



## Maternal Newborn Dashboard - Key Performance Indicator Criterion Reference Guide

This reference guide is provided to assist hospital users to better understand the criterion used to calculate the rates and proportion values for each of the six key performance indicators (KPIs) of the BORN Maternal Newborn Dashboard, as available in the BORN Information System (BIS).

The KPI criterion are defined by the pertinent BIS data elements that are used to calculate the rates and proportion values for the respective Maternal Newborn Dashboard KPI, as shown on each of the following tabs - one tab per KPI.

As well, pick-list values for each data element when selected will result in a patient record to be either included or excluded for a given KPI based on the KPI criterion definition, as illustrated in the tables on the following tabs.

In addition, the numerator and denominator definitions for each KPI are provided.

Lastly, the 'Definition of indicator' and 'Notes' corresponding to each KPI tab from the Maternal Newborn Dashboard report are shown on each of the following tabs for each KPI.

***Last updated:*** 16-Feb-2018



## **BORN Maternal Newborn Dashboard Frequently Asked Questions (FAQs)**

### **Q1. Why isn't Cesarean Section Rate one of the Key Performance Indicators of the Maternal Newborn Dashboard?**

A1. Measuring the overall Cesarean Section (CS) rate is too complex an issue to handle a single indicator on the Maternal Newborn Dashboard (MND). The overall CS rate indicator was on the original list of indicators under consideration for MND development; however, it got prioritized below KPIs that were selected by an expert panel who evaluated the list of KPIs and rated them against the evaluation criteria: 1) clinically meaningful; 2) feasible to measure (the Robson CS Monitoring report hadn't been developed at that time therefore, detailed analysis was a challenge); 3) amenable to change (complex issues to tackle with a multitude of factors that influence the CS rate). The Maternal Newborn Outcomes Committee (MNOC) Dashboard Subcommittee agreed that it would be more appropriate to examine a more specific CS related issue within the realm of CS issues (e.g. the current KPI 4 on elective repeat CS (ERCS) <39 weeks) as a starting place and leave the broader CS question for future consideration.

Cesarean Section data can be obtained from the following BIS reports:

- Robson Cesarean Section Monitoring Report
- Profile of Birth - Birth/Mother
- Key Indicator - Maternal Summary

### **Q2. 'Newborn Feeding at Discharge' was selected as 'Breastmilk Only'; however, the 'Reason For Breastmilk Substitute' was completed, even though breastmilk was not substituted. This is contradictory, how should we handle this issue?**

A2. The *BORN Data Collection Review Committee* is working to assess inclusion of a validation rule in the BIS to remove collection for 'Reason for Breastmilk Substitute' when a newborn was exclusively breastfed. This committee will implement the following enhancements: for breastmilk substitution, if 'Newborn Feeding at Discharge' is selected as 'Breastmilk Only', then 'Reasons For Breastmilk Substitute' cannot be selected as 'No Breastmilk Substitute'.

### **Q3. 'Newborn Feeding at Discharge' vs. from birth to discharge**

A3. In collaboration with the Breastfeeding Committee of Canada (BCC), BORN is working to rename the 'Newborn Feeding at Discharge' data element such that the period of feeding is better defined.

### **Q4. Are there definitions for the reasons for unsatisfactory samples in KPI 1?**

A4. For detailed information about newborn blood spot collection, submitter education and support, as well as resources for health care providers and parents please consult the Newborn Screening Ontario website:  
<http://www.newbornscreening.on.ca>



**KPI 1 - Proportion of newborn screening samples that were unsatisfactory for testing, by submitting hospital and comparator groups**

**Numerator:** number of unsatisfactory newborn screening samples submitted by a given hospital (submitter) as recorded by Newborn Screening Ontario (NSO)

**Denominator:** total number of newborn screening samples submitted by a given hospital (submitter) as recorded by NSO

KPI 1 Criterion
Reason for Unsatisfactory Sample
<b>If reason selected by NSO, record is INCLUDED in KPI</b>
✓ Lab Unsatisfactory - Blood spots appear clotted or layered
✓ Lab Unsatisfactory - Blood spots appear diluted
✓ Lab Unsatisfactory - Blood spots appear scratched or abraded
✓ Lab Unsatisfactory - Blood spots are supersaturated
✓ Lab Unsatisfactory - Blood spots are wet and/or discoloured
✓ Lab Unsatisfactory - Quantity of blood insufficient
✓ Lab Unsatisfactory - Specimen delivered to lab >14 days after collection
✓ Data Unsatisfactory - Blood dot collection paper is expired
✓ Data Unsatisfactory - Blood spots appear to be damaged or delayed in transit
✓ Data Unsatisfactory - Insufficient data provided
✓ Other Unsatisfactory - Other

**Definition of indicator** *The number of newborn screening samples that are unsatisfactory for testing, expressed as a percentage of the total number of newborn screening samples submitted to Newborn Screening Ontario (NSO) from a given organization (as noted on the newborn screening requisition as the 'Submitting Health Care Provider').*

- Notes**
1. Samples coded as unsatisfactory due only to collection at <24 hours of age (i.e., there are no other reasons the sample was deemed unsatisfactory) were not considered unsatisfactory for this analysis, since sample collection at <24 hours of age is recommended in cases of early discharge, transfer, or transfusion.
  2. Reporting hospital and comparator hospital data are shown regardless of data acknowledgement for any given month, as data for this indicator is reported from Newborn Screening Ontario.
  3. If values for a particular category or section are zero for both the reporting hospital and comparator groups, the rows are suppressed.
  4. Neonatal Level of Care was chosen for comparator data as Maternal Level of Care designations were created by The Provincial Council for Maternal and Child Health (PCMCH) in 2011 and were not available prior to this date.
  5. There will be no missing data for the 'NSO unsatisfactory samples' KPI. Each sample provided to NSO must fall into one of two categories: satisfactory or unsatisfactory. This determination will always be available for each sample.
  6. 'No data' indicates that no births were entered for a given time period.



## KPI 2 - Rate of episiotomy in women who had a spontaneous vaginal birth

**Numerator:** number of women who had an episiotomy

**Denominator:** total number of women who had a spontaneous vaginal birth

KPI 2 Criterion	
Episiotomy (M0512)	Type of Birth (M0503)
<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Medio-lateral</li> <li><input checked="" type="checkbox"/> Midline</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> None</li> <li><input type="checkbox"/> Unknown</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Spontaneous Vaginal</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Assisted Vaginal</li> <li><input type="checkbox"/> Induced or Spontaneous Labour Cesarean Section</li> <li><input type="checkbox"/> No Labour - Cesarean Section</li> <li><input type="checkbox"/> Vaginal (from Niday)</li> </ul>

**Definition of indicator** *The number of women who had a spontaneous vaginal birth with episiotomy, expressed as a percentage of the total number of women who had a spontaneous vaginal birth (in a given place and time).*

**Notes**

1. Reporting hospital data are shown only if data have been acknowledged for submission for a given month.
2. Quarterly values for hospital data are only shown when all three months in that quarter are reported and acknowledged for the reporting hospital. Quarterly values are not calculated for comparator data, as these values may differ from those shown on the dashboard landing and home page, which require that all three months of data in the reporting period be acknowledged for submission.
3. Comparator data are shown only if a minimum of three or more hospitals within the comparator group have acknowledged their data submission for a given month. The 'Hospitals with acknowledged data submission' column indicates the number of hospitals who have acknowledged their data submission out of the total number of hospitals in the comparator group for a given month. The comparator groups 'Other same level of care hospitals' and 'Other similar birth volume hospitals', exclude data from the reporting hospital. The Ontario comparator group includes data from the reporting hospital. If applicable, 'No data' indicates that there are no records meeting the criterion for all comparator hospitals who have acknowledged data for a particular indicator for a given month.
4. Neonatal Level of Care was chosen for comparator data as Maternal Level of Care designations were created by The Provincial Council for Maternal and Child Health (PCMCH) in 2011 and were not available prior to this date.
5. Caution should be taken when interpreting data if the proportion of 'Missing data' is greater than 5%. Missing data represents records where episiotomy type and/or parity is unknown.
6. No data' indicates that no births were entered for a given time period.



**KPI 3 - Rate of formula supplementation from birth to discharge in term infants whose mothers intended to exclusively breastfeed**

**Numerator:** number of term infants whose mothers intended to exclusively breastfeed and who received formula supplementation from birth to discharge home

**Denominator:** total number of term infants discharged home whose mothers intended to exclusively breastfeed

KPI 3 Criterion			
Gestational Age at Birth (N0014)	Intention to Breastfeed (M0047)	Newborn Discharged or Transferred To (N0065)	Newborn Feeding from Birth to Discharge from Hospital or Birth Centre (N0044)
<p><b>If selected, record is INCLUDED in KPI</b>  <input checked="" type="checkbox"/> ≥ 37 weeks + 0 days</p>	<p><b>If selected, record is INCLUDED in KPI</b>  <input checked="" type="checkbox"/> Yes (prior to April 2014)  <input checked="" type="checkbox"/> Yes, intends to exclusively breastfeed</p>	<p><b>If selected, record is INCLUDED in KPI</b>  <input checked="" type="checkbox"/> Home</p>	<p><b>If selected, record is INCLUDED in KPI</b>  <input checked="" type="checkbox"/> Breast milk substitute - Formula Only  <input checked="" type="checkbox"/> Combination of breast milk and breast milk substitute</p>
<p><b>If selected, record is EXCLUDED from KPI</b>  <input checked="" type="checkbox"/> ≤ 36 weeks + 6 days</p>	<p><b>If selected, record is EXCLUDED from KPI</b>  <input checked="" type="checkbox"/> No, does not intend to breastfeed  <input checked="" type="checkbox"/> Yes, intends to combination feed (use breast milk and breast milk substitute)  <input checked="" type="checkbox"/> Mother unsure  <input checked="" type="checkbox"/> Unknown, intent not collected</p>	<p><b>If selected, record is EXCLUDED from KPI</b>  <input checked="" type="checkbox"/> Child and Family Services Apprehension  <input checked="" type="checkbox"/> Transfer to NICU/SCN other Hospital  <input checked="" type="checkbox"/> Transfer to NICU/SCN same Hospital  <input checked="" type="checkbox"/> Transfer to Paediatric unit unit same hospital  <input checked="" type="checkbox"/> Transfer to other hospital  <input checked="" type="checkbox"/> Other unit, same hospital  <input checked="" type="checkbox"/> No Transfer</p>	<p><b>If selected, record is EXCLUDED from KPI</b>  <input checked="" type="checkbox"/> Breastmilk Only  <input checked="" type="checkbox"/> None  <input checked="" type="checkbox"/> Breast milk substitute - Other  <input checked="" type="checkbox"/> Unknown</p>

**Definition of indicator** The number of term infants receiving formula supplementation from birth to discharge home, expressed as a percentage of the total number of term infants discharged home whose mothers intended to exclusively breastfeed (in a given place and time).

- Notes**
1. Intention to breastfeed indicates whether the mother intends to exclusively breastfeed her infant. This is self-reported during pregnancy or at the time of birth.
  2. Reporting hospital data are shown only if data have been acknowledged for submission for a given month.
  3. Quarterly values for hospital data are only shown when all three months in that quarter are reported and acknowledged for the reporting hospital. Quarterly values are not calculated for comparator data, as these values may differ from those shown on the dashboard landing and home page, which require that all three months of data in the reporting period be acknowledged for submission.
  4. Comparator data are shown only if a minimum of three or more hospitals within the comparator group have acknowledged their data submission for a given month. The 'Hospitals with acknowledged data submission' column indicates the number of hospitals who have acknowledged their data submission out of the total number of hospitals in the comparator group for a given month. The comparator groups 'Other same level of care hospitals' and 'Other similar birth volume hospitals', exclude data from the reporting hospital. The Ontario comparator group includes data from the reporting hospital.
  5. Neonatal Level of Care was chosen for comparator data as Maternal Level of Care designations were created by The Provincial Council for Maternal and Child Health (PCMCH) in 2011 and were not available prior to this date.
  6. Caution should be taken when interpreting data if the proportion of 'Missing data' is greater than 5%. Missing data represents records with unknown newborn feeding type at discharge.
  7. No data' indicates that no births were entered for a given time period.
  8. As of April 7, 2014 with the introduction of a new picklist value this indicator was changed to exclude women who intended to combination feed. Previously both women who intended to exclusively breastfeed and combination feed were included.

**KPI 4 - Proportion of women with a cesarean section performed from ≥37 to <39 weeks' gestation among low-risk women having a repeat cesarean section at term**

**Numerator:** number of low-risk women women with a repeat cesarean section performed from ≥37 to <39 weeks' gestation

**Denominator:** total number of low-risk women women with a repeat cesarean section performed at term (≥37 weeks' gestation)

KPI 4 Criterion					
Pregnancy Outcome (F0053)	Gestational Age at Birth (N0014)	Number of Fetuses (FAN0007)	Number of Previous Cesarean Births (M0035)	Type of birth (M0503)	All indications for Cesarean Section (D0040)
<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ Live birth</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>⊗ Stillbirth at &gt;20wks or &gt;500gms</li> <li>⊗ Stillbirth at &gt;20wks or &gt;500gms  Termination</li> <li>⊗ Stillbirth at &gt;20wks or &gt;500gms  Spontaneous - Occurred during antepartum period</li> <li>⊗ Stillbirth at &gt;20wks or &gt;500gms  Spontaneous - Occurred during intrapartum period</li> <li>⊗ Pregnancy Loss &lt;20 weeks</li> <li>⊗ Pregnancy Loss &lt;20 weeks  Termination</li> <li>⊗ Pregnancy Loss &lt;20 weeks Spontaneous Miscarriage</li> <li>⊗ Pregnancy Continued</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ ≥37 weeks + 0 days</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>⊗ ≤36 weeks + 6 days</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ 1</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>⊗ 2</li> <li>⊗ 3</li> <li>⊗ 4</li> <li>⊗ 5</li> <li>⊗ 6</li> <li>⊗ 7</li> <li>⊗ 8</li> <li>⊗ Unknown</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ 1</li> <li>✓ 2</li> <li>✓ 3</li> <li>✓ 4</li> <li>✓ 5</li> <li>✓ 6</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>⊗ 0</li> <li>⊗ Unknown</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ No Labour - Cesarean Section</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>⊗ Spontaneous Vaginal</li> <li>⊗ Assisted Vaginal</li> <li>⊗ Induced or Spontaneous Labour Cesarean Section</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ Fetal   Malposition/Malpresentation</li> <li>✓ Maternal   Previous C-section</li> <li>✓ Maternal   HSV - Herpes Simplex Virus</li> <li>✓ Other   Accommodates Care Provider/Organization</li> <li>✓ Other   Maternal Request</li> <li>✓ Unknown</li> <li>✓ Maternal   Obesity</li> <li>✓ Maternal   VBAC   Declined VBAC</li> <li>✓ Maternal   VBAC   Not eligible</li> <li>✓ Maternal   HIV – Human immunodeficiency Virus</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>⊗ Fetal   Anomaly(ies)</li> <li>⊗ Fetal   Atypical or Abnormal Fetal Surveillance</li> <li>⊗ Fetal   Cord prolapse</li> <li>⊗ Fetal   Intrauterine Growth Restriction</li> <li>⊗ Fetal   Macrosomia</li> <li>⊗ Fetal   Other Fetal Indication</li> <li>⊗ Maternal   Failed forceps / vacuum</li> <li>⊗ Maternal   Failed Induction</li> <li>⊗ Maternal   Gestational hypertension</li> <li>⊗ Maternal   Hypertensive disorders of pregnancy - Eclampsia</li> <li>⊗ Maternal   Hypertensive disorders of pregnancy - HELLP</li> <li>⊗ Maternal   Hypertensive disorders of pregnancy - Preeclampsia</li> <li>⊗ Maternal   Maternal Health Conditions</li> <li>⊗ Maternal   Multiple gestation</li> <li>⊗ Maternal   Nonprogressive first stage of labour</li> <li>⊗ Maternal   Nonprogressive labour/descent/dystocia</li> <li>⊗ Maternal   Nonprogressive second stage of labour</li> <li>⊗ Maternal   Other Obstetrical Complication</li> <li>⊗ Maternal   Placenta Increta/Accreta/Percreta</li> <li>⊗ Maternal   Placenta previa</li> <li>⊗ Maternal   Placental abruption</li> <li>⊗ Maternal   Prelabour rupture of membranes (PROM) in women with planned C/section</li> <li>⊗ Maternal   Preterm prelabour rupture of membranes (PPROM) in women with planned C/section</li> <li>⊗ Maternal   Previous T incision/classical incision/uterine surgery</li> <li>⊗ Maternal   Previous uterine rupture</li> <li>⊗ Maternal   Suspected chorioamnionitis</li> <li>⊗ Maternal   Uterine rupture</li> <li>⊗ Maternal   VBAC   Failed attempt</li> </ul>
<p><i>Definition of indicator</i></p>	<p>The number of low-risk women with a cesarean section performed from 37 to &lt;39 weeks' gestation (37 weeks + 0 days to 38 weeks + 6 days gestation), expressed as a percentage of the total number of low-risk women who had a repeat cesarean section at term (≥37 weeks) (in a given place and time).</p>				
<p><i>Notes</i></p>	<p>1. Repeat cesarean section in low-risk women is defined as a cesarean section performed prior to the onset of labour, among women with a singleton live birth, with a history of one or more previous cesarean sections and with no fetal or maternal health conditions (except cleft lip and/or palate, craniosynostosis, hyperthyroidism, hypothyroidism, chromosome rearrangement (balanced), chronic anemia, limb reduction defects, autism, developmental delay, Fragile X, hearing disorder, learning disabilities, vision disorder, epilepsy/seizures, asthma, and recurrent spontaneous abortion) or obstetrical complications. Women with indication for cesarean section are excluded, other than women with the following indications: fetal malposition/malpresentation, previous cesarean section, maternal obesity, Herpes Simplex Virus, HIV, VBAC declined or not eligible, accommodates care provider/organization, or maternal request.</p> <p>2. For this indicator, values for type of birth are derived from the Birth Mother encounter, unless a different value was entered in the Birth Child encounter, in which case the value from the Birth Child encounter is used.</p> <p>3. Reporting hospital data are shown only if data have been acknowledged for submission for a given month.</p> <p>4. Quarterly values for hospital data are only shown when all three months in that quarter are reported and acknowledged for the reporting hospital. Quarterly values are not calculated for comparator data, as these values may differ from those shown on the dashboard landing and home page, which require that all three months of data in the reporting period be acknowledged for submission.</p> <p>5. Comparator data are shown only if a minimum of three or more hospitals within the comparator group have acknowledged their data submission for a given month. The 'Hospitals with acknowledged data submission' column indicates the number of hospitals who have acknowledged their data submission out of the total number of hospitals in the comparator group for a given month. The comparator groups 'Other same level of care hospitals' and 'Other similar birth volume hospitals', exclude data from the reporting hospital. The Ontario comparator group includes data from the reporting hospital. If applicable, 'No data' indicates that there are no records meeting the criterion for all comparator hospitals who have acknowledged data for a particular indicator for a given month.</p> <p>6. Neonatal Level of Care was chosen for comparator data as Maternal Level of Care designations were created by the Provincial Council for Maternal and Child Health (PCMCH) in 2011 and were not available prior to this date.</p> <p>7. 'No data' indicates that no births were entered for a given time period.</p> <p>8. As of April 7, 2014 new picklist values of maternal obesity, Herpes Simplex Virus, HIV, VBAC declined or not eligible were added to the list of indications for cesarean section that would be included in the indicator.</p>				

Pregnancy Outcome (F0053)	Gestational Age at Birth (N0014)	Number of Fetuses (FAN0007)	Number of Previous Cesarean Births (M0035)	Type of birth (M0503)	All indications for Cesarean Section (D0040)
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Maternal Health Conditions (M0013)	Complications of Pregnancy (M0531)	Diabetes and Pregnancy (D0013)	Hypertension Disorder in Pregnancy (D0016)	Labour and Birth Complications (M0530)
<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ None</li> <li>✓ Craniofacial   Cleft Lip and/or palate</li> <li>✓ Craniofacial   Craniosynostosis</li> <li>✓ Endocrine   Hyperthyroidism (prior to April 2014)</li> <li>✓ Endocrine   Hyperthyroidism   Managed</li> <li>✓ Endocrine   Hyperthyroidism   Unmanaged</li> <li>✓ Endocrine   Hyperthyroidism   Management Unknown</li> <li>✓ Endocrine   Hypothyroidism (prior to April 2014)</li> <li>✓ Endocrine   Hypothyroidism   Managed</li> <li>✓ Endocrine   Hypothyroidism   Unmanaged</li> <li>✓ Endocrine   Hypothyroidism   Management Unknown</li> <li>✓ Genetics   Chromosome Rearrangement (balanced)</li> <li>✓ Haematology   Chronic Anemia</li> <li>✓ Musculoskeletal   Limb Reduction Defects</li> <li>✓ Neurodevelopmental   Autism</li> <li>✓ Neurodevelopmental   Developmental Delay (Mental Retardation)</li> <li>✓ Neurodevelopmental   Fragile X</li> <li>✓ Neurodevelopmental   Hearing Disorder</li> <li>✓ Neurodevelopmental   Learning Disabilities</li> <li>✓ Neurodevelopmental   Vision Disorder</li> <li>✓ Neurology   Epilepsy/Seizures (prior to April 2014)</li> <li>✓ Neurology   Epilepsy/Seizures   Seizure occurred in current pregnancy</li> <li>✓ Neurology   Epilepsy/Seizures   Pre-existing</li> <li>✓ Pulmonary   Asthma (prior to April 2014)</li> <li>✓ Pulmonary   Asthma   Occurred in current pregnancy</li> <li>✓ Pulmonary   Asthma   Pre-existing</li> <li>✓ Recurrent Spontaneous Abortion</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>🔍 Autoimmune</li> <li>🔍 Autoimmune   Lupus</li> <li>🔍 Autoimmune   Rheumatoid Arthritis</li> <li>🔍 Autoimmune   Other</li> <li>🔍 Cancer</li> <li>🔍 Cancer   Diagnosed in Pregnancy</li> <li>🔍 Cancer   Prior to Pregnancy</li> <li>🔍 Cardiovascular</li> <li>🔍 Cardiovascular   Acquired Heart Disease</li> <li>🔍 Cardiovascular   Antihypertensive Therapy outside of pregnancy</li> <li>🔍 Cardiovascular   Cardiovascular Disease</li> <li>🔍 Cardiovascular   Congenital Heart Defect</li> <li>🔍 Cardiovascular   Congenital Heart Disease</li> <li>🔍 Cardiovascular   Pre-existing Hypertension</li> <li>🔍 Cardiovascular   Renal Disease</li> <li>🔍 Cardiovascular   Other</li> <li>🔍 Craniofacial</li> <li>🔍 Craniofacial   Other</li> <li>🔍 Diabetes</li> <li>🔍 Diabetes   Diabetes Type I</li> <li>🔍 Diabetes   Diabetes Type II - Insulin</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ None</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>🔍 Fetal</li> <li>🔍 Fetal   Anomalies</li> <li>🔍 Fetal   Isoimmunization/Alloimmunization</li> <li>🔍 Fetal   IUGR</li> <li>🔍 Fetal   LGA</li> <li>🔍 Fetal   Oligohydramnios</li> <li>🔍 Fetal   Other</li> <li>🔍 Fetal   Polyhydramnios</li> <li>🔍 Maternal</li> <li>🔍 Maternal   Anemia unresponsive to therapy</li> <li>🔍 Maternal   Antepartum Bleeding ( Persistent and unexplained)</li> <li>🔍 Maternal   Gestational diabetes</li> <li>🔍 Maternal   Hyperemesis Gravidarum (Requiring Hospital Admission)</li> <li>🔍 Maternal   Hypertensive Disorders in Pregnancy</li> <li>🔍 Maternal   Other</li> <li>🔍 Maternal   Preterm labour prior to this admission</li> <li>🔍 Maternal   Prelabour rupture of membranes (PROM)</li> <li>🔍 Maternal   Preterm prelabour rupture of membranes (PPROM)</li> <li>🔍 Placental</li> <li>🔍 Placental   Other</li> <li>🔍 Placental   Placenta accrete</li> <li>🔍 Placental   Placenta increta</li> <li>🔍 Placental   Placenta percreta</li> <li>🔍 Placental   Placenta previa</li> <li>🔍 Placental   Placental abruption</li> <li>🔍 Unknown</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ None</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>🔍 Diabetes Complications/Comorbidities</li> <li>🔍 Diabetes Complications/Comorbidities   Nephropathy</li> <li>🔍 Diabetes Complications/Comorbidities   Retinopathy</li> <li>🔍 Gestational diabetes   Insulin</li> <li>🔍 Gestational diabetes   Insulin   ACE inhibitors</li> <li>🔍 Gestational diabetes   Insulin   No Ace Inhibitors or Statins</li> <li>🔍 Gestational diabetes   Insulin   Statins</li> <li>🔍 Gestational diabetes   Insulin Status Unknown</li> <li>🔍 Gestational diabetes   No Insulin</li> <li>🔍 Gestational diabetes   No Insulin   No Oral agents</li> <li>🔍 Gestational diabetes   No Insulin   Oral Antihyperglycemic Agents</li> <li>🔍 Type I</li> <li>🔍 Type II</li> <li>🔍 Type II   Insulin</li> <li>🔍 Type II   Insulin   ACE inhibitors</li> <li>🔍 Type II   Insulin   No Ace Inhibitors or Statins</li> <li>🔍 Type II   Insulin   Statins</li> <li>🔍 Type II   No Insulin</li> <li>🔍 Type II   No Insulin   No Oral Agents</li> <li>🔍 Type II   No Insulin   Oral Antihyperglycemic Agents</li> <li>🔍 Unknown</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ None</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>🔍 Eclampsia</li> <li>🔍 Gestational Hypertension</li> <li>🔍 HELLP</li> <li>🔍 Preeclampsia</li> <li>🔍 Preeclampsia requiring magnesium sulfate</li> <li>🔍 Pre-existing Hypertension with superimposed preeclampsia</li> <li>🔍 Unknown</li> </ul>	<p><b>If selected, record is INCLUDED in KPI</b></p> <ul style="list-style-type: none"> <li>✓ None</li> </ul> <p><b>If selected, record is EXCLUDED from KPI</b></p> <ul style="list-style-type: none"> <li>🔍 Atypical or abnormal fetal surveillance</li> <li>🔍 Cord prolapse</li> <li>🔍 Fever &gt;38.5 C</li> <li>🔍 Hysterectomy</li> <li>🔍 Meconium</li> <li>🔍 Nonprogressive first stage of labour</li> <li>🔍 Nonprogressive labour / lack of descent / dystocia</li> <li>🔍 Nonprogressive second stage of labour</li> <li>🔍 Perineal hematoma</li> <li>🔍 Placental abruption</li> <li>🔍 Postpartum hemorrhage</li> <li>🔍 Pulmonary embolism</li> <li>🔍 Retained Placenta Manual Removal</li> <li>🔍 Retained Placenta Surgical Removal</li> <li>🔍 Shoulder dystocia</li> <li>🔍 Unknown</li> <li>🔍 Uterine atony</li> <li>🔍 Uterine dehiscence</li> <li>🔍 Uterine rupture</li> </ul>

Maternal Health Conditions (M0013)	Complications of Pregnancy (M0531)	Diabetes and Pregnancy (D0013)	Hypertension Disorder in Pregnancy (D0016)	Labour and Birth Complications (M0530)
<ul style="list-style-type: none"> <li>Diabetes   Diabetes Type II - No Insulin</li> <li>Diabetes   Diabetes Type II - No Insulin   Diet management only</li> <li>Diabetes   Diabetes Type II - No Insulin   Oral Anthyperglycemic Agents</li> <li>Diabetes   Type Unknown</li> <li>Endocrine</li> <li>Endocrine   Thyroid disease</li> <li>Endocrine   Other</li> <li>Genetics</li> <li>Genetics   CGH Microarray abnormality polymorphism</li> <li>Genetics   Chromosome Abnormality</li> <li>Genetics   Other birth defects</li> <li>Genetics   Other genetic inherited disorders/syndromes</li> <li>Gastrointestinal</li> <li>Gastrointestinal   Liver/Gallbladder Cholecystitis</li> <li>Gastrointestinal   Colitis</li> <li>Gastrointestinal   Crohns</li> <li>Gastrointestinal   Hepatitis</li> <li>Gastrointestinal   Liver</li> <li>Gastrointestinal   Liver/Gallbladder</li> <li>Gastrointestinal   Liver/Gallbladder Intrahepatic cholestasis of pregnancy</li> <li>Gastrointestinal   Liver/Gallbladder Other</li> <li>Gastrointestinal   Other</li> <li>Gastrouterine</li> <li>Gastrouterine   Acquired Renal(insufficiency; chronic infections)</li> <li>Gastrouterine   Congenital/Genetic Renal (renal agenesis; pelvic kidney)</li> <li>Gastrouterine   Renal Disease</li> <li>Gastrouterine   Uterine Anomalies</li> <li>Gastrouterine   Other</li> <li>Haematology</li> <li>Haematology   Gestational Thrombocytopenia</li> <li>Haematology   Haemophilia (A; B Von Willibrands)</li> <li>Haematology   Idiopathic Thrombocytopenia</li> <li>Haematology   Sickle Cell Disease</li> <li>Haematology   Thalassemia</li> <li>Haematology   Thrombophilia</li> <li>Haematology   Other</li> <li>Infection</li> <li>Musculoskeletal</li> <li>Musculoskeletal   Muscular Dystrophy/Neuromuscular disorder</li> <li>Musculoskeletal   Myotonic Dystrophy</li> <li>Musculoskeletal   Osteogenesis Imperfecta</li> <li>Musculoskeletal   Achondroplasia</li> <li>Musculoskeletal   Other</li> <li>Neurology</li> <li>Neurology   Cerebral palsy</li> <li>Neurology   Multiple Sclerosis</li> <li>Neurology   Myasthenia Gravis</li> <li>Neurology   Spina Bifida/NTD</li> <li>Neurology   Other</li> <li>Neurodevelopmental</li> <li>Neurodevelopmental   Other</li> <li>Pulmonary</li> <li>Pulmonary   Cystic Fibrosis</li> <li>Pulmonary   Previous Pulmonary Embolism/DVT</li> <li>Pulmonary   Pulmonary Hypertension</li> <li>Pulmonary   Other</li> <li>Other   Unspecified</li> <li>Unknown</li> </ul>				



**KPI 5 - Proportion of women who delivered at term and had Group B Streptococcus (GBS) screening at 35-37 weeks' gestation**

**Numerator:** number of women who delivered at term and had GBS screening at 35-37 weeks' gestation

**Denominator:** total number of women who delivered at term (≥37 weeks' gestation) and did not decline GBS screening

**Note:** the number of women who delivered at term and did not have GBS screening at 35-37 weeks' gestation are also presented in the MND report

KPI 5 Criterion		
Gestational Age at Birth (N0014)	Group B Strep Screening Results (35-37 weeks) (M0527)	Reason GBS Screening Not Done (M0701)
<b>If selected, record is Done</b>		
<b>Women delivering at term who had Group B Streptococcus (GBS) screening at 35-37 weeks' gestation</b>		
✓ ≥37 weeks + 0 days	✓ Negative Result	"Any option"
✓ ≥37 weeks + 0 days	✓ Positive Result	"Any option"
✓ ≥37 weeks + 0 days	✓ Done, result unknown	"Any option"
✓ ≥37 weeks + 0 days	✓ Not done	✓ Previous baby with GBS disease
✓ ≥37 weeks + 0 days	✓ Not done	✓ Urine Positive for GBS
<b>If selected, record is "Not Done"</b>		
<b>Women delivering at term who did not have Group B Streptococcus (GBS) screening at 35-37 weeks' gestation</b>		
✓ ≥37 weeks + 0 days	⊗ Not done	Other
✓ ≥37 weeks + 0 days	⊗ Not done	Unknown
<b>If selected, record is Missing Data</b>		
✓ ≥37 weeks + 0 days	⊗ Unknown if screened	"Any option "

*Definition of indicator Notes*

- The number of women who delivered at term and had Group B Streptococcus (GBS) screening at 35-37 weeks' gestation (35 weeks + 0 days to 37 weeks + 0 days gestation), expressed as a percentage of the total number of women who delivered at term (in a given place and time). GBS screening protocol based on the Society of Obstetricians and Gynaecologists of Canada (SOGC) 2010.*
- Reporting hospital data are shown only if data have been acknowledged for submission for a given month.*
  - Quarterly values for hospital data are only shown when all three months in that quarter are reported and acknowledged for the reporting hospital. Quarterly values are not calculated for comparator data, as these values may differ from those shown on the dashboard landing and home page, which require that all three months of data in the reporting period be acknowledged for submission.*
  - Comparator data are shown only if a minimum of three or more hospitals within the comparator group have acknowledged their data submission for a given month. The 'Hospitals with acknowledged data submission' column indicates the number of hospitals who have acknowledged their data submission out of the total number of hospitals in the comparator group for a given month. The comparator groups 'Other same level of care hospitals' and 'Other similar birth volume hospitals', exclude data from the reporting hospital. The Ontario comparator group includes data from the reporting hospital.*
  - Neonatal Level of Care was chosen for comparator data as Maternal Level of Care designations were created by The Provincial Council for Maternal and Child Health (PCMCH) in 2011 and were not available prior to this date.*
  - Caution should be taken when interpreting data if the proportion of 'Missing data' is greater than 5%. Missing data represents records where the GBS screening result is unknown.*
  - 'No data' indicates that no births were entered for a given time period.*
  - As of October 2013, women who declined screening are excluded from the denominator with the introduction of a new picklist value.*



**KPI 6 - Proportion of women who were induced with an indication of post-dates and were less than 41 weeks' gestation at delivery**

**Numerator:** number of women who were induced with an indication of post-dates and were less than 41 weeks' gestation at delivery

**Denominator:** total number of women who were induced with an indication of post-dates

KPI 6 Criterion		
Gestational Age at Birth (N0014)	Type of Labour (M0502)	All indications for induction of labour (D0039)
<b>If selected, record is INCLUDED in KPI</b> <input checked="" type="checkbox"/> ≤40 weeks + 6 days	<b>If selected, record is INCLUDED in KPI</b> <input checked="" type="checkbox"/> Induced	<b>If selected, record is INCLUDED in KPI</b> <input checked="" type="checkbox"/> Fetal   Post dates
<b>If selected, record is EXCLUDED from KPI</b> <input checked="" type="checkbox"/> ≥41 weeks + 0 days	<b>If selected, record is EXCLUDED from KPI</b> <input checked="" type="checkbox"/> Spontaneous <input checked="" type="checkbox"/> No Labour	<b>If selected in combination with 'Post dates' record is still INCLUDED in KPI</b> <input checked="" type="checkbox"/> Fetal   Atypical or Abnormal Fetal Surveillance <input checked="" type="checkbox"/> Fetal   Fetal anomalies <input checked="" type="checkbox"/> Fetal   Demise <input checked="" type="checkbox"/> Fetal   Isoimmunization/Alloimmunization <input checked="" type="checkbox"/> Fetal   IUGR <input checked="" type="checkbox"/> Fetal   Macrosomia <input checked="" type="checkbox"/> Fetal   Multiple gestation <input checked="" type="checkbox"/> Fetal   Other Fetal Complication <input checked="" type="checkbox"/> Fetal   Termination of Pregnancy <input checked="" type="checkbox"/> Maternal   Diabetes <input checked="" type="checkbox"/> Maternal   History of precipitous delivery <input checked="" type="checkbox"/> Maternal   Oligohydramnios <input checked="" type="checkbox"/> Maternal   Other Obstetrical Complications/Concerns <input checked="" type="checkbox"/> Maternal   Polyhydramnios <input checked="" type="checkbox"/> Maternal   Pre-existing maternal medical conditions <input checked="" type="checkbox"/> Maternal   Preeclampsia/Hypertension <input checked="" type="checkbox"/> Maternal   Prelabour rupture of membranes (PROM) <input checked="" type="checkbox"/> Maternal   Preterm prelabour rupture of membranes (PPROM) <input checked="" type="checkbox"/> Other   Accommodates Care Provider/Organization <input checked="" type="checkbox"/> Other   Distance from birth hospital/Safety precaution <input checked="" type="checkbox"/> Other   Maternal Request <input checked="" type="checkbox"/> Unknown

**Definition of indicator** The number of women who were induced with an indication for induction of labour of post-dates (≥41 weeks gestation) and were actually less than 41 weeks' gestation (less than or equal to 40 weeks + 6 days gestation), expressed as a percentage of the total number of women who were induced with an indication for induction of labour of post-dates (in a given time and place). Indication for induction of labour of post-dates need not be the primary indication for induction of labour, it can be any indication for induction. Records will be included for this indicator if 'Fetal | Post dates' is selected for 'All indications for induction of labour', regardless if any additional indications are selected for this multi-select data element.

- Notes**
1. Reporting hospital data are shown only if data have been acknowledged for submission for a given month.
  2. Quarterly values for hospital data are only shown when all three months in that quarter are reported and acknowledged for the reporting hospital. Quarterly values are not calculated for comparator
  3. Comparator data are shown only if a minimum of three or more hospitals within the comparator group have acknowledged their data submission for a given month. The 'Hospitals with acknowledged
  4. Neonatal Level of Care was chosen for comparator data as Maternal Level of Care designations were created by The Provincial Council for Maternal and Child Health (PCMCH) in 2011 and were not
  5. 'No data' indicates that no births were entered for a [given time period](#).



# BORN Maternal Newborn Dashboard

## Report Version History

Version number	Released date	Change description
version 1.0	19-Nov-12	First release.
version 1.1	03-Oct-13	Updated KPI 4 and KPI 5 with changes related to Sep 20 2013 BIS enhancements.
version 1.2	08-May-14	Updated with changes related to the April 2014 BIS Enhancements.
version 1.3	2-Jul-2014	Updated KPI 3 to include only women who intended to exclusively breast feed, KPI 4 to include additional indications for cesarean section in the indicator and KPI 5 to exclude women who declined GBS screening.
version 1.4	17-Feb-2016	Updated KPI 3 and KPI 4 with changes related to the April 2015 BIS enhancements.
version 1.4.1	7-Apr-2015	'KPI 1 Newborn Screening' tab footnotes update: the 'Definition of Indicator' was modified to clarify that samples may be collected from anywhere within the organization, and Notes 1, 5 and 6 were edited for clarity.
version 1.4.2	8-Jun-2016	'KPI 3 Formula supplementation' tab: correct four column headings in the second table to properly reflect the 2014 data element name change. They now read: "Term infants receiving formula supplementation from birth to discharge". 'KPI 6 Indication post-dates' tab: correct typographical error in the table's title, change the word "any" to "an".
version 1.5	30-Nov-2016	'KPI 1 Newborn Screening' benchmark changes implemented to align with the new target, warning and alert benchmarks set by Newborn Screening Ontario (NSO) and reported in their new "Unsatisfactory Sample Report".
version 1.6	01-Feb-2017	Fixed a calculation defect for the comparators' Total and yearly rows in tables that contain comparators (all KPIs): these calculations now exclude data for a month where less than 3 hospitals in the comparator have acknowledged their data.
version 1.6.1	15-Mar-2017	Minor edits to footnotes to reflect merge of Labour and Birth Mother encounters.
version 1.7	19-Jul-2017	1. 'KPI 2 Episiotomy' tab's second table: removed the missing data portion for Parity from the "Missing data" column as it had no bearing on the numerator rates. 2. 'KPI 2 inclusion missing' tab's second table: removed data pertaining to only when Parity data is missing, because the table is supposed to report only on the missing data for Episiotomy. (UAT#6008)
version 1.8	31-Jan-2018	1. KPI 4 tabs: excluded encounters where the 'All indications for Cesarean Section' (D0040) data element consists of multi-select values that contain one of the following excluded criterion pick list values introduced in the April 2017 BIS enhancements. These exclusions were not implemented for April 2017: - "Maternal \ Gestational hypertension" - "Maternal \ Placenta Increta/Accreta/Percreta" - "Maternal \ Previous T incision/classical incision/uterine surgery" (UAT#6256)

