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BORN Ontario

Reporting using the Robson Cesarean Section Classification

**Robson Cesarean Section Monitoring
Report Training**

February 2013

Objectives

- Brief overview:
 - BORN Ontario
 - BORN Information System (BIS)
 - Cesarean Section rates
 - Robson Cesarean Section Classification
- Overview of Robson CS Monitoring Report in the BIS

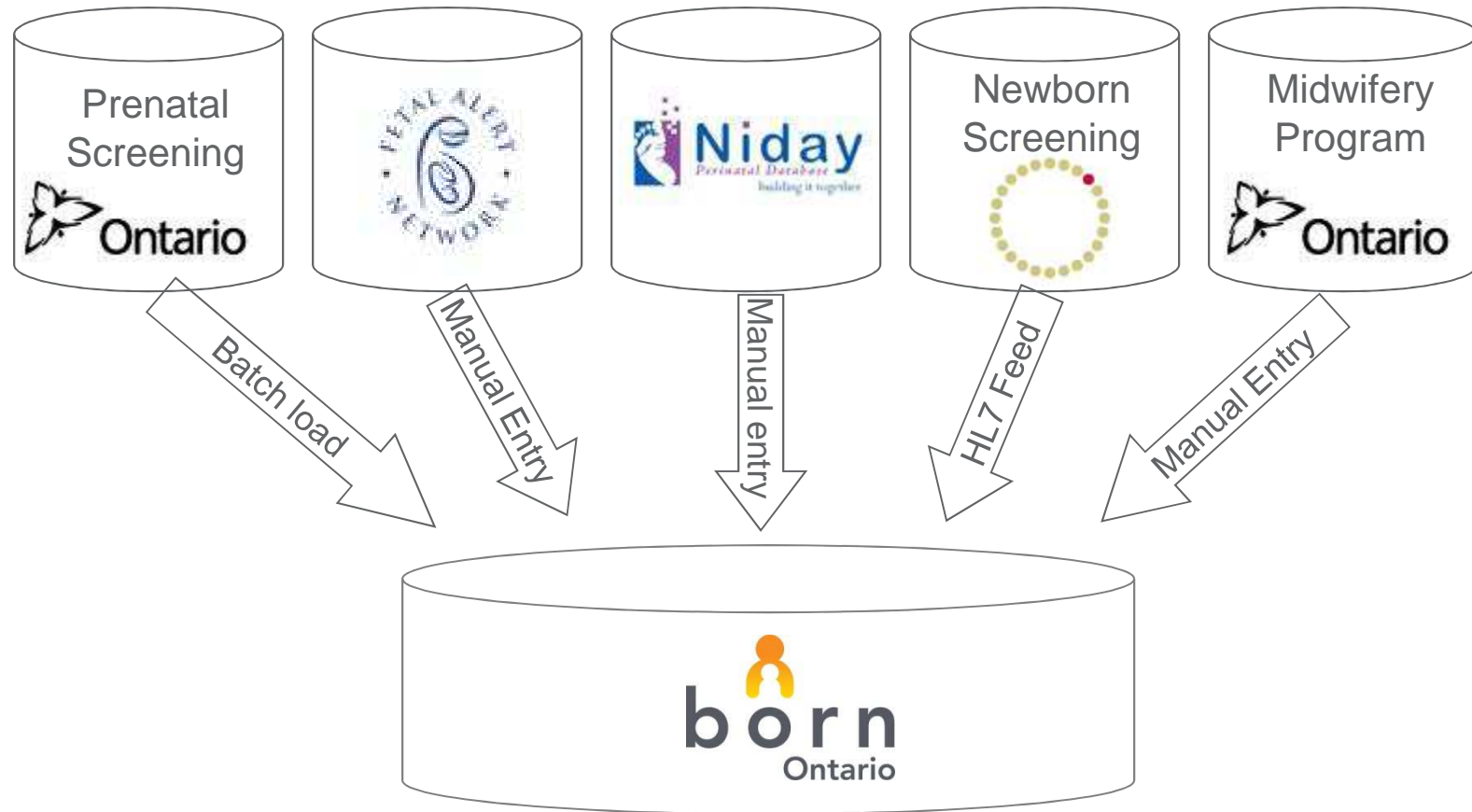
BORN is a PHIPA Registry

- BORN (as OPSS) was granted registry Status under the *Personal Health Information Privacy Act (PHIPA)* in Nov 2009

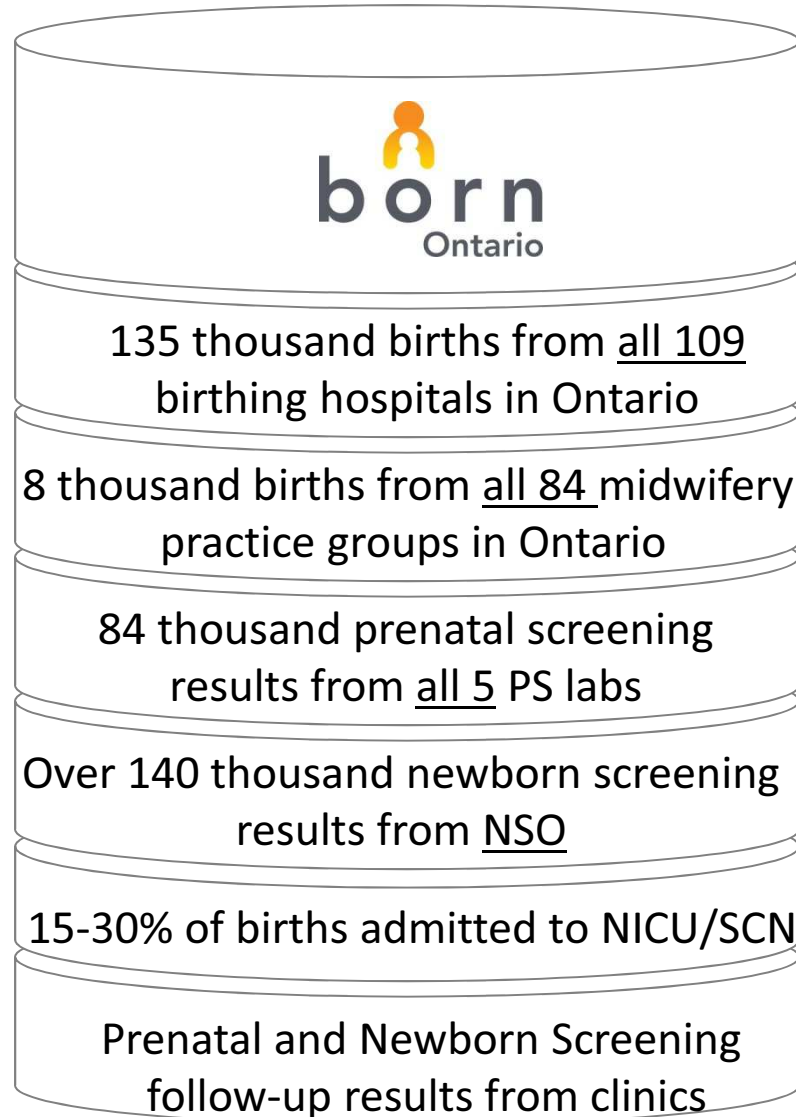


Registry status affords BORN authority to collect, use and disclose personal health information **without consent** “for the purpose of “facilitating or improving the provision of health care”.

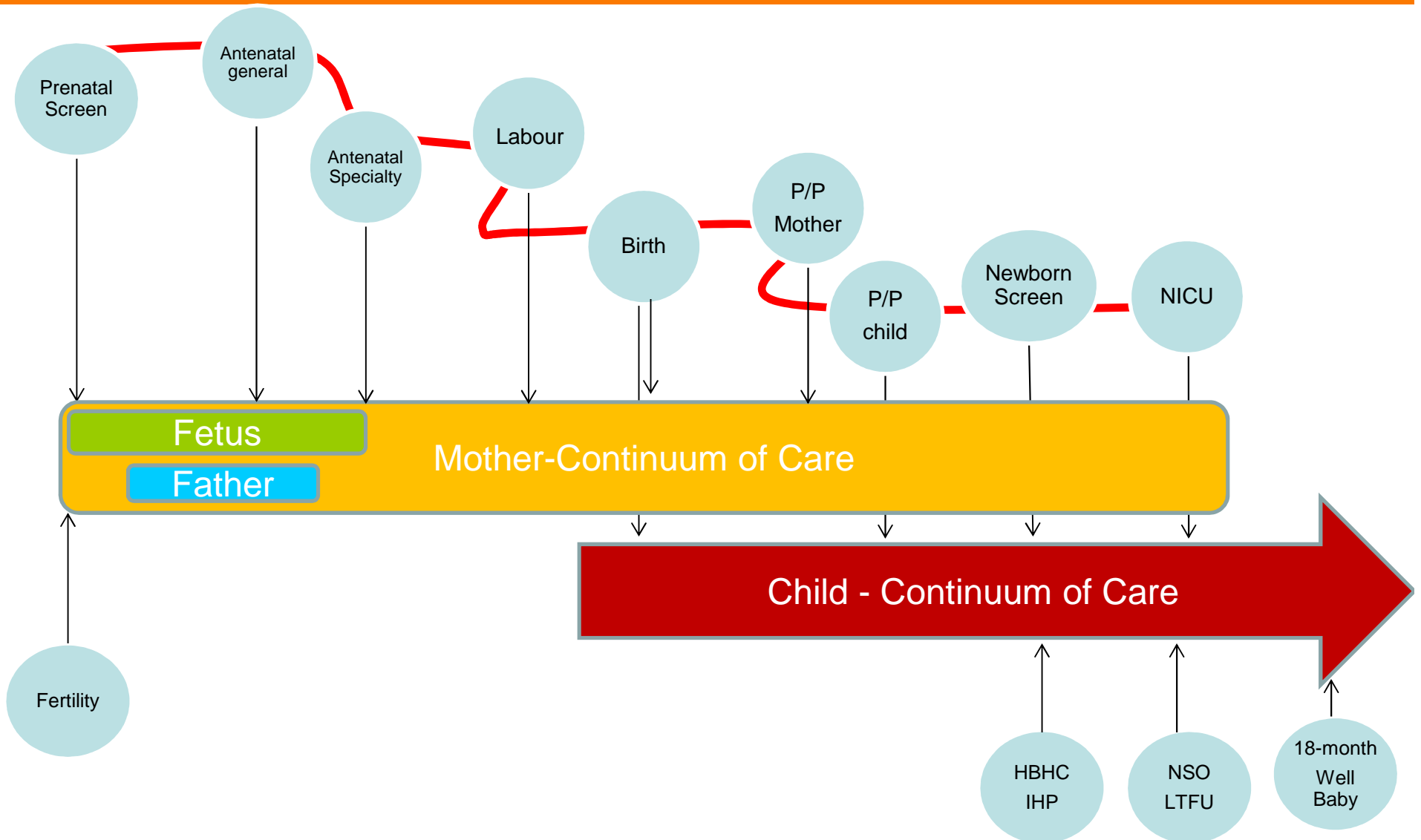
BORN Beginning: The Integration



BORN Build: Volumes of Data



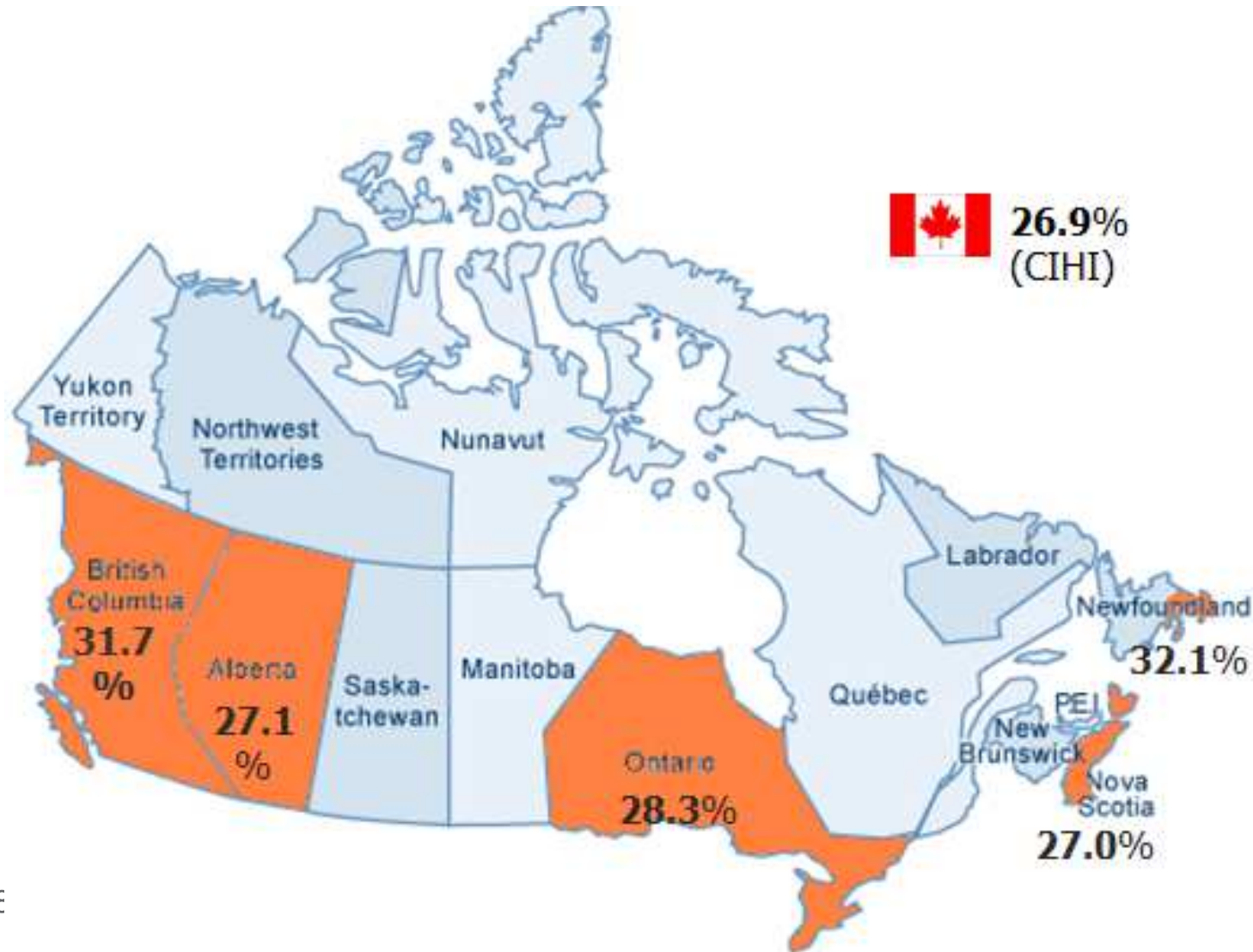
The Continuum



Cesarean Birth Rates

- Cesarean section (CS) rates have been increasing worldwide over the last few decades
 - more than 1 in 4 babies are born by CS- (SOGC 2009)
- Most countries exceed the WHO recommended rate of **15%** for all deliveries-(1985)
In **2010-2011**, the CS rate in **Canada** reached **26.9%** up from 17.6% in 1995.

Rate of cesarean section by province, 2010-2011



Factors Affecting Cesarean Birth Rates

- Introduction of continuous EFM
- Rising obesity rates
- Women and HCP's less willing to attempt vaginal births after CS (SOGC 2009)
- Delayed childbearing
- Maternal request

Risks associated with Cesarean Birth

- Mothers exposed to increased risks during childbirth and for subsequent pregnancies
 - CS major surgery with risk of infection, longer recovery times
 - May impact breast feeding, bonding, satisfaction with childbearing experience, postpartum depression
- Increased strain on a health care system.

Robson classification - 2001

‘Caesarean section rates should no longer be thought of as being too high or too low, but rather whether they are appropriate or not, after taking into consideration all the relevant information.’

Dr. Michael Robson

OBGYN, National Maternity Hospital, Dublin, Ireland

Clinical Obstetrics and Gynecology, 2001

What is the Robson Classification System?

- Robson is a standard classification system of **10 mutually exclusive** and totally inclusive **classification categories for cesarean section (CS)**.
- It allows for comparison between institutions, regions, and countries that adopt this classification system.

Robson Report: Modified criteria

1. Nullipara, singleton cephalic, ≥ 37 weeks, spontaneous labour

- A: Spontaneous
- B: Augmentation

2. Nullipara, singleton cephalic, ≥ 37 weeks

- A: Induced
- B: Caesarean section before labour

3. Multipara, singleton cephalic, ≥ 37 weeks, spontaneous labour

- A: Spontaneous
- B: Augmentation

4. Multipara, singleton cephalic, ≥ 37 weeks

- A: Induced
- B: Caesarean section before labour

5. Previous Caesarean section, singleton cephalic, ≥ 37 weeks

- A: Spontaneous labour
- B: Induced labour
- C: Caesarean section before labour

6. All nulliparous breeches

- A: Spontaneous labour
- B: Induced labour
- C: Caesarean section before labour

7. All multiparous breeches (including previous Caesarean section)

- A: Spontaneous labour
- B: Induced labour
- C: Caesarean section before labour

8. All multiple pregnancies (including previous Caesarean section)

- A: Spontaneous labour
- B: Induced labour
- C: Caesarean section before labour

9. All abnormal lies (including previous Caesarean section but excluding breech)

- A: Spontaneous labour
- B: Induced labour
- C: Caesarean Section before labour

10. All singleton cephalic, ≤ 36 weeks (including previous Caesarean section)

- A: Spontaneous labour
- B: Induced labour
- C: Caesarean section before labour

BIS Reports

- Clinical Reports



Robson Cesarean Section Monitoring

- Batch Upload
- Queue Management
- Linking and Matching
- Patient Search
- Reporting**
- Administration
- My Profile
- Midwifery Invoice System
- Help
- Sign Out

BORN Portal

Patient Search

OHIP #:

or

ID #:

or

Family Name:

Given Name:

Date of Birth: 

[Advanced Search](#)

Welcome Sarah Buchan

Announcements

[BORN Coordinators Contact Information](#)

[BIS Reporting Roadmap Now Available](#)

[The BORN Ontario Maternal Newborn Dashboard is live!](#)

[BORN Information BITS](#)

 Page size: 10

4 items in 1 pages

Reporting

Recommend using IE 8. Google Chrome is not supported



Dashboards | **Clinical Reports** | Administrative Reports | Analytical Report Tool

The following report(s) require a one day lag for the clinical data to be updated in BORN.
Changes made today will not be reflected in reports until tomorrow.

Click here for the [Maternal Newborn Dashboard Report](#)

Dashboard - Maternal Newborn |

Organization:

Newborn start date of birth:  Newborn end date of birth: 

Calendar:  Organization: 

Expand Rows: 

Maternal Newborn Reports

The following report(s) require a one day lag for the clinical data to be updated in BORN. Changes made today will not be reflected in reports until tomorrow.

Click on a Report Name link to view the report


Report Name	Description
Baby-Friendly Initiative Stats	Baby-Friendly Initiative Statistics
Key Indicator - Infant Summary	Key Indicator - Infant Summary
Key Indicator - Maternal Summary	Key Indicator - Maternal Summary
Maternal Newborn Dashboard	Maternal Newborn Dashboard
Midwifery Care Profile – Demographics	Midwifery Care Profile – Demographics
Profile of Birth - Birth/Mother	Profile of Birth - Birth/Mother
Profile of Birth - Birth/Newborn	Profile of Birth - Birth/Newborn
Profile of Birth - Demographics	Profile of Birth - Demographics
Profile of Birth - FSA	Profile of Birth - Forward Sortation Area (FSA)
Profile of Birth - Pregnancy	Profile of Birth - Pregnancy
Robson - Cesarean Section Monitoring	Robson - Cesarean Section Monitoring



Can't find the report? Check with your local BORN Administrator to ensure you have the correct access permissions (i.e. clinical report access)

Click on Assign Access Permission to specify the organizations to which the user has data access.

Assign Access Permissions

Organization	Role(s)	Edit Contact Information	Revoke Access
Trillium Health Partners - Mississauga Hospital site	<input type="checkbox"/> Clinic Data Entry – Antenatal Record report <input type="checkbox"/> Hospital Data Analysis – Administrative reports <input checked="" type="checkbox"/> Hospital Data Analysis – Clinical reports <input checked="" type="checkbox"/> Hospital Data Analysis – Standard reports <input checked="" type="checkbox"/> Hospital Data Analysis – Standard reports NICU <input type="checkbox"/> Hospital Data Entry – Antenatal General <input type="checkbox"/> Hospital Data Entry – Birth (Mother and Child) <input type="checkbox"/> Hospital Data Entry – Labour <input type="checkbox"/> Hospital Data Entry – NICU <input type="checkbox"/> Hospital Data Entry – Post Partum (Mother and Child) <input type="checkbox"/> Leadership - Mat/Newborn Dashboard <input type="checkbox"/> NIDAY File Conversion Tool <input type="checkbox"/> Organization Data Upload <input type="checkbox"/> Organization Local Administration <input type="checkbox"/> Organization queue management (L&M only) <input type="checkbox"/> Organization queue management (Upload only)		<input type="checkbox"/>

Save

Cancel

Acknowledgment

Month end data acknowledgment summary

Hospital 1, 01-Apr-2012 to 31-May-2012

Month	Data acknowledged
	Hospital 1
April 2012	Yes
May 2012	No

Data source

BORN Ontario, 2012-2013

Type of Birth



Distribution of type of delivery, by hospital of birth and other same level of care hospitals

Hospital 1 01-Apr-2012 to 30-Apr-2012

	Hospital 1		Other Level x hospitals (mean)		
	n	%	n (mean)	% (mean)	Hospitals with acknowledged data submission
Vaginal	62	64.6	37	72.5	28 of 33
2012-2013	62	64.6	37	72.5	
Q2 2012-2013	62	64.6	37	72.5	
Apr 2012	62	64.6	37	72.5	
Cesarean	34	35.4	14	27.5	28 of 33
2012-2013	34	35.4	14	27.5	
Q2 2012-2013	34	35.4	14	27.5	
Apr 2012	34	35.4	14	27.5	
Total number of women who gave birth	96	100.0	51	100.0	28 of 33
2012-2013	96	100.0	51	100.0	
Q2 2012-2013	96	100.0	51	100.0	
Apr 2012	96	100.0	51	100.0	

Data source

BORN Ontario, 2012-2013

Rate of cesarean section, by Robson classification groups

Hospital 1, 01-Apr-2012 to 30-Apr-2012

	Number of cesarean sections (A)	Total number of deliveries (B)	Rate of cesarean (A/B) x 100	Relative size of group (B/Total obstetrical population) x 100	Contribution to overall rate (A/Total obstetrical population) x 100
Robson classification group	n	n	%	%	%
1 Nulliparous, singleton, cephalic, ≥37 weeks, spontaneous labour	<u>6</u>	<u>31</u>	19.4	32.3	6.3
(1a) Augmentation	<u>4</u>	<u>26</u>	15.4	27.1	4.2
(1b) No Augmentation	<u>2</u>	<u>5</u>	40.0	5.2	2.1
2 Nulliparous, singleton, cephalic, ≥37 weeks, induced labour or cesarean before labour	<u>7</u>	<u>10</u>	70.0	10.4	7.3
(2a) Induced labour	<u>4</u>	<u>7</u>	57.1	7.3	4.2
(2b) Cesarean before labour	<u>3</u>	<u>3</u>	100.0	3.1	3.1
3 Multiparous, singleton, cephalic, ≥37 weeks, no previous cesarean, spontaneous labour	<u>1</u>	<u>22</u>	4.5	22.9	1.0
(3a) Augmentation	0	<u>9</u>	0.0	9.4	0.0
(3b) No Augmentation	<u>1</u>	<u>13</u>	7.7	13.5	1.0
4 Multiparous, singleton, cephalic, ≥37 weeks, no previous cesarean, with induced labour or no labour	0	<u>2</u>	0.0	2.1	0.0
(4a) Induced labour	0	<u>2</u>	0.0	2.1	0.0
(4b) Cesarean before labour	0	0	0.0	0.0	0.0

	Number of cesarean sections (A)	Total number of deliveries (B)	Rate of cesarean (A/B) x 100	Relative size of group (B/Total obstetrical population) x 100	Contribution to overall rate (A/Total obstetrical population) x 100
Robson classification group	n	n	%	%	%
5 Multiparous, singleton, cephalic, ≥37 weeks, previous cesarean	<u>4</u>	<u>7</u>	57.1	7.3	4.2
(5a) Spontaneous labour	<u>3</u>	<u>6</u>	50.0	6.3	3.1
(5b) Induced labour	0	0	0.0	0.0	0.0
(5c) Cesarean before labour	<u>1</u>	<u>1</u>	100.0	1.0	1.0
6 Nulliparous, singleton, breech	<u>1</u>	<u>1</u>	100.0	1.0	1.0
7 Multiparous, singleton, breech	<u>3</u>	<u>3</u>	100.0	3.1	3.1
8 Multifetal pregnancy	<u>7</u>	<u>10</u>	70.0	10.4	7.3
9 Singleton, transverse or oblique lie	<u>1</u>	<u>1</u>	100.0	1.0	1.0
10 Singleton, cephalic, <37 weeks	<u>2</u>	<u>6</u>	33.3	6.3	2.1
All others with missing information on presentation, parity, gestational age, number of fetuses, type of labour or previous cesarean	<u>2</u>	<u>3</u>	66.7	3.1	2.1
Type of birth not indicated	N/A	0	N/A	N/A	N/A
TOTAL POPULATION	<u>34</u>	96	35.4	100.0	35.4

List of records for group: TOTAL POPULATION

Hospital 1, 01-Apr-2012 to 30-Apr-2012

Robson Classification Group	Newborn Date of Birth	ID	Type of Delivery	Presentation	Parity	Previous Cesarean Section	Type of Labour	Number of Fetuses	Gestational Age	Augmentation
1	12-Apr-2012	2786148,64824	Cesarean	Cephalic	Nulliparous	No	Spontaneous	1	37+ weeks	Augmentation
1	13-Apr-2012	2803791,64843	Cesarean	Cephalic	Nulliparous	No	Spontaneous	1	37+ weeks	No Augmentation
2	14-Apr-2012	2789210,64854	Cesarean	Cephalic	Nulliparous	No	Induced	1	37+ weeks	N/A
5	13-Apr-2012	2797371,64845	Cesarean	Cephalic	Multiparous	Yes	No Labour	1	37+ weeks	N/A
7	15-Apr-2012	502025,64870	Cesarean	Breech	Multiparous	No	No Labour	1	< 37 weeks	N/A
8	18-Apr-2012	2196285,64897	Cesarean	Cephalic	Nulliparous	No	Induced	2	37+ weeks	N/A
8	20-Apr-2012	2836650,64921	Cesarean	Breech	Nulliparous	No	No Labour	2	< 37 weeks	N/A
9	15-Apr-2012	2177967,64860	Cesarean	Transverse/ Malpresentation	Multiparous	No	Induced	1	37+ weeks	N/A
10	20-Apr-2012	2198835,64922	Cesarean	Cephalic	Nulliparous	No	No Labour	1	< 37 weeks	N/A
Missing	03-Apr-2012	1279049,1,212790491	Cesarean	Cephalic	Multiparous	Yes	Spontaneous	1	Missing data	N/A
Missing	19-Apr-2012	2153429,64906	Cesarean	Cephalic	Multiparous	No	Missing data	1	37+ weeks	N/A
Total 34										

Type of missing data element

Distribution of type of missing data elements, by hospital of birth

Hospital 1, 01-Apr-2012 to 30-Apr-2012

	Hospital 1	
	n	%
Gestational Age	1	25.0
2012-2013	1	100.0
Q1 2012-2013	1	100.0
Apr 2012	1	100.0
Type of Labour	3	75.0
2012-2013	3	100.0
Q1 2012-2013	3	100.0
Apr 2012	3	100.0
Total number of deliveries with missing information	4	100.0
2012-2013	4	100.0
Q1 2012-2013	4	100.0
Apr 2012	4	100.0

Data source

BORN Ontario, 2012-2013



Go back to the parent report

Robson Cesarean Section Missing Data

Chart numbers for missing Gestational Age data element

Hospital 1

ID
12790491,212790491
Total 1

Data source: BORN Ontario, 2012-2013

Definition of indicator

2013/2/19 9:05:38 AM

Page 1 of 1

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Missing data elements by chart number

Robson missing data elements, by chart number

Hospital 1, 01-Apr-2012 to 30-Apr-2012

Newborn date of birth	ID	Type of birth	Missing Data Element(s)						Total missing data elements (n)
			Presentation	Parity	Previous Cesarean Section	Type of Labour	Number of Fetuses	Gestational Age	
2012-2013									
Q1 2012-2013									
Apr 2012	2796640,64826	Assisted Vaginal				Missing			1
Apr 2012	2153429,64906	Induced or Spontaneous Labour Cesarean Section				Missing			1
Apr 2012	2336106,64888	Assisted Vaginal				Missing			1
Apr 2012	12790491,212790491	Induced or Spontaneous Labour Cesarean Section						Missing	1
Total missing for data element (n)			0	0	0	3	0	1	

Data source

BORN Ontario, 2012-2013

NoGivenName Surname KC1

- PSO
 - PSO Screen
 - PSO Follow-up
- Antenatal Care
 - Antenatal General
 - Antenatal Specialty
- Labour & Birth
 - Labour
 - SHSC-(Toronto), 11 Sep 2012
 - Birth Mother
 - SHSC-(Toronto), 01 Apr 2012
 - Postpartum Mother
 - SHSC-(Toronto), 11 Sep 2012
- Antenatal Record
 - Antenatal Record

Add Child Record

Name: **NoGivenName Surname KC1** ID #: **12790491, 212790491, 12790491, 777581** Postal Code: **M4S 3H8** City: **TORONTO**
 DOB: **22-Mar-1983** Sex: **F** G: **4** T: **1** P: **1** A: **1** L: **1** EDB: **13-Feb-2013**

Demographics & ID Name & Address History

Please verify the patient's profile information before entering data against their record. [Aggregate Report](#)

Patient Demographics

DOB: Sex:
 Primary Language:

Save

Patient IDs

The following are the identifiers used by this patient. Click Add New to create a new identifier.

ID Type	ID	Issued By	Edit
Chart #	12790491	WOHS-Civic-(Brampton)	
Chart #	212790491	SHSC-(Toronto)	
Hospital Visit ID	12790491	SHSC-(Toronto)	
Hospital Visit ID	777581	WOHS-Civic-(Brampton)	

Add New

Conclusion

- Understand your population with less focus on targeting a percentage/rate - the “right” number/percentage is still up for debate
- Focus on best practice guidelines
- Determine the most important contributors for CS rates
- A place to begin - this report is an asset for your QI “tool kit”

Conclusion

- Target your QI strategies where you will see the biggest impact
 - Clinically meaningful
 - Feasible to measure
 - Actionable

Questions?



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