.2%) and 28.4% (95% CI: 22.3–34.5%) in mothers aged 35–39 and 40 years and over, respectively. During the same years, rates ranged from 15.4% (95% CI: 8.1–22.7%) in Newfoundland and Labrador to 42.0% (95% CI: 25.8–58.1%) in Yukon (Figure 3.4). As with breastfeeding initiation, there was a gradient across Canada with higher rates in the West.

**LIMITATIONS**

Information reported from the CCHS was collected from mothers recalling pregnancies up to five years preceding the survey, which may have affected the accuracy of the information obtained. Changes in the method for calculating exclusive breastfeeding rates resulted in slightly different rates than those published in the Perinatal Health Report, 2008 Edition.<sup>2</sup>

**REFERENCES**

1. Béland Y. Canadian community health survey - methodological overview. Health Rep 2002;13(3):9-14.
2. Public Health Agency of Canada. Canadian Perinatal Health Report, 2008 Edition. Ottawa, 2008.

## CHAPTER 4

## RATE OF LIVE BIRTHS TO TEENAGE MOTHERS

The age-specific rate of live births to mothers aged 15–17 years decreased from 9.1 per 1,000 females in 2001 to 7.2 per 1,000 females in 2005, and then increased slightly to 7.7 per 1,000 females in 2010. The rate of live births to mothers aged 18–19 years decreased from 31.0 per 1,000 females in 2001 to 26.6 per 1,000 in 2005 and 25.8 per 1,000 females in 2010. Live births to teenage mothers expressed as a proportion of all live births decreased between 2001 and 2010.

## DEFINITION

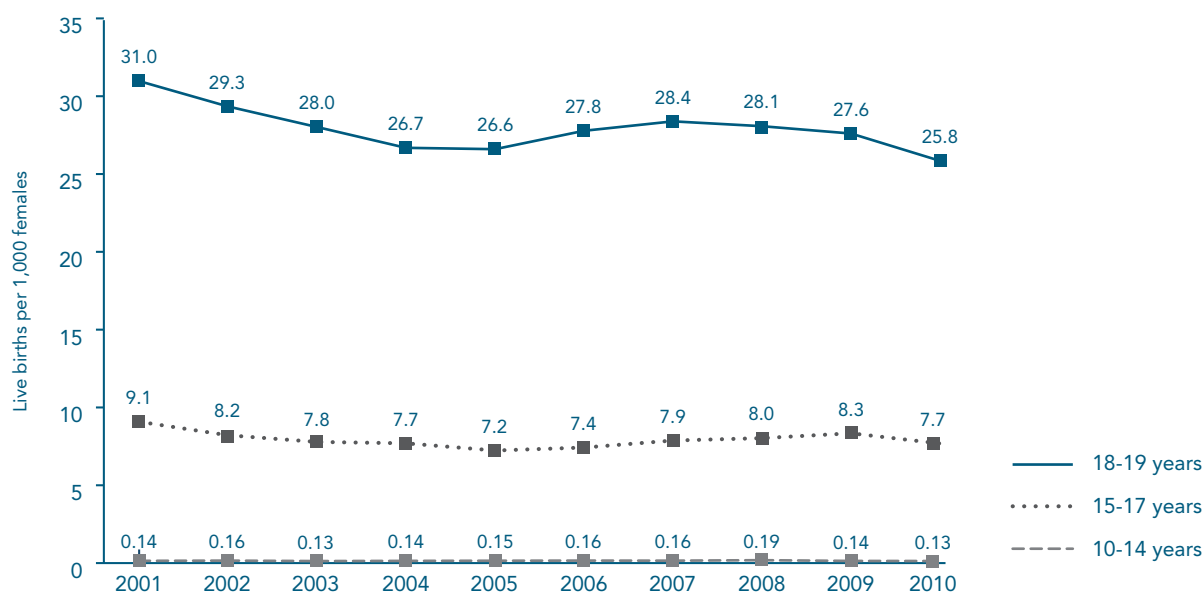
The age-specific rate of live births to teenage mothers is defined as the number of live births to mothers aged 10–14, 15–17 or 18–19 years per 1,000 females in the same age category. The proportion of live births to teenage mothers refers to the number of live births to mothers aged 10–14, 15–17 or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

## DATA SOURCES

Rates of live births to teenage mothers were calculated using vital statistics data (birth database). The denominators for the age-specific rate of live birth were female population estimates for the corresponding age category for the specific calendar year. Data from Ontario were excluded because of data quality concerns.<sup>1</sup>

FIGURE 4.1

AGE-SPECIFIC BIRTH RATES, FEMALES AGED 10-14, 15-17 AND 18-19 YEARS, CANADA (EXCLUDING ONTARIO),\* 2001-2010

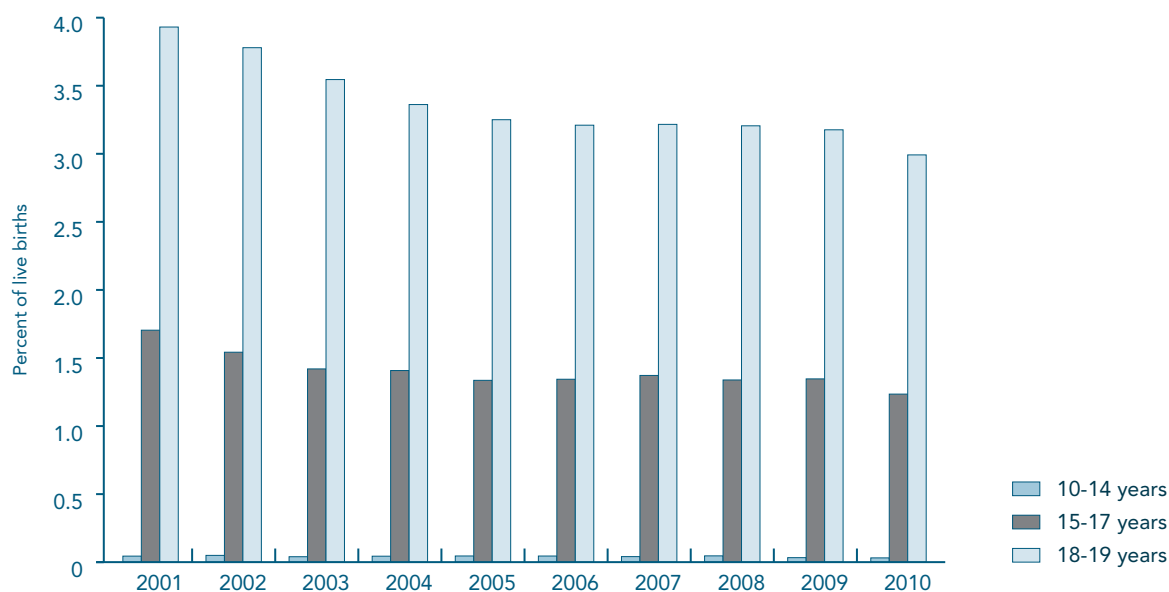


Source: Statistics Canada, Vital Statistics (live births) and CANSIM Table 051-0001 (number of women by age group)

\* Data for Ontario were excluded because of data quality concerns.

**FIGURE 4.2**

PROPORTION (%) OF LIVE BIRTHS TO MOTHERS AGED 10-14, 15-17 AND 18-19 YEARS,\*, CANADA (EXCLUDING ONTARIO),\*\* 2001-2010



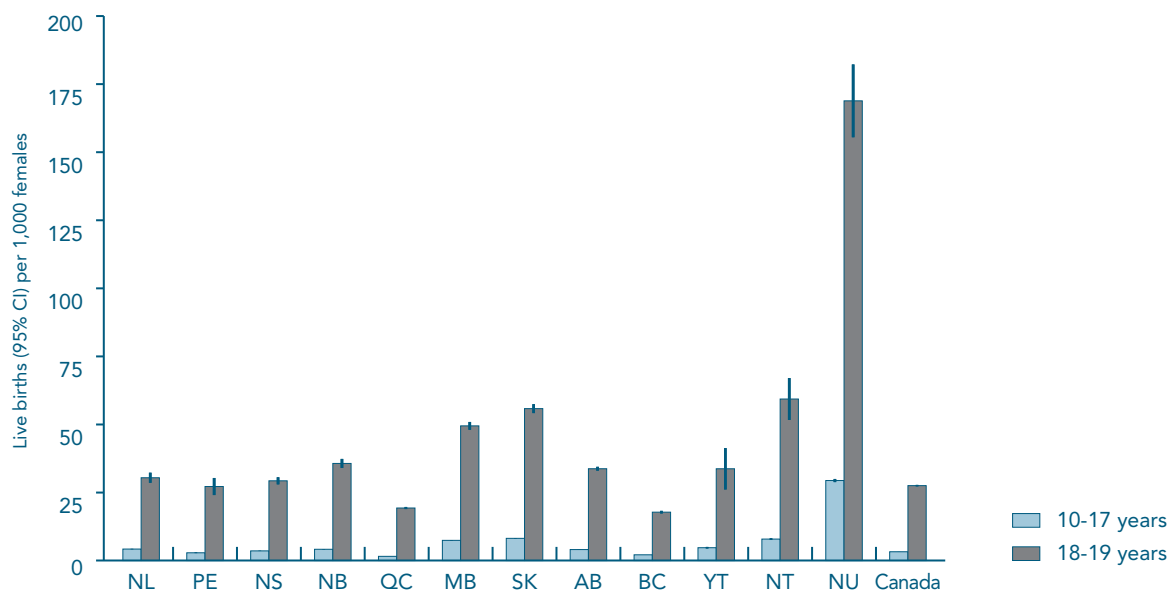
Source: Statistics Canada, Vital Statistics

\* Live births to mothers  $\geq 50$  years and those with unknown maternal age were excluded from the denominator.

\*\* Data for Ontario were excluded because of data quality concerns.

**FIGURE 4.3**

AGE-SPECIFIC LIVE BIRTH RATES, FEMALES AGED 10-17 AND 18-19 YEARS BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010



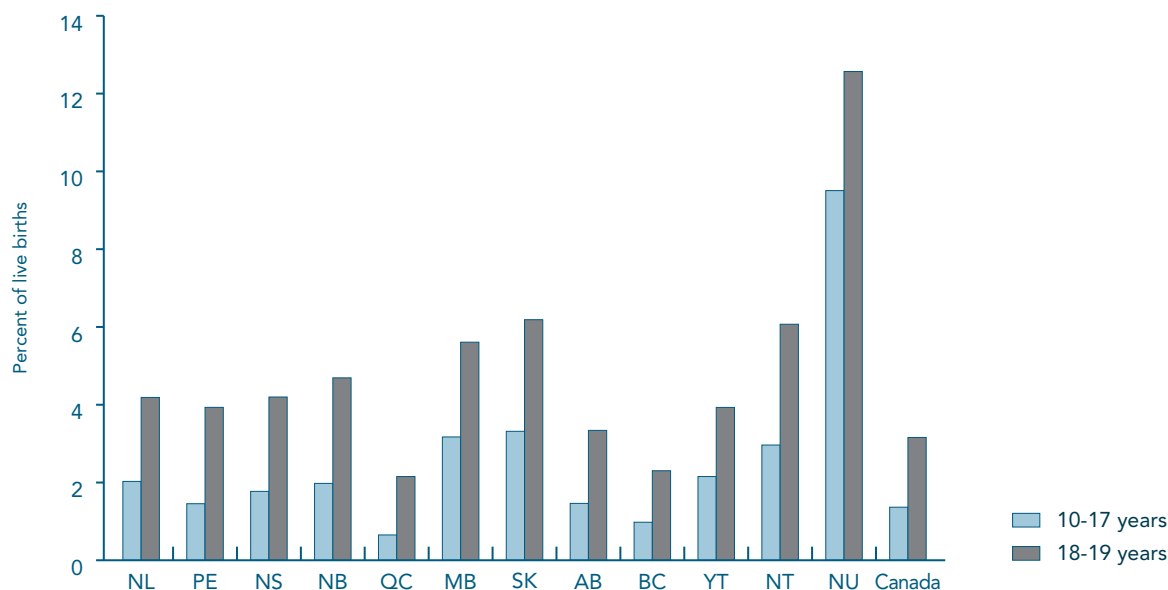
Source: Statistics Canada, Vital Statistics (live births) and CANSIM Table 051-0001 (number of women by age group)

\* Data for Ontario were excluded because of data quality concerns. CI—Confidence interval



**FIGURE 4.4**

PROPORTION (%) OF LIVE BIRTHS TO MOTHERS AGED 10-17 AND 18-19 YEARS\*  
BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO), \*\* 2006-2010



Source: Statistics Canada, Vital Statistics

\* Live births to mothers  $\geq 50$  years and those of unknown maternal age were excluded from the denominator.

\*\* Data for Ontario were excluded because of data quality concerns.

CI—Confidence interval

## RESULTS

After decreasing steadily from 9.1 per 1,000 females in 2001 to 7.2 per 1,000 females in 2005, the age-specific rate of live births to mothers aged 15–17 years increased slightly to 7.7 in 2010. The rate of live births to mothers aged 18–19 years decreased from 31.0 per 1,000 in 2001 to 26.6 per 1,000 in 2005 and then increased to 28.4 per 1,000 in 2007, then decreased steadily to 25.8 per 1,000 females in 2010. The rate of live births to mothers aged 10–14 years fluctuated between 0.1 and 0.2 per 1,000 (Figure 4.1).

The proportions of live births to mothers aged 10–14, 15–17 and 18–19 years also decreased between 2001 and 2010 (Figure 4.2).

In 2006–2010, age-specific live birth rates ranged from 1.6 per 1,000 (95% CI: 1.5–1.6) in Quebec to 29.4 per 1,000 (95% CI: 28.8–30.0) in Nunavut among females aged 10 to 17 years. Age-specific live birth rates ranged from 17.8 per 1,000 (95% CI: 17.3–18.3) in British Columbia to 168.9 per 1,000 (95% CI: 155.5–182.3) in Nunavut among women aged 18–19 years (Figure 4.3).

The proportions of births to mothers aged 10–17 and 18–19 years ranged respectively from 0.7% and 2.2% in Quebec to 9.5% and 12.6% in Nunavut (Figure 4.4) in 2006–2010.

## LIMITATIONS

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.

## REFERENCES

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

## CHAPTER 5

## RATE OF LIVE BIRTHS TO OLDER MOTHERS

The rate of live births to older mothers increased steadily between 2001 and 2010. The age-specific live birth rates to mothers aged 35-39 years, 40-44 years and 45-49 years increased respectively from 32.0 to 49.3 per 1,000, from 5.2 to 9.2 per 1,000 and from 0.2 to 0.4 per 1,000 females during these years.

## 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 vital statistics data (birth registrations). The denominators for the age-

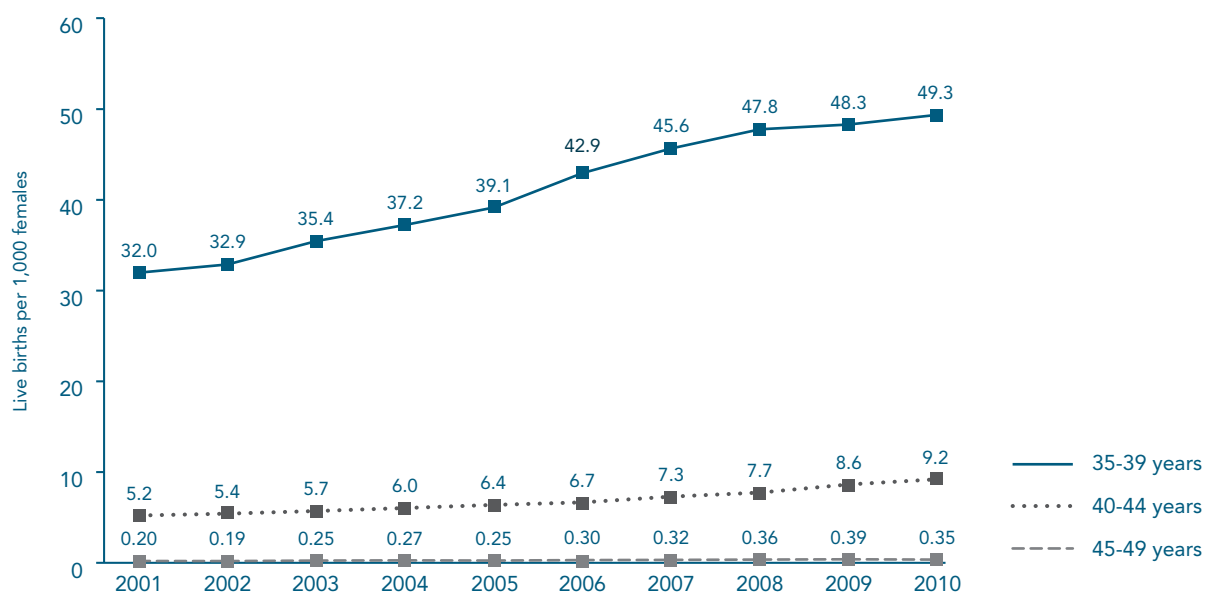
specific rate of live births were population estimates for the corresponding age category for the specific calendar year. Data from Ontario were excluded because of data quality concerns.<sup>1</sup>

## RESULTS

Between 2001 and 2010, the live birth rate to mothers aged 35-39 years, 40-44 years and 45-49 increased steadily from 32.0 to 49.3 per 1,000, from 5.2 to 9.2 per 1,000, and from 0.2 to 0.4 per 1,000 females, respectively (Figure 5.1). Similarly, the proportion of live births to women aged 35-39, 40-44 and 44-49 increased steadily (Figure 5.2).

FIGURE 5.1

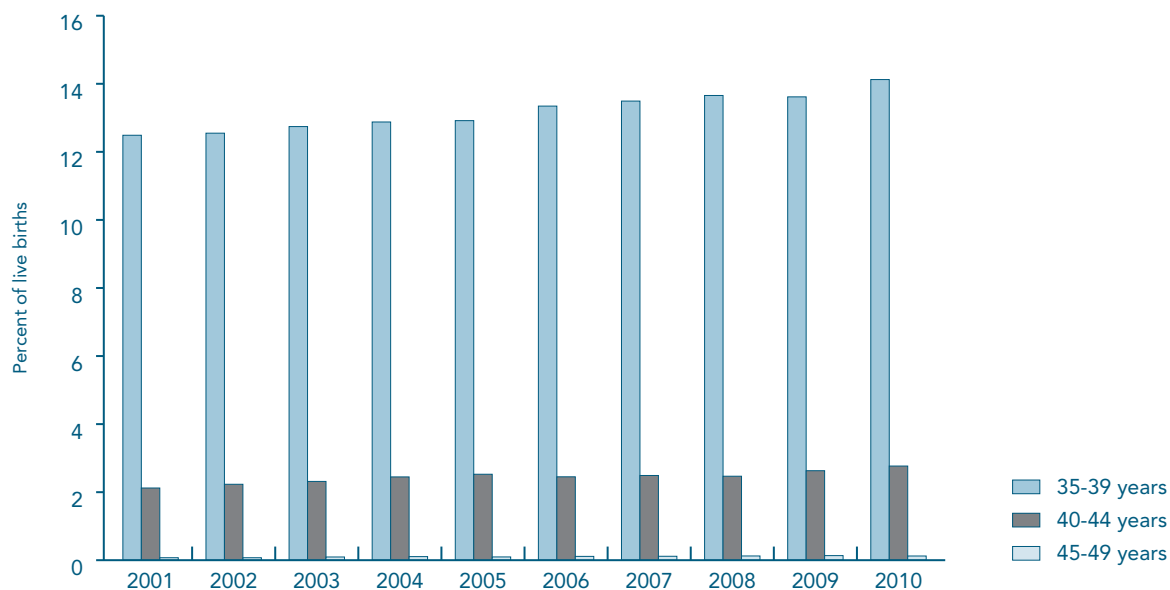
AGE-SPECIFIC BIRTH RATES, FEMALES AGED 35-39, 40-44 AND 45-49 YEARS, CANADA (EXCLUDING ONTARIO),\* 2001-2010



Source: Statistics Canada, Vital Statistics (live births) and CANSIM Table 051-0001 (number of women by age group)  
 \* Data for Ontario were excluded because of data quality concerns.

**FIGURE 5.2**

PROPORTION (%) OF LIVE BIRTHS TO MOTHERS AGED 35-39, 40-44 AND 45-49 YEARS,\*  
CANADA (EXCLUDING ONTARIO),\*\* 2001-2010



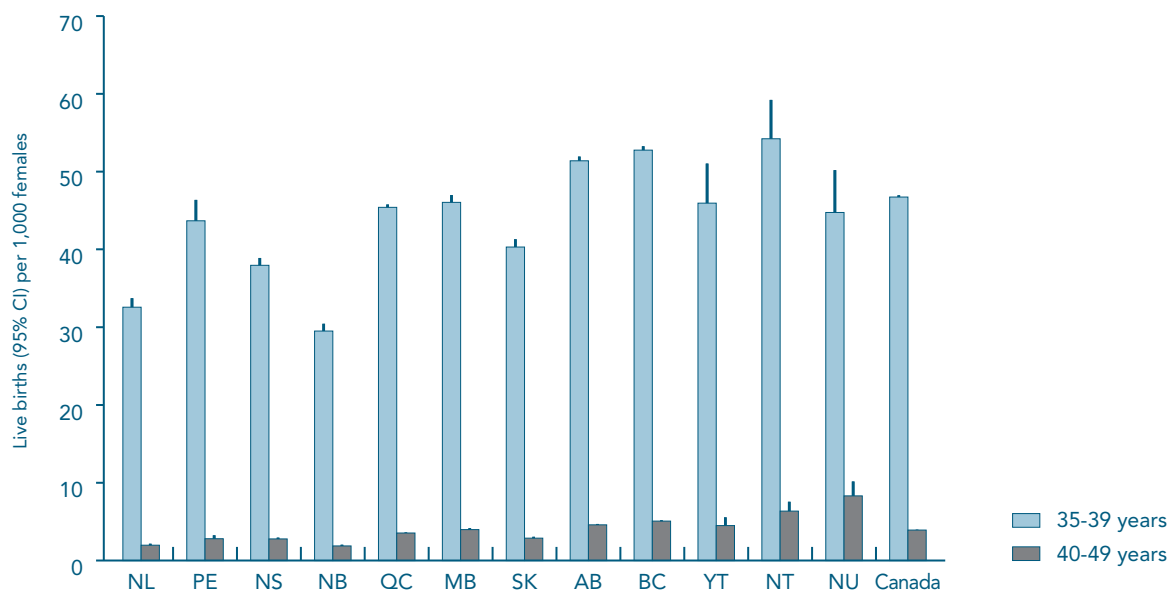
Source: Statistics Canada, Vital Statistics (live births) and CANSIM Table 051-0001 (number of women by age group)

\* Data for Ontario were excluded because of data quality concerns.

CI—Confidence interval

**FIGURE 5.3**

AGE-SPECIFIC BIRTH RATES, FEMALES AGED 35-39 AND 40-49 YEARS  
BY PROVINCE-TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010



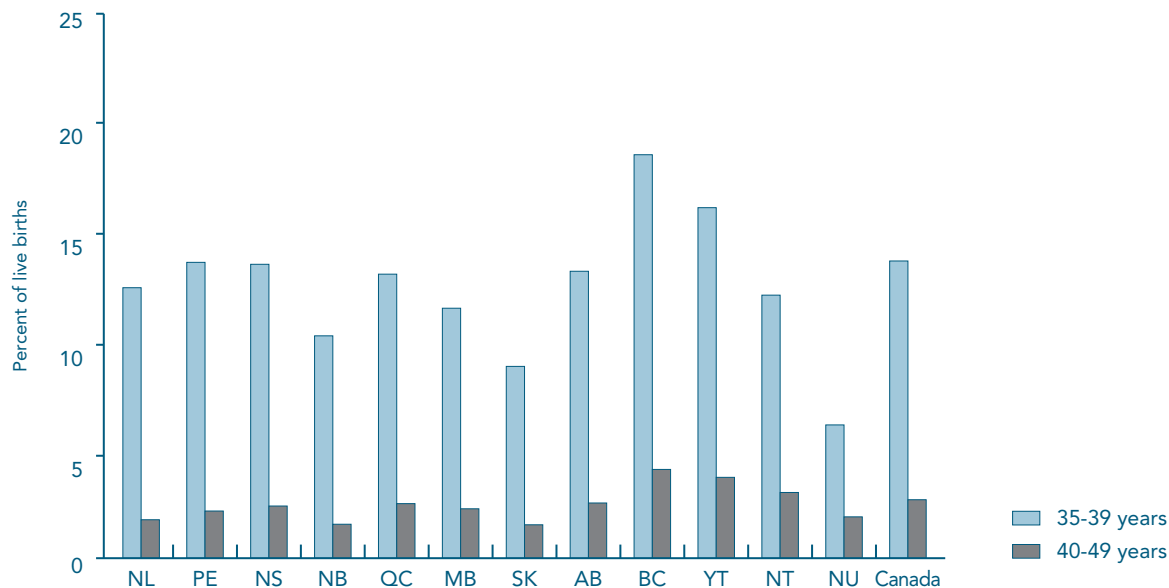
Source: Statistics Canada, Vital Statistics (live births) and CANSIM Table 051-0001 (number of women by age group)

\* Data for Ontario were excluded because of data quality concerns.

CI—Confidence interval

**FIGURE 5.4**

PROPORTION (%) OF LIVE BIRTHS TO MOTHERS AGED 35-39 AND 40-49 YEARS\*  
BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO), \*\* 2006-2010



Source: Statistics Canada, Vital Statistics

\* Live births to mothers  $\geq 50$  years and those with unknown maternal age were excluded from the denominator.

\*\* Data for Ontario were excluded because of data quality concerns.

CI—Confidence interval

The live birth rate to mothers aged 35–39 years in 2006–2010 ranged from 29.5 per 1,000 females (95% CI: 28.6–30.5) in New Brunswick to 54.3 per 1,000 females (95% CI: 49.3–59.3) in the Northwest Territories, and the live birth rate to mothers aged 40–49 years ranged from 1.9 per 1,000 females (95% CI: 1.7–2.0) in New Brunswick to 8.3 per 1,000 females (95% CI: 6.5–10.2) in Nunavut (Figure 5.3). In 2006–2010, the proportion of live births to mothers aged 35–39 years ranged from 6.1% in Nunavut to 18.5% in British Columbia in 2006–2010, and the proportion of live births to mothers aged 40–49 years ranged from 1.5% in Saskatchewan to 4.1% in British Columbia (Figure 5.4).

## LIMITATIONS

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.

## REFERENCES

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

## CHAPTER 6

## RATE OF CESAREAN DELIVERY

The rate of cesarean delivery increased between 2001-2002 and 2008-2009, and then stabilized. The rate was 28.0 per 100 hospital deliveries in 2010-2011.

## 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 caesarean 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 prior cesarean delivery. 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 number of cesarean deliveries to women who have had a cesarean delivery previously, expressed as a percentage of all deliveries to women who have had a prior cesarean delivery.

## DATA SOURCE

Cesarean delivery rates were calculated using the Discharge Abstract Database (DAD) of the Canadian Institute for Health Information (CIHI). This database does not include information from Quebec. Rates were calculated by fiscal year (April 1 to March 31). Provincial and territorial rates are based on province or territory of maternal residence (i.e., not province of delivery).

## RESULTS

The rate of cesarean delivery increased from 23.4 to 28.0 per 100 hospital deliveries between 2001-2002 and 2008-2009, and then stabilized. It was 28.0 per 100 hospital deliveries in 2010-2011. Similar trends were observed for primary cesarean (19.7 per 100 hospital deliveries without previous cesarean in 2010-2011) and repeat cesarean rates (81.8 per 100 hospital deliveries with previous cesarean in 2010-2011) (Table 6.1).

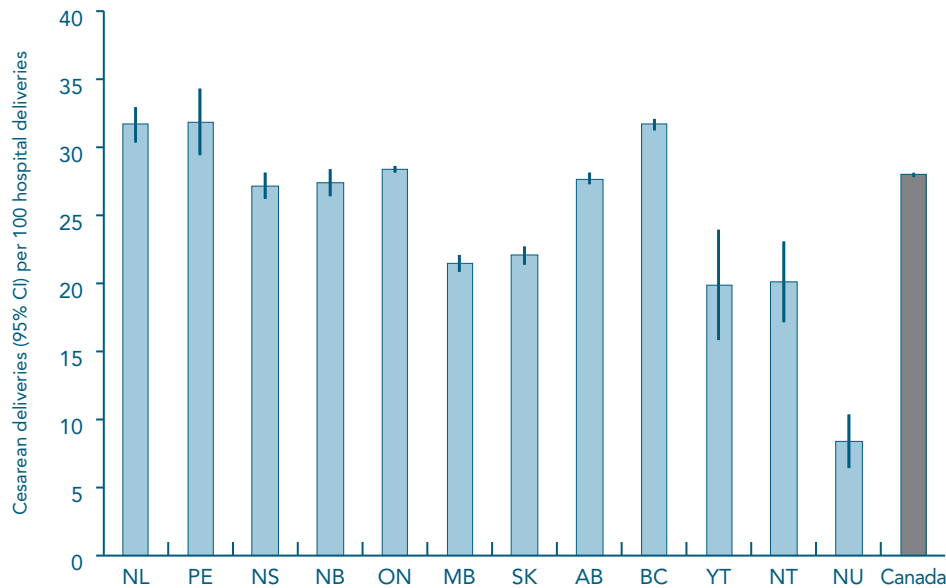
TABLE 6.1

RATES OF CESAREAN DELIVERY, PRIMARY AND REPEAT CESAREAN DELIVERY  
BY FISCAL YEAR, CANADA (EXCLUDING QUEBEC)\*, 2001-2002 TO 2010-2011

Fiscal year	Cesarean deliveries per 100 hospital deliveries	Primary cesarean deliveries per 100 hospital deliveries without a previous cesarean delivery	Repeat cesarean deliveries per 100 hospital deliveries with previous cesarean delivery
2001-2002	23.4	17.1	74.2
2002-2003	24.5	18.1	76.5
2003-2004	25.8	19.1	78.5
2004-2005	26.5	19.4	80.3
2005-2006	27.3	19.7	81.5
2006-2007	27.3	19.6	82.0
2007-2008	27.7	19.8	82.1
2008-2009	28.0	19.9	82.1
2009-2010	27.8	19.7	81.7
2010-2011	28.0	19.7	81.8

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database.

\* Quebec does not contribute to the Discharge Abstract Database.

**FIGURE 6.1****RATE OF CESAREAN DELIVERIES****BY PROVINCE/TERRITORY OF RESIDENCE, CANADA (EXCLUDING QUEBEC),\* 2010-2011 FISCAL YEAR**

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI—Confidence interval

Nunavut had the lowest rate of cesarean deliveries, 8.4% (95% CI: 6.5–10.3%), followed by the two other territories, Yukon (19.9%, 95% CI: 15.9–24.0%) and the Northwest Territories (20.1%, 95% CI: 17.1–23.1%). Provincial rates were higher, ranging from 21.5% (95% CI: 20.8–22.1%) in Manitoba to 31.8% (95% CI: 31.3–32.2%) in British Columbia (Figure 6.1).

**LIMITATIONS**

Out-of-hospital deliveries were not included in the calculation of cesarean delivery rates. In addition, data do not allow determining with certainty the reasons for which caesareans were performed, which limits interpretation of the results.

## CHAPTER 7

## SEVERE MATERNAL MORBIDITY RATE

Between 2003/2004 and 2010/2011, the overall rates of severe maternal morbidity fluctuated between 13.2 and 15.4 per 1,000 deliveries. In 2010/11, the rate was 15.4 (95% CI: 14.9-15.8) per 1,000 deliveries. The most common severe maternal morbidities between 2006/2007 and 2010/2011 included: blood transfusion; postpartum hemorrhage and blood transfusion; hysterectomy; cardiac arrest/failure, myocardial infarction or pulmonary edema; embolization or ligation of pelvic vessels or suturing of uterus and postpartum hemorrhage; puerperal sepsis; uterine rupture during labour; repair of bladder, urethra, or intestine; and eclampsia.

## DEFINITION

The Canadian Perinatal Surveillance System uses a pragmatic definition for severe maternal morbidity that includes disease-specific (e.g., eclampsia), intervention-specific (e.g., blood transfusion) and organ dysfunction-based (e.g., acute renal failure) criteria. The severe morbidity rate is expressed per 1,000 deliveries in a given place and time. The list of conditions and interventions included in the

composite severe maternal morbidity indicator can be found in previous publications.<sup>1,2</sup>

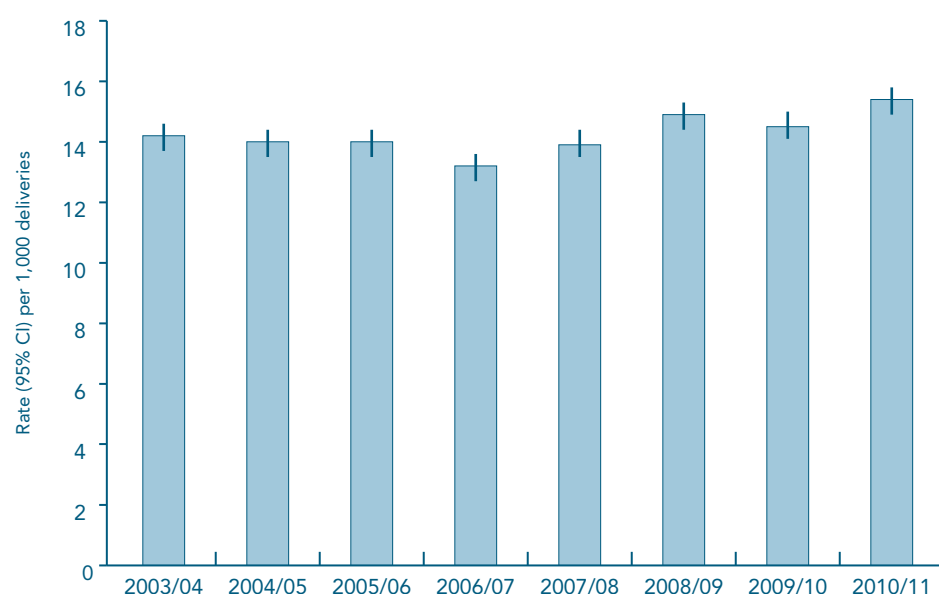
## DATA SOURCE

Rates of severe maternal morbidity were calculated using data from the Discharge Abstract Database (DAD) of the Canadian Institute for Health Information (CIHI) for the period 2003/2004 to 2010/2011. This database contains information

FIGURE 7.1

## RATE OF SEVERE MATERNAL MORBIDITY

CANADA (EXCLUDING QUEBEC),\* FISCAL YEARS 2003/2004 TO 2010/2011



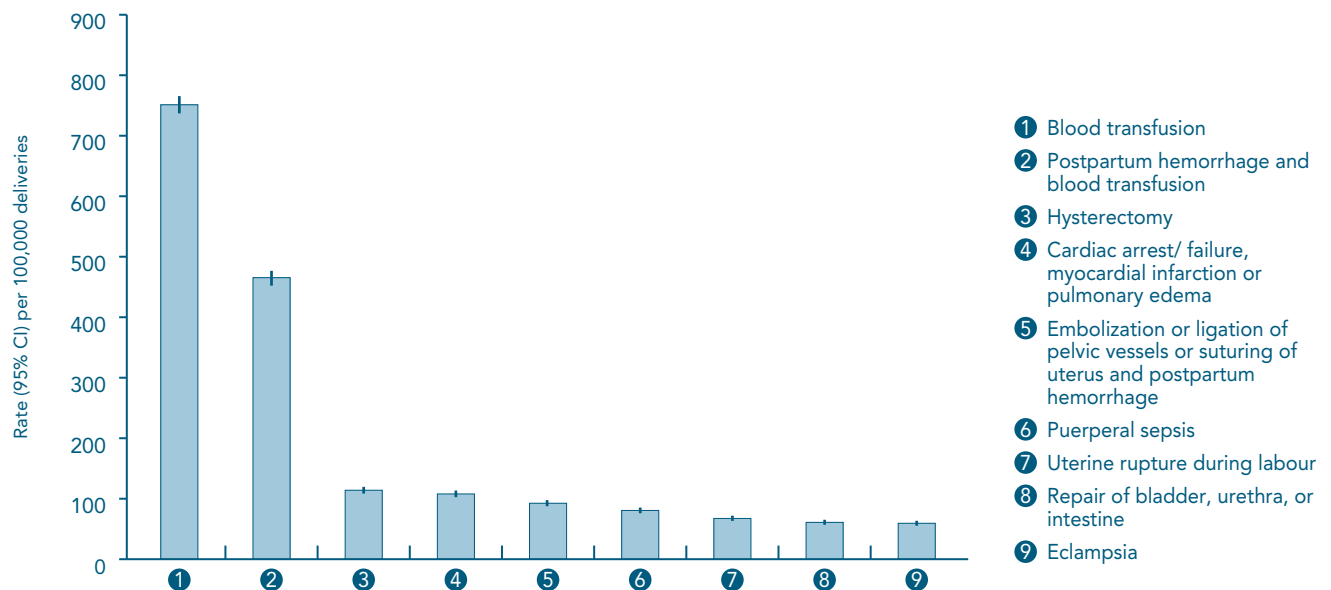
Source: Canadian Institute for Health Information, Discharge Abstract Database. Manitoba data were incomplete for fiscal year 2003-2004.

\* Quebec does not contribute to the Discharge Abstract Database. CI—Confidence interval



**FIGURE 7.2**

RATE OF THE MOST COMMON SEVERE MATERNAL MORBIDITIES  
CANADA (EXCLUDING QUEBEC),\* 2006-2007 TO 2010-2011



Source: Canadian Institute for Health Information, Discharge Abstract Database.

\* Quebec does not contribute to the Discharge Abstract Database. CI—Confidence interval

on all hospital discharges in Canada (except Quebec). Diagnoses and procedures in the database are coded using the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)<sup>3</sup> and the Canadian Classification of Health Interventions (CCI), respectively. Rates are calculated based on fiscal years (April 1 to March 31).

## RESULTS

Between 2003/2004 and 2010/2011, the overall rates of severe maternal morbidity fluctuated from a low of 13.2 (95% CI: 12.7–13.6) per 1,000 deliveries in 2006/2007 to a high of 15.4 (95% CI: 14.9–15.8) per 1,000 deliveries in 2010/2011 (Figure 7.1).

The most common severe maternal morbidities for fiscal years 2006/2007 to 2010/2011 included: blood transfusion; postpartum hemorrhage and blood transfusion; hysterectomy; cardiac arrest/failure, myocardial infarction or pulmonary edema; embolization or ligation of pelvic vessels or suturing of uterus and postpartum hemorrhage; puerperal sepsis; uterine rupture during labour; repair of bladder, urethra, or intestine; and eclampsia (Figure 7.2).

## LIMITATIONS

Some severe maternal conditions (e.g., severe preeclampsia) could not be identified due to limitations of the ICD-10 codes. Severe maternal morbidity rates in Quebec could not be estimated because this province's data are not part of the Discharge Abstract Database.

## 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.
3. World Health Organization. International Statistical Classification of Diseases and Related Health Problems, 10th Revision, 2008 Edition. Geneva: World Health Organization; 2008.

CHAPTER 8

# MATERNAL MORTALITY RATE

Over the 1997/1998 to 2010/2011 time period, maternal mortality rates fluctuated between 6.1 and 11.9 per 100,000 deliveries. Between 2002/2003 and 2010/2011, the most common diagnoses associated with maternal deaths were: diseases of the circulatory system; other indirect causes; postpartum hemorrhage; hypertension complicating pregnancy, childbirth and the puerperium; and obstetric embolism.

DEFINITION

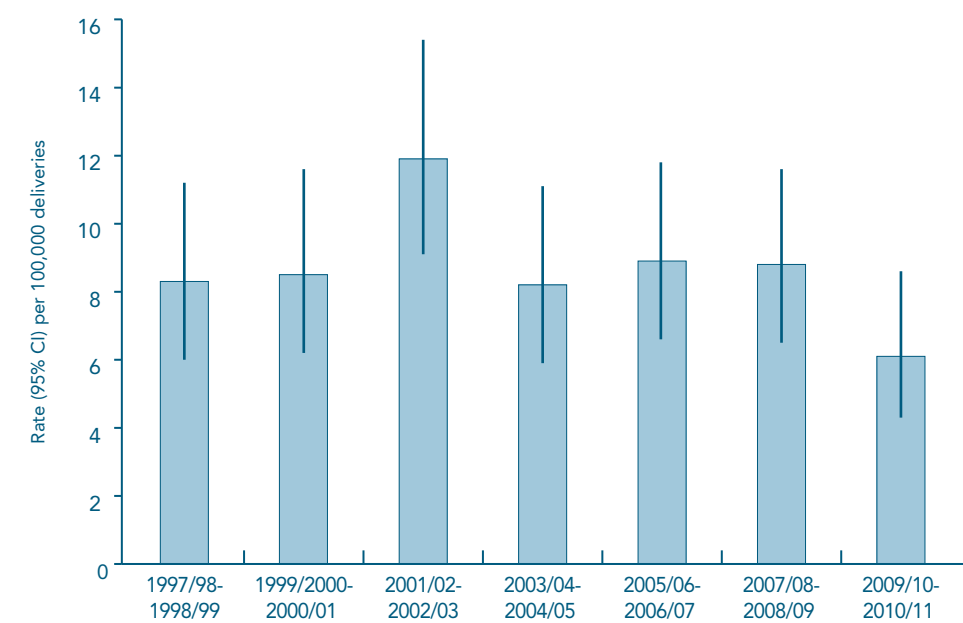
The definition of maternal death under the International Statistical Classification of Diseases, Tenth Revision (ICD-10) is: “The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.”<sup>1</sup> For the purpose of this report, the maternal mortality

rate is defined as the number of maternal deaths (occurring during pregnancy, childbirth, or within 42 days after delivery or termination of pregnancy) divided by the number of deliveries, and expressed per 100,000 deliveries.<sup>2,3</sup>

DATA SOURCE

Data from the Canadian Institute of Health Information (CIHI)’s Discharge Abstract Database (DAD) were used to identify in-hospital deaths

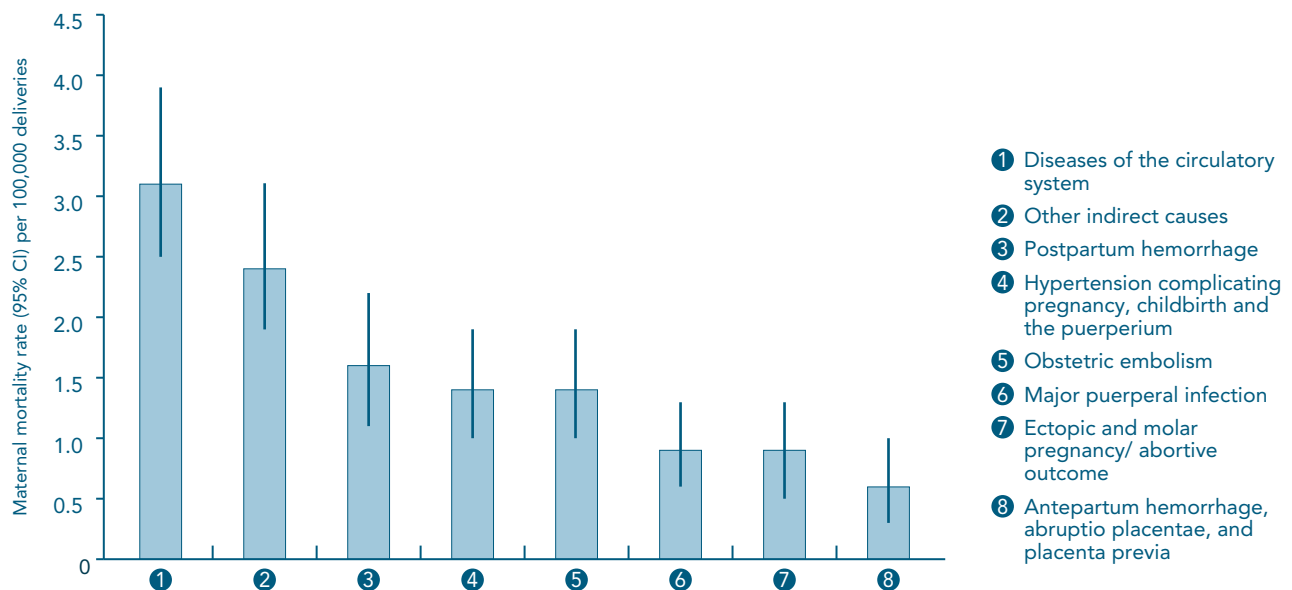
FIGURE 8.1  
MATERNAL MORTALITY RATES  
CANADA (EXCLUDING QUEBEC),\* 1997/1998 TO 2010/2011



Source: Canadian Institute for Health Information, Discharge Abstract Database.  
\* Quebec does not contribute data to Discharge Abstract Database. Manitoba data, which were incomplete for earlier years, were included from 2004/2005.  
CI—Confidence interval

**FIGURE 8.2**

DIAGNOSES ASSOCIATED WITH MATERNAL DEATHS  
CANADA (EXCLUDING QUEBEC),\* 2002/2003 TO 2010/2011



Source: Canadian Institute for Health Information, Discharge Abstract Database.

Diagnoses do not represent underlying causes of death. Therefore, cases could have more than one associated diagnosis.

\* Quebec does not contribute data to the Discharge Abstract Database. Manitoba data, which were incomplete for earlier years, were included from 2004/2005. CI—Confidence interval

among women of reproductive age (15–54 years) in Canada (excluding Quebec). CIHI data were used instead of the more traditional vital statistics data because recent papers by the Canadian Perinatal Surveillance System have shown that hospitalization data are more comprehensive and timely.<sup>2,3</sup> Methods used are described in detail elsewhere.<sup>3</sup> Temporal trends are presented by two fiscal year periods because of the small number of events. Manitoba data, which were incomplete for earlier years, were included from fiscal year 2004/2005.

## RESULTS

In 2009/2010 to 2010/2011, the maternal death rate was 6.1 per 100,000 deliveries. From 1997/1998 to 2010/2011, maternal mortality rates fluctuated between a low of 6.1 per 100,000 deliveries and a high of 11.9 per 100,000 deliveries (Figure 8.1).

The most common diagnoses associated with these maternal deaths in 2002/2003 to 2010/2011 were diseases of the circulatory system; other indirect causes (e.g., diseases of the digestive system and 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 8.2).

## LIMITATIONS

The DAD does not include data from Quebec, and data from Manitoba were excluded from some analyses because they were incomplete before 2004/2005. Deaths that occurred outside of hospitals were not included in this analysis. The DAD data include multiple diagnostic codes for each maternal death, but do not assign an underlying cause of death. Therefore, maternal mortality rates by underlying cause of death cannot be calculated from these data.

## REFERENCES

1. World Health Organization. International Statistical Classification of Diseases and Related Health Problems, 10th Revision, 2008 Edition. Geneva: World Health Organization; 2008.

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 9

## PRETERM BIRTH RATE

From 2001 to 2010, the rate of preterm birth in Canada fluctuated between 7.5 and 8.2% of live births. It was 7.7% in 2010.

## 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 vital statistics data (birth database). Data from Ontario were excluded because of data quality concerns.<sup>1</sup>

## RESULTS

From 2001 to 2010, the preterm birth rate fluctuated between 7.5 and 8.2% of live births; it was 7.7% in 2010. The highest proportion of

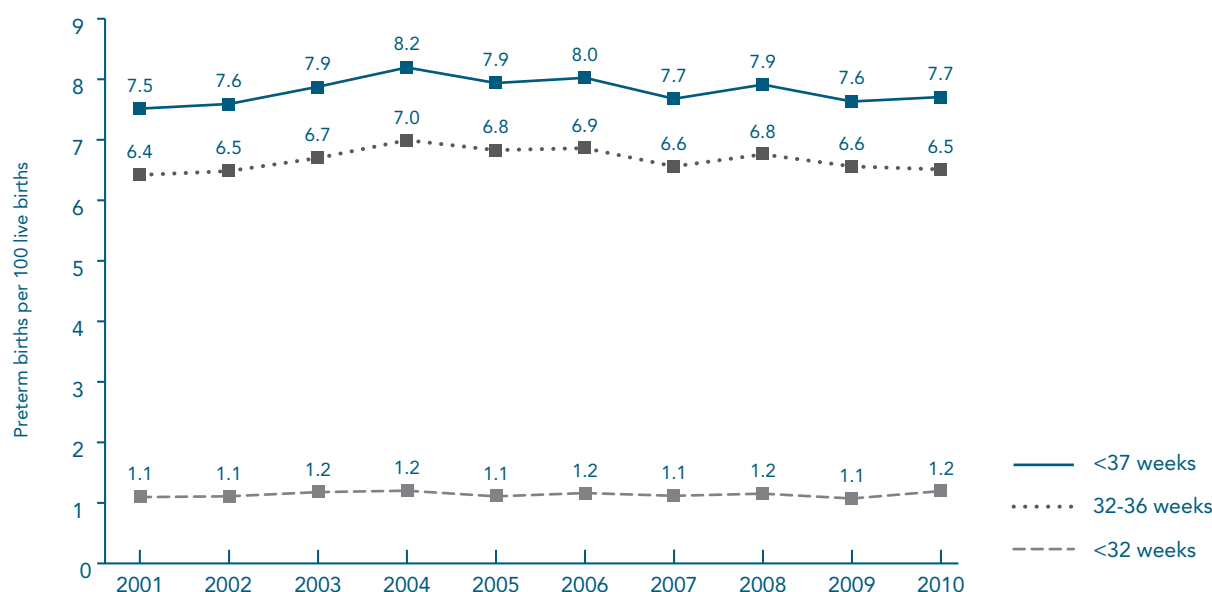
preterm births occurred between 32 and 36 weeks gestation, with the rate ranging from 6.4 to 7.0%. During the same period, the rate of early preterm birth (<32 weeks) remained stable at 1.1–1.2% of live births (Figure 9.1).

Preterm birth rates were substantially higher among multiple births. In 2010, preterm birth rates among singleton, twins, and triplets or higher-order live births were 6.2, 53.0, and 98.4%, respectively (Figure 9.2).

In 2006–2010, preterm birth rates ranged from 7.4% of live births in Quebec and Saskatchewan (Quebec, 95% CI: 7.3–7.5%, Saskatchewan, 95% CI: 7.2–7.6%) to 12.8% (95% CI: 11.8–13.9%) in Nunavut (Figure 9.3).

FIGURE 9.1

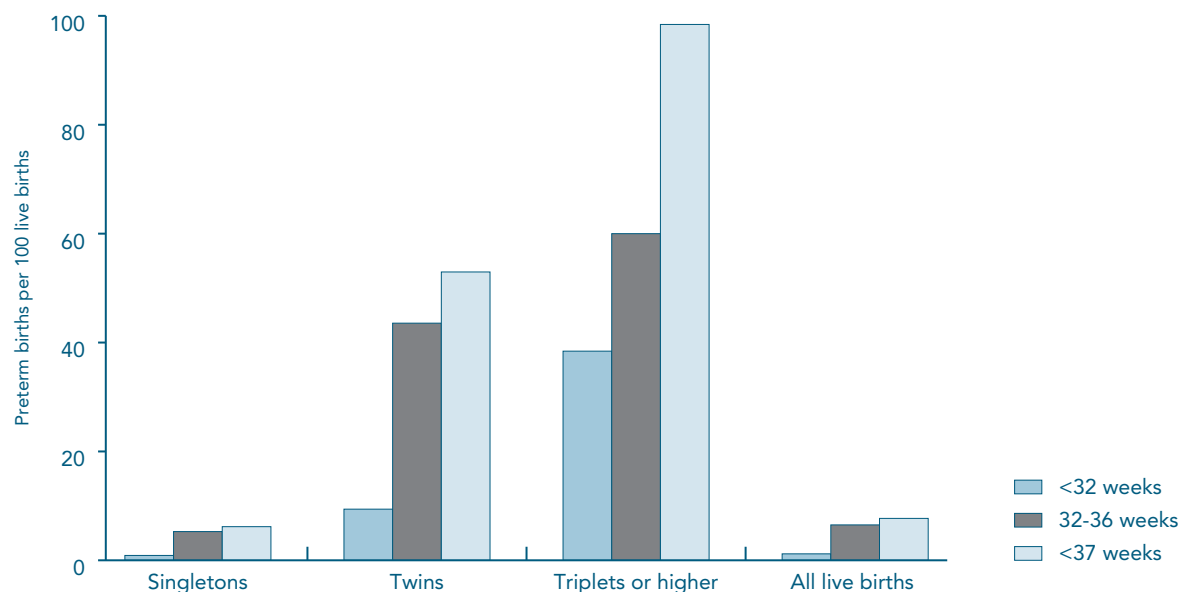
RATE OF PRETERM BIRTH  
CANADA (EXCLUDING ONTARIO),\* 2001-2010



Source: Statistics Canada, Vital Statistics \* Data for Ontario were excluded because of data quality concerns.

**FIGURE 9.2**

RATE OF PRETERM BIRTH BY PLURALITY  
CANADA (EXCLUDING ONTARIO),\* 2010

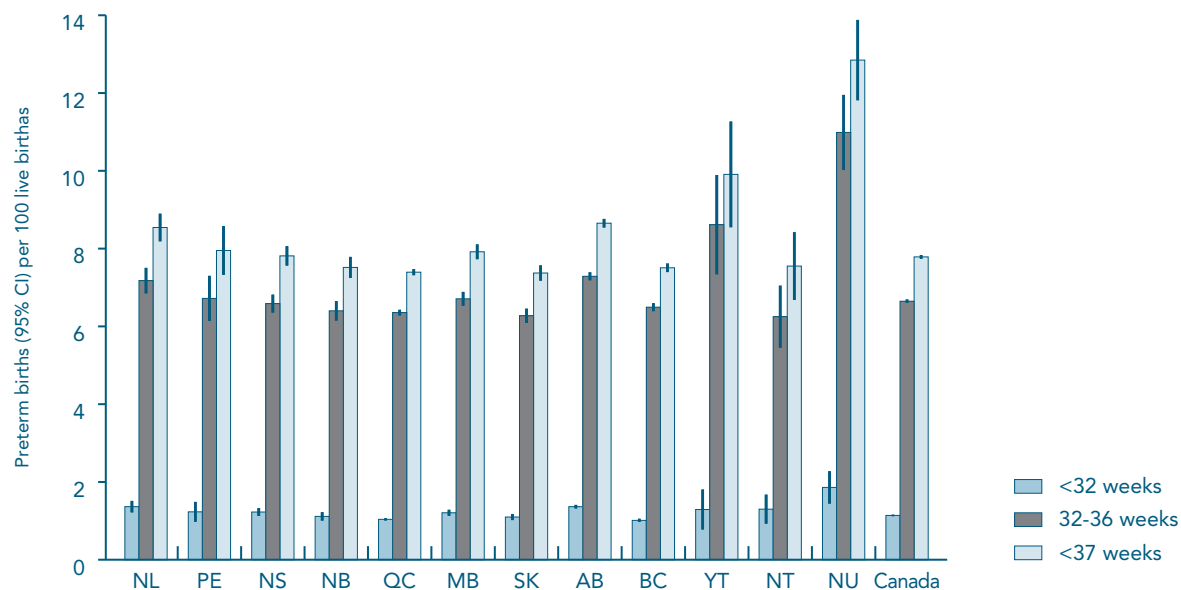


Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

**FIGURE 9.3**

RATE OF PRETERM BIRTH  
BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010



Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

CI—Confidence interval

## LIMITATIONS

The source and method of determination of gestational age are not specified on birth certificates. Moreover, it may have changed over time.

## REFERENCES

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



CHAPTER 10

POSTTERM BIRTH RATE

From 2001 to 2008, the rate of postterm birth declined steadily in Canada from 1.14 to 0.62% of live births. It then stabilized to 0.61% in 2010.

DEFINITION

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

DATA SOURCE

Postterm birth rates were calculated using vital statistics data (birth database). Data from Ontario were excluded because of data quality concerns.<sup>1</sup>

RESULTS

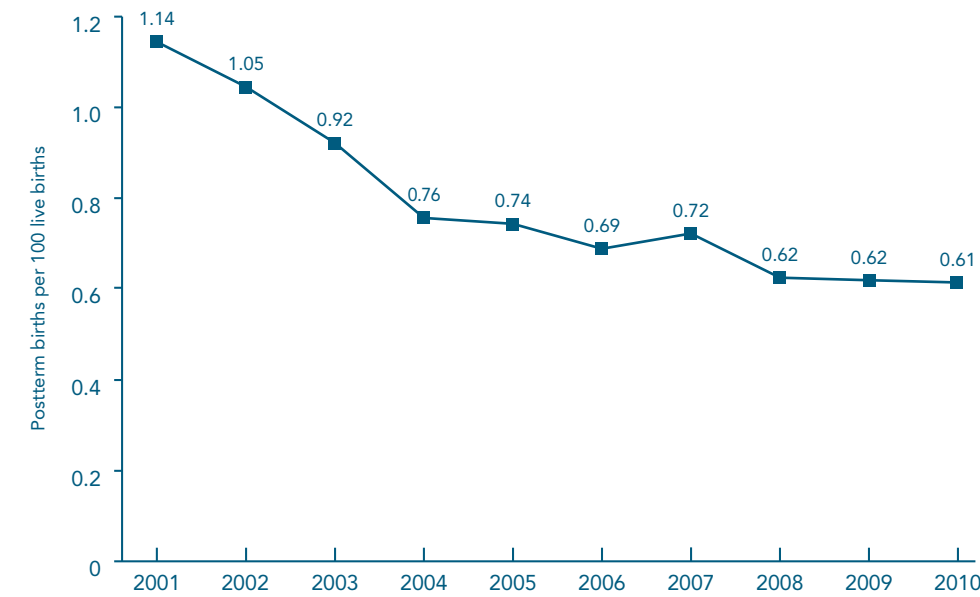
The rate of postterm birth declined from 1.14% of live births in 2001 to 0.625 in 2008. It then stabilized and was 0.61% in 2010 (Figure 10.1).

Between 2006 and 2010, the Canadian average was 0.65% of live births. Rates ranged from 0.33% (95% CI: 0.27–0.39%) in New Brunswick to 3.37% (95% CI: 2.77–3.96%) in the Northwest Territories (Figure 10.2).

FIGURE 10.1

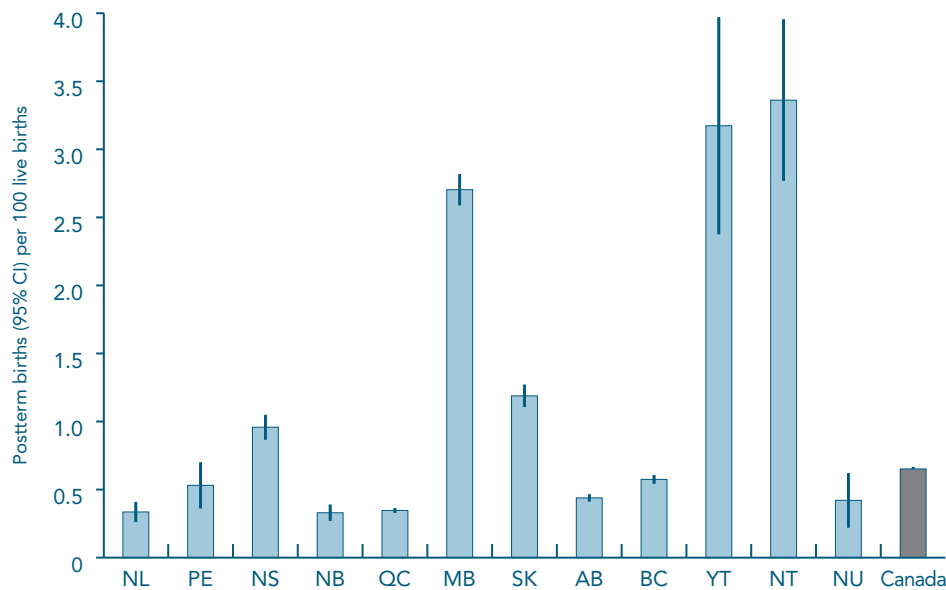
RATE OF POSTTERM BIRTH

CANADA (EXCLUDING ONTARIO),\* 2001-2010



Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

**FIGURE 10.2****RATE OF POSTTERM BIRTH****BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010**

Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

CI—Confidence interval

**LIMITATIONS**

The source and method of determination of gestational age are not specified on birth certificates. Moreover, it may have changed over time.

**REFERENCES**

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

## CHAPTER 11

## SMALL-FOR-GESTATIONAL-AGE BIRTH RATE

The rate of small-for-gestational-age (SGA) birth among singleton infants fluctuated between 7.8% and 8.3% between 2001 and 2010. It was 8.3% in 2010.

## DEFINITION

The SGA birth rate is defined as the number of singleton live births whose birth weight is below the 10th percentile of the sex-specific birth weight for gestational age reference, 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 gestational age, based on 1994–1996 live births.<sup>1</sup>

## DATA SOURCE

SGA rates were calculated using vital statistics data (birth database). Data from Ontario were excluded

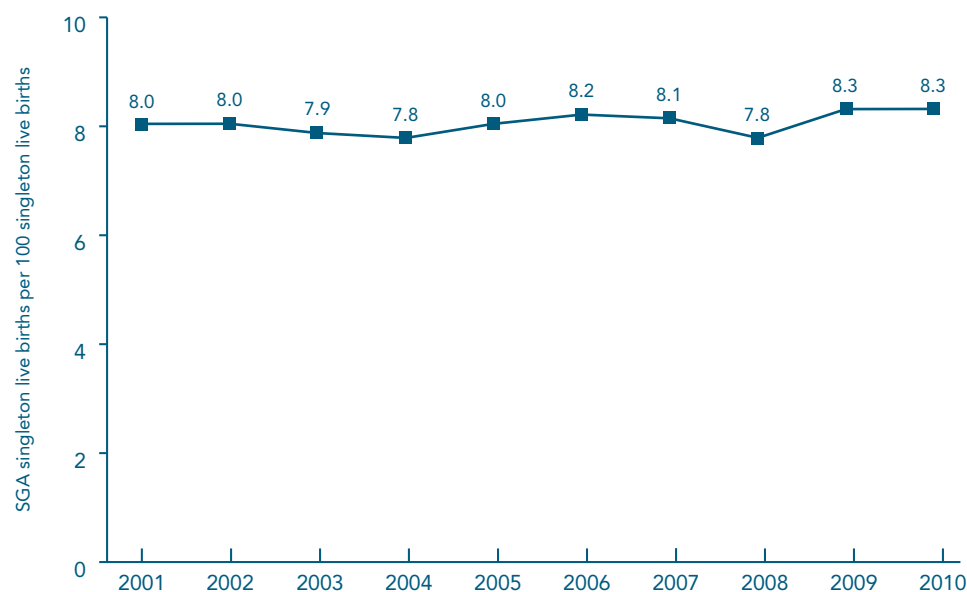
because of data quality concerns.<sup>2</sup> Live births with unknown gestational age, live births with gestational age less than 22 weeks or greater than 43 weeks, live births with unknown birth weight, and multiple births were excluded from these calculations.

## RESULTS

The SGA birth rate fluctuated between 7.8% and 8.3% between 2001 and 2010. It was 8.3% in 2010 (Figure 11.1). Between 2006 and 2010, rates ranged from 6.0% (95% CI: 4.9–7.1%) in Yukon to 8.8% (95% CI: 8.7–8.9%) in Alberta (Figure 11.2).

FIGURE 11.1

RATE OF SMALL-FOR-GESTATIONAL-AGE (SGA)  
BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001-2010



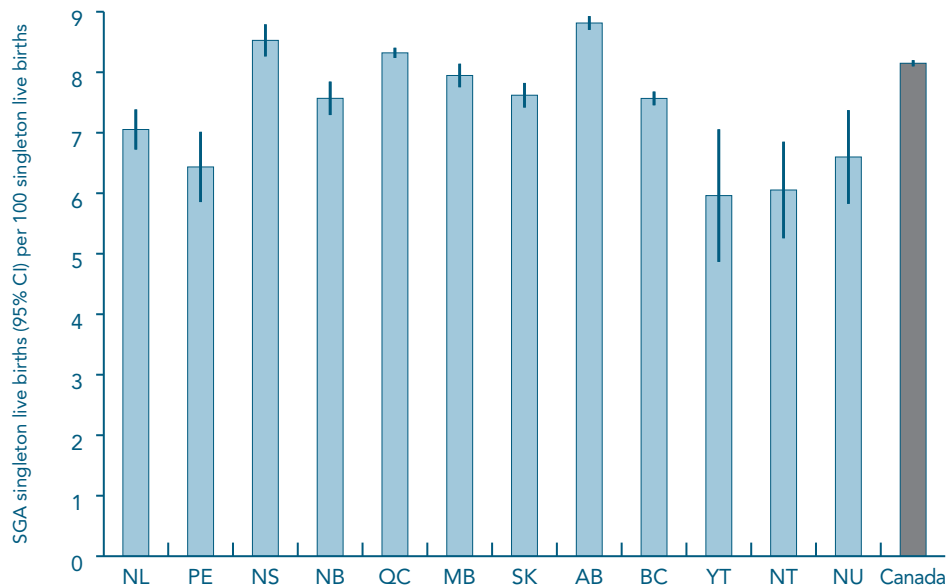
Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

**FIGURE 11.2**

RATE OF SMALL-FOR-GESTATIONAL-AGE (SGA)

BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010



Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

CI—Confidence interval

## LIMITATIONS

The source and method of determination of gestational age are not specified on birth certificates. Moreover, it may have changed over time.

## REFERENCES

1. Kramer MS, Platt RW, Wen SW, Joseph KS, Allen A, Abrahamowicz M, et al. A new and improved population-based Canadian reference for birth weight for gestational age. *Pediatrics* 2001;108(2):E35.
2. Public Health Agency of Canada. Canadian Perinatal Health Report, 2008 Edition. Ottawa, 2008.

## CHAPTER 12

## LARGE-FOR-GESTATIONAL-AGE BIRTH RATE

The rate of large-for-gestational-age (LGA) birth among singleton infants decreased from 11.8% in 2001 to 10.4% in 2010.

## DEFINITION

The LGA rate is defined as the number of singleton live births whose birth weight is above the 90<sup>th</sup> percentile of the sex-specific birth weight for gestational age reference, 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 gestational age, based on 1994–1996 live births.<sup>1</sup>

## DATA SOURCE

LGA birth rates were calculated using vital statistics data (birth database). Data from Ontario were

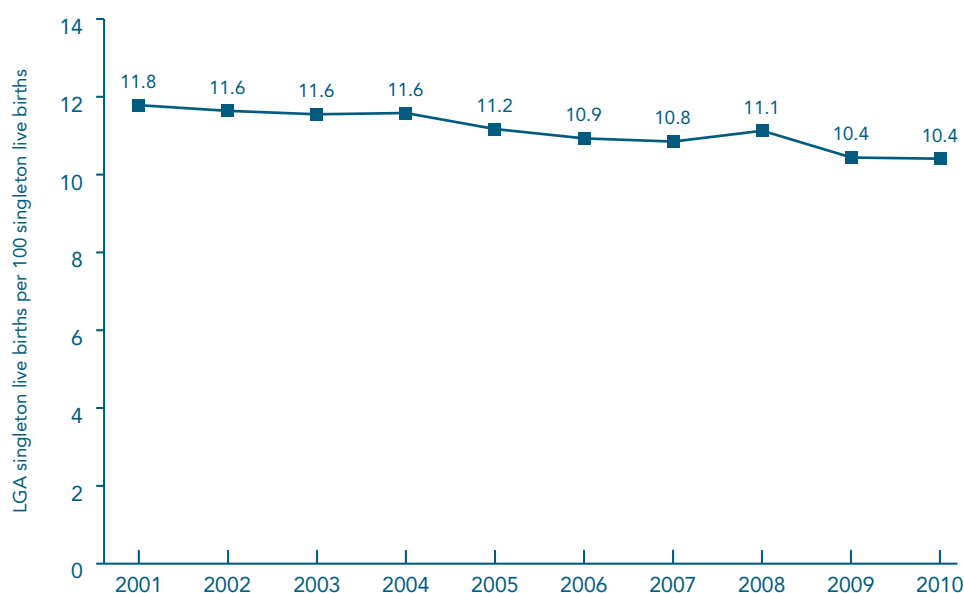
excluded because of data quality concerns.<sup>2</sup> Live births with unknown gestational age, live births with gestational age less than 22 weeks or greater than 43 weeks, live births with unknown birth weight, and multiple births were excluded from these calculations.

## RESULTS

The LGA birth rate decreased from 11.8% in 2001 to 10.4% in 2010 (Figure 12.1). Between 2006 and 2010, rates ranged from 9.3% (95% CI: 9.2–9.4%) in Quebec to 17.8% (95% CI: 16.6–19.1%) in the Northwest Territories (Figure 12.2).

FIGURE 12.1

RATE OF LARGE-FOR-GESTATIONAL-AGE (LGA)  
BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001-2010



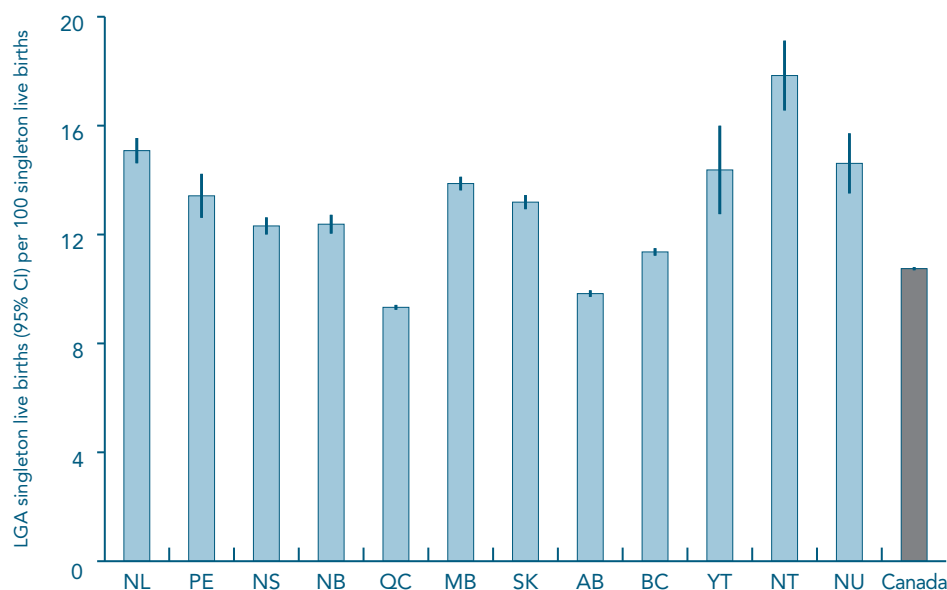
Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

**FIGURE 12.2**

RATE OF LARGE-FOR-GESTATIONAL-AGE (LGA)

BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010



Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

CI—Confidence interval

## LIMITATIONS

The source and method of determination of gestational age are not specified on birth certificates. Moreover, it may have changed over time.

## REFERENCES

1. Kramer MS, Platt RW, Wen SW, Joseph KS, Allen A, Abrahamowicz M, et al. A new and improved population-based Canadian reference for birth weight for gestational age. *Pediatrics* 2001;108(2):E35.
2. Public Health Agency of Canada. Canadian Perinatal Health Report, 2008 Edition. Ottawa, 2008.

## CHAPTER 13

## FETAL MORTALITY RATE

The rate of fetal mortality among births weighing  $\geq 500$  g and  $\geq 1,000$  g increased between 2003 and 2010. In 2010, the rates were 5.1 and 3.7 per 1,000 total births, respectively.

## DEFINITION

The fetal mortality rate is defined as the number of late fetal deaths per 1,000 total births (live births and stillbirths). The definition of stillbirth in most of Canada includes all fetal deaths with a gestational age at delivery of 20 weeks or greater, or a birth weight of at least 500 g. The definition varies slightly in Quebec where only the birth weight criterion applies (birth weight  $\geq 500$  g).

In all provinces and territories, any expulsion or extraction of a dead fetus, including pregnancy termination, meeting the gestational age and birth weight criteria mentioned above must be

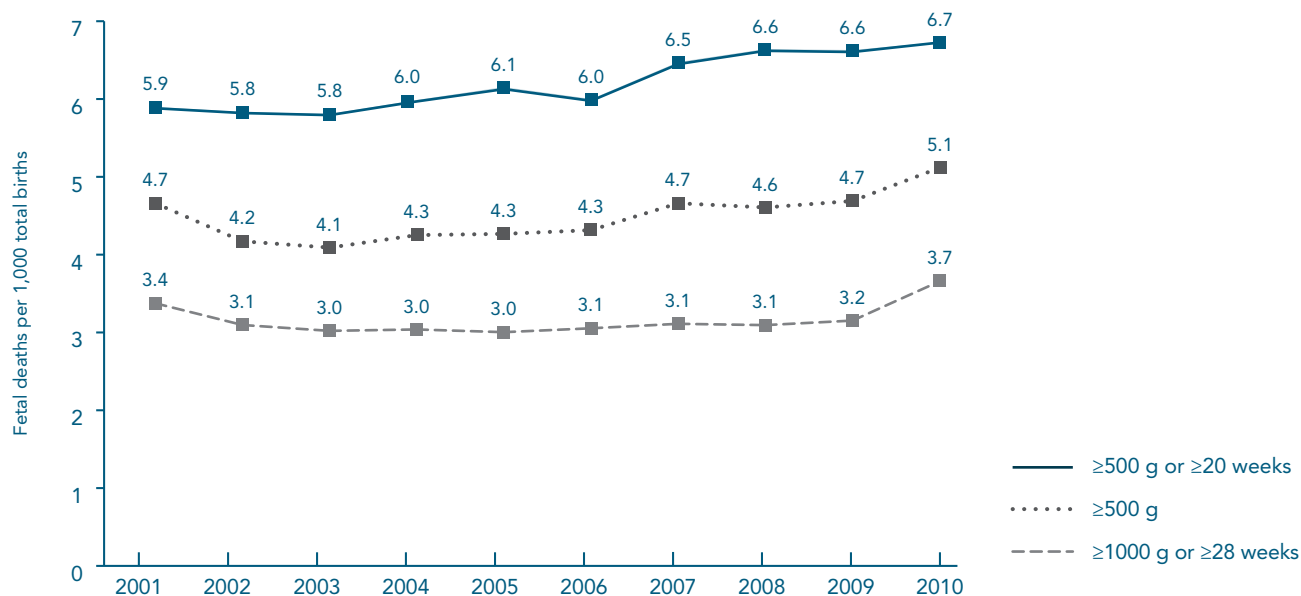
registered as a stillbirth. The following rates were calculated:

- Mortality among fetuses of all birth weights meeting provincial/territorial registration requirements (not directly comparable between jurisdictions);
- Mortality among fetuses with a birth weight of  $\geq 500$  g; and
- Mortality in fetuses of  $\geq 1,000$  g or  $\geq 28$  weeks, i.e., the criteria suggested by the World Health Organization for international comparisons.

FIGURE 13.1

## FETAL MORTALITY RATE

CANADA (EXCLUDING ONTARIO),\* 2001-2010



Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.



For the cause-specific stillbirth rates, the cause categories used are those described in the Canadian Perinatal Health Report, 2008 Edition.<sup>1</sup>

## DATA SOURCE

Fetal mortality rates were calculated using vital statistics data (stillbirth database). Cause-specific rates were calculated using the International Statistical Classification of Diseases, Tenth Revision (ICD-10) codes.<sup>2</sup> Data from Ontario were excluded because of data quality concerns.<sup>1</sup>

## RESULTS

Fetal mortality rates increased between 2001 and 2010 (Figure 13.1). The overall rate increased from 5.9 to 6.7 per 1,000 total births between 2001 and 2010. The mortality rate among fetuses of  $\geq 500$  g birthweight decreased from 4.7 per 1,000 total births in 2001 to 4.1 per 1,000 total births in 2003, and then increased to 5.1 per 1,000 total births in 2010. The mortality rate among fetuses  $\geq 1,000$  g birthweight or  $\geq 28$  weeks decreased from 3.4 per 1,000 total births in 2001 to 3.0 per 1,000 total births between 2003 and 2005, and then increased to 3.7 per 1,000 total births in

2010. These increases in fetal mortality rates are mainly attributable to increases in late pregnancy terminations.<sup>3</sup>

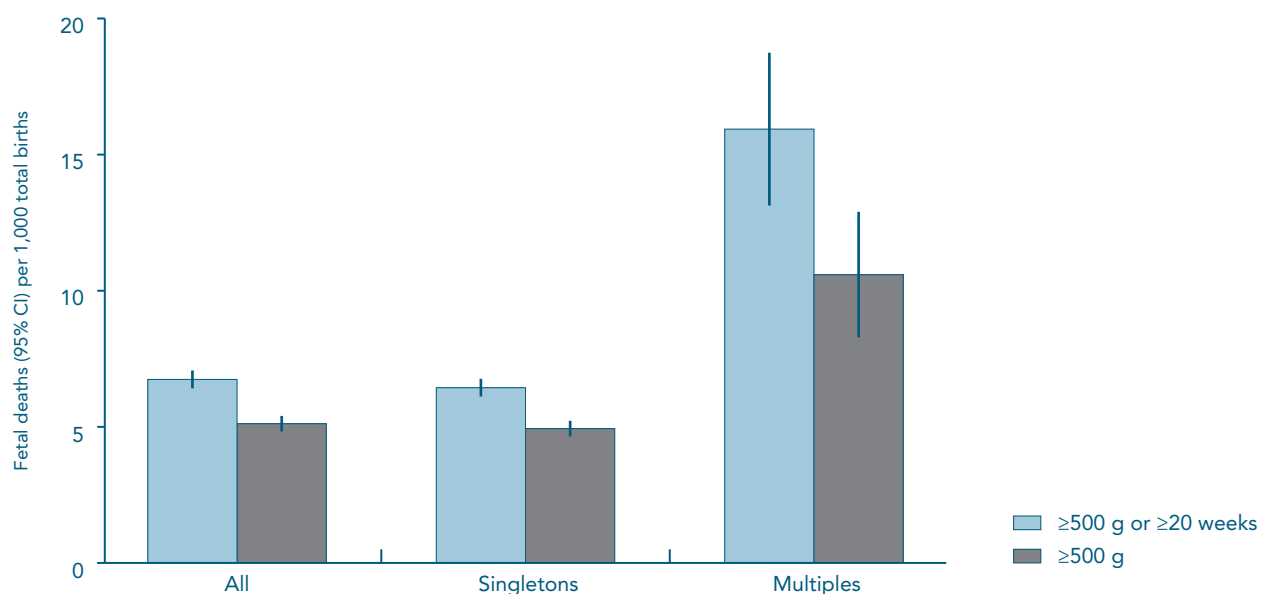
In 2010, the overall rate was significantly higher among multiple births (15.9 per 1,000 total births, 95% CI: 13.1–18.7) than among singletons (6.4, 95% CI: 6.1–6.8). The rates among fetuses  $\geq 500$  g birth weight were 10.6 (95% CI: 8.3–12.9) among multiples and 4.9 per 1,000 total births (95% CI: 4.7–5.2) among singletons (Figure 13.2).

In 2006–2010, mortality among fetuses  $\geq 500$  g birth weight ranged from 3.9 per 1,000 total births (95% CI: 3.2–4.5) in New Brunswick to 10.3 per 1,000 total births (95% CI: 7.2–13.4) in Nunavut (Figure 13.3).

The mortality among fetuses  $\geq 500$  g birth weight excluding terminations of pregnancy decreased from 4.3 to 3.8 deaths per 1,000 total births between 2001 and 2010. The rate of death due to termination of pregnancy increased from 0.3 to 1.3 per 1,000 total births during the same period (Figure 13.4). No clear trend was observed among other cause-specific fetal mortality rates (Figure 13.5).

**FIGURE 13.2**

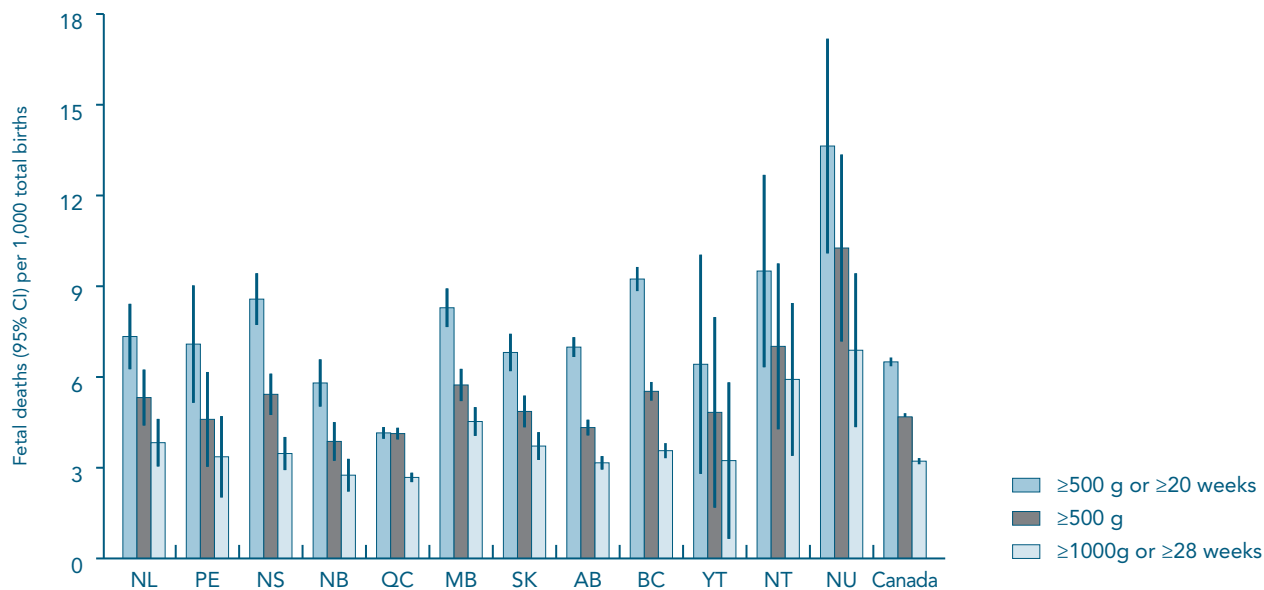
FETAL MORTALITY RATE BY PLURALITY  
CANADA (EXCLUDING ONTARIO),\* 2010



Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

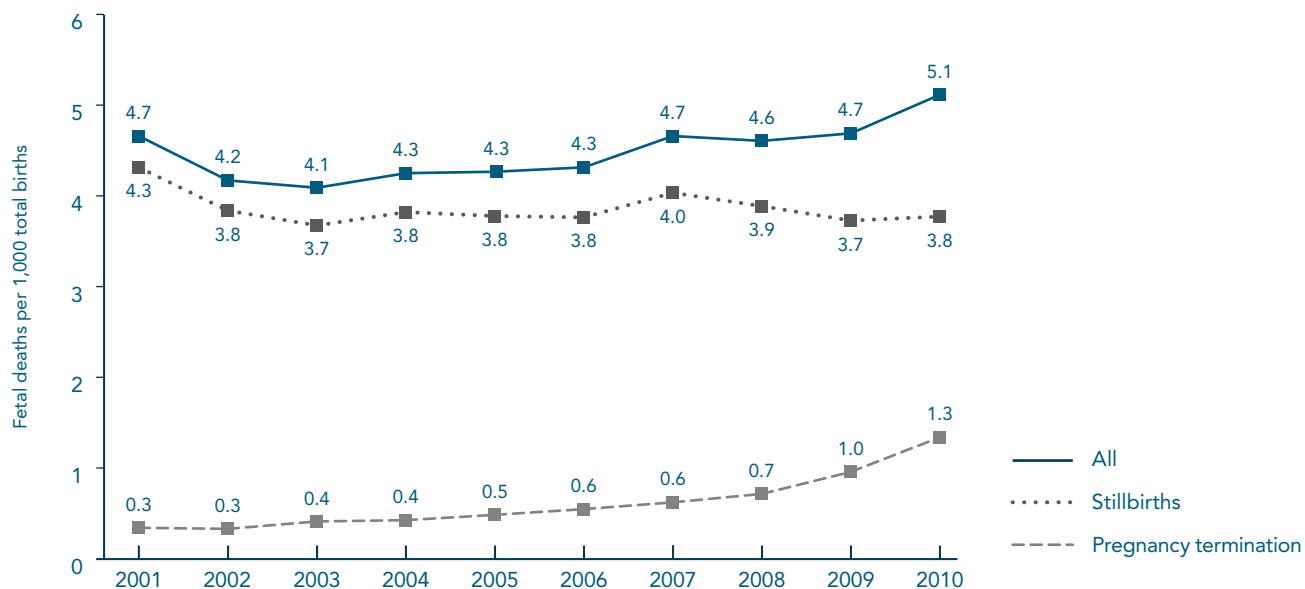
CI—Confidence interval

**FIGURE 13.3****FETAL MORTALITY RATE****BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010**

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

CI—Confidence interval

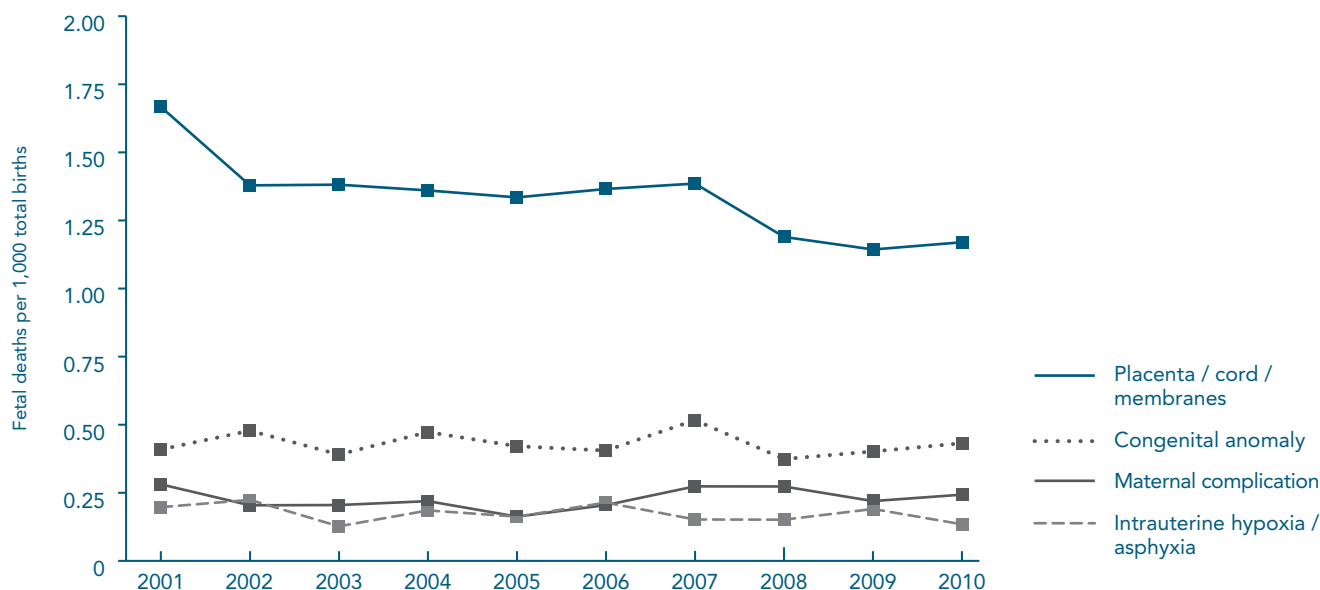
**FIGURE 13.4****MORTALITY RATE IN FETUSES ≥500 G BY TYPE****CANADA (EXCLUDING ONTARIO),\* 2001-2010**

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

**FIGURE 13.5**

MORTALITY RATE IN FETUSES  $\geq 500$  G BY CAUSE  
CANADA (EXCLUDING ONTARIO),\* 2001–2010



Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

## LIMITATIONS

In addition to difference in rules between Quebec and other provinces, vital statistics 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.<sup>4</sup>

One cannot distinguish pregnancy terminations due to congenital anomaly diagnosis from those motivated by other indications.

## REFERENCES

1. Public Health Agency of Canada. Canadian Perinatal Health Report, 2008 Edition. Ottawa, 2008.
2. World Health Organization. International Statistical Classification of Diseases and Related Health Problems, 10th Revision, 2008 Edition. Geneva: World Health Organization; 2008.
3. Joseph KS, Kinniburgh B, Hutcheon JA, Mehrabadi A, Basso M, Davies C, Lee L. Determinants of increases in stillbirth rates from 2000 to 2010. CMAJ 2013;185(8):E345-E351.
4. Joseph KS, Allen A, Kramer MS, Cyr M, Fair M. Changes in the registration of stillbirths < 500 g in Canada, 1985-95. Fetal-Infant Mortality Study Group of the Canadian Perinatal Surveillance System. Paediatr Perinat Epidemiol 1999;13(3):278-287.

## CHAPTER 14

## INFANT MORTALITY RATE

The infant mortality rate varied between 4.9 and 5.4 per 1,000 live births between 2000 and 2009. Neonatal death constituted 74% of infant deaths in 2009. Immaturity and congenital anomalies were the leading causes of neonatal death, while congenital anomalies and SIDS were the leading causes of postneonatal death.

## DEFINITION

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 categorized 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 SOURCE

Infant mortality rates were calculated from vital statistics data (death database). Data

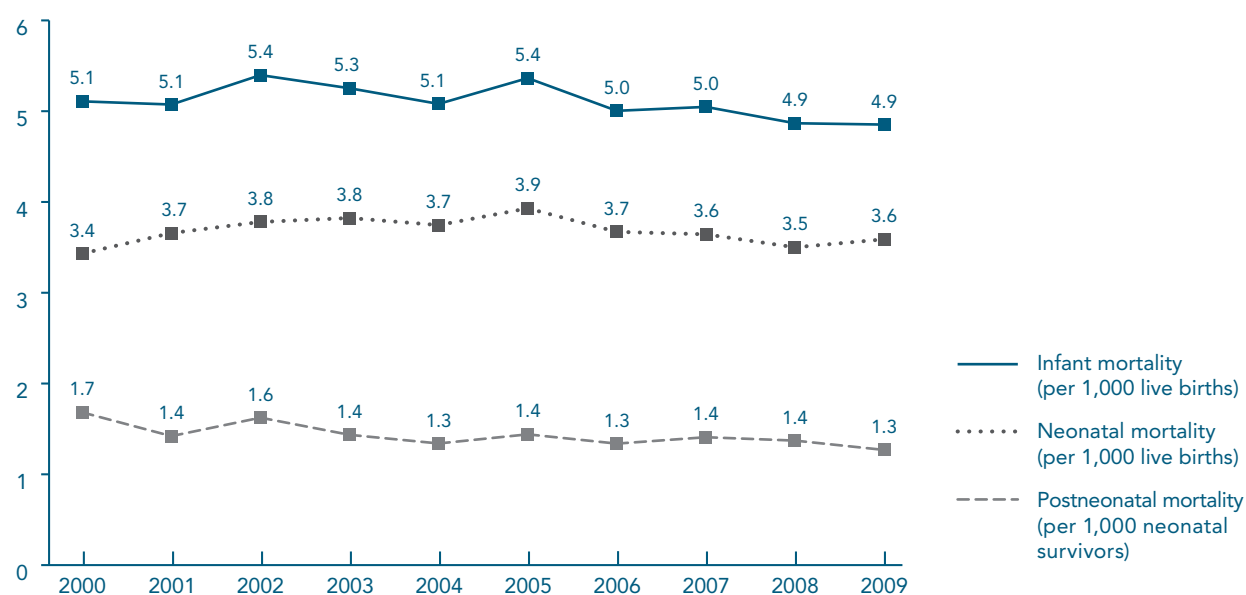
from Ontario were excluded because of data quality concerns.<sup>1</sup> Cause-specific infant mortality was categorized according to the modified International Collaborative Effort (ICE) groupings, which comprise eight categories: congenital anomalies, asphyxia, immaturity, infection, sudden infant death syndrome (SIDS), other sudden or unexplained infant death, external causes, and other conditions.<sup>2</sup>

## RESULTS

The infant mortality rate fluctuated between 4.9 and 5.4 per 1,000 live births between 2000 and

FIGURE 14.1

RATE OF INFANT, NEONATAL AND POSTNEONATAL MORTALITY  
BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2000-2009

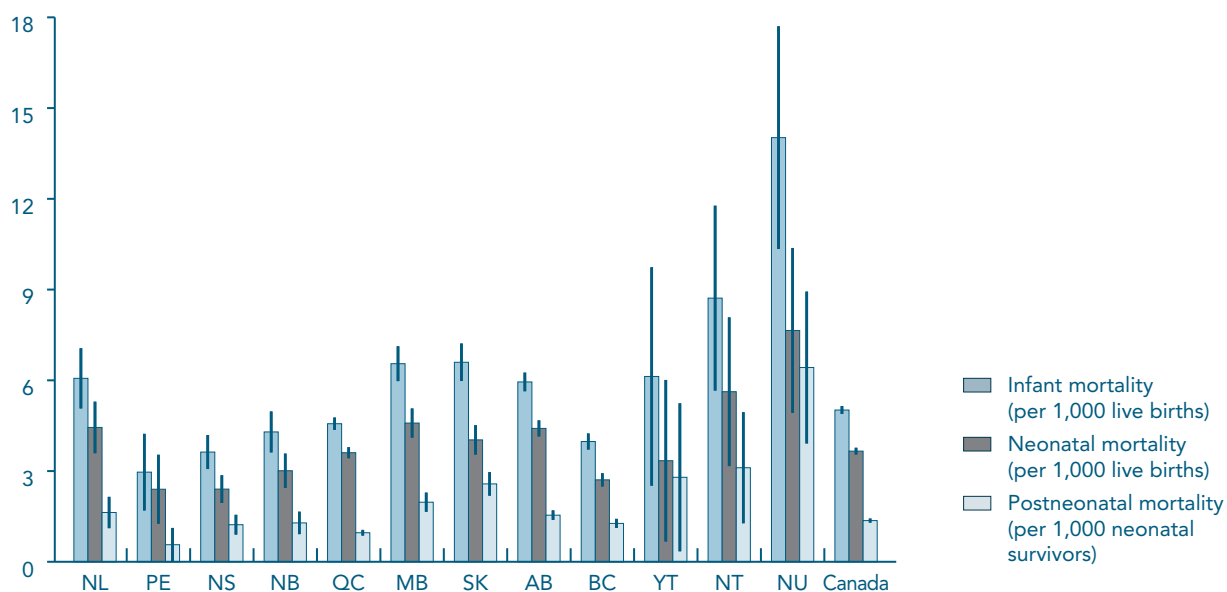


Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

**FIGURE 14.2**

RATE OF INFANT, NEONATAL AND POSTNEONATAL MORTALITY  
BY PROVINCE OR TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2005-2009

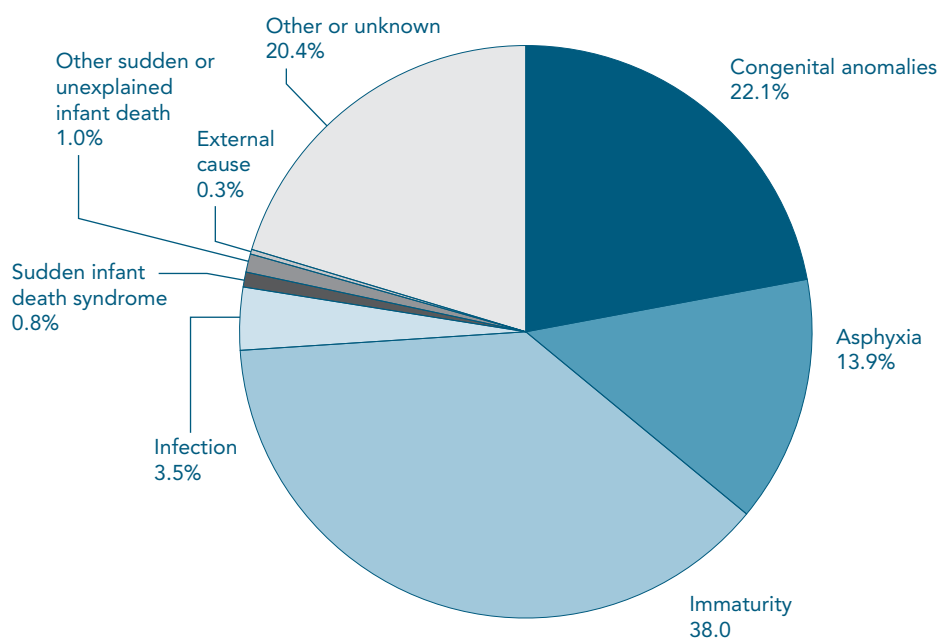


Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns. CI—Confidence interval

**FIGURE 14.3A**

PROPORTION (%) OF NEONATAL DEATHS BY CAUSE

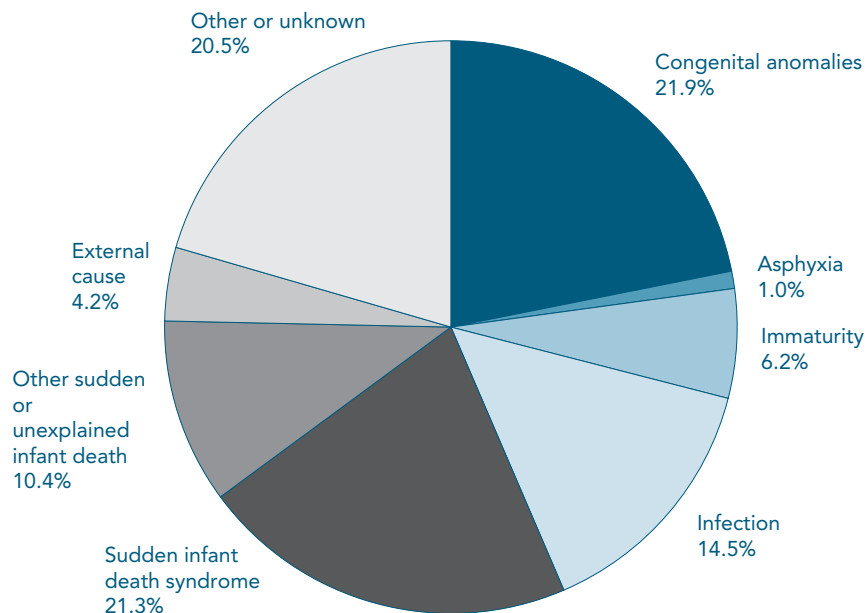


Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

**FIGURE 14.3B**

PROPORTION (%) OF POSTNEONATAL DEATHS BY CAUSE

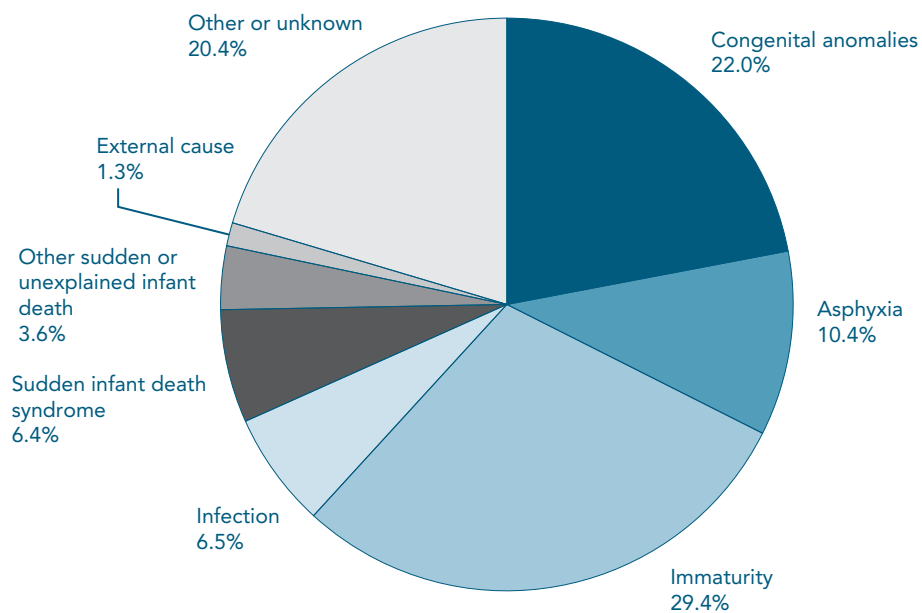


Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

**FIGURE 14.3C**

PROPORTION (%) OF OVERALL INFANT DEATHS BY CAUSE



Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

2009. Neonatal death constituted 74% of infant deaths in 2009. Between 2000 and 2009, neonatal mortality varied between 3.4 and 3.9 per 1,000 live births, while postneonatal mortality varied between 1.3 and 1.7 per 1,000 neonatal survivors (Figure 14.1).

In 2005–2009, the infant mortality rate ranged from 3.0 per 1,000 live births (95% CI: 1.7–4.2) in Prince Edward Island to 14.0 per 1,000 live births (95% CI: 10.3–10.8) in Nunavut (Figure 14.2).

The leading causes of neonatal death were immaturity (38.0%), congenital anomalies (22.1%) and asphyxia (13.9%) (Figure 14.3A), while the leading causes of postneonatal death were congenital anomalies (21.9%), sudden infant death syndrome (21.3%), and infections (14.5%) (Figure 14.3B). For overall infant death, the leading causes were immaturity (29.4%), congenital anomalies (22.0%) and asphyxia (10.4%) (Figure 14.3C).

### LIMITATIONS

Vital statistics data have been found to be affected by regional variations in birth registration, particularly for extremely small, immature newborns.<sup>3-5</sup>

### REFERENCES

1. Public Health Agency of Canada. Canadian Perinatal Health Report, 2008 Edition. Ottawa, 2008.
2. Cole S, Hartford RB, Bergsjø P, McCarthy B. International Collaborative Effort (ICE) on birth weight, plurality, perinatal, and infant mortality III: a method of grouping underlying causes of infant death to aid international comparisons. *Acta Obstet Gynecol Scand* 1989;68(2):113-117.
3. Joseph KS, Kramer MS. Recent trends in Canadian infant mortality rates: effect of changes in registration of live newborns weighing less than 500 g. *CMAJ* 1996;155(8):1047-1052.
4. Joseph KS, Allen A, Kramer MS, Cyr M, Fair M. Changes in the registration of stillbirths < 500 g in Canada, 1985-95. Fetal-Infant Mortality Study Group of the Canadian Perinatal Surveillance System. *Paediatr Perinat Epidemiol* 1999;13(3):278-287.
5. Wen SW, Kramer MS, Liu S, Dzakpasu S, Sauve R. Infant mortality by gestational age and birth weight in Canadian provinces and territories, 1990-1994 births. *Chronic Dis Can* 2000;21(1):14-22.

## CHAPTER 15

## BIRTH PREVALENCE OF CONGENITAL ANOMALIES

After decreasing between 2001 and 2007, the overall prevalence of congenital anomalies increased slightly to 397 per 10,000 total births in 2010.

## DEFINITION

Congenital anomalies, birth defects and congenital malformations are synonymous terms that describe an abnormality of structure or function present at birth.<sup>1</sup> Some congenital anomalies may, however, 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 identified as having at least one anomaly, expressed as a proportion of the total number of live births and stillbirths. In addition to overall congenital anomaly rates, birth prevalence rates of three of the anomalies most commonly recognized prenatally or at birth, namely, Down syndrome, neural tube defects and orofacial clefts are presented.

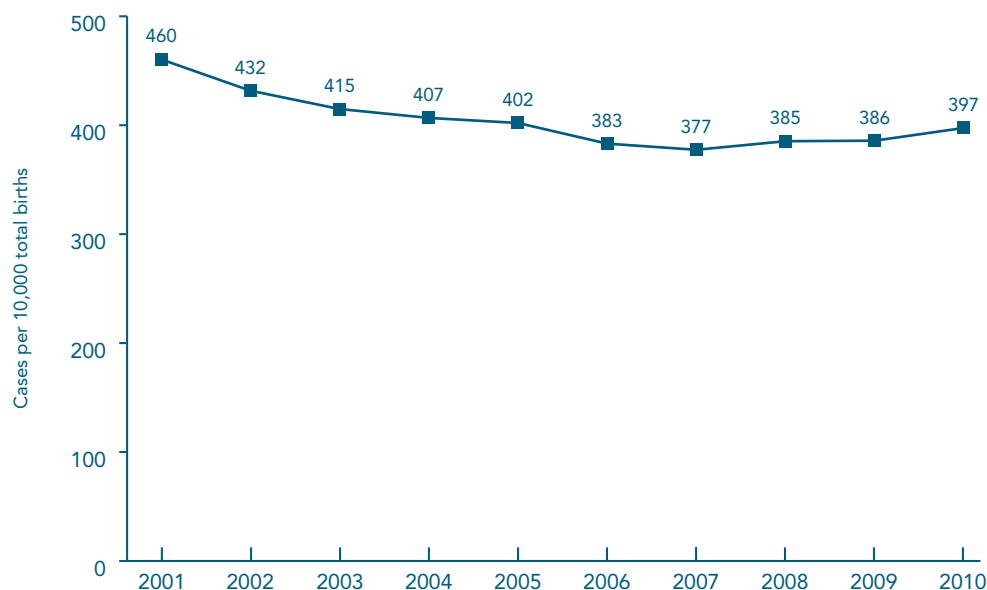
## DATA SOURCE

Congenital anomaly prevalence rates were calculated using the Discharge Abstract Database (DAD) from the Canadian Institute for Health Information (CIHI). This database does not include information from Quebec. Provincial and territorial rates are based on province or territory of maternal residence.

## RESULTS

After decreasing from 460 per 10,000 births in 2001 to 377 per 10,000 total births in 2007, the overall birth prevalence of congenital anomalies increased slightly to 397 per 10,000 total births in 2010 (Figure 15.1).

**FIGURE 15.1**  
BIRTH PREVALENCE OF CONGENITAL ANOMALIES  
CANADA (EXCLUDING QUEBEC),\* 2001-2010



Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database  
\* Quebec does not contribute to the Discharge Abstract Database.



Between 2001 and 2010, the rate of Down syndrome oscillated between 14.4 and 16.5 per 10,000 total births. It was 15.3 per 10,000 total births in 2010 (Figure 15.2). Provincial/territorial rates ranged from 11.1 (95% CI: 4.8–17.4) per 10,000 total births in Yukon and Northwest Territories, to 17.2 (95% CI: 14.5–20.0) in Nova Scotia (Figure 15.3).

The rate of neural tube defects (NTD) decreased from 5.3 to 4.4 per 10,000 total births between 2001 and 2004, and then increased to 5.7 per 10,000 total births in 2010. The rate of spina bifida fluctuated between 2.7 and 3.3 per 10,000 total births between 2001 and 2008, and then increased to 3.5 per 10,000 total births in 2010 (Figure 15.4). Provincial/territorial rates of all NTD ranged from 3.4 (95% CI: 2.0–4.8) per 10,000 total births in New Brunswick, to 6.0 (95% CI: 4.4–7.7) in Nova Scotia (Figure 15.5).

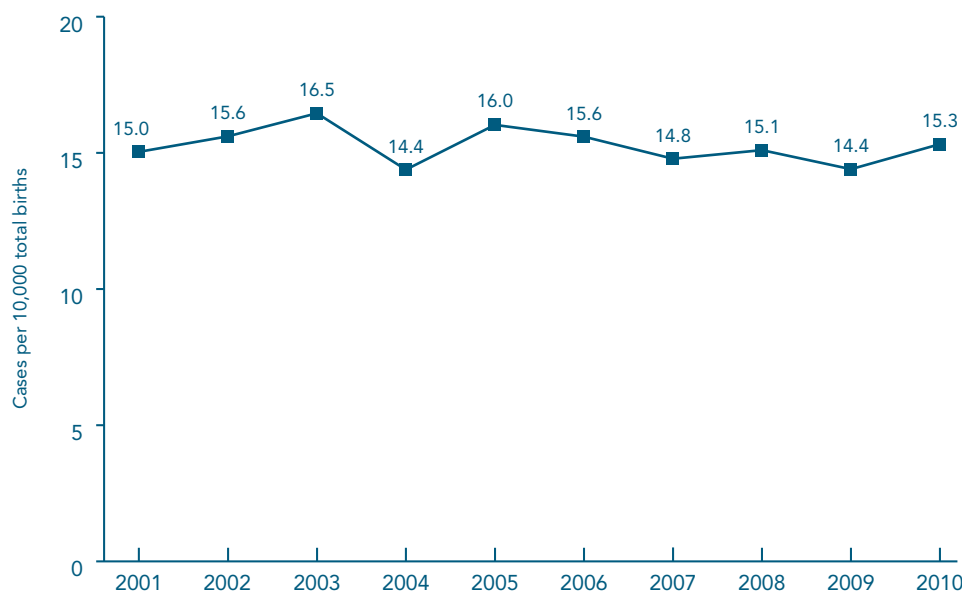
The rate of cleft lip with or without cleft palate varied between 8.5 and 10.4 per 10,000 total births. It was 9.9 per 10,000 total births in 2010. The rate of cleft palate fluctuated between 6.3 and 7.5 per 10,000 total births, dropping to 5.6 per 10,000 total births in 2009 (Figure 15.6). Nunavut had the highest rate of cleft lip (23.4, 95% CI 11.2–35.7 per 10,000 total births) and cleft palate (11.7, 95% CI 3.0–20.4) (Figure 15.7).

## LIMITATIONS

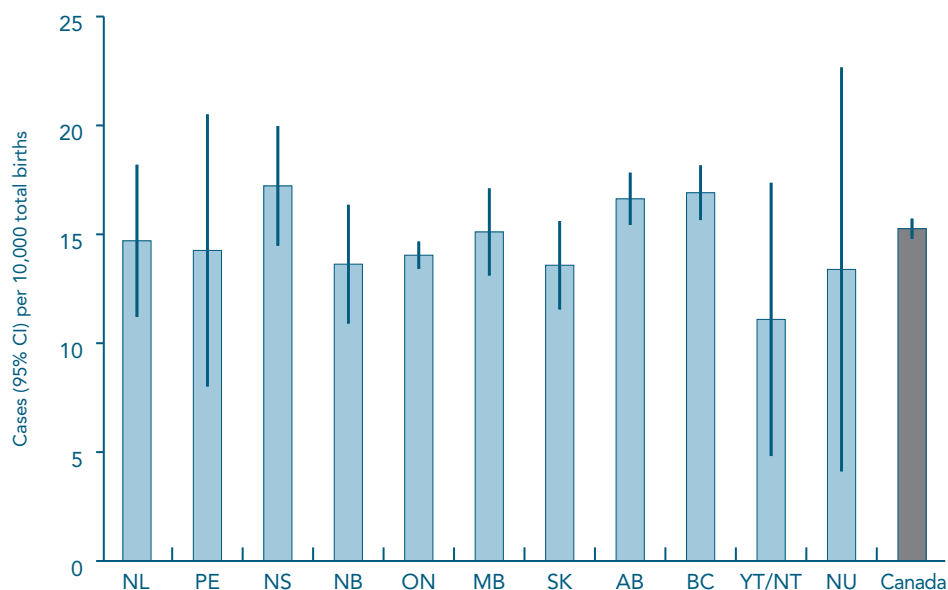
Incomplete ascertainment of cases and inconsistent coding practices due to lack of standardized case definitions are important limitations for population-based congenital anomalies surveillance systems. Another important limitation is the lack of data on early pregnancy terminations. The DAD captures 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 study<sup>2</sup> with those identified by the DAD<sup>3</sup> clearly indicate that hospitalization data are incomplete.

Data presented in this report differ from those presented previously<sup>3,4</sup> because, in the past, data from Alberta and Quebec were provided to the Canadian Congenital Anomalies Surveillance System (CCASS) by the Alberta Congenital Anomalies Surveillance System (ACASS) and

**FIGURE 15.2**  
RATE OF DOWN SYNDROME  
CANADA (EXCLUDING QUEBEC),\* 2001-2010



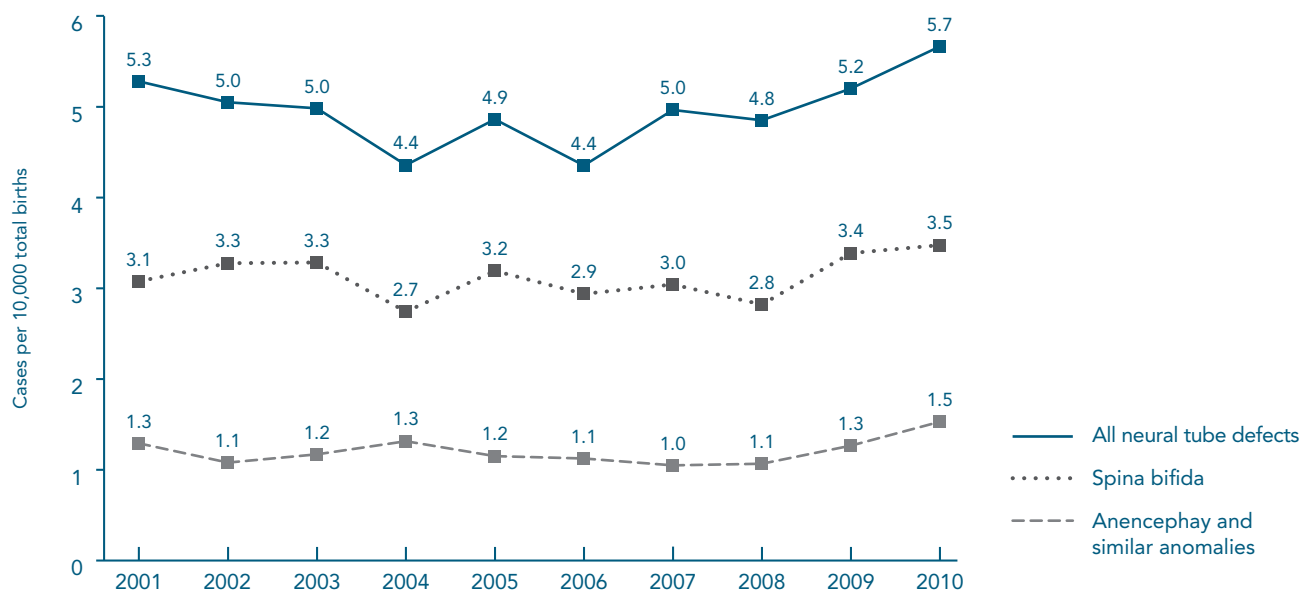
Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database  
\* Quebec does not contribute to the Discharge Abstract Database.

**FIGURE 15.3****RATE OF DOWN SYNDROME****BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC),\* 2001-2010**

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

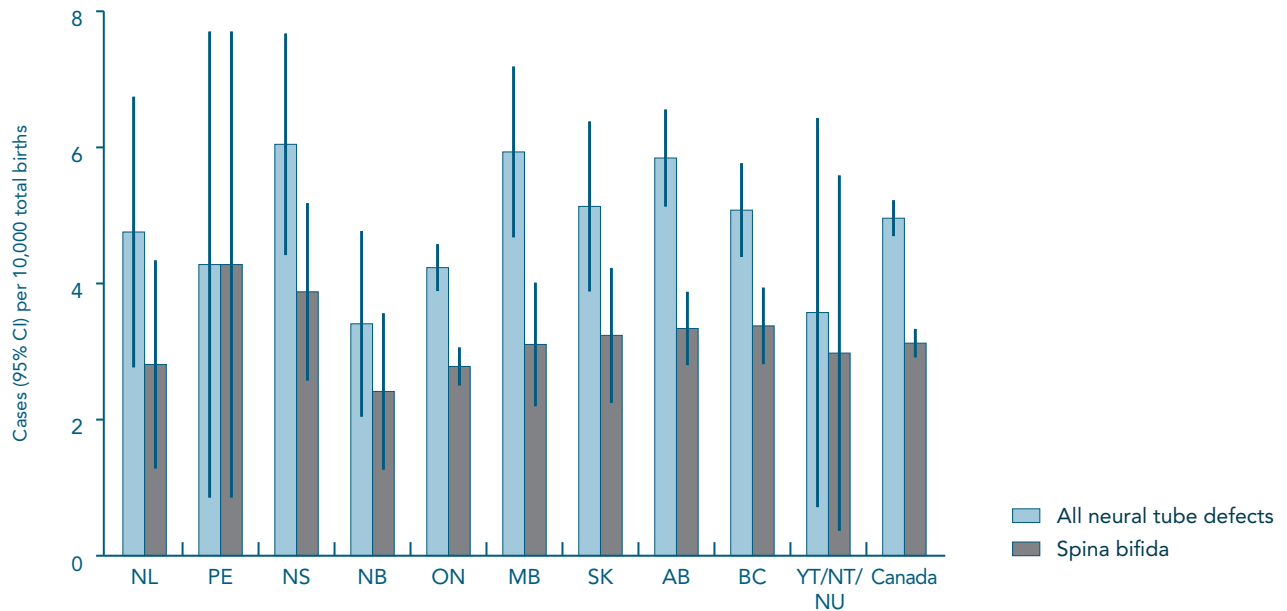
\* Quebec does not contribute to the Discharge Abstract Database.

CI-Confidence interval

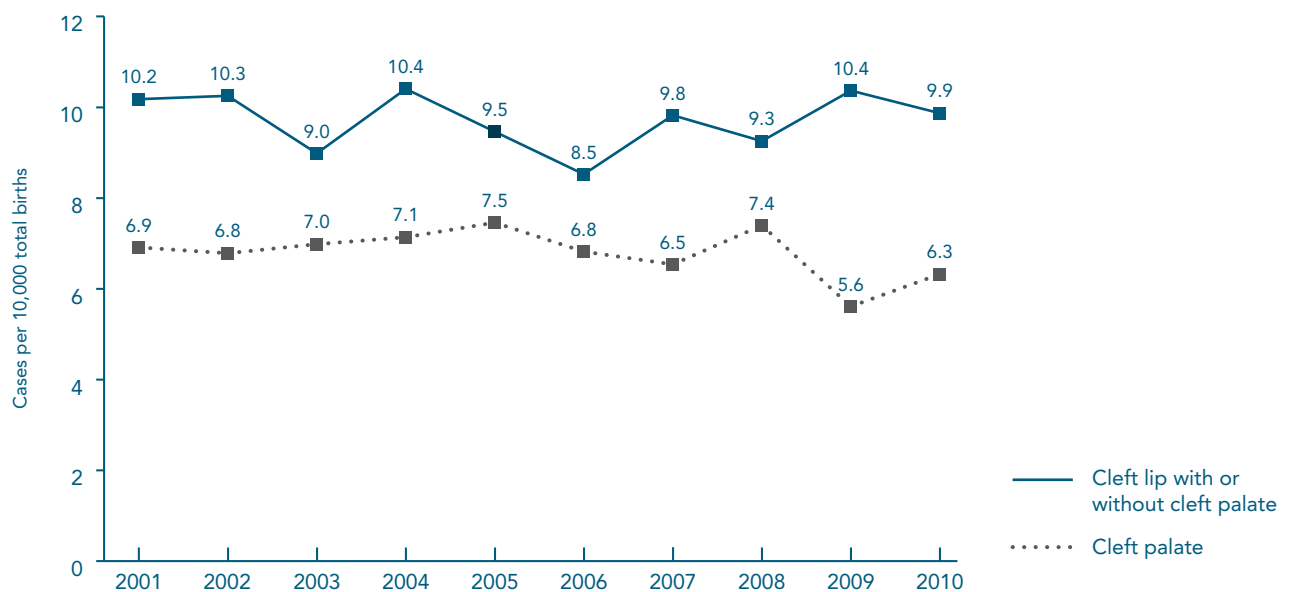
**FIGURE 15.4****RATES OF NEURAL TUBE DEFECTS****CANADA (EXCLUDING QUEBEC),\* 2001-2010**

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

**FIGURE 15.5****RATES OF NEURAL TUBE DEFECTS****BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC),\* 2001-2010**

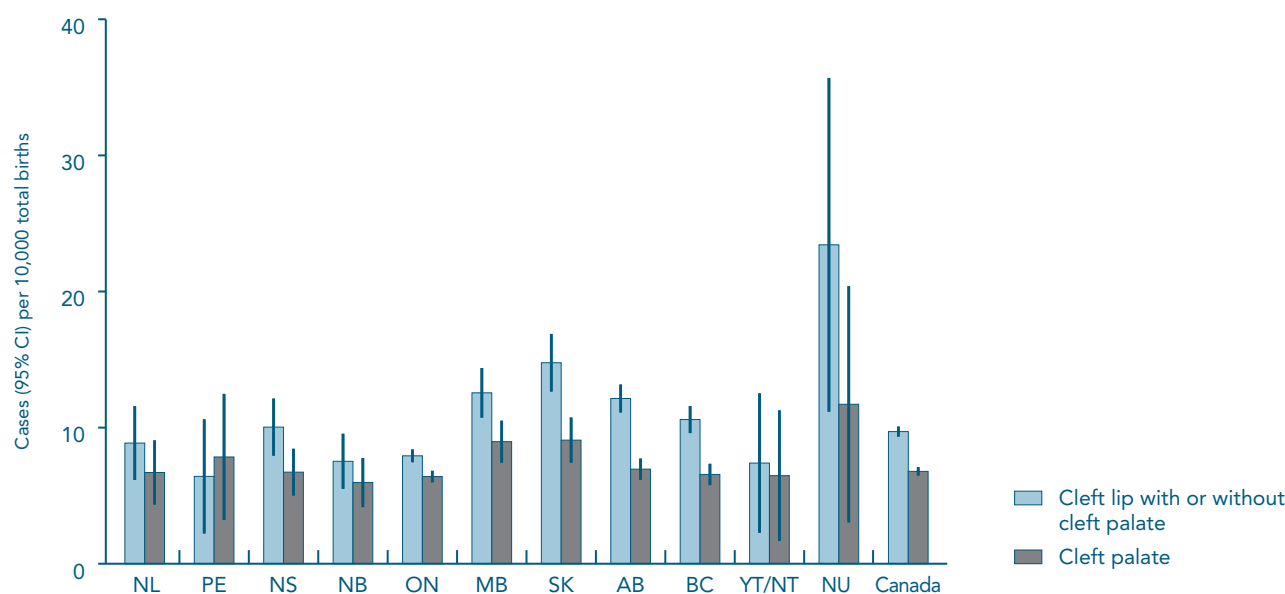
Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database  
 \* Quebec does not contribute to the Discharge Abstract Database.  
 CI—Confidence interval

**FIGURE 15.6****RATES OF CLEFT PALATE AND CLEFT LIP WITH OR WITHOUT CLEFT PALATE**  
**CANADA (EXCLUDING QUEBEC),\* 2001-2010**

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database  
 \* Quebec does not contribute to the Discharge Abstract Database.

**FIGURE 15.7**

RATES OF CLEFT PALATE AND CLEFT LIP WITH OR WITHOUT CLEFT PALATE  
CANADA (EXCLUDING QUEBEC),\* 2001-2010



Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI-Confidence interval

Maintenance et exploitation des données pour l'étude de la morbidité hospitalière (MED-ECHO), respectively. In this report, Alberta data was obtained from the DAD, and Quebec, which does not contribute to DAD, is excluded from calculations.

## REFERENCES

1. Moore KL, Persaud TV. Before We Are Born: Essentials of Embryology and Birth Defects. 5th Edition ed. Philadelphia: W. B. Saunders; 1998.
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.
4. Public Health Agency of Canada. Perinatal Health Indicators for Canada 2011. Ottawa, 2012.

## CHAPTER 16

## MULTIPLE BIRTH RATE

Between 2001 and 2010, the rate of multiple births increased from 2.8 to 3.2% of total births.

## 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 live births and stillbirths.

## DATA SOURCE

Multiple birth rates were calculated using vital statistics data (birth database). Data from Ontario were excluded because of data quality concerns.

## RESULTS

Over the period 2001–2010, the rate of multiple births increased from 2.8 to 3.2% of total births (Figure 16.1).

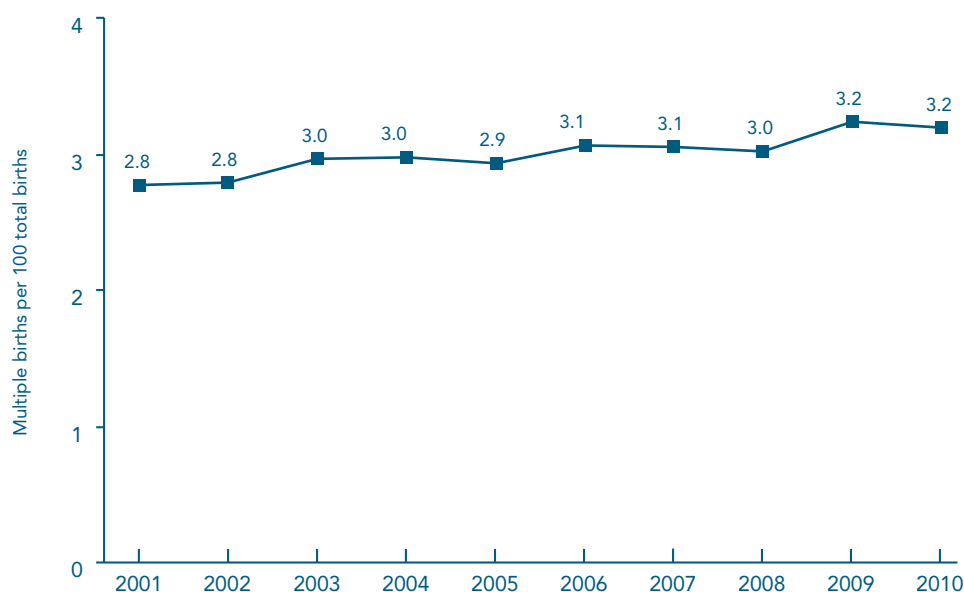
Between 2006 and 2010, rates of multiple births varied across provinces and territories. Nunavut had the lowest multiple birth rate at 1.8% (95% CI: 1.4–2.2%), while Prince Edward Island had the highest rate at 3.7% (95% CI: 3.3–4.2%) (Figure 16.2).

## LIMITATIONS

The birth database contains no information on assisted reproduction technologies, and therefore does not allow distinguishing babies conceived by ART from those conceived naturally. This limits the interpretation of data on temporal trends in multiple births.

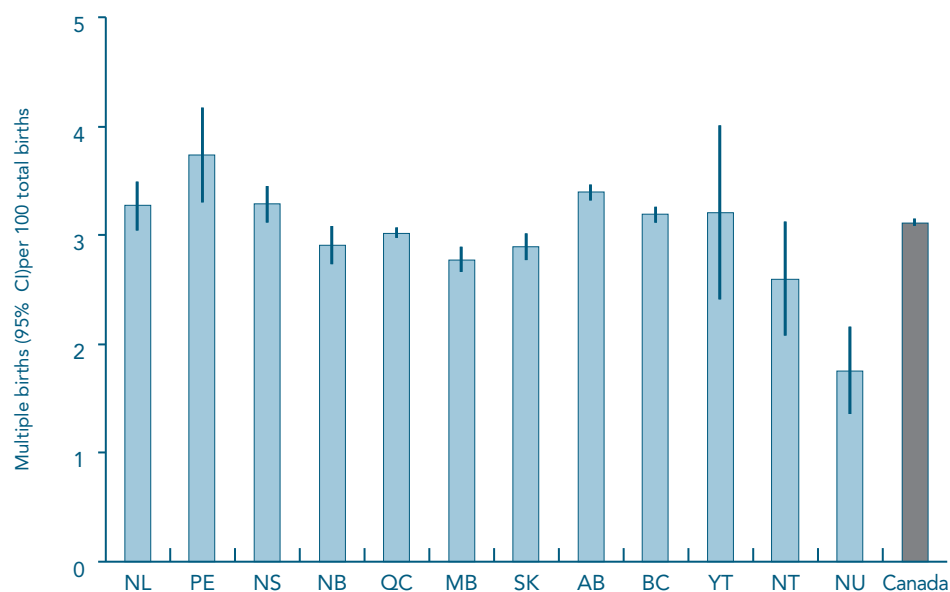
FIGURE 16.1

RATE OF MULTIPLE BIRTH  
CANADA (EXCLUDING ONTARIO),\* 2001-2010



Source: Statistics Canada. Canadian Vital Statistics System, 2001-2010.

\* Data for Ontario were excluded because of data quality concerns.

**FIGURE 16.2****RATE OF MULTIPLE BIRTH****BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010**

Source: Statistics Canada. Canadian Vital Statistics System, 2010.

\* Data for Ontario were excluded because of data quality concerns.

CI—Confidence interval

## APPENDIX: DATA TABLES

### A1. RATE OF MATERNAL SMOKING DURING PREGNANCY

TABLE A1.1

RATE OF MATERNAL SMOKING DURING PREGNANCY  
BY AGE AND BIRTH YEAR, CANADA, 1993-2008

Maternal age at birth	Percentage of children <2 years of age whose mother reported smoking during pregnancy (95% CI)			
	1993-1996	1997-2000	2001-2004	2005-2008
15-19	38.7 (30.9-46.6)	43.1 (35.2-51.0)	42.5 (33.7-51.3)	38.8 (28.5-49.2)
20-24	32.2 (28.4-36.0)	32.2 (28.7-35.7)	27.1 (23.1-31.0)	28.3 (24.3-32.4)
25-29	22.1 (19.9-24.3)	18.2 (16.2-20.2)	13.9 (11.8-15.9)	11.3 (9.5-13.1)
30-34	17.2 (15.0-19.3)	13.9 (11.6-16.1)	9.4 (7.7-11.1)	7.4 (5.7-9.1)
35-39	17.7 (14.0-21.5)	11.1 (8.4-13.8)	9.8 (6.8-12.7)	5.6 (3.5-7.7)
40-49	*	*	*	*
All ages	21.9 (20.5-23.2)	19.5 (18.2-20.7)	14.7 (13.5-15.9)	12.3 (11.2-13.5)

Source: Statistics Canada, National Longitudinal Survey of Children and Youth  
Denominators exclude those who responded "don't know" and those who refused to answer.

Territories are excluded because the survey was not conducted there.

\* Result not reliable because coefficient of variation was too high

CI - Confidence interval

TABLE A1.2

RATE OF MATERNAL SMOKING DURING PREGNANCY  
BY PROVINCE OF RESIDENCE AND BIRTH YEAR, CANADA, 1993-2008

Province of residence	Percentage of children <2 years of age whose mother reported smoking during pregnancy (95% CI)			
	1993-1996	1997-2000	2001-2004	2005-2008
Newfoundland and Labrador	27.6 (21.1-34.2)	21.9 (15.3-28.4)	*	13.1 (8.2-18.0)
Prince Edward Island	25.4 (19.0-31.8)	22.9 (15.4-30.5)	*	19.9 (12.4-27.5)
Nova Scotia	27.6 (22.9-32.4)	27.0 (21.4-32.7)	18.8 (13.7-23.8)	18.8 (14.0-23.6)
New Brunswick	24.9 (19.9-29.9)	23.9 (18.8-28.9)	15.7 (11.0-20.5)	19.4 (14.4-24.5)
Quebec	25.6 (22.5-28.7)	24.7 (21.4-28.0)	18.0 (14.8-21.3)	14.3 (11.1-17.5)
Ontario	19.4 (17.2-21.6)	16.4 (14.3-18.4)	11.7 (9.8-13.7)	9.9 (8.0-11.7)
Manitoba	22.4 (17.8-26.9)	23.1 (19.3-26.9)	13.6 (9.9-17.3)	16.5 (13.0-20.0)
Saskatchewan	24.9 (20.8-28.9)	25.8 (21.7-29.8)	19.0 (14.8-23.2)	19.5 (15.8-23.2)
Alberta	22.0 (18.3-25.6)	20.5 (16.7-24.4)	18.9 (15.1-22.7)	13.0 (10.0-16.1)
British Columbia	18.3 (14.6-22.1)	13.3 (10.5-16.0)	11.2 (8.4-13.9)	9.4 (6.8-12.1)
CANADA	21.9 (20.5-23.2)	19.5 (18.2-20.7)	14.7 (13.5-15.9)	12.3 (11.2-13.5)

Source: Statistics Canada, National Longitudinal Survey of Children and Youth  
Denominators exclude those who responded "don't know" and those who refused to answer.

Territories are excluded because the survey was not conducted there.

\* Result not reliable because coefficient of variation was too high

CI - Confidence interval

## A2. RATE OF MATERNAL ALCOHOL CONSUMPTION DURING PREGNANCY

**TABLE A2.1**

**RATE OF MATERNAL ALCOHOL CONSUMPTION DURING PREGNANCY  
BY AGE AND BIRTH YEAR, CANADA, 1993-2008**

Maternal age at birth	Percentage of children <2 years of age whose mother reported drinking any alcohol during pregnancy (95% CI)			
	1993-1996	1997-2000	2001-2004	2005-2008
15-19	9.0 (5.1-12.9)	*	*	*
20-24	13.4 (10.5-16.4)	11.9 (9.3-14.4)	12.0 (9.1-14.9)	8.0 (5.5-10.5)
25-29	14.2 (12.4-16.1)	13.2 (11.1-15.4)	15.1 (12.7-17.5)	10.2 (8.3-12.0)
30-34	17.2 (15.3-19.2)	13.7 (11.7-15.8)	17.1 (14.4-19.7)	11.7 (9.4-14.0)
35-39	27.6 (23.3-32.0)	20.1 (16.2-23.9)	16.8 (13.0-20.5)	11.2 (8.2-14.3)
40-49	12.0 (4.4-19.6)	26.7 (16.5-36.8)	*	*
All ages	16.5 (15.4-17.7)	14.3 (13.1-15.5)	15.5 (14.1-16.9)	10.7 (9.5-11.8)

Source: Statistics Canada, National Longitudinal Survey of Children and Youth  
Denominators exclude those who responded "don't know" and those who refused to answer.  
Territories are excluded because the survey was not conducted there.  
\* Result not reliable because of coefficient of variation too high  
CI - Confidence interval

**TABLE A2.2**

**RATE OF MATERNAL ALCOHOL CONSUMPTION DURING PREGNANCY  
BY PROVINCE OF RESIDENCE, CANADA, 1993-2008**

Province of residence	Percentage of children <2 years of age whose mother reported drinking any alcohol during pregnancy (95% CI)
Newfoundland and Labrador	5.4 (3.6-7.3)
Prince Edward Island	4.9 (3.0-6.8)
Nova Scotia	7.1 (5.6-8.6)
New Brunswick	7.3 (5.8-8.8)
Quebec	25.6 (23.9-27.3)
Ontario	12.0 (11.0-13.0)
Manitoba	9.4 (8.0-10.9)
Saskatchewan	10.0 (8.5-11.5)
Alberta	10.4 (9.0-11.9)
British Columbia	11.4 (9.8-13.1)
CANADA	14.4 (13.7-15.0)

Source: Statistics Canada, National Longitudinal Survey of Children and Youth  
Denominators exclude those who responded "don't know" and those who refused to answer.  
Territories are excluded because the survey was not conducted there.  
CI - Confidence interval



### A3. RATE OF BREASTFEEDING

**TABLE A3.1**

**RATE OF BREASTFEEDING INITIATION**

*BY MATERNAL AGE, CANADA, 2005, 2007-2008, AND 2009-2010*

Maternal age (years)	Percentage of mothers* who reported breastfeeding initiation (95% CI)		
	2005	2007-2008	2009-2010
15-19	76.0 (65.6-86.4)	84.8 (75.4-94.1)	86.1 (77.9-94.3)
20-24	82.3 (77.5-87.0)	82.7 (78.2-87.3)	83.8 (78.4-89.1)
25-29	84.2 (81.9-86.5)	87.1 (85.0-89.1)	86.5 (84.0-89.0)
30-34	88.7 (87.0-90.3)	88.9 (87.2-90.7)	87.0 (84.8-89.2)
35-39	89.7 (87.7-91.7)	89.5 (87.1-91.9)	88.5 (85.5-91.6)
≥40	87.6 (83.3-91.9)	86.7 (80.9-92.6)	90.3 (86.9-93.7)
All ages	87.0 (85.9-88.0)	87.9 (86.8-89.1)	87.3 (86.0-88.5)

Source: Statistics Canada, Canadian Community Health Survey, 2007, 2007-2008, and 2009-2010.

\* Women who gave birth in the five years preceding the survey; denominators exclude responses of "do not know", "not stated", and refusal to answer  
CI – Confidence interval

**TABLE A3.2**

**RATE OF BREASTFEEDING INITIATION**

*BY PROVINCE AND TERRITORY, CANADA, 2005, 2007-2008, AND 2009-2010*

Province/territory	Percentage of mothers* who reported breastfeeding initiation (95% CI)		
	2005	2007-2008	2009-2010
Newfoundland and Labrador	62.3 (54.9-69.8)	69.1 (61.8-76.4)	61.5 (53.1-69.9)
Prince Edward Island	72.1 (61.9-82.2)	74.0 (65.9-82.0)	75.1 (64.6-85.5)
Nova Scotia	75.1 (68.8-81.3)	75.1 (67.6-82.5)	77.8 (70.7-85.0)
New Brunswick	77.0 (70.9-83.0)	75.8 (69.5-82.1)	82.2 (76.4-88.0)
Quebec	82.2 (79.5-84.8)	83.9 (80.3-87.4)	82.8 (79.6-85.9)
Ontario	88.0 (86.2-89.9)	89.4 (87.8-91.0)	88.5 (86.1-90.9)
Manitoba	88.8 (84.1-93.5)	85.1 (79.2-90.9)	89.2 (85.0-93.4)
Saskatchewan	88.1 (84.8-91.5)	88.1 (83.4-92.8)	91.0 (87.6-94.5)
Alberta	92.7 (90.6-94.8)	92.0 (89.5-94.5)	90.8 (87.8-93.8)
British Columbia	93.0 (90.0-95.9)	94.8 (92.2-97.4)	93.1 (90.2-96.0)
Yukon	98.8 (96.5-101.1)	98.2 (96.0-100.4)	97.2 (94.2-100.3)
Northwest Territories	93.6 (86.7-100.6)	86.7 (80.3-93.1)	88.8 (80.8-96.7)
Nunavut	73.7 (50.3-97.1)	70.0 (57.8-82.3)	65.4 (48.7-82.1)
Canada	87.0 (85.9-88.0)	87.9 (86.8-89.1)	87.3 (86.0-88.5)

Source: Statistics Canada, Canadian Community Health Survey, 2007, 2007-2008, and 2009-2010.

\* Women who gave birth in the five years preceding the survey; denominators exclude responses of "do not know", "not stated", and refusal to answer  
CI – Confidence interval

**TABLE A3.3****RATE OF EXCLUSIVE BREASTFEEDING***BY MATERNAL AGE, CANADA, 2005, 2007-2008, AND 2009-2010*

Maternal age (years)	Percentage of mothers* who reported exclusive breastfeeding for six months or more (95% CI)		
	2005	2007-2008	2009-2010
15-19	**	**	**
20-24	12.7 (9.3–16.1)	13.4 (8.8–18.1)	13.8 (10.0–17.7)
25-29	15.9 (13.5–18.2)	19.3 (16.2–22.4)	20.8 (17.8–23.8)
30-34	21.1 (18.8–23.3)	24.7 (22.0–27.3)	27.5 (24.2–30.8)
35-39	23.1 (20.0–26.2)	26.2 (22.9–29.4)	33.3 (29.5–37.2)
≥40	27.8 (22.2–33.3)	27.2 (21.2–33.3)	28.4 (22.3–34.5)
All ages	20.3 (19.0–21.6)	23.1 (21.5–24.7)	25.9 (24.2–27.7)

Source: Statistics Canada, Canadian Community Health Survey, 2007, 2007-2008, and 2009-2010.

\* Women who gave birth in the five years preceding the survey; denominators exclude responses of "do not know", "not stated", and refusal to answer

\*\* Result not reliable because coefficient of variation was too high

CI – Confidence interval

**TABLE A3.4****RATE OF EXCLUSIVE BREASTFEEDING***BY PROVINCE AND TERRITORY, CANADA, 2005, 2007-2008, AND 2009-2010*

Province/territory	Percentage of mothers* who reported exclusive breastfeeding for six months or more (95% CI)		
	2005	2007-2008	2009-2010
Newfoundland and Labrador	13.2 (8.0–18.4)	10.3 (5.7–15.0)	15.4 (8.1–22.7)
Prince Edward Island	12.2 (4.6–19.8)	13.8 (6.9–20.6)	20.7 (11.6–29.9)
Nova Scotia	15.2 (9.3–21.2)	16.5 (10.4–22.7)	18.0 (11.0–24.9)
New Brunswick	14.8 (8.9–20.7)	15.2 (9.8–20.6)	18.6 (11.6–25.7)
Quebec	14.1 (11.7–16.5)	15.6 (12.4–18.9)	19.9 (16.6–23.3)
Ontario	19.6 (17.4–21.7)	23.6 (20.7–26.5)	26.2 (23.2–29.1)
Manitoba	26.6 (20.3–33.0)	23.7 (16.8–30.5)	31.1 (23.0–39.2)
Saskatchewan	20.9 (16.2–25.7)	27.2 (21.2–33.1)	33.0 (25.6–40.4)
Alberta	22.3 (18.3–26.4)	24.5 (20.2–28.7)	29.1 (23.7–34.4)
British Columbia	31.8 (27.5–36.1)	38.2 (33.3–43.1)	33.9 (28.4–39.3)
Yukon	41.9 (22.9–60.8)	33.7 (21.2–46.2)	42.0 (25.8–58.1)
Northwest Territories	25.8 (13.0–38.7)	**	32.4 (22.5–42.3)
Nunavut	27.6 (11.9–43.4)	24.1 (13.9–34.3)	28.1 (17.4–38.8)
Canada	20.3 (19.0–21.6)	23.1 (21.5–24.7)	25.9 (24.2–27.7)

Source: Statistics Canada, Canadian Community Health Survey, 2007, 2007-2008, and 2009-2010

\* Women who gave birth in the five years preceding the survey; denominators exclude responses of "do not know", "not stated", and refusal to answer

\*\* Result not reliable because coefficient of variation was too high

CI – Confidence interval

## A4. RATE OF LIVE BIRTHS TO TEENAGE MOTHERS

**TABLE A4.1**

AGE-SPECIFIC LIVE BIRTH RATES, FEMALES AGED 10–14, 15–17 AND 18–19 YEARS  
BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001–2010

Year	10–14 years			15–17 years			18–19 years		
	Number of females	Number of live births	Live births per 1,000 females	Number of females	Number of live births	Live births per 1,000 females	Number of females	Number of live births	Live births per 1,000 females
2001	622,577	90	0.14	379,058	3,443	9.1	256,399	7,942	31.0
2002	629,693	100	0.16	376,073	3,089	8.2	257,958	7,569	29.3
2003	634,631	82	0.13	372,487	2,900	7.8	258,446	7,242	28.0
2004	633,526	90	0.14	374,044	2,879	7.7	257,647	6,875	26.7
2005	626,780	95	0.15	384,819	2,784	7.2	254,690	6,774	26.6
2006	617,785	99	0.16	396,419	2,943	7.4	253,073	7,030	27.8
2007	604,130	94	0.16	399,612	3,147	7.9	259,927	7,378	28.4
2008	589,958	110	0.19	395,199	3,173	8.0	270,686	7,599	28.1
2009	577,356	80	0.14	388,170	3,237	8.3	276,646	7,636	27.6
2010	565,607	75	0.13	381,684	2,933	7.7	274,958	7,107	25.8

Source: Statistics Canada, Vital Statistics (live births) and CANSIM Table 051-0001 (number of women by age group).

\* Data for Ontario were excluded because of data quality concerns.

**TABLE A4.2**

NUMBER AND PERCENT OF LIVE BIRTHS, BY MATERNAL AGE  
BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001–2010

Year	10–14 years		15–17 years		18–19 years		Total number of live births**
	Number of live births	Percent of total live births	Number of live births	Percent of total live births	Number of live births	Percent of total live births	
2001	90	0.04	3,443	1.7	7,942	3.9	202,020
2002	100	0.05	3,089	1.5	7,569	3.8	200,263
2003	82	0.04	2,900	1.4	7,242	3.5	204,265
2004	90	0.04	2,879	1.4	6,875	3.4	204,500
2005	95	0.05	2,784	1.3	6,774	3.3	208,399
2006	99	0.05	2,943	1.3	7,030	3.2	218,993
2007	94	0.04	3,147	1.4	7,378	3.2	229,401
2008	110	0.05	3,173	1.3	7,599	3.2	237,049
2009	80	0.03	3,237	1.3	7,636	3.2	240,408
2010	75	0.03	2,933	1.2	7,107	3.0	237,538

Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

\*\* Excludes live births to mothers ≥50 years and those with unknown maternal age.

**TABLE A4.3**

**AGE-SPECIFIC LIVE BIRTH RATES, FEMALES AGED 10–17 AND 18–19 YEARS  
BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006–2010**

Province/territory	10–17 years			18–19 years		
	Average number of females 2006–2010	Number of live births 2006–2010	Live births per 1,000 females per year (95% CI)	Average number of females 2006–2010	Number of live births 2006–2010	Live births per 1,000 females per year (95% CI)
Newfoundland and Labrador	22,878	483	4.2 (4.2–4.3)	6,555	997	30.4 (28.6–32.3)
Prince Edward Island	7,295	104	2.9 (2.7–3.0)	2,066	281	27.2 (24.1–30.3)
Nova Scotia	44,331	787	3.6 (3.5–3.6)	12,726	1,864	29.3 (28.0–30.6)
New Brunswick	34,666	718	4.1 (4.1–4.2)	9,547	1,703	35.7 (34.0–37.3)
Quebec	364,048	2,814	1.6 (1.5–1.6)	96,258	9,291	19.3 (18.9–19.7)
Manitoba	65,887	2,444	7.4 (7.4–7.5)	17,466	4,321	49.5 (48.0–50.9)
Saskatchewan	55,073	2,247	8.2 (8.1–8.2)	15,018	4,191	55.8 (54.2–57.5)
Alberta	179,611	3,625	4.0 (4.0–4.1)	49,059	8,274	33.7 (33.0–34.4)
British Columbia	202,419	2,139	2.1 (2.1–2.1)	56,602	5,031	17.8 (17.3–18.3)
Yukon	1,696	40	4.7 (4.4–5.0)	433	73	33.7 (26.1–41.3)
Northwest Territories	2,661	105	7.9 (7.6–8.2)	725	215	59.3 (51.6–67.0)
Nunavut	2,619	385	29.4 (28.8–30.0)	603	509	168.9 (155.5–182.3)
CANADA	983,184	15,891	3.2 (3.2–3.2)	267,058	36,750	27.5 (27.2–27.8)

Source: Statistics Canada, Vital Statistics (live births) and CANSIM Table 051-0001 (number of women by age group).

\* Data for Ontario were excluded because of data quality concerns.

CI – Confidence interval

TABLE A4.4

PROPORTION OF LIVE BIRTHS TO MOTHERS AGED 10-17 AND 18-19 YEARS  
BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010

Province/territory	10-17 years		18-19 years		Total number of live births**
	Number of live births	Percent of total live births	Number of live births	Percent of total live births	
Newfoundland and Labrador	483	2.0	997	4.2	23,807
Prince Edward Island	104	1.5	281	3.9	7,145
Nova Scotia	787	1.8	1,864	4.2	44,391
New Brunswick	718	2.0	1,703	4.7	36,300
Quebec	2,814	0.7	9,291	2.2	431,436
Manitoba	2,444	3.2	4,321	5.6	77,045
Saskatchewan	2,247	3.3	4,191	6.2	67,741
Alberta	3,625	1.5	8,274	3.3	247,656
British Columbia	2,139	1.0	5,031	2.3	218,419
Yukon	40	2.2	73	3.9	1,857
Northwest Territories	105	3.0	215	6.1	3,542
Nunavut	385	9.5	509	12.6	4,050
CANADA	15,891	1.4	36,750	3.2	1,163,389

Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

\*\* Excludes live births to mothers  $\geq 50$  years and those with unknown maternal age.

## A5. RATE OF LIVE BIRTHS TO OLDER MOTHERS

TABLE A5.1

AGE-SPECIFIC LIVE BIRTH RATES, FEMALES AGED 35–39 40–44 AND 45–49 YEARS  
BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001-2010

Year	35–39 years			40–44 years			45–49 years		
	Number of females	Number of live births	Live births per 1,000 females	Number of females	Number of live births	Live births per 1,000 females	Number of females	Number of live births	Live births per 1,000 females
2001	789,292	25,228	32.0	822,596	4,288	5.2	751,287	150	0.20
2002	764,610	25,131	32.9	825,481	4,470	5.4	773,095	148	0.19
2003	734,465	26,030	35.4	828,927	4,731	5.7	791,714	195	0.25
2004	707,581	26,335	37.2	829,666	5,007	6.0	804,086	218	0.27
2005	687,823	26,920	39.1	825,173	5,266	6.4	813,676	202	0.25
2006	680,674	29,224	42.9	806,331	5,369	6.7	824,109	248	0.30
2007	678,074	30,951	45.6	783,378	5,713	7.3	829,923	267	0.32
2008	677,871	32,373	47.8	756,470	5,852	7.7	836,595	298	0.36
2009	677,975	32,734	48.3	732,641	6,325	8.6	840,876	327	0.39
2010	679,860	33,551	49.3	714,409	6,575	9.2	836,693	296	0.35

Source: Statistics Canada, Vital Statistics (live births) and CANSIM Table 051-0001 (number of women by age group).

\* Data for Ontario were excluded because of data quality concerns.

TABLE A5.2

NUMBER AND PERCENT OF LIVE BIRTHS, BY MATERNAL AGE  
BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001-2010

Year	35–39 years		40–44 years		45–49 years		Total number of live births**
	Number of live births	Percent of total live births	Number of live births	Percent of total live births	Number of live births	Percent of total live births	
2001	25,228	12.5	4,288	2.1	150	0.07	202,020
2002	25,131	12.5	4,470	2.2	148	0.07	200,263
2003	26,030	12.7	4,731	2.3	195	0.10	204,265
2004	26,335	12.9	5,007	2.4	218	0.11	204,500
2005	26,920	12.9	5,266	2.5	202	0.10	208,399
2006	29,224	13.3	5,369	2.5	248	0.11	218,993
2007	30,951	13.5	5,713	2.5	267	0.12	229,401
2008	32,373	13.7	5,852	2.5	298	0.13	237,049
2009	32,734	13.6	6,325	2.6	327	0.14	240,408
2010	33,551	14.1	6,575	2.8	296	0.12	237,538

Source: Statistics Canada, Vital Statistics (live births).

\* Data for Ontario were excluded because of data quality concerns.

\*\* Excludes live births to mothers ≥50 years and those with unknown maternal age.

**TABLE A5.3**

**AGE-SPECIFIC LIVE BIRTH RATES, FEMALES AGED 35-39 AND 40-49 YEARS**  
**BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010**

Province/territory	35-39 years			40-49 years		
	Average number of females 2006-2010	Number of live births 2006-2010	Live births per 1,000 females per year (95% CI)	Average number of females 2006-2010	Number of live births 2006-2010	Live births per 1,000 females per year (95% CI)
Newfoundland and Labrador	18,140	2,958	32.6 (31.5–33.8)	42,538	421	2.0 (1.8–2.2)
Prince Edward Island	4,440	971	43.7 (41.0–46.4)	11,022	155	2.8 (2.4–3.3)
Nova Scotia	31,538	5,993	38.0 (37.1–38.9)	76,422	1,065	2.8 (2.6–3.0)
New Brunswick	25,102	3,708	29.5 (28.6–30.5)	60,178	567	1.9 (1.7–2.0)
Quebec	247,619	56,291	45.5 (45.1–45.8)	609,857	10,822	3.5 (3.5–3.6)
Manitoba	38,376	8,847	46.1 (45.2–47.0)	87,806	1,750	4.0 (3.8–4.2)
Saskatchewan	29,581	5,969	40.4 (39.4–41.4)	72,148	1,041	2.9 (2.7–3.1)
Alberta	126,870	32,642	51.5 (50.9–52.0)	273,340	6,286	4.6 (4.5–4.7)
British Columbia	153,243	40,479	52.8 (52.3–53.3)	350,701	8,910	5.1 (5.0–5.2)
Yukon	1,300	299	46.0 (40.9–51.1)	3,064	69	4.5 (3.4–5.6)
Northwest Territories	1,577	428	54.3 (49.3–59.3)	3,361	107	6.4 (5.2–7.6)
Nunavut	1,107	248	44.8 (39.4–50.3)	1,849	77	8.3 (6.5–10.2)
CANADA	678,891	158,833	46.8 (46.6–47.0)	1,592,285	31,270	3.9 (3.9–4.0)

Source: Statistics Canada, Vital Statistics (live births) and CANSIM Table 051-0001 (number of women by age group).

\* Data for Ontario were excluded because of data quality concerns.

CI – Confidence interval

TABLE A5.4

## PROPORTION OF LIVE BIRTHS TO OLDER MOTHERS

BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010

Province/territory	35-39 years		40-49 years		Total number of live births**
	Number of live births	Percent of total live births	Number of live births	Percent of total live births	
Newfoundland and Labrador	2,958	12.4	421	1.8	23,807
Prince Edward Island	971	13.6	155	2.2	7,145
Nova Scotia	5,993	13.5	1,065	2.4	44,391
New Brunswick	3,708	10.2	567	1.6	36,300
Quebec	56,291	13.0	10,822	2.5	431,436
Manitoba	8,847	11.5	1,750	2.3	77,045
Saskatchewan	5,969	8.8	1,041	1.5	67,741
Alberta	32,642	13.2	6,286	2.5	247,656
British Columbia	40,479	18.5	8,910	4.1	218,419
Yukon	299	16.1	69	3.7	1,857
Northwest Territories	428	12.1	107	3.0	3,542
Nunavut	248	6.1	77	1.9	4,050
CANADA	158,833	13.7	31,270	2.7	1,163,389

Source: Statistics Canada, Vital Statistics

\* Data for Ontario were excluded because of data quality concerns.

\*\* Excludes live births to mothers  $\geq 50$  years and those with unknown maternal age.



## A6. RATE OF CESAREAN DELIVERY

TABLE A6.1

RATES OF CESAREAN DELIVERY, PRIMARY AND REPEAT CESAREAN DELIVERY  
BY FISCAL YEAR, CANADA (EXCLUDING QUEBEC)\*, 2001-2002 TO 2010-2011 FISCAL YEARS

Fiscal year	Hospital deliveries	Cesarean deliveries	Cesarean delivery rate (%)	Hospital deliveries without a previous cesarean delivery	Primary cesarean deliveries	Primary cesarean delivery rate (%)	Hospital deliveries with previous cesarean delivery	Repeat cesarean deliveries	Repeat cesarean delivery rate (%)
2001-2002	253,543	59,208	23.4	225,660	38,516	17.1	27,883	20,692	74.2
2002-2003	250,520	61,479	24.5	223,062	40,483	18.1	27,458	20,996	76.5
2003-2004	256,928	66,376	25.8	227,627	43,384	19.1	29,301	22,992	78.5
2004-2005	261,332	69,222	26.5	230,769	44,691	19.4	30,563	24,531	80.3
2005-2006	264,705	72,190	27.3	232,095	45,629	19.7	32,610	26,561	81.5
2006-2007	272,594	74,428	27.3	238,803	46,711	19.6	33,791	27,717	82.0
2007-2008	283,295	78,564	27.7	247,098	48,838	19.8	36,197	29,726	82.1
2008-2009	284,654	79,780	28.0	247,337	49,157	19.9	37,317	30,623	82.1
2009-2010	286,179	79,683	27.8	248,458	48,879	19.7	37,721	30,804	81.7
2010-2011	280,977	78,761	28.0	243,153	47,829	19.7	37,824	30,932	81.8

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

TABLE A6.2

RATE OF CESAREAN DELIVERY  
BY PROVINCE/TERRITORY OF RESIDENCE, CANADA (EXCLUDING QUEBEC)\*, 2010-2011 FISCAL YEAR

Province/territory	Hospital deliveries	Cesarean deliveries	Cesarean deliveries per 100 hospital deliveries (95% CI)
Newfoundland and Labrador	4,670	1,481	31.7 (30.4–33.0)
Prince Edward Island	1,371	438	31.9 (29.5–34.4)
Nova Scotia	8,471	2,306	27.2 (26.3–28.2)
New Brunswick	7,031	1,930	27.4 (26.4–28.5)
Ontario	133,059	37,845	28.4 (28.2–28.7)
Manitoba	15,387	3,307	21.5 (20.8–22.1)
Saskatchewan	13,979	3,091	22.1 (21.4–22.8)
Alberta	49,015	13,596	27.7 (27.3–28.1)
British Columbia	41,683	13,235	31.8 (31.3–32.2)
Yukon	371	74	19.9 (15.9–24.0)
Northwest Territories	696	140	20.1 (17.1–23.1)
Nunavut	785	66	8.4 (6.5–10.3)
CANADA	280,977	78,761	28.0 (27.9–28.2)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

## A7. SEVERE MATERNAL MORBIDITY RATE

**TABLE A7.1**

**RATE OF SEVERE MATERNAL MORBIDITY**

BY FISCAL YEAR, CANADA (EXCLUDING QUEBEC),\* 2003-2004 TO 2010-2011 FISCAL YEARS

Fiscal Year	Number of hospital deliveries	Number of cases	Severe maternal morbidity per 1,000 hospital deliveries (95% CI)
2003-2004	248,496	3,520	14.2 (13.7–14.6)
2004-2005	262,673	3,672	14.0 (13.5–14.4)
2005-2006	266,172	3,723	14.0 (13.5–14.4)
2006-2007	274,089	3,608	13.2 (12.7–13.6)
2007-2008	284,924	3,967	13.9 (13.5–14.4)
2008-2009	286,432	4,256	14.9 (14.4–15.3)
2009-2010	287,942	4,188	14.5 (14.1–15.0)
2010-2011	282,695	4,347	15.4 (14.9–15.8)

Source : Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

**TABLE A7.2**

**RATES OF THE MOST COMMON SEVERE MATERNAL MORBIDITIES**

CANADA (EXCLUDING QUEBEC),\* 2006-2007 TO 2010-2011 FISCAL YEARS

Maternal Morbidity	Number of cases	Rate per 100,000 hospital deliveries (95% CI)
Blood transfusion	10,637	751.2 (737.0–765.5)
Postpartum hemorrhage and blood transfusion	6,590	465.4 (452.2–476.7)
Hysterectomy	1,614	114.0 (108.5–119.6)
Cardiac arrest/failure, myocardial infarction or pulmonary edema	1,528	107.9 (102.6–113.5)
Embolization or ligation of pelvic vessels or suturing of uterus and postpartum hemorrhage	1,310	92.5 (87.6–97.7)
Puerperal sepsis	1,141	80.6 (76.0–85.4)
Uterine rupture during labour	955	67.4 (63.3–71.9)
Repair of bladder, urethra, or intestine	863	60.9 (56.9–65.2)
Eclampsia	841	59.4 (55.4–63.5)

Source : Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

**TABLE A7.3****RATES OF SEVERE MATERNAL MORBIDITY***BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC),\* 2006-2007 TO 2010-2011 FISCAL YEARS*

Province/territory	Number of cases	Severe maternal morbidity per 1,000 hospital deliveries (95% CI)
Newfoundland and Labrador	524	22.3 ( 20.4–24.3)
Prince Edward Island	103	14.9 (12.2–18.0)
Nova Scotia	536	12.2 (11.2–13.3)
New Brunswick	518	14.3 (13.1–15.6)
Ontario	9,296	13.3 (13.0–13.6)
Manitoba	1,155	14.8 (14.0–15.7)
Saskatchewan	1,242	18.2 (17.2–19.2)
Alberta	3,996	16.5 (16.0–17.0)
British Columbia	2,853	13.5 (13.0–14.0)
Yukon	37	21.0 (14.8–28.8)
Northwest Territories	63	15.7 ( 12.1–20.0)
Nunavut	43	22.0 (16.0–29.5)
CANADA	20,366	14.4 (14.2–14.6)

Source : Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\*Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

## A8. MATERNAL MORTALITY RATE

**TABLE A8.1**

**MATERNAL MORTALITY RATE**

CANADA (EXCLUDING QUEBEC),\* 1997-1998 TO 2010-2011 FISCAL YEARS

Fiscal Years	Number of maternal deaths	Maternal deaths per 100,000 hospital deliveries (95% CI)
1997-1998 to 1998-1999	42	8.3 (6.0–11.2)
1999-2000 to 2000-2001	42	8.5 (6.2–11.6)
2001-2002 to 2002-2003	58	11.9 (9.1–15.4)
2003-2004 to 2004-2005	42	8.2 (5.9–11.1)
2005-2006 to 2006-2007	48	8.9 (6.6–11.8)
2007-2008 to 2008-2009	50	8.8 (6.5–11.6)
2009-2010 to 2010-2011	35	6.1 (4.3–8.6)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database. Manitoba data, which were incomplete for earlier years, were included from 2004/2005.

CI – Confidence interval

**TABLE A8.2**

**DIAGNOSIS ASSOCIATED WITH MATERNAL DEATHS**

CANADA (EXCLUDING QUEBEC),\* 2002-2003 TO 2010-2011 FISCAL YEARS

Diagnosis	Number of maternal deaths	Maternal deaths per 100,000 hospital deliveries (95% CI)
Diseases of the circulatory system	76	3.1 (2.5–3.9)
Other indirect causes	59	2.4 (1.9–3.1)
Postpartum hemorrhage	39	1.6 (1.1–2.2)
Hypertension complicating pregnancy, childbirth and the puerperium	34	1.4 (1.0–1.9)
Obstetric embolism	34	1.4 (1.0–1.9)
Major puerperal infection	22	0.9 (0.6–1.3)
Ectopic and molar pregnancy /abortive outcome	21	0.9 (0.5–1.3)
Antepartum hemorrhage, abruptio placentae, and placenta previa	15	0.6 (0.3–1.0)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database. Manitoba data, which were incomplete for earlier years, were included from 2004/2005.

CI – Confidence interval

TABLE A8.3

## MATERNAL MORTALITY RATE

BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC),\* 1996-1997 TO 2010-2011 FISCAL YEARS

Province/territory	Number of maternal deaths	Maternal deaths per 100,000 hospital deliveries (95% CI)
Newfoundland and Labrador	12	16.7 (8.7–29.3)
Prince Edward Island	**	19.0 (5.2–48.6)
Nova Scotia	8	5.9 (2.6–11.7)
New Brunswick	6	5.4 (2.0–11.7)
Ontario	195	9.6 (8.2–11.0)
Manitoba	6	5.6 (2.1–12.3)
Saskatchewan	13	6.8 (3.7–11.7)
Alberta	49	7.9 (5.8–10.4)
British Columbia	52	8.4 (6.3–11.0)
Yukon	**	18.8 (0.5–104.4)
Northwest Territories	0	0.0 (0.0–37.5)
Nunavut	0	0.0 (0.0–54.7)
CANADA	346	8.8 (7.9–9.8)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database. Manitoba data, which were incomplete for earlier years, were included from 2004/2005

\*\* Number suppressed for privacy reasons (cell size between 1 and 5)

CI – Confidence interval

## A9. PRETERM BIRTH RATE

TABLE A9.1

## RATES OF PRETERM BIRTH

BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001–2010

Year	Number of live births**	Number of births <32 weeks	Births <32 weeks per 100 live births	Number of births 32–36 weeks	Births 32–36 weeks per 100 live births	Number of births <37 weeks	Births <37 weeks per 100 live births
2001	201,068	2,204	1.1	12,906	6.4	15,110	7.5
2002	199,435	2,211	1.1	12,929	6.5	15,140	7.6
2003	203,422	2,397	1.2	13,625	6.7	16,022	7.9
2004	203,565	2,446	1.2	14,235	7.0	16,681	8.2
2005	203,565	2,446	1.2	14,235	7.0	16,681	8.2
2006	208,052	2,306	1.1	14,209	6.8	16,515	7.9
2007	218,840	2,544	1.2	15,016	6.9	17,560	8.0
2008	237,005	2,732	1.2	16,020	6.8	18,752	7.9
2009	240,115	2,576	1.1	15,751	6.6	18,327	7.6
2010	237,498	2,839	1.2	15,463	6.5	18,302	7.7

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* Excludes live births with unknown gestational age.

TABLE A9.2

## RATES OF PRETERM BIRTH

BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2010

Plurality	Number of live births**	Number of births <32 weeks	Births <32 weeks per 100 live births	Number of births 32–36 weeks	Births 32–36 weeks per 100 live births	Number of births <37 weeks	Births <37 weeks per 100 live births
Singletons	229,969	2,076	0.9	12,152	5.3	14,228	6.2
Twins	7,339	690	9.4	3,197	43.6	3,887	53.0
Triplets or higher	190	73	38.4	114	60.0	187	98.4
All live births	237,498	2,839	1.2	15,463	6.5	18,302	7.7

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* Excludes live births with unknown gestational age.

TABLE A9.3

## RATES OF PRETERM BIRTH

BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2006-2010

Province/territory	Number of live births**	Number of births <32 weeks	Births <32 weeks per 100 live births (95% CI)	Number of births 32-36 weeks	Births 32-36 weeks per 100 live births (95% CI)	Number of births <37 weeks	Births <37 weeks per 100 live births (95% CI)
Newfoundland and Labrador	23,797	325	1.4 (1.2-1.5)	1,708	7.2 (6.8-7.5)	2,033	8.5 (8.2-8.9)
Prince Edward Island	7,143	88	1.2 (1.0-1.5)	480	6.7 (6.1-7.3)	568	8.0 (7.3-8.6)
Nova Scotia	44,398	545	1.2 (1.1-1.3)	2,924	6.6 (6.4-6.8)	3,469	7.8 (7.6-8.1)
New Brunswick	36,321	405	1.1 (1.0-1.2)	2,325	6.4 (6.1-6.7)	2,730	7.5 (7.2-7.8)
Quebec	431,326	4,483	1.0 (1.0-1.1)	27,410	6.4 (6.3-6.4)	31,893	7.4 (7.3-7.5)
Manitoba	76,984	930	1.2 (1.1-1.3)	5,166	6.7 (6.5-6.9)	6,096	7.9 (7.7-8.1)
Saskatchewan	67,711	744	1.1 (1.0-1.2)	4,248	6.3 (6.1-6.5)	4,992	7.4 (7.2-7.6)
Alberta	247,674	3,381	1.4 (1.3-1.4)	18,051	7.3 (7.2-7.4)	21,432	8.7 (8.5-8.8)
British Columbia	217,970	2,207	1.0 (1.0-1.1)	14,156	6.5 (6.4-6.6)	16,363	7.5 (7.4-7.6)
Yukon	1,857	24	1.3 (0.8-1.8)	160	8.6 (7.3-9.9)	184	9.9 (8.5-11.3)
Northwest Territories	3,536	46	1.3 (0.9-1.7)	221	6.3 (5.5-7.0)	267	7.6 (6.7-8.4)
Nunavut	4,032	75	1.9 (1.4-2.3)	443	11.0 (10.0-12.0)	518	12.8 (11.8-13.9)
CANADA	1,162,749	13,253	1.1 (1.1-1.2)	77,292	6.6 (6.6-6.7)	90,545	7.8 (7.7-7.8)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* Excludes live births with unknown gestational age.

CI – Confidence interval

## A10. POSTTERM BIRTH RATE

TABLE A10.1

## RATE OF POSTTERM BIRTH

BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001-2010

Year	Number of live births**	Number of births ≥42 weeks	Births ≥42 weeks per 100 live births
2001	201,068	2,301	1.14
2002	199,435	2,085	1.05
2003	203,422	1,875	0.92
2004	203,565	1,540	0.76
2005	208,052	1,547	0.74
2006	218,840	1,507	0.69
2007	229,291	1,656	0.72
2008	237,005	1,481	0.62
2009	240,115	1,487	0.62
2010	237,498	1,459	0.61

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* Excludes live births with unknown gestational age.

TABLE A10.2

## RATE OF POSTTERM BIRTH

BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010

Province/territory	Number of live births**	Number of births ≥42 weeks	Births ≥42 weeks per 100 live births (95% CI)
Newfoundland and Labrador	23,797	80	0.34 (0.26–0.41)
Prince Edward Island	7,143	38	0.53 (0.36–0.70)
Nova Scotia	44,398	426	0.96 (0.87–1.05)
New Brunswick	36,321	120	0.33 (0.27–0.39)
Quebec	431,326	1,497	0.35 (0.33–0.36)
Manitoba	76,984	2,084	2.71 (2.59–2.82)
Saskatchewan	67,711	806	1.19 (1.11–1.27)
Alberta	247,674	1,089	0.44 (0.41–0.47)
Colombie-Britannique	217,970	1,255	0.58 (0.54–0.61)
Yukon	1,857	59	3.18 (2.38–3.97)
Northwest Territories	3,536	119	3.37 (2.77–3.96)
Nunavut	4,032	17	0.42 (0.22–0.62)
CANADA	1,162,749	7,590	0.65 (0.64–0.67)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* Excludes live births with unknown gestational age.

CI – Confidence interval



## A11. SMALL-FOR-GESTATIONAL-AGE RATE

TABLE A11.1

RATE OF SMALL-FOR-GESTATIONAL-AGE (SGA)

BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001-2010

Year	Number of singleton live births**	Number of SGA singleton live births	SGA live births per 100 singleton live births
2001	194,524	15,634	8.0
2002	193,071	15,521	8.0
2003	196,624	15,471	7.9
2004	196,472	15,283	7.8
2005	201,775	16,219	8.0
2006	211,923	17,394	8.2
2007	222,145	18,080	8.1
2008	229,675	17,869	7.8
2009	232,252	19,296	8.3
2010	229,777	19,097	8.3

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

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

TABLE A11.2

RATE OF SMALL-FOR-GESTATIONAL-AGE (SGA)

BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010

Province/territory	Number of singleton live births**	Number of SGA singleton live births	SGA live births per 100 singleton live births (95% CI)
Newfoundland and Labrador	22,981	1,621	7.1 (6.7–7.4)
Prince Edward Island	6,869	442	6.4 (5.9–7.0)
Nova Scotia	42,911	3,659	8.5 (8.3–8.8)
New Brunswick	35,250	2,668	7.6 (7.3–7.8)
Quebec	417,932	34,775	8.3 (8.2–8.4)
Manitoba	74,800	5,944	7.9 (7.8–8.1)
Saskatchewan	65,745	5,010	7.6 (7.4–7.8)
Alberta	239,085	21,073	8.8 (8.7–8.9)
British Columbia	211,013	15,968	7.6 (7.5–7.7)
Yukon	1,795	107	6.0 (4.9–7.1)
Northwest Territories	3,436	208	6.1 (5.3–6.9)
Nunavut	3,955	261	6.6 (5.8–7.4)
CANADA	1,125,772	91,736	8.1 (8.1–8.2)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

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

CI – Confidence interval

## A12. LARGE-FOR-GESTATIONAL-AGE RATE

TABLE A12.1

RATE OF LARGE-FOR-GESTATIONAL-AGE (LGA)  
BY YEAR, CANADA (EXCLUDING ONTARIO),\* 2001-2010

Year	Number of singleton live births**	Number of LGA singleton live births	LGA live births per 100 singleton live births
2001	194,524	22,926	11.8
2002	193,071	22,473	11.6
2003	196,624	22,711	11.6
2004	196,472	22,758	11.6
2005	201,775	22,541	11.2
2006	211,923	23,166	10.9
2007	222,145	24,102	10.8
2008	229,675	25,557	11.1
2009	232,252	24,243	10.4
2010	229,777	23,919	10.4

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* 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.

TABLE A12.2

RATE OF LARGE-FOR-GESTATIONAL-AGE (LGA)  
BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010

Province/territory	Number of singleton live births**	Number of LGA singleton live births	LGA live births per 100 singleton live births (95% CI)
Newfoundland and Labrador	22,981	3,466	15.1 (14.6–15.5)
Prince Edward Island	6,869	922	13.4 (12.6–14.2)
Nova Scotia	42,911	5,285	12.3 (12.0–12.6)
New Brunswick	35,250	4,364	12.4 (12.0–12.7)
Quebec	417,932	38,977	9.3 (9.2–9.4)
Manitoba	74,800	10,377	13.9 (13.6–14.1)
Saskatchewan	65,745	8,672	13.2 (12.9–13.4)
Alberta	239,085	23,501	9.8 (9.7–9.9)
British Columbia	211,013	23,974	11.4 (11.2–11.5)
Yukon	1,795	258	14.4 (12.8–16.0)
Northwest Territories	3,436	613	17.8 (16.6–19.1)
Nunavut	3,955	578	14.6 (13.5–15.7)
CANADA	1,125,772	120,987	10.7 (10.7–10.8)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* 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.

CI – Confidence interval

## A13. FETAL MORTALITY RATE

**TABLE A13.1**  
**FETAL MORTALITY RATE**  
 CANADA (EXCLUDING ONTARIO)\*, 2001-2010

Year	≥500 g or ≥20 weeks			≥500 g **			≥1000 g or ≥28 weeks		
	Total births	Fetal deaths	Fetal deaths per 1,000 total births	Total births	Fetal deaths	Fetal deaths per 1,000 total births	Total births	Fetal deaths	Fetal deaths per 1,000 total births
2001	203,231	1198	5.9	202,773	945	4.7	201,782	681	3.4
2002	201,445	1175	5.8	200,878	838	4.2	199,930	619	3.1
2003	205,466	1193	5.8	204,860	838	4.1	203,924	616	3.0
2004	205,746	1231	6.0	205,111	872	4.3	204,038	620	3.0
2005	209,704	1288	6.1	209,041	892	4.3	208,064	625	3.0
2006	220,336	1320	6.0	219,686	948	4.3	218,748	668	3.1
2007	230,920	1493	6.5	230,238	1073	4.7	229,169	713	3.1
2008	238,678	1584	6.6	237,907	1096	4.6	236,867	733	3.1
2009	242,089	1603	6.6	241,376	1132	4.7	240,117	757	3.2
2010	239,194	1613	6.7	238,473	1220	5.1	237,388	869	3.7

Source : Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* Includes fetal deaths with a gestational age ≥22 weeks if birth weight is unknown.

**TABLE A13.2**  
**FETAL MORTALITY IN SINGLETON AND MULTIPLE BIRTHS**  
 CANADA (EXCLUDING ONTARIO)\*, 2010

Plurality	≥500 g or ≥20 weeks			≥500 g **		
	Total births	Fetal deaths	Fetal deaths per 1,000 total births (95% CI)	Total births	Fetal deaths	Fetal deaths per 1,000 total births (95% CI)
All	239,194	1,613	6.7 (6.4–7.1)	238,473	1,220	5.1 (4.8–5.4)
Singletons	231,539	1,491	6.4 (6.1–6.8)	230,919	1,140	4.9 (4.7–5.2)
Multiples	7,655	122	15.9 (13.1–18.7)	7,554	80	10.6 (8.3–12.9)

Source : Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* Includes fetal deaths with a gestational age ≥22 weeks if birth weight is unknown.

IC – Confidence interval

TABLE A13.3

## FETAL MORTALITY RATE

BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006–2010

Province/ territory***	≥500 g or ≥20 weeks			≥500 g **			≥1000 g or ≥28 weeks		
	Total births	Fetal deaths	Fetal deaths per 1,000 total births (95% CI)	Total births	Fetal deaths	Fetal deaths per 1,000 total births (95% CI)	Total births	Fetal deaths	Fetal deaths per 1,000 total births (95% CI)
Newfoundland and Labrador	23,984	176	7.3 (6.3–8.4)	23,870	127	5.3 (4.4–6.2)	23,765	91	3.8 (3.0–4.6)
Prince Edward Island	7,196	51	7.1 (5.1–9.0)	7,174	33	4.6 (3.0–6.2)	7,137	24	3.4 (2.0–4.7)
Nova Scotia	44,785	384	8.6 (7.7–9.4)	44,589	242	5.4 (4.7–6.1)	44,376	154	3.5 (2.9–4.0)
New Brunswick	36,536	212	5.8 (5.0–6.6)	36,430	141	3.9 (3.2–4.5)	36,304	100	2.8 (2.2–3.3)
Quebec	433,276	1,799	4.2 (4.0–4.3)	432,734	1,787	4.1 (3.9–4.3)	430,905	1,155	2.7 (2.5–2.8)
Manitoba	77,695	644	8.3 (7.7–8.9)	77,397	444	5.7 (5.2–6.3)	77,067	349	4.5 (4.1–5.0)
Saskatchewan	68,273	465	6.8 (6.2–7.4)	68,088	331	4.9 (4.3–5.4)	67,799	252	3.7 (3.3–4.2)
Alberta	249,424	1,743	7.0 (6.7–7.3)	248,360	1,075	4.3 (4.1–4.6)	247,211	782	3.2 (2.9–3.4)
British Columbia	220,494	2,037	9.2 (8.8–9.6)	219,518	1,213	5.5 (5.2–5.8)	218,257	778	3.6 (3.3–3.8)
Yukon	1,869	12	6.4 (2.8–10.0)	1,863	9	4.8 (1.7–8.0)	1,854	6	3.2 (0.7–5.8)
Northwest Territories	3,578	34	9.5 (6.3–12.7)	3,565	25	7.0 (4.3–9.8)	3,547	21	5.9 (3.4–8.4)
Nunavut	4,107	56	13.6 (10.1–17.2)	4,092	42	10.3 (7.2–13.4)	4,067	28	6.9 (4.3–9.4)
CANADA	1,171,217	7,613	6.5 (6.4–6.6)	1,167,680	5,469	4.7 (4.6–4.8)	1,162,289	3,740	3.2 (3.1–3.3)

Source : Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

\*\* Includes fetal deaths with a gestational age ≥22 weeks if birth weight is unknown.

\*\*\* As residential address is no longer recorded in stillbirth registrations in BC, mother residing in Canada who had a stillbirth registered in BC are assumed to reside in that province

IC – Confidence interval

TABLE A13.4

MORTALITY RATE IN FETUSES  $\geq 500$  G BY TYPE  
CANADA (EXCLUDING L'ONTARIO)\*, 2001-2010

Year	Total births	Stillbirth		Pregnancy termination		Total	
		Fetal deaths	Fetal deaths per 1,000 total births	Fetal deaths	Fetal deaths per 1,000 total births	Fetal deaths	Fetal deaths per 1,000 total births
2001	202,773	875	4.3	70	0.3	945	4.7
2002	200,878	771	3.8	67	0.3	838	4.2
2003	204,860	753	3.7	85	0.4	838	4.1
2004	205,111	784	3.8	88	0.4	872	4.3
2005	209,041	790	3.8	102	0.5	892	4.3
2006	219,686	827	3.8	121	0.6	948	4.3
2007	230,238	929	4.0	144	0.6	1,073	4.7
2008	237,907	925	3.9	171	0.7	1,096	4.6
2009	241,376	900	3.7	232	1.0	1,132	4.7
2010	238,473	900	3.8	320	1.3	1,220	5.1

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

TABLE A13.5

MORTALITY RATE IN FETUSES  $\geq 500$  G BY CAUSE  
CANADA (EXCLUDING ONTARIO)\*, 2001-2010

Year	Total births	Maternal complication		Placenta / cord / membrane		Congenital anomaly		Intrauterine hypoxia / asphyxia		Other or unspecified cause	
		Fetal deaths	Fetal deaths per 1,000 total births	Fetal deaths	Fetal deaths per 1,000 total births	Fetal deaths	Fetal deaths per 1,000 total births	Fetal deaths	Fetal deaths per 1,000 total births	Fetal deaths	Fetal deaths per 1,000 total births
2001	202,773	57	0.28	338	1.67	83	0.41	40	0.20	357	1.76
2002	200,878	41	0.20	277	1.38	96	0.48	45	0.22	312	1.55
2003	204,860	42	0.21	283	1.38	80	0.39	26	0.13	322	1.57
2004	205,111	45	0.22	279	1.36	97	0.47	38	0.19	325	1.58
2005	209,041	34	0.16	279	1.33	88	0.42	34	0.16	355	1.70
2006	219,686	45	0.20	300	1.37	89	0.41	47	0.21	346	1.57
2007	230,238	63	0.27	319	1.39	119	0.52	35	0.15	393	1.71
2008	237,907	65	0.27	283	1.19	89	0.37	36	0.15	452	1.90
2009	241,376	53	0.22	276	1.14	97	0.40	46	0.19	428	1.77
2010	238,473	58	0.24	279	1.17	103	0.43	32	0.13	428	1.79

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

## A14. INFANT MORTALITY RATE

TABLE A14.1

RATE OF NEONATAL MORTALITY (0 TO 27 DAYS)  
BY YEAR, CANADA (EXCLUDING ONTARIO)\*, 2000-2009

Year	Number of live births	Number of neonatal deaths	Neonatal deaths by 1,000 live births (95% CI)
2000	200,458	688	3.4 (3.2–3.7)
2001	202,033	739	3.7 (3.4–3.9)
2002	200,270	757	3.8 (3.5–4.0)
2003	204,273	781	3.8 (3.6–4.1)
2004	204,515	766	3.7 (3.5–4.0)
2005	208,416	819	3.9 (3.7–4.2)
2006	219,016	804	3.7 (3.4–3.9)
2007	229,427	836	3.6 (3.4–3.9)
2008	237,094	830	3.5 (3.3–3.7)
2009	240,486	863	3.6 (3.3–3.8)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

CI – Confidence interval

TABLE A14.2

RATE OF POSTNEONATAL MORTALITY (28 TO 364 DAYS)  
BY YEAR, CANADA (EXCLUDING ONTARIO)\*, 2000-2009

Year	Number of neonatal survivors	Number of postneonatal deaths	Postneonatal deaths per 1,000 neonatal survivors (95% CI)
2000	199,770	336	1.7 (1.5–1.9)
2001	201,294	286	1.4 (1.3–1.6)
2002	199,513	324	1.6 (1.4–1.8)
2003	203,492	292	1.4 (1.3–1.6)
2004	203,749	273	1.3 (1.2–1.5)
2005	207,597	299	1.4 (1.3–1.6)
2006	218,212	292	1.3 (1.2–1.5)
2007	228,591	322	1.4 (1.3–1.6)
2008	236,264	324	1.4 (1.2–1.5)
2009	239,623	304	1.3 (1.1–1.4)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

CI – Confidence interval

**TABLE A14.3****RATE OF INFANT MORTALITY (0 TO 364 DAYS)****BY YEAR, CANADA (EXCLUDING ONTARIO)\*, 2000-2009**

Year	Number of live births	Number of infant deaths	Infant deaths by 1,000 live births (95% CI)
2000	200,458	1,024	5.1 (4.8–5.4)
2001	202,033	1,025	5.1 (4.8–5.4)
2002	200,270	1,081	5.4 (5.1–5.7)
2003	204,273	1,073	5.3 (4.9–5.6)
2004	204,515	1,039	5.1 (4.8–5.4)
2005	208,416	1,118	5.4 (5.1–5.7)
2006	219,016	1,096	5.0 (4.7–5.3)
2007	229,427	1,158	5.0 (4.8–5.3)
2008	237,094	1,154	4.9 (4.6–5.1)
2009	240,486	1,167	4.9 (4.6–5.1)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

CI – Confidence interval

**TABLE A14.4****RATE OF NEONATAL MORTALITY (0 TO 27 DAYS)****BY PROVINCE OR TERRITORY, CANADA (EXCLUDING ONTARIO)\*, 2005-2009**

Province/territory	Number of live births	Number of neonatal deaths	Neonatal deaths by 1,000 live births (95% CI)
Newfoundland and Labrador	23,409	104	4.4 (3.6–5.3)
Prince Edward Island	7,082	17	2.4 (1.3–3.5)
Nova Scotia	44,087	106	2.4 (1.9–2.9)
New Brunswick	35,861	108	3.0 (2.4–3.6)
Quebec	419,407	1,513	3.6 (3.4–3.8)
Manitoba	75,420	346	4.6 (4.1–5.1)
Saskatchewan	65,481	264	4.0 (3.5–4.5)
Alberta	238,945	1,054	4.4 (4.1–4.7)
British Columbia	215,474	584	2.7 (2.5–2.9)
Yukon	1,795	6	3.3 (0.7–6.0)
Northwest Territories	3,556	20	5.6 (3.2–8.1)
Nunavut	3,922	30	7.6 (4.9–10.4)
CANADA	1,134,439	4,152	3.7 (3.5–3.8)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

CI – Confidence interval

TABLE A14.5

## RATE OF POSTNEONATAL MORTALITY (28 TO 364 DAYS)

BY PROVINCE OR TERRITORY, CANADA (EXCLUDING ONTARIO)\*, 2005-2009

Province/territory	Number of neonatal survivors	Number of postneonatal deaths	Postneonatal deaths per 1,000 neonatal survivors (95% CI)
Newfoundland and Labrador	23,305	38	1.6 (1.1–2.1)
Prince Edward Island	7,065	4	0.6 (0.0–1.1)
Nova Scotia	43,981	54	1.2 (0.9–1.6)
New Brunswick	35,753	46	1.3 (0.9–1.7)
Quebec	417,894	402	1.0 (0.9–1.1)
Manitoba	75,074	148	2.0 (1.7–2.3)
Saskatchewan	65,217	168	2.6 (2.2–3.0)
Alberta	237,891	367	1.5 (1.4–1.7)
British Columbia	214,890	273	1.3 (1.1–1.4)
Yukon	1,789	5	2.8 (0.3–5.2)
Northwest Territories	3,536	11	3.1 (1.3–4.9)
Nunavut	3,892	25	6.4 (3.9–8.9)
CANADA	1,130,287	1,541	1.4 (1.3–1.4)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

CI – Confidence interval

TABLE A14.6

## RATE OF INFANT MORTALITY (28 TO 364 DAYS)

BY PROVINCE OR TERRITORY, CANADA (EXCLUDING ONTARIO)\*, 2005-2009

Province/territory	Number of LIVE BIRTHS	Number of infant deaths	Infant death by 1,000 live births (95% CI)
Newfoundland and Labrador	23,409	142	6.1 (5.1–7.1)
Prince Edward Island	7,082	21	3.0 (1.7–4.2)
Nova Scotia	44,087	160	3.6 (3.1–4.2)
New Brunswick	35,861	154	4.3 (3.6–5.0)
Quebec	419,407	1,915	4.6 (4.4–4.8)
Manitoba	75,420	494	6.5 (6.0–7.1)
Saskatchewan	65,481	432	6.6 (6.0–7.2)
Alberta	238,945	1,421	5.9 (5.6–6.3)
British Columbia	215,474	857	4.0 (3.7–4.2)
Yukon	1,795	11	6.1 (2.5–9.7)
Northwest Territories	3,556	31	8.7 (5.7–11.8)
Nunavut	3,922	55	14.0 (10.3–17.7)
CANADA	1,134,439	5,693	5.0 (4.9–5.1)

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

CI – Confidence interval



TABLE A14.7

## CAUSES OF INFANT DEATH

CANADA (EXCLUDING ONTARIO)\*, 2005-2009

Cause	Neonatal death (0-27 days)		Postneonatal death (28-364 days)		Infant death (0-364 days)	
	Number of deaths	Proportion (%) among all neonatal deaths	Number of deaths	Proportion (%) among all postneonatal deaths	Number of deaths	Proportion (%) among all infant deaths
Congenital anomalies	916	22.1	337	21.9	1,253	22.0
Asphyxia	578	13.9	15	1.0	593	10.4
Immaturity	1,577	38.0	95	6.2	1,672	29.4
Infection	147	3.5	224	14.5	371	6.5
Sudden infant death syndrome	35	0.8	329	21.3	364	6.4
Other sudden or unexplained infant death	43	1.0	161	10.4	204	3.6
External cause	11	0.3	64	4.2	75	1.3
Other or unknown	845	20.4	316	20.5	1,161	20.4
TOTAL	4,152	100.0	1,541	100.0	5,693	100.0

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

TABLE A14.8

## CAUSE-SPECIFIC RATES OF INFANT MORTALITY

CANADA (EXCLUDING ONTARIO)\*, 2005-2009

Cause	2005		2006		2007		2008		2009	
	Number of infant deaths	Rate per 1,000 live births	Number of infant deaths	Rate per 1,000 live births	Number of infant deaths	Rate per 1,000 live births	Number of infant deaths	Rate per 1,000 live births	Number of infant deaths	Rate per 1,000 live births
Congenital anomalies	262	1.26	242	1.10	258	1.12	237	1.00	254	1.06
Asphyxia	106	0.51	107	0.49	130	0.57	129	0.54	121	0.50
Immaturity	323	1.55	350	1.60	342	1.49	325	1.37	332	1.38
Infection	74	0.36	61	0.28	81	0.35	77	0.32	78	0.32
Sudden infant death syndrome	70	0.34	71	0.32	79	0.34	71	0.30	73	0.30
Other sudden or unexplained infant death	40	0.19	34	0.16	38	0.17	50	0.21	42	0.17
External cause	16	0.08	12	0.05	16	0.07	14	0.06	17	0.07
Other or unknown	227	1.09	219	1.00	214	0.93	251	1.06	250	1.04
TOTAL	1,118	5.36	1,096	5.00	1,158	5.05	1,154	4.87	1,167	4.85
Number of live births	208,416		219,016		229,427		237,094		240,486	

Source: Statistics Canada, Vital Statistics

\* Data from Ontario were excluded because of data quality concerns.

## A15. PREVALENCE OF CONGENITAL ANOMALIES

TABLE A15.1

BIRTH PREVALENCE OF CONGENITAL ANOMALIES  
BY YEAR, CANADA (EXCLUDING QUEBEC)\*, 2001-2010

Year	Total births	Number of cases	Cases per 10,000 total births (95% CI)
2001	263,350	12,126	460 (452–468)
2002	259,505	11,203	432 (424–440)
2003	264,981	10,994	415 (407–422)
2004	266,277	10,830	407 (399–414)
2005	269,530	10,837	402 (395–409)
2006	275,737	10,564	383 (376–390)
2007	286,098	10,799	377 (370–384)
2008	290,725	11,203	385 (378–392)
2009	292,339	11,279	386 (379–393)
2010	287,829	11,441	397 (390–405)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

TABLE A15.2

RATE OF DOWN SYNDROME  
BY YEAR, CANADA (EXCLUDING QUEBEC)\*, 2001-2010

Year	Total births	Number of cases	Cases per 10,000 total births (95% CI)
2001	263,350	396	15.0 (13.6–16.5)
2002	259,505	405	15.6 (14.1–17.1)
2003	264,981	436	16.5 (14.9–18.0)
2004	266,277	383	14.4 (12.9–15.8)
2005	269,530	432	16.0 (14.5–17.5)
2006	275,737	430	15.6 (14.1–17.1)
2007	286,098	423	14.8 (13.4–16.2)
2008	290,725	439	15.1 (13.7–16.5)
2009	292,339	421	14.4 (13.0–15.8)
2010	287,829	441	15.3 (13.9–16.8)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

TABLE A15.3

## RATE OF DOWN SYNDROME

BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC)\*, 2001-2010

Province/territory	Total births	Number of cases	Cases per 10,000 total births (95% CI)
Newfoundland and Labrador	46,252	68	14.7 (11.2–18.2)
Prince Edward Island	14,024	20	14.3 (8.0–20.5)
Nova Scotia	87,677	151	17.2 (14.5–20.0)
New Brunswick	70,429	96	13.6 (10.9–16.4)
Ontario	1,377,309	1,934	14.0 (13.4–14.7)
Manitoba	144,948	219	15.1 (13.1–17.1)
Saskatchewan	126,639	172	13.6 (11.6–15.6)
Alberta	443,199	737	16.6 (15.4–17.8)
British Columbia	411,590	696	16.9 (15.7–18.2)
Yukon and Northwest Territories	10,817	12	11.1 (4.8–17.4)
Nunavut	5,975	8	13.4 (4.1–22.7)
CANADA	2,756,371	4,206	15.3 (14.8–15.7)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

TABLE A15.4

## RATE OF NEURAL TUBE DEFECTS

BY YEAR, CANADA (EXCLUDING QUEBEC)\*, 2001-2010

Year	Total births	All neural tube defects		Spina bifida		Anencephaly and similar anomalies**	
		Number of cases	Cases per 10,000 total births (95% CI)	Number of cases	Cases per 10,000 total births (95% CI)	Number of cases	Cases per 10,000 total births (95% CI)
2001	263,350	139	5.3 (4.4–6.2)	81	3.1 (2.4–3.7)	34	1.3 (0.9–1.7)
2002	259,505	131	5.0 (4.2–5.9)	85	3.3 (2.6–4.0)	28	1.1 (0.7–1.5)
2003	264,981	132	5.0 (4.1–5.8)	87	3.3 (2.6–4.0)	31	1.2 (0.8–1.6)
2004	266,277	116	4.4 (3.6–5.1)	73	2.7 (2.1–3.4)	35	1.3 (0.9–1.7)
2005	269,530	131	4.9 (4.0–5.7)	86	3.2 (2.5–3.9)	31	1.2 (0.7–1.6)
2006	275,737	120	4.4 (3.6–5.1)	81	2.9 (2.3–3.6)	31	1.1 (0.7–1.5)
2007	286,098	142	5.0 (4.1–5.8)	87	3.0 (2.4–3.7)	30	1.0 (0.7–1.4)
2008	290,725	141	4.8 (4.0–5.7)	82	2.8 (2.2–3.4)	31	1.1 (0.7–1.4)
2009	292,339	152	5.2 (4.4–6.0)	99	3.4 (2.7–4.1)	37	1.3 (0.9–1.7)
2010	287,829	163	5.7 (4.8–6.5)	100	3.5 (2.8–4.2)	44	1.5 (1.1–2.0)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

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

CI – Confidence interval

TABLE A15.5

## RATE OF NEURAL TUBE DEFECTS

BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC)\*, 2001-2010

Province/territory	Total births	All neural tube defects		Spina bifida	
		Number of cases	Cases per 10,000 total births (95% CI)	Number of cases	Cases per 10,000 total births (95% CI)
Newfoundland and Labrador	46,252	22	4.8 (2.8–6.7)	13	2.8 (1.3–4.3)
Prince Edward Island	14,024	6	4.3 (0.9–7.7)	6	4.3 (0.9–7.7)
Nova Scotia	87,677	53	6.0 (4.4–7.7)	34	3.9 (2.6–5.2)
New Brunswick	70,429	24	3.4 (2.0–4.8)	17	2.4 (1.3–3.6)
Ontario	1,377,309	583	4.2 (3.9–4.6)	383	2.8 (2.5–3.1)
Manitoba	144,948	86	5.9 (4.7–7.2)	45	3.1 (2.2–4.0)
Saskatchewan	126,639	65	5.1 (3.9–6.4)	41	3.2 (2.2–4.2)
Alberta	443,199	259	5.8 (5.1–6.6)	148	3.3 (2.8–3.9)
British Columbia	411,590	209	5.1 (4.4–5.8)	139	3.4 (2.8–3.9)
Territories	16,792	6	3.6 (0.7–6.4)	5	3.0 (0.4–5.6)
CANADA	2,756,371	1,367	5.0 (4.7–5.2)	861	3.1 (2.9–3.3)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

TABLE A15.6

## RATE OF CLEFT PALATE AND CLEFT LIP WITH OR WITHOUT CLEFT PALATE

BY YEAR, CANADA (EXCLUDING QUEBEC)\*, 2001-2010

Year	Total births	Cleft palate		Cleft lip with or without cleft palate	
		Number of cases	Cases per 10,000 total births (95% CI)	Number of cases	Cases per 10,000 total births (95% CI)
2001	263,350	182	6.9 (5.9–7.9)	268	10.2 (9.0–11.4)
2002	259,505	176	6.8 (5.8–7.8)	266	10.3 (9.0–11.5)
2003	264,981	185	7.0 (6.0–8.0)	238	9.0 (7.8–10.1)
2004	266,277	190	7.1 (6.1–8.1)	277	10.4 (9.2–11.6)
2005	269,530	201	7.5 (6.4–8.5)	255	9.5 (8.3–10.6)
2006	275,737	188	6.8 (5.8–7.8)	235	8.5 (7.4–9.6)
2007	286,098	187	6.5 (5.6–7.5)	281	9.8 (8.7–11.0)
2008	290,725	215	7.4 (6.4–8.4)	269	9.3 (8.1–10.4)
2009	292,339	164	5.6 (4.8–6.5)	33	10.4 (9.2–11.5)
2010	287,829	182	6.3 (5.4–7.2)	284	9.9 (8.7–11.0)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

TABLE A15.7

RATE OF CLEFT PALATE AND CLEFT LIP WITH OR WITHOUT CLEFT PALATE  
BY PROVINCE/TERRITORY, CANADA (EXCLUDING QUEBEC)\*, 2001-2010

Province/territory	Total births	Cleft palate		Cleft lip with or without cleft palate	
		Number of cases	Cases per 10,000 total births (95% CI)	Number of cases	Cases per 10,000 total births (95% CI)
Newfoundland and Labrador	46,252	31	6.7 (4.3–9.1)	41	8.9 (6.2–11.6)
Prince Edward Island	14,024	11	7.8 (3.2–12.5)	9	6.4 (2.2–10.6)
Nova Scotia	87,677	59	6.7 (5.0–8.4)	88	10.0 (7.9–12.1)
New Brunswick	70,429	42	6.0 (4.2–7.8)	53	7.5 (5.5–9.6)
Ontario	1,377,309	882	6.4 (6.0–6.8)	1,092	7.9 (7.5–8.4)
Manitoba	144,948	130	9.0 (7.4–10.5)	182	12.6 (10.7–14.4)
Saskatchewan	126,639	115	9.1 (7.4–10.7)	187	14.8 (12.7–16.9)
Alberta	443,199	308	6.9 (6.2–7.7)	538	12.1 (11.1–13.2)
British Columbia	411,590	270	6.6 (5.8–7.3)	436	10.6 (9.6–11.6)
Yukon/Northwest Territories	10,817	7	6.5 (1.7–11.3)	8	7.4 (2.3–12.5)
Nunavut	5,975	7	11.7 (3.0–20.4)	14	23.4 (11.2–35.7)
CANADA	2,756,371	1,870	6.8 (6.5–7.1)	2,676	9.7 (9.3–10.1)

Source: Canadian Institute of Health Information (CIHI), Discharge Abstract Database

\* Quebec does not contribute to the Discharge Abstract Database.

CI – Confidence interval

## A16. MULTIPLE BIRTH RATE

TABLE A16.1

RATE OF MULTIPLE BIRTH  
CANADA (EXCLUDING ONTARIO),\* 2001-2010

Year	Total births**	Multiple births	Multiple births per 100 total births
2001	203,233	5,639	2.8
2002	201,464	5,626	2.8
2003	205,470	6,096	3.0
2004	205,746	6,133	3.0
2005	209,713	6,156	2.9
2006	220,338	6,742	3.1
2007	230,920	7,049	3.1
2008	238,679	7,220	3.0
2009	242,087	7,855	3.2
2010	239,194	7,655	3.2

Source: Statistics Canada, CANSIM, Table 102-4515

\* Data from Ontario were excluded because of data quality concerns.

\*\* Sum of live births and stillbirths

TABLE A16.2

RATE OF MULTIPLE BIRTH  
BY PROVINCE/TERRITORY, CANADA (EXCLUDING ONTARIO),\* 2006-2010

Province/territory	Total births**	Multiple births	Multiple births per 100 total births (95% CI)
Newfoundland and Labrador	23,984	784	3.3 (3.0–3.5)
Prince Edward Island	7,196	269	3.7 (3.3–4.2)
Nova Scotia	44,785	1,470	3.3 (3.1–3.4)
New Brunswick	36,536	1,062	2.9 (2.7–3.1)
Quebec	433,280	13,089	3.0 (3.0–3.1)
Manitoba	77,695	2,155	2.8 (2.7–2.9)
Saskatchewan	68,273	1,975	2.9 (2.8–3.0)
Alberta	249,424	8,459	3.4 (3.3–3.5)
British Columbia	220,491	7,033	3.2 (3.1–3.3)
Yukon	1,869	60	3.2 (2.4–4.0)
Northwest Territories	3,578	93	2.6 (2.1–3.1)
Nunavut	4,107	72	1.8 (1.4–2.2)
CANADA	1,171,218	36,521	3.1 (3.1–3.1)

Source: Statistics Canada, CANSIM, Table 102-4515

\* Data from Ontario were excluded because of data quality concerns.

\*\* Sum of live births and stillbirths

CI—confidence interval