Hospitalization and Childbirth Quick Stats Metadata

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Canadian Institute for Health Information 495 Richmond Road, Suite 600 Ottawa, Ontario K2A 4H6 Phone: 613-241-7860 Fax: 613-241-8120 cihi.ca copyright@cihi.ca

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Inpatient Hospitalizations: Volumes, Lengths of Stay and Standardized Rates

As of April 2021, hospitalization and childbirth statistics (including historical results) are available in preformatted supplementary data tables from the Canadian Institute for Health Information (CIHI) on our <u>Hospital stays in Canada</u> web page. Previously, these results were available in interactive tables in CIHI's <u>Quick Stats</u> tool.

Name of table	Title of the table of interest
Data sources	Databases from which the data for the table of interest is derived
Available statistics	Figures available in the table of interest (e.g., number of discharges, average length of stay)
Available breakdowns	All possible methods by which the data for the table of interest may be grouped (e.g., by sex, by 5-year age group)
Inclusions	Characteristics of records included in the data for the table of interest
Exclusions	Characteristics of records excluded from the data for the table of interest
Methodology	Analytical approach used to calculate the figures presented in the table of interest
Important notes	Additional information that is relevant to the table of interest (e.g., coverage in a particular fiscal year)
Interpretation	Additional notes to aid in understanding the information provided in each table

Metadata for each statistic follows the template below:

Metadata that applies to each statistic in tables 1 and 2

Name of table	Table 1: Inpatient hospitalizations: Volumes and lengths of stay and Table 2: Inpatient hospitalizations: Standardized rates
Data sources	 Discharge Abstract Database (DAD), CIHI Hospital Morbidity Database (HMDB), CIHI
	Ontario Mental Health Reporting System (OMHRS), CIHI (see Important notes below)
	 Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec (see Important notes below)
Available breakdowns	• Discharge fiscal year (1995–1996 to 2021–2022)

Important notes	 Prior to 1999–2000, Nunavut submitted its acute inpatient hospitalization data to CIHI as part of the Northwest Territories. In this table, inpatient hospitalizations prior to 1999–2000 that were captured under the Northwest Territories from the region that is now represented as Nunavut were isolated for trending purposes. In 2002–2003, Nunavut did not submit discharge data to CIHI. As such, Canada
	figures for 2002–2003 do not include Nunavut and are not comparable with figures from other fiscal years.
	• 2016–2017, 2019–2020 and 2020–2021 data for Nunavut is incomplete and has therefore been suppressed.
	• 1 hospital in New Brunswick did not submit 4 periods of data in 2004–2005.
	• 2 hospitals in Alberta did not submit 2 periods of data in 2005–2006, and a third hospital did not submit 3 periods.
	• 1 hospital in Alberta did not submit 3 periods of data in 2006–2007.
	• 1 hospital in Quebec did not submit 2 periods of data in 2005–2006.
	• 2 hospitals in Ontario did not submit any data from 2009–2010 to 2013–2014.
	• 1 hospital in Ontario did not submit 5 periods of data in 2013–2014.
	• 2 hospitals in Yukon and 1 hospital in Quebec did not submit any data in 2013–2014.
	• 2 hospitals in Yukon, 2 hospitals in Ontario, 1 hospital in Nova Scotia and 1 hospital in Quebec did not submit any data in 2014–2015.
	• 1 hospital in Ontario did not submit 1 period of data in 2014–2015.
	• 1 hospital in Nova Scotia did not submit 10 periods of data in 2015–2016.
	• 1 hospital in Nunavut did not submit 7 periods of data in 2016–2017.
	• 1 hospital in Ontario did not submit 1 period of data in 2017–2018.
	• 1 hospital in Ontario did not submit 6 periods of data in 2018–2019.
	• 1 hospital in Nunavut did not submit 6 periods of data in 2019–2020.
	• 1 hospital in Nunavut did not submit 3 periods of data in 2020–2021.
	• 2 hospitals in Ontario did not submit 1 period of data in 2020–2021.
	• 1 hospital in Ontario did not submit 2 periods of data in 2020–2021.
	• 1 hospital in Ontario did not submit 1 period of data in 2021–2022.
	• 1 hospital in Ontario did not submit 4 periods of data in 2021–2022.
	• Quebec data from 2006–2007 to 2009–2010 was sourced from MED-ÉCHO. Prior to 2006–2007 and from 2010–2011 onward, Quebec data was sourced from the HMDB.
	• As of 2006–2007, the submission of information on adult inpatient mental health beds in Ontario migrated from the DAD to OMHRS. To facilitate the comparison of data over time at the Ontario and pan-Canadian levels, 2006–2007 to 2021–2022 data from OMHRS was incorporated into the inpatient hospitalization data.
	• Data from OMHRS includes data from general hospitals and excludes data from specialty (psychiatric) hospitals.
	• Approximately 1,700 discharges were excluded from OMHRS, per fiscal year, from 2006–2007 through 2011–2012 due to a data quality issue.

Metadata for each statistic

Name of table	Table 1: Inpatient hospitalizations: Volumes and lengths of stay
Available statistics	Number of discharges
Available breakdowns	National
	Province/territory of facility
	• Sex (male, female, all)
	• 5-year age group (<1 through 90+)
Inclusions	Discharges from acute care institutions in Canada
	• Records with invalid length of stay are included in the number of discharges
	• Records where sex is categorized as "other" are included in the "all" sex counts
Exclusions	Newborns (see Important notes below)
	• Stillbirths
	Cadaveric donors
	Invalid or unknown age
Methodology	Number of discharges — all records meeting the above inclusion criteria
Important notes	Geography represents the province/territory where the hospital is located.
	• Discharges from acute care institutions in a given province/territory may include non-residents of that particular province/territory or of Canada.
	• Due to privacy and confidentiality concerns, and to minimize the risk of residual disclosure, volumes of fewer than 5 discharges have been suppressed in the cells and removed from total discharge counts.
	• There is some inconsistency from year to year between provinces/territories in newborn coding. In some provinces/territories, the category "newborns" includes those born in the reporting facility and those born outside the reporting facility but admitted to that facility within 24 hours of birth.
	Therefore, the figures presented here exclude
	 All newborns born in the reporting facility; and
	 Some newborns born outside the reporting facility but admitted to that facility within 24 hours of birth.
	This will result in a slight undercount of discharges.
Interpretation	• The terms "hospitalization" and "discharge" are used interchangeably in this document.
	• These statistics reflect the number of hospitalizations (or discharges), which is somewhat higher than the number of individuals hospitalized, since individuals with service transfers or multiple hospitalizations during a single year would be counted more than once in the totals.

Name of table	Table 1: Inpatient hospitalizations: Volumes and lengths of stay
Available statistics	Total length of stay (days)
Available breakdowns	National
	Province/territory of facility
	• Sex (male, female, all)
	• 5-year age group (<1 through 90+)
Inclusions	Discharges from acute care institutions in Canada
	• Records where sex is categorized as "other" are included in the "all" sex counts
Exclusions	Newborns (see Important notes below)
	• Invalid lengths of stay
	• Stillbirths
	Cadaveric donors
	• Invalid or unknown age
Methodology	• Total length of stay — calculated by summing the length of stay for all records with valid length of stay
Important notes	Geography represents the province/territory where the hospital is located.
	• Discharges from acute care institutions in a given province/territory may include non-residents of that particular province/territory or of Canada.
	• There is some inconsistency from year to year between provinces/territories in newborn coding. In some provinces/territories, the category "newborns" includes those born in the reporting facility and those born outside the reporting facility but admitted to that facility within 24 hours of birth.
	Therefore, the figures presented here exclude
	 All newborns born in the reporting facility; and
	 Some newborns born outside the reporting facility but admitted to that facility within 24 hours of birth.
	This will result in a slight undercount of discharges.
	• Length of stay statistics may be influenced by cases with very long stays. A hospitalization's length of stay days are reported in the year the patient is discharged. For example, days associated with a patient who is hospitalized for a year and who is discharged on April 1, 2021, would be reported in the 2021–2022 fiscal year (April 1, 2021, to March 31, 2022), potentially skewing the results.
Interpretation	• Length of stay (LOS) is defined as the number of days a patient spends in hospital from time of admission to time of discharge.

Name of table	Table 1: Inpatient hospitalizations: Volumes and lengths of stay
Available statistics	Average length of stay (days)
Available breakdowns	National
	Province/territory of facility
	• Sex (male, female, all)
	• 5-year age group (<1 through 90+)

Inclusions	Discharges from acute care institutions in Canada
	• Records where sex is categorized as "other" are included in the "all" sex counts
Exclusions	Newborns (see Important notes below)
	Invalid lengths of stay
	• Stillbirths
	Cadaveric donors
	• Invalid or unknown age
Methodology	Average length of stay — calculated by dividing total length of stay by number of discharges with a valid length of stay
Important notes	Geography represents the province/territory where the hospital is located.
	• Discharges from acute care institutions in a given province/territory may include non-residents of that particular province/territory or of Canada.
	• There is some inconsistency from year to year between provinces/territories in newborn coding. In some provinces/territories, the category "newborns" includes those born in the reporting facility and those born outside the reporting facility but admitted to that facility within 24 hours of birth.
	Therefore, the figures presented here exclude
	 All newborns born in the reporting facility; and
	 Some newborns born outside the reporting facility but admitted to that facility within 24 hours of birth.
	This will result in a slight undercount of discharges.
	• Length of stay statistics may be influenced by cases with very long stays. A hospitalization's length of stay days are reported in the year the patient is discharged. For example, days associated with a patient who is hospitalized for a year and who is discharged on April 1, 2021, would be reported in the 2021–2022 fiscal year (April 1, 2021, to March 31, 2022), potentially skewing the results.
Interpretation	• Length of stay (LOS) is defined as the number of days a patient spends in hospital from time of admission to time of discharge.

Name of table	Table 2: Inpatient hospitalizations: Standardized rates
Available statistics	Age-sex-standardized hospitalization rate per 100,000 population
Available breakdowns	National
	Province/territory of patient residence
Inclusions	 Discharges from acute care institutions in Canada (includes non-residents of Canada)
	 Discharge abstracts of Canadian residents (based on patient postal code) for the provincial breakdown
	Discharge abstracts with valid age
	Discharge abstracts with sex of male or female

Exclusions	Newborns (see Important notes below)
	• Stillbirths
	Cadaveric donors
	Invalid or unknown age
Methodology	The direct standardization process was used. For data years 2013–2014 and earlier, the October 1, 2001, post-censal fiscal year Canadian population estimates were used as the standard population. As of 2014–2015, the 2011 censal fiscal year Canadian population estimates are used. This creates a break in the series; therefore, rates for 2013–2014 and earlier should not be compared with rates for 2014–2015 onward.
	1. Age–sex-specific rates were calculated for 5-year age (<1 to 90+) and gender (male or female) groups for each province/territory and for Canada:
	• Numerator for rate = Number of discharges in that age-sex group of residents of a particular province/territory (for provincial/territorial rates) or of Canada (for national rates) in the fiscal year of interest
	• Denominator for rate = Number of people in that age–sex group of residents of a particular province/territory (for provincial/territorial rates) or of Canada (for national rates) in the fiscal year of interest
	2. Age–sex-specific rates were then multiplied by the age–sex-specific population in the standard population.
	3. The results of step 2 were then summed for each province/territory or for Canada.
	4. The results of step 3 were then divided by the total population of Canada from the standard population.
	5. The results of step 4 were then multiplied by 100,000 to give the age–sex-standardized discharge rate per 100,000 population of the province/territory of interest.
	6. For data years 2014–2015 and earlier, geography represented the province or territory in which the patient resided at the time of discharge. Therefore, statistics presented in the tables included residents of Canada only. As of 2015–2016, geography for the provincial breakdown represents the province or territory in which the patient resided at the time of discharge; geography for the national counts represents discharges from acute care institutions in Canada, which may include non-residents of Canada. Therefore, statistics presented in the tables for provincial breakdown include residents of Canada only, while the national counts may include non-residents of Canada.
Important notes	• There is some inconsistency from year to year between provinces/territories in newborn coding. In some provinces/territories, the category "newborns" includes those born in the reporting facility and those born outside the reporting facility but admitted to that facility within 24 hours of birth.
	Therefore, the figures presented here exclude
	 All newborns born in the reporting facility; and
	 Some newborns born outside the reporting facility but admitted to that facility within 24 hours of birth.
	This will result in a slight undercount of discharges used in the numerator of the age-standardized discharge rate.

Interpretation	• Age–sex standardization is a statistical technique used to remove the effect of the age and gender distributions of 2 or more populations (e.g., Ontario and Alberta) when comparing rates across different populations or for the same population over time.
	• Age-sex-standardized rates in this table can be compared with each other only for years where the same standard population was used.
	• Age-sex-standardized rates in this table cannot be compared with other rates calculated outside this table.
	• The terms "hospitalization" and "discharge" are used interchangeably in this document
	• These statistics reflect the number of hospitalizations (or discharges), which is somewhat higher than the number of individuals hospitalized, since individuals with multiple hospitalizations during a single year would be counted more than once in the totals.
	• There are methodological differences in how the numerator and denominator are calculated:
	 Numerator for rate = Number of discharges in that age-sex group of residents of a particular province/territory (for provincial/territorial rates) or of Canada (for national rates) in the fiscal year of interest. Therefore, the same person could be included more than once if they were discharged more than once in the same province/territory in the fiscal year of interest.
	 Denominator for rate = Number of persons in that age-sex group of residents of a particular province/territory (for provincial/territorial rates) or of Canada (for national rates) in the fiscal year of interest. Therefore, the same person could be included only once in the same province/territory in the fiscal year of interest.
	• Because of these methodological differences, the age-sex-standardized rates will be higher than if the numerator considered each person only once.

Name of table	Table 2: Inpatient hospitalizations: Standardized rates
Available statistics	Age-standardized average length of stay (days)
Available breakdowns	National
	Province/territory of facility
Inclusions	Discharges from acute care institutions in Canada
	Discharge abstracts with valid age
Exclusions	Newborns (see Important notes below)
	Invalid lengths of stay
	• Stillbirths
	Cadaveric donors
	Invalid or unknown age

Methodology	The direct standardization process was used; the pooled number of hospitalized patients from 1995–1996 to 2005–2006 was used as a standard population. This represents the average age distribution of the inpatient hospital population from 1995–1996 through 2005–2006.
	 Age-specific average length of stay figures were calculated for 5-year age groups (<1 to 90+) for each province/territory and for Canada:
	• Numerator for average length of stay = Number of total days of stay in that age group of discharges of a particular province/territory (for provincial/territorial rates) or of Canada (for national rates) in the fiscal year of interest
	• Denominator for average length of stay = Number of hospitalizations in that age group of discharges of a particular province/territory (for provincial/territorial rates) or of Canada (for national rates) in the fiscal year of interest
	2. Age-specific average length of stay figures were then multiplied by the derived weight for that particular age group from the standard population.
	 The results of step 2 were then summed for each province/territory or for Canada to give the age-standardized average length of stay.
	4. Geography represents the province/territory where the hospital is located.
	5. Average length of stay is calculated using the actual (i.e., not rounded) number of hospitalizations and total inpatient hospital days.
Important notes	• Discharges from acute care institutions in a given province/territory may include non-residents of that particular province/territory or of Canada.
	• There is some inconsistency from year to year between provinces/territories in newborn coding. In some provinces/territories, the category "newborns" includes those born in the reporting facility and those born outside the reporting facility but admitted to that facility within 24 hours of birth.
	Therefore, the figures presented here exclude
	 All newborns born in the reporting facility; and
	 Some newborns born outside the reporting facility but admitted to that facility within 24 hours of birth.
	This will result in a slight undercount of discharges.
	• Length of stay statistics may be influenced by cases with very long stays. A hospitalization's length of stay days are reported in the year the patient is discharged. For example, days associated with a patient who is hospitalized for a year and who is discharged on April 1, 2021, would be reported in the 2021–2022 fiscal year (April 1, 2021, to March 31, 2022), potentially skewing the results.
Interpretation	Age-standardization is a statistical technique used to remove the effect of the age distribution of 2 or more populations (e.g., Ontario and Alberta) when comparing measures across different populations or for the same population over time.
	• Age-standardized measures in this table can be compared with each other.
	• Age-standardized measures in this table cannot be compared with other measures calculated outside this table.
	• Length of stay is defined as the number of days a patient spends in hospital from time of admission to time of discharge.

Childbirth Indicators by Place of Residence

As of April 2021, hospitalization and childbirth statistics (including historical results) are available in preformatted supplementary data tables from the Canadian Institute for Health Information (CIHI) on our <u>Hospital stays in Canada</u> web page. Previously, these results were available in interactive tables in CIHI's <u>Quick Stats</u> tool.

Name of indicator	Name of the indicator of interest
Data sources	Databases from which the data for the indicator of interest is derived
Available statistics	Figures available for the indicator of interest (e.g., crude primary C-section rate)
Available breakdowns	All possible methods by which the data for the indicator of interest may be grouped (e.g., national, provincial or regional level)
Inclusions	Characteristics of records included in the data for the indicator of interest
Exclusions	Characteristics of records excluded from the data for the indicator of interest
Methodology	Analytical approach used to calculate the figures presented for the indicator of interest
Important notes	Additional information that is relevant to the indicator of interest (e.g., coverage in a particular fiscal year)

Metadata for each indicator follows the template below:

Metadata that applies to each indicator in tables 3 and 4

Name of indicator	Name of the indicator of interest, found in the following 2 tables:
	Table 3: Childbirth indicators by province
	Table 4: Childbirth indicators by region
Data sources	Discharge Abstract Database (DAD), CIHI
	Hospital Morbidity Database (HMDB), CIHI
	 Quebec data from 2006–2007 to 2009–2010 was sourced from the Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec. As of 2010–2011, Quebec data was sourced from the HMDB.
Available statistics	Crude rate
Available breakdowns	• Discharge fiscal year (2001–2002 to 2021–2022)
	• Exceptions:
	 Total Caesarean Section Rate (2001–2002 to 2005–2006 and 2013–2014 to 2021–2022)
	 Preterm Birth Rate and Small-for-Gestational-Age (SGA) Rate (2007–2008 to 2021–2022)

Available breakdowns	National
(continued)	• Provincial
	• Regional
Important notes	• Data for this indicator was restricted to those provinces and territories that had fully implemented the ICD-10-CA and CCI coding classification system. The exception is Quebec, which maintained the ICD-9 and CCP coding classification system up to 2005–2006. As of 2006–2007, Quebec began to submit in the ICD-10-CA and CCI coding classification system. As such, Quebec data prior to 2006–2007 may not be comparable with data from 2006–2007 onward. As of 2006–2007, all provinces and territories were submitting in the ICD-10-CA and CCI coding classification system; for this reason, Canada rates are provided only from 2006–2007 onward.
	 Results are presented for a patient's region of residence, rather than the location of the facility where hospitalization occurred. For P.E.I. and the territories, the entire province/territory is included as a region. Health regions in Nova Scotia, Manitoba and Alberta have changed over time. The Postal Code Conversion File (PCCF/PCCF+) was used to assign patients to their region of residence. As of 2015–2016, the national results include non-residents of Canada.
	 In order to provide a more stable rate estimate, only data from regions with a population of at least 75,000 (from 2001–2002 to 2005–2006) or 50,000 (from 2006–2007 to 2014–2015) was reported. Additional indications for suppression were rate instability and under-reporting. As of 2015–2016, regions are not suppressed based on population; instead, the following suppression methodology is used:
	 Suppression due to privacy: To ensure privacy, a suppression rule is applied to all clinical indicator results. Numerators and/or denominators between 1 and 4 are suppressed.
	 Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
	• In 2002–2003, Nunavut did not submit discharge data to CIHI. As such, Canada figures for 2002–2003 do not include Nunavut and are not comparable with figures from other fiscal years.
	• 2016–2017, 2019–2020 and 2020–2021 data for Nunavut is incomplete and has therefore been suppressed.
	• Data from Region 6 in New Brunswick in 2004–2005 was suppressed due to incomplete data submission. Data from this region was excluded from the provincial rate. Data from Peace Country in Alberta in 2006–2007 and 2008–2009 was also suppressed due to incomplete data submission.
	 Indicators for 2001–2002 to 2005–2006 were originally presented in CIHI's report Giving Birth in Canada: Regional Trends From 2001–2002 to 2005–2006.
	• Results are shown as n/a where there are no eligible records available for indicator calculation (e.g., denominator is 0).

Metadata for each indicator

Name of indicator	Epidural Rate for Vaginal Deliveries
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-9 delivery codes:
	• Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	• 650 coded in any position or
	• V27 coded in any position
	ICD-10-CA delivery codes (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	• Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	ICD-10-CA delivery codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators):
	• Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	Numerator (is a subset of the denominator)
	CCP epidural codes:
	• Anesthetic Technique Code = 3 or
	• A procedure code of 16.91 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI epidural codes:
	• Anesthetic Technique Code = 3 or
	• A procedure code of 5.LD.20.HA-P1 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)

Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	 Procedure code of 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis
	CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2008–2009 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
	Caesarean section:
	CCP Caesarean section delivery codes:
	 Any procedure code of 86.0 to 86.2, 86.8 or 86.9 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI Caesarean section delivery codes:
	 A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of vaginal deliveries where an epidural anesthetic was used) ÷ (Number of vaginal deliveries) × 100
Important notes	• Data from 2005–2006 in Alberta and data from 2006–2007 in Newfoundland and Labrador was suppressed due to under-reporting of epidural use. Data from Chinook region in Alberta between 2001–2002 and 2005–2006 was also suppressed for this reason.

Name of indicator	Epidural Rate for All Deliveries
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-9 delivery codes:
	• Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	• 650 coded in any position or
	• V27 coded in any position
	ICD-10-CA delivery codes (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	• Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	ICD-10-CA delivery codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators):
	• Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	Numerator (is a subset of the denominator)
	CCP epidural codes:
	• Anesthetic Technique Code = 3 or
	• A procedure code of 16.91 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI epidural codes:
	• Anesthetic Technique Code = 3 or
	• A procedure code of 5.LD.20.HA-P1 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)

Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	 Procedure code of 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis
	CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2008–2009 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of deliveries where an epidural anesthetic was used) ÷ (Number of deliveries) × 100
Important notes	• Data from 2005–2006 in Alberta and data from 2006–2007 in Newfoundland and Labrador was suppressed due to under-reporting of epidural use. Data from Chinook region in Alberta between 2001–2002 and 2005–2006 was also suppressed for this reason.

Name of indicator	Assisted Delivery Rate (Overall) Among Vaginal Deliveries
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-9 delivery codes:
	• Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	• 650 coded in any position or
	• V27 coded in any position
	ICD-10-CA delivery codes (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	• Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	ICD-10-CA delivery codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators):
	• Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	Numerator (is a subset of the denominator)
	CCP assisted delivery codes:
	• Procedure code of 84.0, 84.1, 84.2, 84.3 or 84.7 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI assisted delivery codes:
	• Any procedure code of 5.MD.53.KL, 5.MD.53.KK, 5.MD.53.KN, 5.MD.53.KM, 5.MD.53.KJ, 5.MD.53.KH, 5.MD.53.KS or 5.MD.53.KP coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	• A procedure code of 5.MD.54 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	• A procedure code of 5.MD.55 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)

Evolucione	Stillbirth records or newborns
Exclusions	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	 Procedure code of 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis
	CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2008–2009 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
	Caesarean section:
	CCP Caesarean section delivery codes:
	 Any procedure code of 86.0 to 86.2, 86.8 or 86.9 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI Caesarean section delivery codes:
	 A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of vaginal deliveries assisted by means of forceps extraction, vacuum extraction or a combination of the 2) ÷ (Number of vaginal deliveries) × 100

Name of indicator	Assisted Delivery Rate (Vacuum Extraction) Among Vaginal Deliveries
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-9 delivery codes:
	• Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	• 650 coded in any position or
	• V27 coded in any position
	ICD-10-CA delivery codes (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	• Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	ICD-10-CA delivery codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators):
	• Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	Numerator (is a subset of the denominator)
	CCP vacuum extraction codes:
	• A procedure code of 84.7 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI vacuum extraction codes:
	• A procedure code of 5.MD.54 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)

Exclusions (continued)	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	 Procedure code of 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis
	CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2008–2009 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
	Denominator
	• Caesarean section:
	CCP Caesarean section delivery codes:
	 Any procedure code of 86.0 to 86.2, 86.8 or 86.9 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI Caesarean section delivery codes:
	 A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
	Numerator (is a subset of the denominator)
	 Vaginal deliveries assisted by means of forceps technique or vacuum and forceps technique:
	CCP codes:
	 Forceps technique: Any procedure code of 84.0, 84.1, 84.2 or 84.3 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI codes:
	 Forceps technique: Any procedure code of 5.MD.53.KL, 5.MD.53.KK, 5.MD.53. KN, 5.MD.53.KM, 5.MD.53.KJ, 5.MD.53.KH, 5.MD.53.KS or 5.MD.53.KP coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 Vacuum and forceps technique: A procedure code of 5.MD.55 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of vaginal deliveries assisted by means of vacuum extraction only) ÷ (Number of vaginal deliveries) × 100

Name of indicator	Assisted Delivery Rate (Forceps) Among Vaginal Deliveries
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-9 delivery codes:
	• Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	• 650 coded in any position or
	• V27 coded in any position
	ICD-10-CA delivery codes (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	• Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	ICD-10-CA delivery codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators):
	• Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	Numerator (is a subset of the denominator)
	CCP forceps extraction codes:
	 Procedure code of 84.0, 84.1, 84.2 or 84.3 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI forceps extraction codes:
	• Any procedure code of 5.MD.53.KL, 5.MD.53.KK, 5.MD.53.KN, 5.MD.53.KM, 5. MD.53.KJ, 5.MD.53.KH, 5.MD.53.KS or 5.MD.53.KP coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)

Exclusions (continued)	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	 Procedure code of 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis
	CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2008–2009 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospita (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
	Denominator
	Caesarean section:
	CCP Caesarean section delivery codes:
	 Any procedure code of 86.0 to 86.2, 86.8 or 86.9 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI Caesarean section delivery codes:
	 A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
	Numerator (is a subset of the denominator)
	• Vaginal deliveries assisted by means of vacuum technique or vacuum and forceps technique:
	CCP codes:
	 Vacuum technique: A procedure code of 84.7 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI codes:
	 Vacuum technique: A procedure code of 5.MD.54 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 Vacuum and forceps technique: A procedure code of 5.MD.55 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of vaginal deliveries assisted by means of forceps extraction only) ÷ (Number of vaginal deliveries) × 100

Name of indicator	Total Caesarean Section Rate
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-9 delivery codes:
	• Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	• 650 coded in any position or
	• V27 coded in any position
	ICD-10-CA delivery codes (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	• Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	ICD-10-CA delivery codes (2012, 2015 and 2018 versions used for 2013–2014 to 2021–2022 indicators):
	• Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	Numerator (is a subset of the denominator)
	CCP Caesarean section delivery codes:
	• Procedure code of 86.0 to 86.2, 86.8 or 86.9 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI Caesarean section delivery codes:
	• A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)

Exclusions (continued)	CCI (2012, 2015 and 2018 versions used for 2013–2014 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of Caesarean section deliveries) ÷ (Number of deliveries) × 100
Important notes	Data on the Total Caesarean Section Rate from 2006–2007 to 2012–2013
	was previously available only in the Health Indicators series of publications.
	As of April 23, 2020, historical Total Caesarean Section Rate results have
	been aligned with the Health Indicators e-Publication.

Name of indicator	Primary Caesarean Section Rate
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-9 delivery codes:
	• Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	• 650 coded in any position or
	• V27 coded in any position
	ICD-10-CA delivery codes (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	• Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	ICD-10-CA delivery codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators):
	• Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	Numerator (is a subset of the denominator)
	CCP Caesarean section delivery codes:
	• Any procedure code of 86.0 to 86.2, 86.8 or 86.9 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI Caesarean section delivery codes:
	 A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)

Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	 Procedure code of 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis
	CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2008–2009 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
	• Previous, repeat or undefined Caesarean section:
	ICD-9 previous Caesarean section delivery codes:
	 A diagnosis code of 654.2 coded in any position
	ICD-10-CA previous Caesarean section delivery codes (2001, 2003 and 2006 versions used for 2001–2002 to 2008–2009 indicators):
	 Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position
	ICD-10-CA and CCI previous or repeat Caesarean section delivery codes (2009, 2012, 2015 and 2018 versions used for 2009–2010 to 2021–2022 indicators):
	 Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position or
	 A procedure code of 5.MD.60 coded in any position that was coded as a repeat (Status Attribute = N4 or N6; or Status Attribute = RA, RB or RC, as of the 2018 version)
	Undefined Caesarean sections (new as of 2011–2012 indicators):
	 Procedure code of 5.MD.60 coded in any position that was coded with a Status Attribute of "unknown" (Status Attribute = Z) and without any diagnosis code of O34.201, O66.401 or O75.701 coded in any position

Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of primary Caesarean section deliveries) ÷ (Number of deliveries without a previous Caesarean section) × 100
Important notes	• Changes in version 2009 of the ICD-10-CA and CCI coding classification system have resulted in changes to the methodology for deriving the Primary and Repeat Caesarean Section rates. As such, data from prior fiscal years, which used ICD-9/CCP and ICD-10-CA/CCI versions 2001, 2003 and 2006, may not be comparable with data from 2009–2010 onward.

Name of indicator	Primary Caesarean Section Rate (Age <35 Years)
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	• Patient Age <35 years
	ICD-9 delivery codes:
	 Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	– 650 coded in any position or
	 V27 coded in any position
	ICD-10-CA delivery codes (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	 Z37 coded in any position
	ICD-10-CA delivery codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators):
	 Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	 Z37 coded in any position
	Numerator (is a subset of the denominator)
	CCP Caesarean section delivery codes:
	• Any procedure code of 86.0 to 86.2, 86.8 or 86.9 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI Caesarean section delivery codes:
	• A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)

Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	 Procedure code of 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis
	CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2008–2009 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
	Previous, repeat or undefined Caesarean section:
	ICD-9 previous Caesarean section delivery codes:
	 A diagnosis code of 654.2 coded in any position
	ICD-10-CA (2001, 2003 and 2006 versions used for 2001–2002 to 2008–2009 indicators) previous Caesarean section delivery codes:
	 Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position
	ICD-10-CA and CCI previous or repeat Caesarean section delivery codes (2009, 2012, 2015 and 2018 versions used for 2009–2010 to 2021–2022 indicators):
	- Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position or
	 A procedure code of 5.MD.60 coded in any position that was coded as a repeat (Status Attribute = N4 or N6; or Status Attribute = RA, RB or RC, as of the 2018 version)
	Undefined Caesarean sections (new as of 2011–2012 indicators):
	 Procedure code of 5.MD.60 coded in any position that was coded with a Status Attribute of "unknown" (Status Attribute = Z) and without any diagnosis code of O34.201, O66.401 or O75.701 coded in any position

Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of primary Caesarean section deliveries) ÷ (Number of deliveries without a previous Caesarean section, age <35 years) × 100
Important notes	 Changes in version 2009 of the ICD-10-CA and CCI coding classification system have resulted in changes to the methodology for deriving the Primary and Repeat Caesarean Section rates. As such, data from prior fiscal years, which used ICD-9/CCP and ICD-10-CA/CCI versions 2001, 2003 and 2006, may not be comparable with data from 2009–2010 onward.

Name of indicator	Primary Caesarean Section Rate (Age ≥35 Years)
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	• Patient Age ≥35 years
	ICD-9 delivery codes:
	 Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	– 650 coded in any position or
	 V27 coded in any position
	ICD-10-CA delivery codes (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	 Z37 coded in any position
	ICD-10-CA delivery codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators):
	 Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	 Z37 coded in any position
	Numerator (is a subset of the denominator)
	CCP Caesarean section delivery codes:
	• Any procedure code of 86.0 to 86.2, 86.8 or 86.9 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI Caesarean section delivery codes:
	• A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)

Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of- Hospital = Y)
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	 Procedure code of 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis
	CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2008–2009 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
	Previous, repeat or undefined Caesarean section:
	ICD-9 previous Caesarean section codes:
	 A diagnosis code of 654.2 coded in any position
	ICD-10-CA previous Caesarean section codes (2001, 2003 and 2006 versions used for 2001–2002 to 2008–2009 indicators):
	 Any diagnosis code of O34.201, O66.401 and O75.701 coded in any position
	ICD-10-CA and CCI previous or repeat Caesarean section delivery codes (2009, 2012, 2015 and 2018 versions used for 2009–2010 to 2021–2022 indicators):
	 Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position or
	 A procedure code of 5.MD.60 coded in any position that was coded as a repeat (Status Attribute = N4 or N6; or Status Attribute = RA, RB or RC, as of the 2018 version)
	Undefined Caesarean sections (new as of 2011–2012 indicators):
	 Procedure code of 5.MD.60 coded in any position that was coded with a Status Attribute of "unknown" (Status Attribute = Z) and without any diagnosis code of O34.201, O66.401 or O75.701 coded in any position

Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of primary Caesarean section deliveries) ÷ (Number of deliveries without a previous Caesarean section, age ≥35 years) × 100
Important notes	 Changes in version 2009 of the ICD-10-CA and CCI coding classification system have resulted in changes to the methodology for deriving the Primary and Repeat Caesarean Section rates. As such, data from prior fiscal years, which used ICD-9/CCP and ICD-10-CA/CCI versions 2001, 2003 and 2006, may not be comparable with data from 2009–2010 onward.

Name of indicator	Repeat Caesarean Section Rate
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-9:
	Delivery codes:
	• Any diagnosis code of 640 to 676, with a fifth digit of 1 or 2 coded in any position or
	• 650 coded in any position or
	• V27 coded in any position
	and
	Previous Caesarean section delivery codes:
	A diagnosis code of 654.2 coded in any position
	ICD-10-CA (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	Delivery codes:
	• Any diagnosis code of O10 to O16, O20 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	and
	Previous Caesarean section delivery codes:
	• Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position
	ICD-10-CA/CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators):
	Delivery codes:
	Any diagnosis code of O10 to O16, O21 to O29, O30 to O46, O48, O60 to O75, O85 to O92, O95, or O98 to O99, with a sixth digit of 1 or 2 coded in any position or
	• Z37 coded in any position
	and
	Previous or repeat Caesarean section delivery codes:
	• Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position or
	• A procedure code of 5.MD.60 coded in any position with Status Attribute N4, N6 or Z (Unknown), or Status Attribute RA, RB, RC or Z (Unknown) as of the 2018 version

Inclusions (continued)	Numerator (is a subset of the denominator)
	CCP Caesarean section delivery codes:
	• Any procedure code of 86.0 to 86.2, 86.8 or 86.9 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI Caesarean section delivery codes:
	• A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	 Procedure code of 86.3, 86.4, 87.0, 87.1 or 87.2 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0) or
	 Salpingectomy (partial) with removal of tubal pregnancy; removal of ectopic fetus from fallopian tube: a procedure code of 78.52 coded in any position that was not cancelled (Intervention Suffix = 8) or a previous procedure (Intervention Suffix = 9) or done out of hospital (Intervention Suffix = 0)
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	 Procedure code of 5.CA.88, 5.CA.89, 5.CA.90 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	 Procedure code of 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis
	CCI (2006, 2009, 2012, 2015 and 2018 versions used for 2008–2009 to 2021–2022 indicators):
	 Any procedure code of 5.CA.20, 5.CA.24, 5.CA.88, 5.CA.89 or 5.CA.93 coded in any position that was not abandoned (Status Attribute = A) or done out of hospital (Out-of-Hospital = Y) or
	 An ICD-10-CA diagnosis code of O04 coded in any diagnosis field
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of repeat Caesarean section deliveries) ÷ (Number of deliveries with
	a previous Caesarean section) × 100
Important notes	• Changes in version 2009 of the ICD-10-CA and CCI coding classification system have resulted in changes to the methodology for deriving the Primary and Repeat Caesarean Section rates. As such, data from prior fiscal years, which used ICD-9/CCP and ICD-10-CA/CCI versions 2001, 2003 and 2006, may not be comparable with data from 2009–2010 onward.

Name of indicator	Low Birth Weight Rate (<2,500 Grams)
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-10-CA in-hospital birth codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators only):
	• Any diagnosis code of Z38.0, Z38.3 or Z38.6 coded in any position
	Numerator (is a subset of the denominator)
	• Weight <2,500 grams
Exclusions	Non-newborn records
	Cadaveric donors
	• Invalid birth weight (Weight = blank, 0000, 0001 or ZZZZ)
	ICD-10-CA abortion or out-of-hospital birth codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators only):
	• Any diagnosis code of P96.4, Z38.1, Z38.2, Z38.4, Z38.5, Z38.7 or Z38.8 coded in any diagnosis field
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of live newborns with a birth weight less than 2,500 grams) ÷ (Number of live newborns with a valid birth weight) × 100

Name of indicator	Low Birth Weight Rate (<2,500 Grams, Excluding <500 Grams)
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-10-CA in-hospital birth codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators only):
	Any diagnosis code of Z38.0, Z38.3 or Z38.6 coded in any position
	Numerator (is a subset of the denominator)
	• Weight <2,500 grams
Exclusions	Non-newborn records
	Cadaveric donors
	• Weight <500 grams
	• Invalid birth weight (Weight = blank, 0000, 0001 or ZZZZ)
	ICD-10-CA abortion or out-of-hospital birth codes (2006, 2009, 2012, 2015 and 2018 versions used for 2006–2007 to 2021–2022 indicators only):
	• Any diagnosis code of P96.4, Z38.1, Z38.2, Z38.4, Z38.5, Z38.7 or Z38.8 coded in any diagnosis field
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of live newborns with a birth weight between 500 grams and 2,499 grams, inclusive) ÷ (Number of live newborns with a birth weight greater than or equal to 500 grams) × 100

Name of indicator	Preterm Birth Rate (<37 Weeks Gestation)
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-10-CA in-hospital birth codes (2006, 2009, 2012, 2015 and 2018 versions used for 2007–2008 to 2021–2022 indicators only):
	Any diagnosis code of Z38.0, Z38.3 or Z38.6 coded in any position
	Numerator (is a subset of the denominator)
	Delivery Gestational Age <37 weeks
Exclusions	Non-newborn records
	Cadaveric donors
	• Invalid birth weight (Weight = blank, 0000, 0001 or ZZZZ)
	• Invalid gestational age (Delivery Gestational Age = blank, 99 or ZZ)
	ICD-10-CA abortion or out-of-hospital birth codes (2006, 2009, 2012, 2015 and 2018 versions used for 2007–2008 to 2021–2022 indicators only):
	• Any diagnosis code of P96.4, Z38.1, Z38.2, Z38.4, Z38.5, Z38.7 or Z38.8 coded in any diagnosis field
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of live newborns with a gestational age of less than 37 weeks) ÷ (Number of live newborns with a valid gestational age) × 100
Important notes	• The Preterm Birth Rate indicator was new in Quick Stats as of 2009–2010 and was retrospectively updated for 2007–2008 and 2008–2009. Data for prior fiscal years is unavailable.

Name of indicator	Small-for-Gestational-Age (SGA) Rate
Inclusions	Discharges from acute care institutions in Canada
	Denominator
	ICD-10-CA in-hospital singleton birth code (2006, 2009, 2012, 2015 and 2018 versions used for 2007–2008 to 2021–2022 indicators only):
	A diagnosis code of Z38.0 coded in any position
	Numerator (is a subset of the denominator)
	• Weight <10th percentile for gestational age and gender category (refer to standard percentile charts by Kramer et al., 2001; see the first note in the Important notes section)
Exclusions	Non-newborn records
	Cadaveric donors
	• Invalid birth weight (Weight = blank, 0000, 0001 or ZZZZ)
	 Invalid or out-of-range gestational age (Delivery Gestational Age = blank or ZZ or <22 weeks or >43 weeks)
	• Gender Code ≠ F or M

Exclusions (continued)	ICD-10-CA multiple births codes (2006, 2009, 2012, 2015 and 2018 versions used for 2007–2008 to 2021–2022 indicators only):
	 Any newborn record (Entry Code = N with a Z38 diagnosis code) where 2 or more newborn records are born to the same mother (duplicate Maternal Newborn Chart Number) within 40 days of one another (based on Admission Date) in the same institution (Institution Number) or
	• Any ICD-10-CA multiple birth diagnosis code of Z38.3, Z38.4, Z38.5, Z38.6, Z38.7 or Z38.8 coded in any diagnosis field
	ICD-10-CA abortion or other out-of-hospital birth codes (2006, 2009, 2012, 2015 and 2018 versions used for 2007–2008 to 2021–2022 indicators only):
	• Any diagnosis code of P96.4, Z38.1 or Z38.2 coded in any diagnosis field
Methodology	All records meeting the above inclusion/exclusion criteria
	Rate = (Number of live singleton newborns classified as SGA at birth) ÷ (Number of live singleton newborns with a valid birth weight, gestational age and gender) × 100
Important notes	• Standard Canadian birth weights for gestational age by gender charts were used; see Kramer MS, et al. <u>A new and improved population-based Canadian reference</u> for birth weight for gestational age. <i>Pediatrics</i> . 2001.
	• The Small-for-Gestational-Age Rate indicator was new in Quick Stats as of 2009–2010 and was retrospectively updated for 2007–2008 and 2008–2009. Data for prior fiscal years is unavailable.

Contact details

Visit CIHI's website for more information about the <u>Discharge Abstract Database (DAD)</u> or the <u>Hospital Morbidity Database (HMDB)</u>, or send an email to <u>cad@cihi.ca</u>.

All other inquiries can be sent to

Canadian Institute for Health Information 495 Richmond Road, Suite 600 Ottawa, ON K2A 4H6 Phone: 613-241-7860 Fax: 613-241-8120



CIHI Ottawa

495 Richmond Road Suite 600 Ottawa, Ont. K2A 4H6 **613-241-7860**

CIHI Toronto

4110 Yonge Street Suite 300 Toronto, Ont. M2P 2B7

416-481-2002

CIHI Victoria

880 Douglas Street Suite 600 Victoria, B.C. V8W 2B7 **250-220-4100**

CIHI Montréal

1010 Sherbrooke Street West Suite 602 Montréal, Que. H3A 2R7

514-842-2226



