# Childbirth Indicators by Place of Residence

Highlights/information sheets for these Quick Stats are available by fiscal year.

Metadata for each statistic follows the template below:

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



Name of report	Epidural Rate for Vaginal Deliveries
Data sources	<ul> <li>Discharge Abstract Database (DAD), Canadian Institute for Health Information (CIHI)</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude epidural rate for vaginal deliveries
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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 010 to 016, 020 to 029, 030 to 046, 048, 060 to 075, 085 to 092, 095 or 098 to 099, 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 and 2015 versions used for 2006–2007 to 2016–2017 indicators):  • Any diagnosis code of 010 to 016, 021 to 029, 030 to 046, 048, 060 to 075, 085 to 092, 095 or 098 to 099, 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:
	<ul> <li>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</li> </ul>
	<ul> <li>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)</li> </ul>
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	<ul> <li>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)</li> </ul>
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	<ul> <li>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</li> </ul>
	<ul> <li>An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis</li> </ul>
	CCI (2006, 2009, 2012 and 2015 versions used for 2008–2009 to 2016–2017 indicators):
	<ul> <li>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</li> </ul>
	<ul> <li>An ICD-10-CA diagnosis code of O04 coded in any diagnosis field</li> </ul>
	Caesarean section:
	CCP Caesarean section delivery codes:
	<ul> <li>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)</li> </ul>
	CCI Caesarean section delivery codes:
	<ul> <li>A procedure code of 5.MD.60 coded in any position that was not abandoned</li> <li>(Status Attribute = A) or done out of hospital (Out-of-Hospital = Y)</li> </ul>
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

- 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, Canadian 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.
- 3. 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 4. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 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.
- 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.
- 7. 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.*
- 8. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Epidural Rate for All Deliveries
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude epidural rate for all deliveries
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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 and 2015 versions used for 2006–2007 to 2016–2017 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:
	<ul> <li>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</li> </ul>
	<ul> <li>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)</li> </ul>
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	<ul> <li>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)</li> </ul>
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	<ul> <li>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</li> </ul>
	<ul> <li>An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis</li> </ul>
	CCI (2006, 2009, 2012 and 2015 versions used for 2008–2009 to 2016–2017 indicators):
	<ul> <li>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</li> <li>An ICD-10-CA diagnosis code of O04 coded in any diagnosis field</li> </ul>
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	1. 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, Canadian rates are provided only from 2006–2007 onward.
	<ol> <li>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.</li> </ol>

# Important notes (cont'd)

- 3. 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 4. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 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.
- 6. 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.
- 7. 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.*
- 8. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Assisted Delivery Rate (Overall) Among Vaginal Deliveries
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude assisted delivery rate (overall) among vaginal deliveries
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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  550 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 and 2015 versions used for 2006–2007 to 2016–2017 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.KJ, 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.55 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

Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	<ul> <li>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</li> </ul>
	<ul> <li>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)</li> </ul>
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	<ul> <li>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)</li> </ul>
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	<ul> <li>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</li> </ul>
	<ul> <li>An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis</li> </ul>
	CCI (2006, 2009, 2012 and 2015 versions used for 2008–2009 to 2016–2017 indicators):
	<ul> <li>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 done</li> </ul>
	<ul> <li>An ICD-10-CA diagnosis code of O04 coded in any diagnosis field</li> </ul>
	Caesarean section:
	CCP Caesarean section delivery codes:
	<ul> <li>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)</li> </ul>
	CCI Caesarean section delivery codes:
	<ul> <li>A procedure code of 5.MD.60 coded in any position that was not abandoned (Status Attribute</li> <li>= A) or done out of hospital (Out-of-Hospital = Y)</li> </ul>
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

- 1. 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, Canadian 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.
- 3. 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 4. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 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.
- 6. 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.*
- 7. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Assisted Delivery Rate (Vacuum Extraction) Among Vaginal Deliveries
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude assisted delivery rate (vacuum extraction) among vaginal deliveries
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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 and 2015 versions used for 2006–2007 to 2016–2017 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)

# 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 and 2015 versions used for 2008-2009 to 2016-2017 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
Important notes	1. 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, Canadian rates are provided only from 2006–2007 onward.
	2. 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.
	3. 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:
	<ul> <li>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.</li> </ul>
	<ul> <li>Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.</li> </ul>
	4. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 data for Nunavut is incomplete and has therefore been suppressed.
	5. 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.
	6. Indicators for 2001–2002 to 2005–2006 were originally presented in CIHI's report <i>Giving Birth in Canada: Regional Trends From 2001–2002 to 2005–2006</i> .
	7. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Assisted Delivery Rate (Forceps) Among Vaginal Deliveries
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude assisted delivery rate (forceps) among vaginal deliveries
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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 and 2015 versions used for 2006–2007 to 2016–2017 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.KJ, 5.MD.53.KJ, 5.MD.53.KJ, 5.MD.53.KJ, 5.MD.53.KJ, 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)

# 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 and 2015 versions used for 2008-2009 to 2016-2017 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 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)

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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
Important notes	1. 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, Canadian rates are provided only from 2006–2007 onward.
	2. 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.
	3. 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:
	<ul> <li>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.</li> </ul>
	<ul> <li>Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.</li> </ul>
	4. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 data for Nunavut is incomplete and has therefore been suppressed.
	5. 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.
	6. Indicators for 2001–2002 to 2005–2006 were originally presented in CIHI's report <i>Giving Birth in Canada: Regional Trends From 2001–2002 to 2005–2006.</i>
	7. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Total Caesarean Section Rate
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>Quebec data for 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 is sourced from the HMDB.</li> </ul>
Available statistics	Crude total Caesarean section rate
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2005–2006 and 2013–2014 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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 and 2015 versions used for 2013–2014 to 2016–2017 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)

	<u> </u>
Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	<ul> <li>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</li> </ul>
	<ul> <li>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)</li> </ul>
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	<ul> <li>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)</li> </ul>
	CCI (2012 and 2015 versions used for 2013–2014 to 2016–2017 indicators):
	<ul> <li>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</li> <li>An ICD-10-CA diagnosis code of O04 coded in any diagnosis field</li> </ul>
Methodology	All records meeting the above inclusion/exclusion criteria
Wethodology	
	Rate = (Number of Caesarean section deliveries) ÷ (Number of deliveries) × 100
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.
	2. 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.
	3. 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:
	<ul> <li>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.</li> </ul>
	<ul> <li>Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.</li> </ul>
	4. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 data for Nunavut is incomplete and has therefore been suppressed.
	5. 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.
	6. Data on the Total Caesarean Section Rate from 2006–2007 to 2012–2013 is available in the Health Indicators series of publications.
	7. Indicators for 2001–2002 to 2005–2006 were originally presented in CIHI's report <i>Giving Birth in Canada: Regional Trends From 2001–2002 to 2005–2006</i> .
	8. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Primary Caesarean Section Rate
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude primary Caesarean section rate
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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 and 2015 versions used for 2006–2007 to 2016–2017 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
LACIUSIONS	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	<ul> <li>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</li> </ul>
	<ul> <li>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)</li> </ul>
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	<ul> <li>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)</li> </ul>
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	<ul> <li>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</li> </ul>
	<ul> <li>An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis</li> </ul>
	CCI (2006, 2009, 2012 and 2015 versions used for 2008–2009 to 2016–2017 indicators):
	<ul> <li>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</li> </ul>
	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 and 2015 versions used for 2009–2010 to 2016–2017 indicators):
	- Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position or
	<ul> <li>A procedure code of 5.MD.60 coded in any position that was coded as a repeat (Status Attribute = N4 or N6)</li> </ul>
	Undefined Caesarean sections (new as of 2011–2012 indicators):
	<ul> <li>Procedure code of 5.MD.60 coded in any position 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</li> </ul>
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

- 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/CCI versions 2001, 2003 and 2006, may not be comparable with data from 2009–2010 onward.
- 2. 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, Canadian rates are provided only from 2006–2007 onward.
- 3. 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 5. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 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.
- 7. 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.*
- 8. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Primary Caesarean Section Rate (Age <35 Years)
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude primary Caesarean section rate (age <35 years)
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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 010 to 016, 020 to 029, 030 to 046, 048, 060 to 075, 085 to 092, 095 or 098 to 099, 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 and 2015 versions used for 2006–2007 to 2016–2017 indicators):  Any diagnosis code of 010 to 016, 021 to 029, 030 to 046, 048, 060 to 075, 085 to 092, 095 or 098 to 099, 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:
	<ul> <li>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</li> </ul>
	<ul> <li>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)</li> </ul>
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	<ul> <li>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)</li> </ul>
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	<ul> <li>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</li> </ul>
	<ul> <li>An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis</li> </ul>
	CCI (2006, 2009, 2012 and 2015 versions used for 2008–2009 to 2016–2017 indicators):
	<ul> <li>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</li> <li>An ICD-10-CA diagnosis code of O04 coded in any diagnosis field</li> </ul>
	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 and 2015 versions used for 2009–2010 to 2016–2017 indicators):
	- Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position or
	<ul> <li>A procedure code of 5.MD.60 coded in any position that was coded as a repeat (Status Attribute = N4 or N6)</li> </ul>
	Undefined Caesarean sections (new as of 2011–2012 indicators):
	<ul> <li>Procedure code of 5.MD.60 coded in any position 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</li> </ul>
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

- 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/CCI versions 2001, 2003 and 2006, may not be comparable with data from 2009–2010 onward.
- 2. 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, Canadian rates are provided only from 2006–2007 onward.
- 3. 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.
- 4. 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 5. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 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.
- 7. 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.*
- 8. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Primary Caesarean Section Rate (Age ≥35 Years)
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude primary Caesarean section rate (age ≥35 years)
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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 and 2015 versions used for 2006–2007 to 2016–2017 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:
	<ul> <li>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</li> </ul>
	<ul> <li>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)</li> </ul>
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	<ul> <li>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)</li> </ul>
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	<ul> <li>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</li> </ul>
	<ul> <li>An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis</li> </ul>
	CCI (2006, 2009, 2012 and 2015 versions used for 2008–2009 to 2016–2017 indicators):
	<ul> <li>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</li> </ul>
	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 and 2015 versions used for 2009–2010 to 2016–2017 indicators):
	<ul> <li>Any diagnosis code of O34.201, O66.401 or O75.701 coded in any position or</li> </ul>
	<ul> <li>A procedure code of 5.MD.60 coded in any position that was coded as a repeat (Status Attribute = N4 or N6)</li> </ul>
	Undefined Caesarean sections (new as of 2011–2012 indicators):
	<ul> <li>Procedure code of 5.MD.60 coded in any position 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</li> </ul>
Methodology	All records meeting the above inclusion/exclusion criteria
J.	Rate = (Number of primary Caesarean section deliveries) ÷ (Number of deliveries without a previous Caesarean section, age ≥35 years) × 100

- 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/CCI versions 2001, 2003 and 2006, may not be comparable with data from 2009–2010 onward.
- 2. 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, Canadian rates are provided only from 2006–2007 onward.
- 3. 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.
- 4. 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 5. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 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.
- 7. 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 NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Repeat Caesarean Section Rate
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude repeat Caesarean section rate
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
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 010 to 016, 020 to 029, 030 to 046, 048, 060 to 075, 085 to 092, 095 or 098 to 099, 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 034.201, 066.401 or 075.701 coded in any position ICD-10-CA/CCI (2006, 2009, 2012 and 2015 versions used for 2006–2007 to 2016–2017 indicators): Delivery codes:  Any diagnosis code of 010 to 016, 021 to 029, 030 to 046, 048, 060 to 075, 085 to 092, 095 or 098 to 099, 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 034.201, 066.401 or 075.701 coded in any position or  As of 2009 version: A procedure code of 5.MD.60 coded in any position with Status Attribute N4, N6 or Z (Unknown)

Inclusions (cont'd)	Numerator (is a subset of the denominator)
•	CCP Caesarean section delivery codes:
	<ul> <li>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)</li> </ul>
	CCI Caesarean section delivery codes:
	<ul> <li>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)</li> </ul>
Exclusions	Stillbirth records or newborns
	Cadaveric donors
	Non-female records
	An abortive procedure:
	CCP:
	<ul> <li>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</li> </ul>
	<ul> <li>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)</li> </ul>
	CCI (2001 and 2003 versions used for 2001–2002 to 2005–2006 indicators):
	<ul> <li>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)</li> </ul>
	CCI (2006 version used for 2006–2007 to 2007–2008 indicators):
	<ul> <li>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</li> </ul>
	<ul> <li>An ICD-10-CA diagnosis code of O04 coded as most responsible diagnosis and Z37 coded as type (3) diagnosis</li> </ul>
	CCI (2006, 2009, 2012 and 2015 versions used for 2008–2009 to 2016–2017 indicators):
	<ul> <li>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</li> <li>An ICD-10-CA diagnosis code of O04 coded in any diagnosis field</li> </ul>
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

- 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/CCI versions 2001, 2003 and 2006, may not be comparable with data from 2009–2010 onward.
- 2. 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, Canadian rates are provided only from 2006–2007 onward.
- 3. 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.
- 4. 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 5. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 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.
- 7. 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 NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Low Birth Weight Rate (<2,500 Grams)
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude low birth weight rate (<2,500 grams)
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
Inclusions	Discharges from acute care institutions in Canada  Denominator  ICD-10-CA in-hospital birth codes (2006, 2009, 2012 and 2015 versions used for 2006–2007 to 2016–2017 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	<ul> <li>Non-newborn records</li> <li>Cadaveric donors</li> <li>Invalid birth weight (Weight = blank, 0000, 0001 or ZZZZ)</li> <li>ICD-10-CA abortion or out-of-hospital birth codes (2006, 2009, 2012 and 2015 versions used for 2006–2007 to 2016–2017 indicators only): <ul> <li>Any diagnosis code of P96.4, Z38.1, Z38.2, Z38.4, Z38.5, Z38.7 or Z38.8 coded in any diagnosis field</li> </ul> </li> </ul>
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

- As of 2006–2007, all provinces and territories were submitting in the ICD-10-CA and CCI
  coding classification system; for this reason, Canadian rates are provided only from
  2006–2007 onward.
- 2. 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.
- 3. 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 4. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 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.
- 6. 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.*
- 7. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Low Birth Weight Rate (<2,500 Grams, Excluding <500 Grams)
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>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.</li> </ul>
Available statistics	Crude low birth weight rate (<2,500 grams, excluding <500 grams)
Available breakdowns	<ul> <li>Discharge fiscal year (2001–2002 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
Inclusions	Discharges from acute care institutions in Canada  Denominator  ICD-10-CA in-hospital birth codes (2006, 2009, 2012 and 2015 versions used for 2006–2007 to 2016–2017 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	<ul> <li>Non-newborn records</li> <li>Cadaveric donors</li> <li>Weight &lt;500 grams</li> <li>Invalid birth weight (Weight = blank, 0000, 0001 or ZZZZ)</li> <li>ICD-10-CA abortion or out-of-hospital birth codes (2006, 2009, 2012 and 2015 versions used for 2006–2007 to 2016–2017 indicators only): <ul> <li>Any diagnosis code of P96.4, Z38.1, Z38.2, Z38.4, Z38.5, Z38.7 or Z38.8 coded in any diagnosis field</li> </ul> </li> </ul>
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

- As of 2006–2007, all provinces and territories were submitting in the ICD-10-CA and CCI
  coding classification system; for this reason, Canadian rates are provided only from
  2006–2007 onward.
- 2. 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.
- 3. 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 4. Nunavut did not submit data to CIHI in 2002–2003. 2016–2017 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.
- 6. 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.*
- 7. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Preterm Birth Rate (<37 Weeks Gestation)
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>Quebec data from 2007–2008 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.</li> </ul>
Available statistics	Crude preterm birth rate (<37 weeks gestation)
Available breakdowns	<ul> <li>Discharge fiscal year (2007–2008 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
Inclusions	Discharges from acute care institutions in Canada  Denominator  ICD-10-CA in-hospital birth codes (2006, 2009, 2012 and 2015 versions used for 2007–2008 to 2016–2017 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	<ul> <li>Non-newborn records</li> <li>Cadaveric donors</li> <li>Invalid birth weight (Weight = blank, 0000, 0001 or ZZZZ)</li> <li>Invalid gestational age (Delivery Gestational Age = blank, 99 or ZZ)</li> <li>ICD-10-CA abortion or out-of-hospital birth codes (2006, 2009, 2012 and 2015 versions used for 2007–2008 to 2016–2017 indicators only): <ul> <li>Any diagnosis code of P96.4, Z38.1, Z38.2, Z38.4, Z38.5, Z38.7 or Z38.8 coded in any diagnosis field</li> </ul> </li> </ul>
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

- 1. The Preterm Birth Rate indicator is 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.
- 2. 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.
- 3. In order to provide a more stable rate estimate, only data from regions with a population of at least 50,000 (from 2007–2008 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 4. 2016–2017 data for Nunavut is incomplete and has therefore been suppressed.
- 5. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

Name of report	Small-for-Gestational-Age (SGA) Rate
Data sources	<ul> <li>Discharge Abstract Database (DAD), CIHI</li> <li>Hospital Morbidity Database (HMDB), CIHI</li> <li>Quebec data from 2007–2008 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.</li> </ul>
Available statistics	Crude SGA rate
Available breakdowns	<ul> <li>Discharge fiscal year (2007–2008 to 2016–2017)</li> <li>National</li> <li>Provincial</li> <li>Regional</li> </ul>
Inclusions	Discharges from acute care institutions in Canada  Denominator  ICD-10-CA in-hospital singleton birth code (2006, 2009, 2012 and 2015 versions used for 2007–2008 to 2016–2017 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 Important Note 1)
Exclusions	<ul> <li>Non-newborn records</li> <li>Cadaveric donors</li> <li>Invalid birth weight (Weight = blank, 0000, 0001 or ZZZZ)</li> <li>Invalid or out-of-range gestational age (Delivery Gestational Age = blank or ZZ or &lt;22 weeks or &gt;43 weeks)</li> <li>Gender Code ≠ F or M</li> <li>ICD-10-CA multiple births codes (2006, 2009, 2012 and 2015 versions used for 2007–2008 to 2016–2017 indicators only):         <ul> <li>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</li> <li>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</li> </ul> </li> <li>ICD-10-CA abortion or other out-of-hospital birth codes (2006, 2009, 2012 and 2015 versions used for 2007–2008 to 2016–2017 indicators only):         <ul> <li>Any diagnosis code of P96.4, Z38.1 or Z38.2 coded in any diagnosis field</li> </ul> </li> </ul>
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

- 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 for birth</u> weight for gestational age. *Pediatrics*. 2001.
- 2. The Small-for-Gestational-Age Rate indicator is 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.
- 3. 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.
- 4. In order to provide a more stable rate estimate, only data from regions with a population of at least 50,000 (from 2007–2008 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:
  - a. 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.
  - b. Suppression due to unstable results: Unstable indicator results are suppressed. In general, these are indicator results with a denominator between 1 and 49.
- 5. 2016–2017 data for Nunavut is incomplete and has therefore been suppressed.
- 6. Results are shown as NA where there are no eligible records available for indicator calculation (e.g., denominator is zero).

# 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>.

For assistance using interactive CIHI data, please send an email to help@cihi.ca.

All other inquiries can be sent to

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