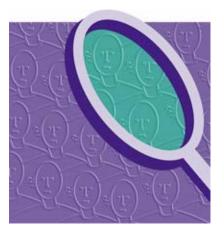


Catalogue no. 84F0210XIE

Births

Stillbirths

2004





Statistics Canada Statistique Canada



How to obtain more information

Specific inquiries about this product and related statistics or services should be directed to: Health Statistics Division, Statistics Canada, Ottawa, Ontario, K1A 0T6 (telephone: 1 800 263-1136; (613) 951-1746).

For information on the wide range of data available from Statistics Canada, you can contact us by calling one of our toll free numbers. You can also contact us by e-mail or by visiting our website at www.statcan.ca.

National inquiries line 1 800 263-1136

National telecommunications device for the hearing impaired 1 800 363-7629

Depository Services Program inquiries 1 800 700-1033

Fax line for Depository Services Program 1 800 889-9734

E-mail inquiries infostats@statcan.ca

Website www.statcan.ca

Information to access the product

This product, Catalogue no. 84F0210XIE, is available for free in electronic format. To obtain a single issue, visit our website at www.statcan.ca and select Publications.

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner and in the official language of their choice. To this end, the Agency has developed *standards of service* which its employees observe in serving its clients. To obtain a copy of these service standards, please contact Statistics Canada toll free at 1 800 263-1136. The service standards are also published on *www.statcan.ca* under About us > Providing services to Canadians.



Statistics Canada Health Statistics Division

Births

Stillbirths

2004

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2006

All rights reserved. The content of this electronic publication may be reproduced, in whole or in part, and by any means, without further permission from Statistics Canada, subject to the following conditions: that it be done solely for the purposes of private study, research, criticism, review or newspaper summary, and/or for non-commercial purposes; and that Statistics Canada be fully acknowledged as follows: Source (or "Adapted from", if appropriate): Statistics Canada, year of publication, name of product, catalogue number, volume and issue numbers, reference period and page(s). Otherwise, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form, by any means—electronic, mechanical or photocopy—or for any purposes without prior written permission of Licensing Services, Client Services Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

October 2006

Catalogue no. 84F0210XIE, Vol. 2

ISSN 1710-5285

Frequency: Semi-Annual

Ottawa

La version française de cette publication est disponible sur demande (nº 84F0210XIF au catalogue).

Note of appreciation

Canada owes the success of its statistical system to a long standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

User information

Symbols

The following standard symbols are used in Statistics Canada publications:

- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
 - p preliminary
 - r revised
- x suppressed to meet the confidentiality requirements of the Statistics Act
- E use with caution
- F too unreliable to be published

Acknowledgements

The cooperation of provincial and territorial Vital Statistics registries who supply the birth data in this report to Statistics Canada is gratefully acknowledged.

Table of contents

Hig	phlights	4
Intr	roduction	5
Ana	alysis	6
Rel	lated products	8
Sta	itistical tables	
1	Fetal deaths (20 weeks or more of gestation) and late fetal deaths (28 weeks or more of gestation), Canada, provinces and territories	12
2	Live births and fetal deaths (stillbirths), by geography	12
2	2-1 Type of birth (single or multiple)	12
2	Place of birth (hospital and non-hospital)	13
Dat	ta quality, concepts and methodology	
Def	finitions	15
	al Statistics - Birth Database	18
	al Statistics - Stillbirth Database	22
	imates of population by age and sex for Canada, the Provinces and the Territories	27
		29
⊏xµ	planatory notes for the tables	28
Cha	arts	
1.	Stillbirth and late stillbirth rates, Canada, 1991 to 2004	6

Highlights

- Since 1991, stillbirth (fetal death) rates in Canada have been fluctuating around 6 per 1,000 births. In 2004, the fetal death rate was 6.1 per 1,000 births, representing a decrease of 0.3 from the year before.
- Late stillbirth rates (fetal deaths with 28 or more weeks of gestation) have dropped steadily in the past quarter of century, from 3.5 in 1991 to 2.9 in 2004.

Introduction

This product presents statistical tables showing the number of live births and fetal deaths (stillbirths) of at least 20 weeks' gestation; total and age-specific fertility rates and crude birth rates; live births by age of mother and live birth order; male and female birth weights; weeks of gestation at the time of birth; and multiple births. Numbers are shown for Canada, the ten provinces and the three territories.

History note

Births - Shelf tables (84F0210X) data for 2000 and 2001 were released in the year 2003 in paper format. Since April 2004, this product is available on the Internet under the title "Births" (84F0210X).

Starting with the 2004 data, this product changed from an annual to a semi-annual publication (two volumes per data year). Volume 1 reports on live births and Volume 2 reports on fetal deaths (stillbirths).

CANSIM data

Free access to the 2000 to 2004 data is provided through a special CANSIM interface. The CANSIM tables can be linked directly from three different locations in the HTML product:

Tables section:

- · Related CANSIM tables
- · Individual tables, in the Source

Related products section:

· Selected CANSIM tables from Statistics Canada

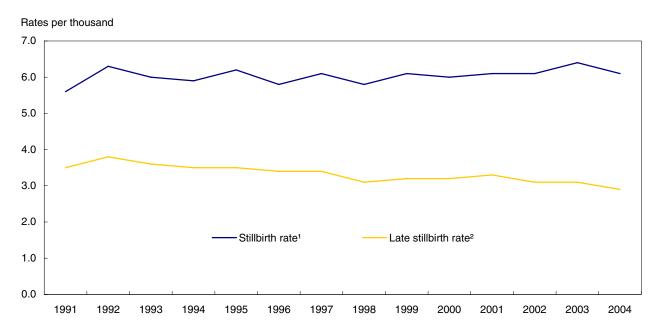
Analysis

Stillbirths 2004

Since 1991, stillbirth (fetal death) rates in Canada have been fluctuating around 6.0 per 1,000 births. In 2004, the fetal death rate was 6.1 per 1,000 births, representing a decrease of 0.3 from the year before.

Late stillbirth rates (fetal deaths with 28 or more weeks of gestation) have dropped steadily in the past quarter of century, from 3.5 in 1991 to 2.9 in 2004.

Chart 1
Stillbirth and late stillbirth rates, Canada, 1991 to 2004



- 1. Number of stillbirths*1,000/Live births + total stillbirths.
- 2. Number of late stillbirths*1,000/Live births + late stillbirths.

Text table 1 Stillbirth and late stillbirth rates, Canada, 1991 to 2004

Year	Stillbirth ¹ rate	Late ² stillbirth rate	
1991	5.6	3.5	
1992	6.3	3.8	
1993	6.0	3.6	
1994	5.9	3.5	
1995	6.2	3.5	
1996	5.8	3.4	
1997	6.1	3.4	
1998	5.8	3.1	
1999	6.1	3.2	
2000	6.0	3.2	
2001	6.1	3.3	
2002	6.1	3.1	
2003	6.4	3.1	
2004	6.1	2.9	

Number of stillbirths*1,000/Live births + total stillbirths
 Number of late stillbirths*1,000/Live births + late stillbirths

Related products

Selected publications from Statistics Canada

82-221-X	Health indicators
82-223-X	Induced abortion statistics
82-224-X	Pregnancy outcomes

Selected CANSIM tables from Statistics Canada

102-4501	Live births, by place of residence of mother and place of occurrence, Canada, provinces, territories and outside Canada
102-4502	Live births, by month, Canada, provinces and territories
102-4503	Live births, by age of mother, Canada, provinces and territories
102-4504	Live births, mean age of mother, Canada, provinces and territories
102-4505	Live births, crude birth rate, age-specific and total fertility rates, Canada, provinces and territories
102-4506	Live births, by marital status of mother, Canada, provinces and territories
102-4507	Live births, by age and marital status of mother, Canada
102-4508	Live births, by age and parity of mother, Canada
102-4509	Live births, by birth weight and sex, Canada, provinces and territories
102-4510	Live births, mean and median birth weight, by sex, Canada, provinces and territories
102-4511	Live births, birth weight indicators, by characteristics of the mother and child, Canada
102-4512	Live births, by weeks of gestation and sex, Canada, provinces and territories
102-4513	Live births, weeks of gestation indicators, by characteristics of the mother and child, Canada
102-4514	Fetal deaths (20 weeks or more of gestation) and late fetal deaths (28 weeks or more of gestation), Canada, provinces and territories
102-4515	Live births and fetal deaths (stillbirths), by type (single or multiple), Canada, provinces and territories
102-4516	Live births and fetal deaths (stillbirths), by place of birth (hospital and non-hospital), Canada, provinces and territories

Selected surveys from Statistics Canada

3231	Vital Statistics - Birth Database
3234	Vital Statistics - Stillbirth Database
3604	Estimates of Population by Age and Sex for Canada, Provinces and Territories

Selected tables of Canadian statistics from Statistics Canada

- · Births and birth rate, by provinces and territories
- Deaths and death rate, by provinces and territories
- Components of population growth, by province and territory
- · Infant mortality rates, by province and territory
- Disability-free life expectancy, by province and territory
- · Induced abortions by age group
- · Pregnancy outcomes by province or territory of residence
- Pregnancy outcomes by age group

Statistical tables

Fetal deaths (20 weeks or more of gestation) and late fetal deaths (28 weeks or more of gestation), Canada, provinces and territories

Place	Gestation				
of residence of mother	20 weeks or more (fetal deaths)	28 weeks or more (late fetal deaths)			
Canada	2,066	972			
Newfoundland and Labrador	20	13			
Prince Edward Island	5	4			
Nova Scotia New Brunswick	77 38	23 17			
Quebec	297	182			
Ontario	835	375			
Manitoba	118	63			
Saskatchewan	90	50			
Alberta	288	139			
British Columbia	285	101			
Yukon Territory Northwest Territories	2	2			
Nunavut	6 5 0	2			
Jnknown	0	0			

Note(s): See "Data quality, concepts and methodology — Explanatory notes for the tables". Source(s): Statistics Canada, Canadian Vital Statistics, Stillbirth Database (CANSIM table 102-4514).

Live births and fetal deaths (stillbirths), by geography — Type of birth (single or multiple)

Place		Type of birth								
of residence of mother		Total			Single			Multiple		
	Total, births	Live births	Fetal deaths (stillbirths)	Total, births	Live births	Fetal deaths (stillbirths)	Total, births	Live births	Fetal deaths (stillbirths)	
Canada	339,138	337,072	2,066	328,733	326,840	1,893	10,405	10,232	173	
Newfoundland and Labrador	4,508	4,488	20	4,388	4,368	20	120	120	0	
Prince Edward Island	1,395	1,390	5	1,357	1,352	5	38	38	0	
Nova Scotia	8,811	8,734	77	8,511	8,445	66	300	289	11	
New Brunswick	6,997	6,959	38	6,777	6,744	33	220	215	5	
Quebec	74,369	74,072	297	72,259	71,984	275	2,110	2,088	22	
Ontario	133,386	132,551	835	129,114	128,345	769	4,272	4,206	66	
Manitoba	13,929	13,811	118	13,537	13,431	106	392	380	12	
Saskatchewan	12,073	11,983	90	11,782	11,697	85	291	286	5	
Alberta	41,067	40,779	288	39,672	39,405	267	1,395	1,374	21	
British Columbia	40,774	40,489	285	39,558	39,303	255	1,216	1,186	30	
Yukon Territory	367	365	2	352	351	1	15	14	1	
Northwest Territories	704	698	6	676	670	6	28	28	0	
Nunavut	752	747	5	744	739	5	8	8	0	
Unknown	6	6	0	6	6	0	0	0	0	

Note(s): See "Data quality, concepts and methodology — Explanatory notes for the tables".

Source(s): Statistics Canada, Canadian Vital Statistics, Birth and Stillbirth Databases (CANSIM table 102-4515).

Table 2-2 Live births and fetal deaths (stillbirths), by geography — Place of birth (hospital and non-hospital)

Place	Live births and fetal deaths (stillbirths)							
of residence of mother	Total, births Live births			Fetal deaths (stillbirths)				
	number	percent	number	percent	number	percent		
Canada Total, place of birth Hospital Non-hospital Unknown	339,138 335,657 1,492 1,989	100.0 99.0 0.4 0.6	337,072 333,612 1,483 1,977	100.0 99.0 0.4 0.6	2,066 2,045 9 12	100.0 99.0 0.4 0.6		
Newfoundland and Labrador Total, place of birth Hospital Non-hospital Unknown	4,508 4,502 5 1	100.0 99.9 0.1 0.0	4,488 4,482 5 1	100.0 99.9 0.1 0.0	20 20 0 0	100.0 100.0 0.0 0.0		
Prince Edward Island Total, place of birth Hospital Non-hospital Unknown	1,395 1,391 0 4	100.0 99.7 0.0 0.3	1,390 1,386 0 4	100.0 99.7 0.0 0.3	5 5 0	100.0 100.0 0.0 0.0		
Nova Scotia Total, place of birth Hospital Non-hospital Unknown	8,811 8,789 22 0	100.0 99.8 0.2 0.0	8,734 8,712 22 0	100.0 99.7 0.3 0.0	77 77 0 0	100.0 100.0 0.0 0.0		
New Brunswick Total, place of birth Hospital Non-hospital Unknown	6,997 6,980 17 0	100.0 99.8 0.2 0.0	6,959 6,942 17 0	100.0 99.8 0.2 0.0	38 38 0 0	100.0 100.0 0.0 0.0		
Quebec Total, place of birth Hospital Non-hospital Jnknown	74,369 74,257 112 0	100.0 99.8 0.2 0.0	74,072 73,961 111 0	100.0 99.9 0.1 0.0	297 296 1 0	100.0 99.7 0.3 0.0		
Ontario Total, place of birth Hospital Non-hospital Unknown	133,386 131,398 62 1,926	100.0 98.5 0.0 1.4	132,551 130,568 61 1,922	100.0 98.5 0.0 1.5	835 830 1 4	100.0 99.4 0.1 0.5		
Manitoba Total, place of birth Hospital Non-hospital Jnknown	13,929 13,740 189 0	100.0 98.6 1.4 0.0	13,811 13,622 189 0	100.0 98.6 1.4 0.0	118 118 0 0	100.0 100.0 0.0 0.0		
Saskatchewan Total, place of birth Hospital Non-hospital Jnknown	12,073 12,031 42 0	100.0 99.7 0.3 0.0	11,983 11,941 42 0	100.0 99.6 0.4 0.0	90 90 0 0	100.0 100.0 0.0 0.0		
Alberta Fotal, place of birth Hospital Non-hospital Unknown	41,067 40,731 336 0	100.0 99.2 0.8 0.0	40,779 40,447 332 0	100.0 99.2 0.8 0.0	288 284 4 0	100.0 98.6 1.4 0.0		
British Columbia Total, place of birth Hospital Non-hospital Unknown	40,774 40,067 694 13	100.0 98.3 1.7 0.0	40,489 39,792 692 5	100.0 98.3 1.7 0.0	285 275 2 8	100.0 96.5 0.7 2.8		
fukon Territory Fotal, place of birth Hospital Non-hospital Jnknown	367 363 4 0	100.0 98.9 1.1 0.0	365 361 4 0	100.0 98.9 1.1 0.0	2 2 0 0	100.0 100.0 0.0 0.0		

Table 2-2 – continued Live births and fetal deaths (stillbirths), by geography — Place of birth (hospital and non-hospital)

Place	Live births and fetal deaths (stillbirths)						
of residence of mother	Total, births		Live births		Fetal deaths (stillbirths)		
	number	percent	number	percent	number	percent	
Northwest Territories							
Total, place of birth	704	100.0	698	100.0	6	100.0	
Hospital	655	93.0	650	93.1	5	83.3	
Non-hospital	7	1.0	6	0.9	1	16.7	
Unknown	42	6.0	42	6.0	0	0.0	
Nunavut							
Total, place of birth	752	100.0	747	100.0	5	100.0	
Hospital	747	99.3	742	99.3	5	100.0	
Non-hospital	2	0.3	2	0.3	0	0.0	
Unknown	3	0.4	3	0.4	0	0.0	
Unknown							
Total, place of birth	6	100.0	6	100.0	0	0.0	
Hospital	6	100.0	6	100.0	0	0.0	
Non-hospital	Ō	0.0	Ō	0.0	Ö	0.0	
Unknown	Ō	0.0	0	0.0	0	0.0	

Note(s): See "Data quality, concepts and methodology — Explanatory notes for the tables".

Source(s): Statistics Canada, Canadian Vital Statistics, Birth and Stillbirth Databases (CANSIM table 102-4516).

Definitions

The definitions used for the production of statistical tables of Canadian vital statistics data are based on those recommended by the World Health Organization¹ and the United Nations.²

Age of mother. Age the mother attained at her last birthday preceding delivery.

Birth. The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy. See also "Fetal death (stillbirth)" and "Live birth".

Birth and fertility rates

- Age-specific fertility rate (ASFR): The number of live births per 1,000 women in a specific age group. Five-year
 age groups were used in these tabulations (ranging from 15 to 19 to 45 to 49 years).
- Age-specific fertility rate, women 15 to 19 years: Live births to women under age 20 per 1,000 women aged 15 to 19.
- Age-specific fertility rate, women 45 to 49 years: Live births to women aged 45 years and over per 1,000 women aged 45 to 49.
- Crude birth rate: The number of live births per 1,000 population.
- Total fertility rate (TFR): An estimate of the average number of live births a woman can be expected to have in her lifetime, based on the age-specific fertility rates (ASFR) of a given year. The total fertility rate (TFR) = [(ASFR of 15 to 19 year olds + ASFR of 20 to 24 year olds +... + ASFR of 45 to 49 year olds)], multiplied by 5 (for example, the number of years in each age group).

Birth weight. The first weight of the fetus or newborn obtained immediately after birth, expressed in grams.

- Extremely low birth weight: Birth weight under 1,000 grams.
- Very low birth weight: Birth weight under 1,500 grams.
- Low birth weight: Birth weight under 2,500 grams.
- Normal birth weight ranges from 2,500 to 4,499 grams.
- High birth weight: Birth weight of 4,500 or more grams.

Cause of fetal death (stillbirth). The cause of fetal death (stillbirth) coded is the underlying cause of fetal death. This is defined as "(a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury". This underlying cause of fetal death is selected from a number of conditions listed on the medical certificate of cause of fetal death (stillbirth).

Beginning in the year 2000 in Canada, causes of death and fetal death (stillbirth) are coded to the 10th revision of the World Health Organization's International Statistical Classification of Diseases and Related Health Problems

World Health Organization (WHO). International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Volumes 1 and 2 (ICD-10). Geneva. 1992.

^{2.} United Nations. Principles and Recommendations for a Vital Statistics System. Statistical Papers, Series M, No. 19, Rev. 1. New York, 1974.

(ICD-10). The previous revision, ICD-9³ was used in Canada for the classification of cause of death and fetal death (stillbirth) from 1979 to 1999.

Delivery. A delivery may consist of one or more live born or stillborn fetuses. The number of deliveries in a given period will be equal to or less than the number of births because multiple births (twins, triplets or higher-order births) are counted as single deliveries.

Fetal death (stillbirth). Death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. Only fetal deaths where the product of conception has a birth weight of 500 grams or more or the duration of pregnancy is 20 weeks or longer are registered in Canada.

In Quebec (as well as in Saskatchewan prior to 2001 and in New Brunswick prior to November 1996), only fetal deaths (stillbirths) weighing 500 or more grams must be reported, regardless of the gestation period.

Because of these differences in reporting requirements, fetal death (stillbirth) data are presented for two gestation periods: 20 or more weeks of gestation (including fetal deaths or stillbirths with unknown weeks of gestation), and 28 or more weeks of gestation (excluding unknown weeks of gestation).

Fetal death (stillbirth) rate. The number of fetal deaths (stillbirths) per 1,000 live births plus fetal deaths (stillbirths).

ICD-10 codes. International Statistical Classification of Diseases and Related Health Problems (ICD) codes, 10th revision, were established by the World Health Organization in 1992. The ICD-10 manual assigns codes to specific diseases, injuries and causes of death and fetal death (stillbirth).

Live birth. The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Marital status of mother. Refers to the legal conjugal status of the mother at the time of the delivery. Persons in common-law relationships are assigned to their legal marital status category. A **single** person is one who has never been married, or a person whose marriage has been annulled and who has not remarried. A **separated** person is legally married but is not living with his or her spouse because the couple no longer wants to live together. A **divorced** person is one who has obtained a legal divorce and has not remarried. A **married** person is one who is legally married and not separated. A person whose spouse has died and who has not remarried is **widowed**.

Mean age of mother. The mean (average) age of mother for Canada, a province or a territory is calculated by summing the mothers' ages at their last birthday, and then dividing the sum by the total number of live births in that jurisdiction. To estimate mid-year mean age, a statistic often used in analyses, add 0.5 to mean age.

Mean birth weight. The mean (average) birth weight for Canada, a province or a territory is calculated by summing the first weight of each live newborn (obtained immediately after birth), and then dividing the sum by the total number of live births in that jurisdiction.

Median birth weight. The median is the middle value in a set of ordered numbers (for example, newborns' birth weight ranked from lightest to heaviest). In the case of an even number of observations, the median is the average of the two middle values.

Multiple birth. A delivery that results in more than one birth, whether live born or stillborn. This includes the delivery of twins, triplets, quadruplets, quintuplets and more.

Parity of mother. The number of live births a woman has had to date (excludes fetal deaths or stillbirths). A woman with zero parity has had no live births; a woman of parity 1 has had one live birth, of parity 2, two live births, and so on. In the case of a first delivery resulting in live twins, the woman has a parity of 1 after the first twin is born and a parity of 2 after the second twin is born.

^{3.} World Health Organization (WHO). International Classification of Diseases, 1975 Revision, Volume 1 (ICD-9). Geneva, 1977.

Population. Persons whose usual place of residence is somewhere in Canada, including Canadian government employees stationed abroad and their families, members of the Canadian Armed Forces stationed abroad and their families, crews of Canadian merchant vessels, and non-permanent residents of Canada.

The population estimates used for vital statistics rate calculations are adjusted for net census under-coverage and include non-permanent residents. Net census under-coverage is the difference between census under-coverage and census over-coverage. The former refers to persons who were part of the census universe but were not enumerated in the census; the latter, to persons either enumerated more than once or enumerated but not part of the census universe. Non-permanent residents are persons claiming refugee status, persons holding a student or employment authorization, or a Minister's permit, and all non-Canadian-born dependents of the above individuals.

Mid-year (July 1) population estimates are used to calculate the rates in vital statistics publications (see table footnotes). Population estimates are frequently revised by Statistics Canada's Demography Division.

Provinces and territories. Unless otherwise stated, the geographic distribution of births and fetal deaths (stillbirths) in the tables of this publication is based on the mother's usual place of residence.

Nunavut came into being officially as a Territory of Canada on April 1, 1999. The name Northwest Territories applies to a Territory with different geographic boundaries before and after April 1, 1999.

Stillbirth (fetal death). Death prior to the complete expulsion or extraction from its mother of a product of conception. irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. Only fetal deaths where the product of conception has a birth weight of 500 grams or more or the duration of pregnancy is 20 weeks or longer are registered in Canada.

In Quebec (as well as in Saskatchewan prior to 2001 and in New Brunswick prior to November 1996), only fetal deaths (stillbirths) weighing 500 or more grams must be reported, regardless of the gestation period.

Because of these differences in reporting requirements, fetal death (stillbirth) data are presented for two gestation periods: 20 or more weeks of gestation (including fetal deaths or stillbirths with unknown weeks of gestation), and 28 or more weeks of gestation (excluding unknown weeks of gestation).

Stillbirth (fetal death) rate. The number of fetal deaths (stillbirths) per 1,000 live births plus fetal deaths (stillbirths).

Type of birth. Type of birth refers to the plurality of a delivery, that is, whether the delivery results in the birth of one or more live born or stillborn infants.

Weeks of gestation. The interval, in completed weeks, between the first day of the mother's last menstrual period and the day of delivery (that is, the duration of pregnancy). It can also be any estimate of that interval, based on ultrasound, a physical examination or other method. Canadian birth registration documents do not specify how the gestational age was calculated. **Pre-term** refers to a period of gestation less than 37 completed weeks; term, 37 through 41 completed weeks; and post-term, 42 or more completed weeks.

Vital Statistics - Birth Database

Survey description

This is an administrative survey that collects demographic information annually from all provincial and territorial vital statistics registries on all live births in Canada. Some data are also collected on live births to Canadian residents in selected American states.

The data are used to calculate basic indicators (such as counts and rates) on births of residents of Canada. Information from this database is also used in the calculation of statistics, such as age-specific fertility rates.

For Canada as a whole, it was impossible to compile a satisfactory series of vital statistics prior to 1921. Eight provinces initially joined the cooperative Canadian vital statistics system, leading to the publication of the first annual report for Canada in 1921; that report included Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. Quebec began to participate in 1926 and Newfoundland in 1949 (after joining Confederation) and their data were included in the tabulations from those years onward. Basic data from the Yukon and Northwest Territories were published as appendices to the national tables from 1924 to 1955; their data were first included in the regular tabulations in 1956. Nunavut came into being officially as a Territory of Canada on April 1, 1999. The name Northwest Territories applies to a Territory with different geographic boundaries before and after April 1, 1999.

Prior to 1944 all vital events were classified by place of occurrence. Since 1944, births, stillbirths, and deaths have been classified by area of reported residence, with births and stillbirths according to the residence of the mother.

Data sources and methodology

Survey population

The conceptual universe of the Birth database is births to Canadian resident women anywhere in the world. The target population of the Birth database is births to Canadian resident women in Canada and to Canadian resident women in American states. The actual (survey) population of the Birth database is births to Canadian resident women and non-resident women in Canada, and births to Canadian resident women in some American states.

Sampling

This survey is a census with a cross-sectional design.

Collection

Responding to this survey is mandatory. Data are extracted from administrative files.

Provincial and territorial Vital Statistics Acts (or equivalent legislation) render compulsory the registration of all live births, stillbirths, deaths and marriages within their jurisdictions. These Acts follow, as closely as possible, a Model Vital Statistics Act that was developed to promote uniformity of legislation and reporting practices among the provinces and territories.

The Canadian Vital Statistics system operates under an agreement between the Government of Canada and governments of the provinces and territories. The Vital Statistics Council for Canada, an advisory committee set up by an Order-in-Council, oversees policy and operational matters. All provincial and territorial jurisdictions and Statistics Canada are represented on the Vital Statistics Council. Under the agreement, all registrars collect a specified set of data elements, although any of them may decide to collect additional information.

The main form for the registration of a live birth is completed by the parents, who are responsible for filing it with the local registrar. Most provinces also require physicians (or other birth attendants) to report all births.

The central Vital Statistics Registry in each province and territory provides data from birth registrations to Statistics Canada. The following statistical data items are reported for each birth by all provinces and territories for inclusion in the Canadian Vital Statistics system:

- · Date and place of birth
- · Child's sex, birth weight and gestational age
- Parents' age, marital status and birthplace
- Mother's place of residence
- Type of birth (single or multiple)
- Parity

All provinces and territories supply microfilm copies or optical images of registration forms to Statistics Canada. In addition, Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario and the Western provinces supply machine-readable abstracts of registrations, which contain the required standard information. For the territories, the required standard information on microfilm is converted to machine-readable format at Statistics Canada. Subsequent changes to registrations due to errors or omissions are transmitted to Statistics Canada as the information becomes available. However, changes received after a cut-off date are not reflected in published tabulations.

Error detection

Provinces and territories that supply machine-readable data conduct edits (presence of the data, validation of code ranges, and data consistency) before transmitting their data, based on standard edit specifications prepared by Statistics Canada. Health Statistics Division has actively promoted the use of a standard data dictionary and standard correlation edits for provincial/territorial data entry. More extensive edit routines are applied to the data by Statistics Canada to ascertain the completeness and quality of the data. For 2004, about 8% of the records were assessed for follow-up action either by referring to the microfilmed registrations or optical images or by consulting with the registries. After the preparation of a preliminary data file, verification tables are prepared for data review by the registries and Statistics Canada (for example, distributions, large changes, percentage and number of unknowns, outliers, changes in the relative composition).

The last comprehensive study of the quality of data capture and data coding was done in 1981, when error rates for most variables were found to be quite low. Since then, studies have been completed on an irregular basis for specific provinces. The most recent study was done in 2002 on the 2000 Prince Edward Island birth data following their development of a new data capture system. A systematic random sample of records was drawn, and the Prince Edward Island capture was compared with the microfilmed documents. Inconsistencies were documented, and a report was sent to the Prince Edward Island Vital Statistics Registrar. Overall, the error rate was zero for most of the important statistical variables (sex of child, age of mother, total number of children, multiple birth indicators). Issues being discussed include: the handling of amendments, consistency of reporting birth weight in metric units, consideration of recapture and 100% verification of certain variables, and earlier detection of errors.

With Prince Edward Island adopting their own data capture, the only birth data regularly captured at Statistics Canada are the data from the three territories, and any late records. Operations and Integration Division maintains data capture quality controls such as 100% verification for new clerks, and sample batch re-capture for experienced clerks to maintain an error rate of less than 3%.

Imputation

Imputation is done on missing sex of child for tabulations in publications only. Sex is assigned based on the last digit of the registration number. This usually affects no more than 5 records annually (except for 1996 when there were 125 records with imputed sex of child and in 1998 when there were 77).

Quality evaluation

Upon completion of the annual national birth data base (produced as described in the section Error Detection above), Statistics Canada carries out a series of quality checks that include:

- 1. producing a set of verification tables which consist of basic tabulations for the majority of variables in the data base by province or territory of occurrence;
- 2. sending the verification tables to each provincial/territorial registrar of vital statistics for their review and approval that Statistics Canada and the registry obtain the same results;
- 3. checking for internal consistencies, for example, running frequencies and looking for outliers on certain data elements; and
- 4. comparing the most recent data year with past data years to detect any unusual or unexpected changes.

Comparisons of tabulated data are made with vital statistics data published by the provinces and territories, where available. After Statistics Canada creates the publication data file, the availability of birth statistics is announced in *The Daily*.

Disclosure control

Statistics Canada is prohibited by law from releasing any data which would divulge information obtained under the *Statistics Act* that relates to any identifiable person, business or organization without the prior knowledge or the consent in writing of that person, business or organization. Various confidentiality rules are applied to all data that are released or published to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent direct or residual disclosure of identifiable data.

Data accuracy

Coverage

Since the registration of births is a legal requirement in each Canadian province and territory, reporting is virtually complete. Under-coverage is thought to be minimal, but is being monitored. Under-coverage may occur because of late registration, which, if not completed soon after birth, is needed for school registration. Statistics Canada does receive late registrations (typically 1,000 to 1,500 cases, five years after the year of the event), and consideration is currently being given to including late registrations and late amendments on the data file for subsequent publication. Incomplete registration is also a source of under-coverage. For example, some provinces require that a notarized statement be completed when a mother declines to name the father on the application for birth registration. Until the statement is notarized, the application is not registered.

Out-of-country births are incompletely reported. There is no reporting of births to Canadian resident women occurring in countries other than the United States; although there is a reciprocal agreement with the U.S., some states may not report births to Canadian resident women occurring in their state.

Non-registration is minimal, except in Ontario where provincial health officials have noted a rise in the number of physician notices of birth that do not have a matching registration from the parents. This may represent up to 5,400 births in 2003, or 4% of all Ontario births, but is probably less because of duplicate or late registrations

being included in this total. This is apparent especially in districts of Ontario that charge a service fee for birth registration (for example, the City of Ottawa charged a \$30 service fee in 2003 to register a birth), and for infants who die within days of the birth (25% of Ontario infant deaths do not have a matching birth registration). These quality concerns have been discussed several times with the Ontario Office of the Registrar General (ORG). Labour disruptions and backlogs have limited ORG resources available for follow-up. For missing birth registrations for infant deaths, it is recognized that collection of these data from the grieving families is difficult.

Over-coverage is minimal. Births to non-resident women in Canada are registered but are excluded from most tabulations. Duplicate birth registrations are identified as part of the regular processing operations on each provincial and territorial subset, as well as additional inter-provincial checks, and comparisons between the birth and stillbirth databases for multiple births. Possible duplicate registrations are checked against microfilmed registrations or optical images, or by consulting with the provinces and territories.

Response rates

Item response

For 1997 to 2000, the response rates were 98% to 100% for most variables on the Birth database, except for mother's marital status, father's age, and birthplace where the response rates were 90% to 95%. One notable exception is that data on the dates of birth of the mother and the father are not supplied to Statistics Canada by the Province of Ontario; however, the age of each parent is provided by that province. As part of security improvements done after the September 11, 2001 terrorist attacks, the Ontario Office of the Registrar General has decided to capture these variables. Date of birth data for each parent is expected to be transmitted to Statistics Canada from Ontario starting with the 2003 data.

Other accuracy issues

Ontario birth weights and gestation data

In the development of the Canadian Perinatal Surveillance System, problems with Ontario Birth data had been noted related to the truncation of birth weights. Working with the Ontario Office of the Registrar General, the issues of truncation of birth weight, and the consistent editing of weight and gestation data (from the physician's notice of birth as opposed to the parent's registration) have been resolved. The data continue to be monitored on an ongoing basis.

Low birth weight/low gestation data

Analysts in Health Statistics Division continue to monitor developments in the field of assisted reproductive technology and medical technology as they relate to the reporting of extremely low birth weight and/or low gestation babies. There is some inconsistency in the practice of registering these babies, even though there is a legal requirement to do so. Statistically, this problem has resulted in alternative indicators for infant mortality being calculated, where the denominator is composed of live births weighing 500 g or more.

Vital Statistics - Stillbirth Database

Survey description

This is an administrative survey that collects demographic information annually from all provincial and territorial vital statistics registries on all stillbirths (fetal deaths) in Canada. Some data are also collected on stillbirths to Canadian resident women in selected American states.

The data are used to calculate basic indicators (such as counts and rates) on stillbirths to Canadian resident women. Information from this database is also used in the calculation of statistics, such as the late fetal death rate and the perinatal death rate. Information from the Stillbirth database is found in both the birth and death annual publications.

For Canada as a whole, it was impossible to compile a satisfactory series of vital statistics prior to 1921. Eight provinces initially joined the cooperative Canadian vital statistics system, leading to the publication of the first annual report for Canada in 1921; that report included Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. Quebec began to participate in 1926 and Newfoundland in 1949 (after joining Confederation) and their data were included in the tabulations from those years onward. Basic data from the Yukon and Northwest Territories were published as appendices to the national tables from 1924 to 1955; their data were first included in the regular tabulations in 1956. Nunavut came into being officially as a Territory of Canada on April 1, 1999. The name Northwest Territories applies to a Territory with different geographic boundaries before and after April 1, 1999.

Prior to 1944 all vital events were classified by place of occurrence. Since 1944, births, stillbirths, and deaths have been classified by area of reported residence, with births and stillbirths according to the residence of the mother.

Stillbirth is currently defined as the complete expulsion or extraction from its mother of a product of conception, which did not at any time after birth breathe or show other sign of life. In 2004, most provinces and all three territories required a stillbirth with a gestational age of at least 20 weeks or a birth weight of at least 500 grams to be registered. In Quebec (as well as in Saskatchewan prior to 2001 and in New Brunswick prior to November 1996), only stillbirths weighing at least 500 grams were required to be registered, regardless of the gestational age. Until 1997, a gestational age of at least 20 weeks was required for stillbirths to be registered in Prince Edward Island, regardless of the birth weight.

History

Starting in 1959, the definition of a stillbirth was revised to conform, in substance, to the definition of "fetal death" recommended by the World Health Organization. At the same time, the compulsory registration of stillbirths was extended to 20 weeks' gestation – from 28 weeks – and the new period of gestation incorporated into the definition: "Stillbirth means the complete expulsion or extraction from its mother, after at least 20 weeks' pregnancy, of a product of conception in which, after such expulsion or extraction, there is no breathing, beating of the heart, pulsation of the umbilical cord, or unmistakable movement of voluntary muscle."

Provinces implemented the new definition at different times, as shown in the table below:

Province Implementation date of revised (1959) stillbirth definition

Nova Scotia March 1959 Manitoba August 1959

Alberta January 1, 1960: 24 or more weeks or 750 grams weight Alberta January 1, 1963: 20 or more weeks or 500 grams weight

Saskatchewan
Quebec
January 1, 1961
Ontario
December 15, 1961
New Brunswick
British Columbia
Prince Edward Island
January 1, 1962
July 1, 1962
January 1, 1964

Newfoundland 1986

Prior to 1959 the following definition of stillbirth was incorporated in the vital statistics legislation of the provinces: "Stillbirth means the birth of a fetus, after at least 28 weeks' pregnancy, which, after complete separation from the mother, does not show any sign of life."

The underlying cause of stillbirth variable in the stillbirth database is classified according to the World Health Organization "International Statistical Classification of Diseases and Related Health Problems" (ICD). The following table shows the data years for which each revision of this classification was used. Data users must note that underlying cause of stillbirth data coded to different revisions of the classification are not comparable and they should contact Statistics Canada for assistance with the use of this variable across classification revisions.

International Statistical Data year used at Statistics Canada Classification of Diseases and Related Health Problems (ICD) Revision ICD-3 1921 to 1930 ICD-4 1931 to 1940 ICD-5 1941 to 1949 ICD-6 1950 to 1957 1958 to 1968 ICD-7 ICDA-8 1969 to 1978 ICD-9 1979 to 1999 ICD-10 2000 to present

An online version of ICD-10, second edition, (in English) became accessible as of October 2004 on the World Health Organization (WHO) website (www.who.int/classifications/en). The second edition incorporates the updates to ICD-10 that came into effect up to January 1, 2003.

Data sources and methodology

Survey population

The conceptual universe of the Stillbirth database is stillbirths to Canadian resident women anywhere in the world. The target population of the Stillbirth database is stillbirths to Canadian resident women in Canada and to Canadian resident women in American states. The actual (survey) population of the Stillbirth database is stillbirths to Canadian resident women and non-resident women in Canada, and stillbirths to Canadian resident women in some American states.

Sampling

This survey is a census with a cross-sectional design.

Collection

Responding to this survey is mandatory. Data are extracted from administrative files.

Provincial and territorial Vital Statistics Acts (or equivalent legislation) render compulsory the registration of all live births, stillbirths, deaths and marriages within their jurisdictions. These Acts follow, as closely as possible, a Model Vital Statistics Act that was developed to promote uniformity of legislation and reporting practices among the provinces and territories.

The Canadian Vital Statistics system operates under an agreement between the Government of Canada and governments of the provinces and territories. The Vital Statistics Council for Canada, an advisory committee set up by an Order-in-Council, oversees policy and operational matters. All provincial and territorial jurisdictions and Statistics Canada are represented on the Vital Statistics Council. Under the agreement, all registrars collect a specified set of data elements, although any of them may decide to collect additional information.

The form for the registration of a stillbirth is usually completed by the parents, who are responsible for filing it with the local, provincial or territorial registrar. Stillbirth registration requires a medical certificate of the cause of stillbirth to be completed by a physician or coroner.

The central Vital Statistics Registry in each province and territory provides data from stillbirth registrations to Statistics Canada. The following statistical data items are reported for each stillbirth by all provinces and territories for inclusion in the Canadian Vital Statistics system:

- · Date and place of stillbirth
- Sex, birth weight and gestational age of fetus (See "History" for further information on definitions of stillbirth related to birth weight and gestational age.)
- Underlying cause of stillbirth classified to the World Health Organization "International Statistical Classification of Diseases and Related Health Problems" (ICD) (See "History" for further information about this variable).
- · Parents' age, marital status and birthplace
- Mother's place of residence
- Type of birth (single or multiple)
- Parity

All provinces and territories supply microfilm copies or optical images of registration forms to Statistics Canada. In addition, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario and the Western provinces supply machine-readable abstracts of registrations, which contain the required standard information. For Newfoundland and Labrador, and the territories, the required standard information on microfilm is converted to machine-readable format at Statistics Canada. Subsequent changes to registrations due to errors or omissions are transmitted to Statistics Canada as the information becomes available. However, changes received after a cut-off date are not reflected in published tabulations.

Error detection

Provinces and territories that supply machine-readable data carry out edits (presence of the data, validation of code ranges, and data consistency) before transmitting their data, based on standard edit specifications prepared by Statistics Canada. Health Statistics Division has actively promoted the use of a standard data dictionary and

standard correlation edits for provincial/territorial data entry. More extensive edit routines are applied to the data by Statistics Canada to ascertain the completeness and quality of the data. For example, additional edits for multiple births identify possible errors and inconsistencies between the stillbirth and birth databases. If the characteristics of the mother of triplets (1 live born and 2 stillborn) are different on the separate registration forms, manual updates make these data consistent on both the birth and stillbirth databases. For 2004, about 45% of the records were assessed for follow-up action either by referring to the microfilmed registrations or optical images or by consulting with the registries. After the preparation of a preliminary data file, verification tables are prepared for data review by the registries and Statistics Canada (for example, distributions, large changes, percentage and number of unknowns, outliers, changes in the relative composition).

The last comprehensive study of the quality of data capture and data coding was done in 1981, when error rates for most variables were found to be quite low. Most provinces do their own data capture, but because of the small size of the Stillbirth database, it is often faster for Statistics Canada to re-capture the records from the microfilms rather than wait for electronic files which usually require reformatting. For 2004 data, Operations and Integration Division (OID) data captured about 43% (approximately 900) of the stillbirth records. OID maintains data capture quality controls such as 100% verification for new clerks, and sample batch re-capture for experienced clerks to maintain an error rate of less than 3%. For 2003 data, Statistics Canada captured the records of unscreened data from Ontario, which resulted in a higher than usual number of stillbirths. Normal Statistics Canada procedures such as duplicate detection, were carried out on the data.

Quality evaluation

Upon completion of the annual national stillbirth data base (produced as described in the section Error Detection above), Statistics Canada carries out a series of quality checks that include:

- 1. producing a set of verification tables which consist of basic tabulations for the majority of variables in the data base by province or territory of occurrence;
- 2. sending the verification tables to each provincial/territorial registrar of vital statistics for their review and approval that Statistics Canada and the registry obtain the same results;
- checking for internal consistencies, for example, running frequencies and looking for outliers on certain data elements; and
- comparing the most recent data year with past data years to detect any unusual or unexpected changes.

Comparisons of tabulated data are made with vital statistics data published by the provinces and territories, where available. After Statistics Canada creates the publication data file, the availability of stillbirth statistics is announced in *The Daily*.

Disclosure control

Statistics Canada is prohibited by law from releasing any data which would divulge information obtained under the *Statistics Act* that relates to any identifiable person, business or organization without the prior knowledge or the consent in writing of that person, business or organization. Various confidentiality rules are applied to all data that are released or published to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent direct or residual disclosure of identifiable data.

Data accuracy

Coverage

Since the registration of stillbirths is a legal requirement in each Canadian province and territory, reporting is virtually complete, with some important exceptions. Québec uses slightly more limited reporting criteria (500 or more grams birth weight, compared with 500 or more grams birth weight or a gestational age of at least 20 weeks used in other provinces). New Brunswick does not require the registration of stillbirths meeting the reporting criteria when the fetus is removed during a therapeutic abortion. Stillbirth rates may be slightly underestimated in these provinces as a result. Under-coverage may also occur because of late registration. Some stillbirths are registered by local authorities, but the paperwork is not forwarded to provincial or territorial registrars before a cut-off date. These cases for 1999 represent approximately 26 stillbirths, 7 years after the year of stillbirth (accumulated late records), or one percent of the total records.

Other missing registrations may occur with Canadian women who have a stillbirth outside of Canada. Only stillbirths in the United States are regularly reported to Statistics Canada, and of these, Statistics Canada has received only three records over the past decade.

Over-coverage is minimal. Stillbirths to non-resident women in Canada are registered but are excluded from most tabulations. Duplicate stillbirth registrations are identified as part of the regular processing operations on each provincial and territorial subset, as well as by additional inter-provincial checks. Additional edits for multiple births identify possible duplicates or missing records between the stillbirth and birth databases. Possible duplicate registrations are checked against microfilmed registrations or optical images, or by consulting with the provinces and territories.

Response rates

Item response

For 1997 to 2004, the response rates were 98% to 100% for most of the demographic variables on the stillbirth database (age of mother, sex of fetus, province of residence of mother). The response rate for last name of mother and date of birth were both at 100%. The underlying cause of stillbirth is unknown in about 20% of the records, in most cases because the certifier was unsure of the cause, and not because of a data capture or processing error or omission. Postal codes are not well reported and/or captured, with only 60% of the records having postal codes.

Other accuracy issues

Underlying cause of stillbirth certification

There are two stages in the determination of an underlying cause of stillbirth: certification done by the certifier, and classification (coding) done by a medical coder. When a stillbirth occurs, the medical doctor in attendance, or the coroner, medical examiner or other certifier completes the medical certificate of stillbirth. The certificate consists of several sections eliciting the direct cause of stillbirth, antecedent causes, and other significant conditions of the mother and fetus. No quality studies specifically focusing on stillbirth certification have been done in Canada, but quality studies done on the certification of deaths have shown that approximately one-third of certificates contain major errors. Most of the errors (about 85%) involve the use of non-specific conditions such as "stroke" or "heart failure". Approximately 10% of the errors involve illogical sequences of conditions entered in on the line items. Some of these can be resolved during coding, where the classification rules pinpoint illogical sequences. The remaining 5% involve competing causes. Proper training of certifiers, however, can greatly reduce these errors. Statistics Canada is working with the provincial and territorial registrars on two projects to improve quality: a half-day workshop suitable for continuing medical education credit, and an on-line tutorial.

Estimates of population by age and sex for Canada, the **Provinces and the Territories**

Survey description

This estimates program is used in the calculation of demographic, social and economic indicators (fertility rates, mortality rates, nuptiality rates, divorce rates, unemployment rates, school enrolment rates, etc.) in which the population, or a part thereof, serves as the denominator. These data are used in calculation of weights for use in Statistics Canada's Surveys (Labour Force Survey, Household Facilities and Equipment Survey, General Social Survey, Survey of Labour and Income Dynamics, etc.). They are also used in the determination of the annual level of immigration by the Government of Canada. In addition, the data helps in the preparation of population projections by Statistics Canada, where estimates of population by age and sex are used as the base population. Estimated population counts play a vital role under the Federal-Provincial Fiscal Arrangements and Federal Post-Secondary Education and Health Contributions Act and the Canada Student Loans Act in determining the amounts of federal-provincial/territorial transfers.

Data sources and methodology

Sampling

This survey is a census.

Collection

Data are extracted from administrative files and derived from other surveys.

Postcensal estimates are obtained by the component method, using the most recent census of population (Survey 3901) adjusted to July 1 and for net census undercount as the base population. For example, to estimate the population as of July 1, 2004, demographic events experienced by each cohort since the 2001 Census have been taken into account. To the base population count, births, immigrants and net change of non-permanent residents have been added, and deaths and total emigrants were subtracted. It is also necessary to add the interprovincial net migration. This produces a postcensal estimate of total population as July 1, 2004. The components of population change are estimated on the basis of data gleaned from various sources.

Estimation

Demographic estimates can be categorised as either intercensal or postcensal. Intercensal estimates correspond to estimates between censuses, whereas postcensal estimates correspond to non-census years after the most recent census. In producing up-to-date figures, postcensal estimates are obviously more timely (as there is no need to wait until the release of the next census), albeit less accurate. The production of intercensal estimates involves the retrospective adjustment of past figures with the availability of new census data. Postcensal estimates are obtained by adding the number of births, subtracting the number of deaths and by adding or subtracting the net impact of international and internal migration on the most recent census population adjusted for census coverage error (that is, both census undercount and census overcount). The inclusion of non-permanent residents in the target population dictates that net change in the size of this subpopulation in Canada be added or subtracted from the base period. Estimates of population are first produced for each province and territory, and then summed to obtain an estimate of the population of Canada. Postcensal estimates of population by age and sex are produced following essentially the same approach as that of total population but applied to each age and sex cohort in the population. For more detailed information regarding population estimation methods, see Population and Family Estimation Methods at Statistics Canada, Demography Division, Catalogue No. 91-528-X.

Disclosure control

Statistics Canada is prohibited by law from releasing any data which would divulge information obtained under the *Statistics Act* that relates to any identifiable person, business or organization without the prior knowledge or the consent in writing of that person, business or organization. Various confidentiality rules are applied to all data that are released or published to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent direct or residual disclosure of identifiable data.

Revisions and seasonal adjustments

Data are revised once a year and after each Census, postcensal estimates are revised to produce intercensal estimates.

Data accuracy

The estimates of population by age and sex contain certain inaccuracies stemming from (1) errors in corrections for net census undercoverage and (2) imperfections in other data sources and the methods used to estimate the components. Errors due to estimation methodologies and data sources other than censuses are difficult to quantify but not insignificant. The more detailed the breakdown of the data, the larger the inaccuracy coefficient becomes. The component totals contain a certain amount of initial error, and the methodology used to classify them by sex and age, produces additional error in the figures at each stage. Nevertheless, the components can be divided into two categories according to the quality of their data sources: births, deaths, immigration, for which the sources of final data may be considered very good; total emigration, non-permanent residents and interprovincial migration for which the methods used may be a more substantial source of error. Lastly, the size of the error due to component estimation may vary by province, sex, and age and errors in some components (births and total emigration) may have a greater impact on a given age group or sex. Intercensal estimates contain the same types of errors as postcensal estimates, as well as errors resulting from the way in which the errors present at the end of the period were distributed, that is, on the basis of the time elapsed since the reference Census.

Explanatory notes for the tables

Table 1 Fetal deaths (20 weeks or more of gestation) and late fetal deaths (28 weeks or more of gestation), Canada, provinces and territories

- Fetal death (stillbirth) is death prior to the complete expulsion or extraction from its mother of a product of
 conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation
 the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the
 umbilical cord, or definite movement of voluntary muscles. Only fetal deaths where the product of conception has
 a birth weight of 500 grams or more or the duration of pregnancy is 20 weeks or longer are registered in Canada.
- Weeks of gestation refers to the interval, in completed weeks, between the first day of the mother's last menstrual
 period and the day of delivery (that is, the duration of the pregnancy). It can also be any estimate of that interval,
 based on ultrasound, a physical examination or other method. Canadian birth registration documents do not
 specify how the weeks of gestation are to be calculated.
- Weeks of gestation, 20 weeks or more (fetal deaths) refers to a fetal death (stillbirth) with a duration of pregnancy
 of 20 weeks or more, or a birth weight of 500 grams or more. Fetal deaths with unknown weeks of gestation are
 included.
- Weeks of gestation, 28 weeks or more (late fetal deaths) refers to a fetal death (stillbirth) with a duration of pregnancy of 28 weeks or more. Fetal deaths with unknown weeks of gestation are excluded.
- Fetal death (stillbirth) data are tabulated according to the mother's usual place of residence.
- · Northwest Territories excluding Nunavut.
- Unknown province or territory of residence of mother refers to fetal deaths (stillbirths) to residents of Canada, province or territory of residence unknown.

Table 2-1 Live births and fetal deaths (stillbirths), by geography

- Live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the
 duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as
 beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not
 the umbilical cord has been cut or the placenta is attached.
- Fetal death (stillbirth) is death prior to the complete expulsion or extraction from its mother of a product of
 conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation
 the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the
 umbilical cord, or definite movement of voluntary muscles. Only fetal deaths where the product of conception has
 a birth weight of 500 grams or more or the duration of pregnancy is 20 weeks or longer are registered in Canada.
- Type of birth refers to the plurality of a delivery, that is, whether the delivery results in one or more liveborn or stillborn infants. The category "Type of birth, multiples" includes the delivery of twins, triplets, quadruplets, quintuplets or more.
- The geographic distribution of live births and fetal deaths (stillbirths) in this table is based on the mother's usual place of residence.
- · Northwest Territories excluding Nunavut.

• Unknown province or territory of residence of mother refers to live births and fetal deaths (stillbirths) to residents of Canada, province or territory of residence unknown.

Table 2-2 Place of birth (hospital and non-hospital)

- Live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.
- Fetal death (stillbirth) is death prior to the complete expulsion or extraction from its mother of a product of
 conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation
 the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the
 umbilical cord, or definite movement of voluntary muscles. Only fetal deaths where the product of conception has
 a birth weight of 500 grams or more or the duration of pregnancy is 20 weeks or longer are registered in Canada.
- The category "Place of birth, non-hospital" includes births in private homes, in health care institutions such as
 nursing homes and other long-term care facilities, nursing stations and other short-term care facilities and other
 health care facilities not licensed to operate as hospitals by provincial, territorial or federal governments, such as
 free-standing birthing centres and at other specified sites.
- The geographic distribution of live births and fetal deaths (stillbirths) in this table is based on the mother's usual place of residence.
- · Northwest Territories excluding Nunavut.
- Unknown province or territory of residence of mother refers to live births and fetal deaths (stillbirths) to residents
 of Canada, province or territory of residence unknown.