

# BORN Information System (BIS) Enhancements to be deployed April 6, 2015

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IMPORTANT FOR ALIGNING DOCUMENTATION:

THE ROWS SHADED GREEN = PICK-LIST CHANGES OR DATA ELEMENTS THAT HAVE BEEN REMOVED

### *Maternal Encounters*

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
1	<b>Maternal Date of Birth</b> [Patient Profile]	X					Mother's age should not be less than 10 or greater than 59
2	<b>Maternal Date of Admission</b> [L, BM, 'PPM-only']	X					<i>BM encounter:</i> Mandatory if the encounter is entered by hospital user Mandatory if the encounter is entered by midwifery user, and Birth Location = Hospital or Birth Centre  <i>L and BM encounters:</i> Cannot be greater than 4 weeks after the EDB  <i>PPM encounters:</i> Cannot be greater than 6 weeks after baby date of birth
3	<b>Maternal Time of Admission</b> [L, BM, 'PPM-only']	X					<i>L and BM encounters:</i> Mandatory if the encounter is entered by a hospital user

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
4	<b>Maternal Health Conditions, Please Specify</b> [AS, AG, L, BM]		X			X	<b>Added</b> data element to AS and AG encounters <b>Added</b> Validation: If "Other, specify" is chosen from the pick-list in the Maternal Health Conditions data element, a 'Please Specify' open text field will become visible and is optional.
5	<b>Maternal Height</b> [AS, AG, L, BM]			X			Moved units of measurement to left side of value so units must be selected first.  Units will not default or auto-select to metric (cm). Changed the units "in" to "inches". Added option to select "ft" and "inches"
6	<b>Maternal Height Unknown</b> <b>Pre-Pregnancy Maternal Weight Unknown</b> <b>Maternal Weight at end of Pregnancy Unknown</b> [AG, AS, L, BM]				X		Changed pre-population rules so <u>unknown</u> values will <u>not</u> pre-populate across encounters.
7	<b>Pre-Pregnancy Maternal Weight</b> [AS, AG, L, BM]			X			Moved units of measurement to left side of value so units must be selected first. Units will not default or auto-select to metric.
8	<b>Pre-Pregnancy Maternal Weight BMI</b> [AS, AG, L, BM]	X					Must be between 10-85

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
9	<b>Maternal Weight at end of Pregnancy</b> [L, BM]			X			Moved units of measurement to left side of value so units must be selected first. Units will not default or auto-select to metric.
10	<b>Intention to Breastfeed</b> [AG, L, BM]					X	<p><b>Added:</b> 'Mother Unsure'</p> <p><b>Renamed:</b></p> <ul style="list-style-type: none"> <li>'Yes, intends to combination feed' renamed → '<b>Yes, intends to combination feed (use breast milk and breast milk substitute)</b>'</li> <li>'Unknown' renamed → '<b>Unknown, intent not collected</b>'</li> </ul> <p><b>Final new pick-list:</b></p> <ul style="list-style-type: none"> <li>Yes, intends to exclusively breastfeed</li> <li><b>Yes, intends to combination feed (use breast milk and breast milk substitute)</b></li> <li>No, does not intend to breastfeed</li> <li><b>Mother unsure</b></li> <li><b>Unknown, intent not collected</b></li> </ul>
11	<b>Drug and Substance Exposure in Pregnancy</b> [AS, AG, L, BM]					X	<p><b>Renamed:</b> 'Other Opioids' renamed → '<b>Opioids</b>'</p> <p><b>Final new pick-list:</b></p> <ul style="list-style-type: none"> <li>None</li> <li>Cocaine</li> <li>Gas/Glue</li> <li>Hallucinogens</li> <li>Marijuana</li> <li><b>Opioids</b></li> <li>Other</li> <li>Unknown</li> </ul>
12						X	<p><b>Added pick-list values from AS to AG, L and BM encounters.</b></p> <ul style="list-style-type: none"> <li>Antibiotics</li> <li>Anticonvulsants</li> <li>Antihistamines</li> <li>Anti-inflammatory</li> <li>Antiretroviral</li> <li>Anti-rheumatic</li> <li>Antiviral</li> <li>Cardiovascular</li> </ul> <p><b>Final new pick-list:</b></p> <ul style="list-style-type: none"> <li>None</li> <li>Amphetamines</li> <li><b>Antibiotics</b></li> <li><b>Anticonvulsants</b></li> <li>Anti-emetics <b>Antihistamines</b></li> <li><b>Anti-inflammatory</b></li> <li><b>Antiretroviral</b></li> <li><b>Anti-rheumatic</b></li> <li><b>Antiviral</b></li> <li><b>Cardiovascular</b></li> <li><b>Chemotherapeutic Agents</b></li> </ul>

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
	<b>Medication Exposure in Pregnancy</b> [AS, AG, L,BM]						<ul style="list-style-type: none"> <li>• Chemotherapeutic Agents</li> <li>• Contraceptives</li> <li>• Gastrointestinal Agents</li> <li>• General anaesthetic</li> <li>• Insulin</li> <li>• Psychotropic</li> <li>• Vitamin A &amp; Congeners</li> </ul> <ul style="list-style-type: none"> <li>• <b>Contraceptives</b></li> <li>• <b>Gastrointestinal Agents</b></li> <li>• <b>General anaesthetic</b></li> <li>• Herbal or homeopathic remedies</li> <li>• <b>Insulin</b></li> <li>• Methadone/Subutex</li> <li>• Opioids</li> <li>• Other over the counter medications</li> <li>• Other prescription</li> <li>• <b>Psychotropic</b></li> <li>• Selective Serotonin Reuptake Inhibitors</li> <li>• Thyroid Medication</li> <li>• <b>Vitamin A &amp; Congeners</b></li> <li>• Vitamins</li> <li>• Other</li> <li>• Unknown</li> </ul>
13	<b>GBS Screening Date</b> [L, BM]	X					<b>Added:</b> Cannot be greater than 8 weeks prior to Estimated Date of Birth. Cannot be greater than 2 weeks after Estimated Dated of Birth.
14	<b>GBS Screening Not Done: Reason</b> [L, BM]	X					<b>Added:</b> If Reason GBS Screening Not Done = 'Previous baby with GBS disease', then Gravida must be > 1 or unknown
15	<b>All Indications for Cesarean</b>					X	<b>Added:</b>

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
	<b>Section</b> [BM]						<ul style="list-style-type: none"> <li>• 'Fetal Indication'</li> </ul> <b>Final new pick-list (Fetal)</b> <ul style="list-style-type: none"> <li>• Anomaly</li> <li>• Atypical or abnormal fetal surveillance</li> <li>• Cord Prolapse</li> <li>• IUGR</li> <li>• Macrosomia</li> <li>• Malpostion/Malpresentation</li> <li>• <b><i>Fetal-Indication</i></b></li> </ul>
16	<b>Primary Indication for Cesarean Section</b> [BM]					X	<b>Added :</b> <ul style="list-style-type: none"> <li>• 'Fetal Indication'</li> </ul>
17	<b>Forceps/ vacuum</b> [BM]	X					<b>Added:</b> If Type of Birth = 'Spontaneous vaginal' then Forceps/Vacuum should = 'none'.

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
18	Healthcare Provider Who Caught/Delivered Baby [BM]	X				X	<p><b>Added to pick-list:</b></p> <ul style="list-style-type: none"> <li>• 'Resident'</li> </ul> <p><b>Final new pick-list:</b></p> <ul style="list-style-type: none"> <li>• Family physician</li> <li>• Registered midwife</li> <li>• Obstetrician</li> <li>• <b>Resident</b></li> <li>• Surgeon</li> <li>• CNS/NP</li> <li>• Registered Nurse</li> <li>• Aboriginal midwife</li> <li>• Midwifery student</li> <li>• Other healthcare provider</li> <li>• Unattended (None)</li> <li>• Unknown</li> </ul> <p><b>Added validation rule:</b></p> <ul style="list-style-type: none"> <li>• If type of Birth = C/Section then Attending HCP must = Obstetrician, Family Physician, Resident or Surgeon</li> </ul>
19	Postpartum Breastfeeding Support [PPM]					X	<p><b>Added:</b></p> <ul style="list-style-type: none"> <li>• 'Referred mother to breastfeeding clinic, community health or peer support'</li> </ul> <p><b>Renamed:</b></p> <ul style="list-style-type: none"> <li>• 'After initial BF, mother was assisted with BF within 6 hours post birth' renamed → '<b>Provided assistance with breastfeeding within six hours of delivery after initial feeding</b>'</li> <li>• 'NA' renamed → '<b>Not applicable</b>' [includes stillbirth, adoption]</li> </ul>

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
	<b>Postpartum Breastfeeding Support</b> [continued] [PPM]						<p><b>Final new pick-list:</b></p> <ul style="list-style-type: none"> <li>• <b>Provided assistance with breastfeeding within six hours of delivery after initial feeding</b></li> <li>• Consult with a lactation consultant</li> <li>• Frequent skin-to-skin</li> <li>• Hand expression/pumping</li> <li>• Latch achieved prior to discharge</li> <li>• <b>Referred mother to breastfeeding clinic, community health or peer support</b></li> <li>• Unknown</li> <li>• <b>Not applicable</b></li> </ul>
20	<b>Reason for Maternal Transfer To</b> [L, BM, PPM]	X					<p><b>Added validation rule to L encounter:</b> ‘Transfer to ICU/CCU’ or ‘Transfer to other non-obstetrical unit same hospital’ is required if Maternal Outcome = ‘Transfer to other hospital’ [on BM and PPM]</p> <p><b>Removed validation rule on L encounter:</b> ‘Reason for Maternal Transfer to’ is required if Maternal Outcome = ‘Transfer to other hospital’.</p> <p>‘Reason for Maternal Transfer to’ is visible on the User Interface if Maternal Outcome = ‘Transfer to other hospital’, ‘Transfer to ICU/CCU’ or ‘Transfer to other non-obstetrical unit same hospital’.</p>
21	<b>Newborn Date of Birth</b> [BM, ‘PPM-only’]	X					<p><b>Added:</b> Newborn ‘Date of Birth’ and Newborn ‘Time of Birth’ cannot be before ‘Date Fully Dilated’; ‘Time Fully Dilated’ or ‘Date Started Pushing’; ‘Time Started Pushing’ on BM encounter.</p> <p>Newborn ‘Date of Birth’ and Newborn ‘Time of Birth’ cannot be after ‘Date of Discharge’ or ‘Time of Discharge’ if Maternal Outcome = ‘Discharged Home’ on BM or PPM encounters.</p>
22	<b>Time of Birth</b>	X					<p><b>Added:</b> Newborn ‘Date of Birth’ and Newborn ‘Time of Birth’ cannot be</p>

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
	[BM, 'PPM-only']						<p>before 'Date Fully Dilated'; 'Time Fully Dilated' or 'Date Started Pushing'; 'Time Started Pushing' on BM encounter.</p> <p>Newborn 'Date of Birth' and Newborn 'Time of Birth' cannot be after 'Date of Discharge; or 'Time of Discharge' if Maternal Outcome = 'Discharged Home' on BM or PPM encounters.</p>



### *Child Encounters*

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
1	<b>Newborn Date of Birth</b> [Patient Profile, BC]	X					<b>Added:</b> Newborn 'Date of Birth' cannot be after the date the child record was created.
2	<b>Time of Birth</b> [BC]	X					<b>Added:</b> Newborn 'Time of Birth' cannot be after the date the child record was created.
3	<b>Forceps/vacuum</b> [BC]	X					<p><b>Added:</b></p> <p>'If Type of Birth' = Assisted Vaginal, then 'Forceps/Vacuum' cannot equal None.</p> <p>'If Type of Birth' is Spontaneous Vaginal Birth then 'Forceps/Vacuum' must be None , Unknown or unselected</p>
4	<b>Neonatal Resuscitation</b> (first	X				X	<p><b>Pick-list value renamed:</b></p> <ul style="list-style-type: none"> <li>'Narcen' renamed → '<b>Narcan/naloxone</b>'.</li> </ul>



	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
	30 minutes of life only) [BC]						<p><b>Validation rule removed:</b> If APGAR 5 is &lt;5 and birth outcome = 'Live birth' and Neonatal Death = 'No', then Newborn Resuscitation cannot = 'None'.</p>
5	<p><b>Infant Early Attachment/ Feeding Initiation</b> [BC, PPC]</p> <p><b>Infant Early Attachment/ Feeding Initiation</b> [continued]</p>	X				X	<p><b>Renamed pick-list values:</b></p> <p>'Uninterrupted skin-to-skin beginning immediately after birth and continuing for at least 2 hours' renamed → <b><i>'Skin to skin contact uninterrupted for at least 1 hour, within the first 2 hours post birth'</i></b></p> <p>'Periodic skin-to-skin within the first 2 hours' renamed → <b><i>'Skin to skin contact <u>with</u> interruptions, within the first 2 hours post birth'</i></b></p> <p>'No attempt' renamed → <b><i>'No Attempt at Breastfeeding or Skin to skin contact, within the first 2 hours post birth'</i></b></p> <p><b>Final new pick-list:</b></p> <ul style="list-style-type: none"> <li>• <b><i>Skin to skin contact uninterrupted for at least 1 hour, within the first 2 hours post birth</i></b></li> <li>• <b><i>Skin to skin contact with interruptions, within the first 2 hours post birth</i></b></li> <li>• Skin to skin with person other than birth mother</li> <li>• Opportunity to latch in first hour</li> <li>• Opportunity to latch in the second hour</li> <li>• Latch achieved</li> <li>• <b><i>No Attempt at Breastfeeding or Skin to skin contact, within the first 2 hours post birth</i></b></li> <li>• Transfer to NICU/SCN</li> <li>• Unknown</li> </ul> <p><b>Modified existing validation rule to accommodate pick- list rename:</b> If 'No Attempt at Breastfeeding or skin to skin contact, within the first 2 hours post birth' is selected, no other values may be selected.</p> <p><b>Added validation rule:</b> 'Skin to skin contact uninterrupted for at least 1 hour, within the first</p>

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
	[BC, PPC]						2 hours post birth' and 'Skin to skin contact <u>with</u> interruptions, within the first 2 hours post birth' are mutually exclusive.
6	<b>Newborn Congenital Anomalies Suspected</b> [BC, PPC]	X					<p>Change from optional to conditional.</p> <p><b>Added validation rules:</b> If Newborn Congenital Anomalies <u>Identified</u> = 'Suspected or Confirmed' then you must select a choice from the 'Newborn Congenital Anomalies <u>Suspected</u>' pick-list <b>OR</b> the 'Newborn Congenital Anomalies <u>Confirmed</u>' pick-list.</p> <p>If the Newborn Congenital Anomalies Suspected data element OR Newborn Congenital Anomalies Confirmed data elements is selected, the pick-list value for that data elements cannot = 'None'. You must specify at least one anomaly.</p> <p>If both of the Newborn Congenital Anomalies Suspected AND Newborn Congenital Anomalies Confirmed data elements are selected, only one can = 'None' (both cannot='None').</p> <p><b>Warning message removed:</b> -'Either Anomalies Suspected or Anomalies Confirmed must be specified if Anomalies Identified is Suspected or Confirmed'</p>
7	<b>Neonatal Health Conditions</b> [BC, PPC]	X			X		<p>Change from mandatory to optional on the BC encounter. Keep as mandatory on the PPC.</p> <p><b>Change pre-population rule:</b> If Neonatal Health Conditions='None' or 'Unknown' in the BC encounter, it does not pre-populate to the PPC encounter.</p> <p><b>Validation rule added to PPC encounter:</b> If Hyperbilirubinemia Treatment = 'Phototherapy' then Neonatal Health Conditions must = 'Hyperbilirbinemia'.</p>
8	<b>Hyperbilirubinemia Treatment</b> [PPC]	X					<p><b>Validation rule added on PPC:</b> If Hyperbilirubinemia Treatment = 'Phototherapy' then Neonatal Health Conditions must = 'Hyperbilirbinemia'.</p>

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
9	Highest Serum Bilirubin >340 mmol/L [PPC]					X	'Highest Serum Bilirubin >340' renamed → ' <b>Highest Serum Bilirubin &gt;340 mmol/L</b> '
10	Highest Serum Bilirubin >425 mmol/L [PPC]					X	'Highest Serum Bilirubin >425' renamed → ' <b>Highest Serum Bilirubin &gt;425 mmol/L</b> '
11	Date of Newborn Screen Collection [PPC]		X				Removed data element. 
12	Time of Newborn Screen Collection [PPC]		X				Removed data element. 
13	Newborn Feeding from Birth to Discharge from Hospital or Birth Centre  Newborn Feeding from Birth to Discharge from Hospital or Birth Centre [continued]		X			X	<p><b>Renamed data element:</b> 'Newborn Feeding from Birth to Discharge' renamed → '<b>Newborn Feeding From Birth to Discharge from Hospital or Birth Centre</b>'</p> <p><b>Renamed pick-list values:</b></p> <ul style="list-style-type: none"> <li>• 'Combination' renamed → '<b>Combination of breast milk and breast milk substitute</b>'</li> <li>• 'Formula only' renamed → '<b>Breast milk substitute - Formula only</b>'</li> <li>• 'Other' renamed → '<b>Breast milk substitute – Other</b>'</li> <li>• 'NA' renamed → '<b>None</b>'</li> </ul> <p><b>Final new pick-list:</b></p> <ul style="list-style-type: none"> <li>• Breast milk only</li> <li>• <b>Combination of breast milk and breast milk substitute</b></li> <li>• <b>Breast milk substitute - Formula only</b></li> <li>• <b>Breast milk substitute - Other</b></li> </ul>

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
							<ul style="list-style-type: none"> <li>• <i>None</i></li> <li>• Unknown</li> </ul>
14	<b>Reason for Breastmilk Substitute</b> [PPC]	X				X	<p><b>Renamed pick-list values:</b></p> <ul style="list-style-type: none"> <li>• 'Infant Medical  Other' renamed → '<i>Infant Medical  Other clinical indications</i>'</li> <li>• 'Maternal Medical-Active herpes' renamed → '<i>Maternal Medical  Active herpes on breast</i>'</li> <li>• 'Parental consent not obtained' renamed → '<i>Parental Consent not documented</i>'</li> </ul> <p><b>Final new pick-list:</b></p> <ul style="list-style-type: none"> <li>• Infant Medical   Hypoglycemia</li> <li>• Infant Medical  Inborn Errors of Metabolism</li> <li>• Infant   Significant weight loss in the presence of clinical indications</li> <li>• <i>Infant Medical  Other clinical indications</i></li> <li>• <i>Maternal Medical  Active herpes on breast</i></li> <li>• Maternal Medical  Additional Health Concerns</li> <li>• Maternal Medical  Contraindicated maternal medication</li> <li>• Maternal Medical  HIV infection</li> <li>• Maternal Medical  Severe maternal illness</li> <li>• Informed Parent Decision to use Any Breast Milk Substitute</li> <li>• <i>Parental Consent not documented</i></li> <li>• Birth mother not involved in care</li> <li>• Unknown</li> </ul> <p><b>Validation rule added:</b>            'Parental consent not documented' cannot be selected with 'Informed parental decision to use any breast milk substitute'</p>
15	<b>Newborn Discharged or Transferred To</b> [PPC]					X	<p><b>Added:</b></p> <ul style="list-style-type: none"> <li>• 'Other unit, same hospital'</li> </ul> <p><b>Final new pick-list:</b></p> <ul style="list-style-type: none"> <li>• Home</li> <li>• Transfer to NICU/SCN, other hospital</li> <li>• Transfer to NICU/SCN, same hospital</li> </ul>

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	April 2015 Changes
							<ul style="list-style-type: none"> <li>• Transfer to Paediatric unit, same hospital</li> <li>• <b>Transfer to other unit, same hospital</b></li> <li>• Transfer to other hospital</li> <li>• Child and Family Services Apprehension</li> </ul>
16	Neonatal Transfer/Discharge Date [BC, PPC]	X					<p><b>Added validation rule on PPC:</b> Newborn Transfer/Discharge Date and Time must be after Newborn Birth Date and Time.</p> <p><b>Removed validation rule on PPC:</b> Newborn Transfer/Discharge Date and Time cannot be before Birth Date and Time.</p>
17	Neonatal Transfer/Discharge Time [BC, PPC]	X					<p><b>Added validation rule on PPC:</b> -Newborn Transfer/Discharge Date and Time must be after Newborn Birth Date and Time.</p> <p><b>Removed validation rule on PPC:</b> -Newborn Transfer/Discharge Date and Time cannot be before Birth Date and Time.</p>
18	'PPC only' - Flag [PPC]						<p>Modified validation rules to match April 2014 'PPM only flag' criteria:</p> <p><b>Validation rules Added:</b> A stand-alone PPC <b>cannot</b> be created for the following scenarios; a BC encounter <b>must</b> be created in the following scenarios:</p> <p style="padding-left: 40px;">If Newborn Transfer from = 'Nursing Station' and Birth Location is not equal to an organization that submits to BORN and there is not pre-existing BC encounter.</p> <p style="padding-left: 40px;">If Newborn Transfer from = 'Other' and Birth Location is not equal to an organization that submits to BORN and there is not pre-existing BC encounter.</p> <p style="padding-left: 40px;">If Newborn Transfer from = 'Other unit, same hospital' and Birth Location is not equal to an organization that submits to BORN and there is not pre-existing BC encounter.</p>

	Data Element Name [Encounters]	Validation Rule	Data Element Change	Formatting Change	Pre-Population Rule	Pick-List Value Change	<b>April 2015 Changes</b>
	<p><b>'PPC only' - Flag (continued)</b> [PPC]</p>						<p>If Transfer From Hospital Name is not an Ontario birthing hospital and there is not pre-existing BC encounter.</p> <p>If Transfer From Birth Centre is not a birth centre that submits to BORN and there is not pre-existing BC encounter.</p> <p><b>Validation rules <u>Removed</u>:</b> A stand-alone PPC <b>cannot</b> be created in the following scenarios; a BC encounter <b>must</b> be created in the following scenarios:</p> <p>If Newborn Transfer From (on the PPC encounter) is 'Nursing Station' or 'Other'.</p> <p>If Transfer From Hospital Name is not an Ontario birthing hospital.</p> <p>If Transfer From Birth Centre is not a birth centre that submits to BORN.</p>