

April 2017 Enhancements to the BORN Information System (BIS) Overview and Impact Assessment for Upload Hospitals

 **The next enhancements release of the BORN Information System (BIS) will be live the evening of Wednesday, April 5th, 2017.**

The Hospital Upload File Specification v4.0.0 details the changes for this release and can be found at www.bornontario.ca Follow links for BORN Information System – Data Entry Training – Hospital Upload. Please note there are **no changes to the record layout or column headers** as part of this release. No new data elements have been added.

This document provides an overview of the changes as well as additional information on transition timing / release cutover. We have indicated which of the changes can be implemented in advance of the release date and the impact on the site if the changes are not in place by April 5, 2017. Those items that cannot be implemented in the upload file in advance of the April 5th have been **highlighted in yellow**. Hopefully, this will allow you to leverage any available resources in your organization between now and April 2017.

This document is intended as a summary of all the changes in a user-friendly format. Please refer to the Hospital Upload File Specification v4.0.0 (excel file) for full details on the changes including version history, upload reference codes, field types, etc.

EMR screen changes need to be in place by April 1st, 2017 to collect any new data element pick list values for the start of the fiscal year. On the evening of April 5, 2017, the BIS 2017 Enhancements will be released to the production environment and the upload will support the changes (e.g., new values, validations).

DID YOU KNOW?

BORN is implementing a change to the User Interface; **we're merging the Labour and Birth Mother encounters** (before the April 2017 enhancements).

This Labour Birth Merge will not impact uploaders as changes will be managed in the 'back end'.

The Labour Birth Merge updates are listed in this specification as version 3.0.3.

Maternal Encounters:

Labour/Birth Mother (L/BM), Postpartum Mother (PPM)

Upload Column Position	BORN Code	Data Element Name [Encounters]	April 2017 Changes	Can sites implement changes prior to April 5, 2017?	What will happen if sites don't implement by April 5, 2017?
22	M0500	Maternal Date of Admission	Validation rule changes: - Add: If <u>Maternal Date of Admission</u> is provided, it cannot be greater than 45 weeks before the <u>EDB</u> .	Yes	Records failing validation rule will error
34	M0035	# of Previous Cesarean Births	Validation rule changes: - Add: LBM: If <u>All Indications for C/S</u> is 'Maternal Previous C/Section' then <u># of Previous Cesarean Births</u> cannot = 0.	Yes	Records failing validation rule will error
55	D0018	Medication Exposure in Pregnancy	Validation rule changes: - Add: If <u>Maternal Health Conditions</u> is 'Diabetes Type I' then <u>Medication Exposure in Pregnancy</u> must contain 'Insulin'.	Yes	Records failing validation rule will error
57	M0527	Group B Strep Screening Results (35-37 wks)	Existing validation rule: LBM: Must be provided when Gestational Age at Admission is greater than or equal to 35 weeks (245 days) Validation rule changes: - Add: If <u>Gestational Age at Birth</u> is less than 35 weeks <u>Group B Strep Screening Results (35-37 wks)</u> must not be 'Done, positive result', 'Done, negative result' or 'Done, result unknown'.	Yes	Records failing validation rule will error
59	M0531	Complications of Pregnancy	Picklist value changes: - Renamed: 'Fetal Anomalies' → 'Fetal Anomaly(ies)' - Renamed: 'Fetal IUGR' → 'Fetal Intrauterine Growth Restriction'	Yes	Records will not share exact language as BIS

Upload Column Position	BORN Code	Data Element Name [Encounters]	April 2017 Changes	Can sites implement changes prior to April 5, 2017?	What will happen if sites don't implement by April 5, 2017?
74	M0530	Labour & Birth Complications	<p>Picklist value changes:</p> <ul style="list-style-type: none"> - Removed: 'Nonprogressive labour / lack of descent / dystocia' (remains for historical data in BIS as 'Nonprogressive labour / lack of descent / dystocia (Prior to April 2017)') 	Yes	Records with the removed picklist value will error
76	M0503	Type of Birth	<p>Existing validation rules:</p> <p><i>Note: Key field for creation of birth section of the merged LBM encounter. If not populated, a Birth section will not be created with no associated error messages provided (refer to 'Encounters' tab).</i></p> <ul style="list-style-type: none"> - Field should remain NULL for "PPM Only" encounters or when there is transfer out during a "Labour Only" (refer to 'Encounters' tab) - For multiple births, if one birth was C/Section provide C/Section. - If <u>Type of Labour</u> is either 'NULL' or 'NOLABR' then <u>Type of Birth</u> must be 'No Labour C/section' <p>Validation rule changes:</p> <ul style="list-style-type: none"> - Add: If <u>Type of Labour</u> is 'No Labour' then <u>Type of Birth</u> must be 'No labour - C/S' - Add: If <u>Type of Labour</u> is 'Induced' or 'Spontaneous' then <u>Type of Birth</u> cannot be 'No labour - C/S' 	Yes	Records failing validation rule will error
79	M510	If C/S Dilation	<p>Existing validation rules:</p> <ul style="list-style-type: none"> - Must be provided if <u>Type Of Birth</u> is 'Induced or Spontaneous Labour Caesarean Section' - If <u>Type Of Birth</u> = 'No Labor Caesarean Section' then optional <p>Validation rule changes:</p> <ul style="list-style-type: none"> - Add: <u>If C/S Stage</u> is 'First Stage' then <u>If C/S Dilation</u> must be less than '10' or 'Unknown'. - Add: <u>If C/S Stage</u> is 'Second Stage' then <u>If C/S Dilation</u> must be '10'. 	Yes	Records failing validation rule will error

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81	M511	If C/S, Stage	Picklist value changes: - Renamed: 'Not Applicable' → 'No labour' (same upload code: 'NA')	Yes	Picklist value will not be collected and the old value will error
82	D0040	All Indications for C/S	Existing validation rules: - Must be provided if <u>Type Of Birth</u> is 'C/Section' Validation rule changes: - Add: If <u>Complications of Pregnancy</u> is 'Placental Placental accreta' or 'Placental Placental increta' or 'Placental Placental percreta' then <u>All Indications for C/S</u> must include 'Maternal Placenta Increta/Accreta/Percreta' Picklist value changes: - Add 'Maternal Gestational hypertension'(upload code: 'ALLCS0035') - Add 'Maternal Previous T incision/classical incision/uterine surgery'(upload code: 'ALLCS0036') - Add 'Maternal Placenta Increta/Accreta/Percreta'(upload code: 'ALLCS0037') - Rename 'Fetal Anomaly' → 'Fetal Anomaly(ies)' - Rename 'Fetal IUGR' → 'Fetal Intrauterine Growth Restriction'	Partially Yes, validation rule can be added and picklist values can be renamed. No, the new picklist cannot be added or updated.	Additional values will not be captured and reported Records failing validation rule will error

Upload Column Position	BORN Code	Data Element Name [Encounters]	April 2017 Changes	Can sites implement changes prior to April 5, 2017?	What will happen if sites don't implement by April 5, 2017?
87	N0005	Birth Location	<p>New Note: If Birth Location is outside of Ontario, the LBM encounter will not be created and applicable data will be ignored.</p> <p>Existing validation rule: - If <u>Type of Birth</u> is 'Induced', 'Spontaneous C/S', or 'No labour - C/S' then <u>Birth Location</u> must be 'Hospital'.</p> <p>Picklist value changes: - Renamed: 'Other' → 'Other (prior to April 2017)' (for historical data only. Will no longer be accepted) - Add: - 'Outside of Ontario' (upload code: 'OUT') - Add: - 'Other Ontario location' (upload code: 'ONT')</p>	No, the new picklist cannot be added or updated.	Records with retired picklist value will error. Additional values will not be recorded
93, 99	M0537	Maternal Outcome	<p>New Note: If the patient is a false labour or labour only and discharged home, the LBM encounter will not be created and the entry ignored</p> <p>Remove picklist value: - The 'Discharged Home' value was removed for <u>Maternal Outcome</u> on the Intrapartum tab. These cases suggest the mother was sent home before birth and these cases are not to be recorded in the BIS. The value will remain selectable for maternal outcome of Birth and Post-Partum.</p> <p>Validation rule changes: - Add: If <u>Type of Birth</u> is NULL and <u>Type of Labour</u> is not 'No labour', then <u>Maternal Outcome</u> must be 'Transfer to other hospital' - Modify: If <u>Maternal Outcome</u> is "Transfer to other hospital" or "Discharged Home", disable Birth and Outcome tabs'</p>	Yes	Records failing validation rule will error. False labours submitted will be ignored

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102-107	F0053-1 to F0053-6	Pregnancy Outcome	<p>Validation rule changes:</p> <ul style="list-style-type: none"> - Add: If <u>Number Of Fetuses</u> = 1 and <u>Gestational Age at Birth</u> ≥ 20 weeks then <u>Pregnancy Outcome</u> cannot be 'Pregnancy Loss <20 weeks & <500gms Spontaneous Miscarriage' or 'Pregnancy Loss <20 weeks & <500gms Termination' <p>Picklist value changes:</p> <ul style="list-style-type: none"> - Renamed: 'Pregnancy Loss <20 weeks Spontaneous Miscarriage' → 'Pregnancy Loss <20 weeks and <500 gms Spontaneous Miscarriage' - Renamed: 'Pregnancy Loss <20 weeks Termination' → 'Pregnancy Loss <20 weeks and <500 gms Termination' 	Yes	Possible inaccurate selection during data entry which may result in error
109	N0051	Postpartum Breastfeeding Support	<p>Validation rule changes:</p> <ul style="list-style-type: none"> - Modify: 'Not Applicable' is 'Not Provided', 'Declined', and 'Unknown' are mutually exclusive from other options <p>Picklist value changes:</p> <ul style="list-style-type: none"> - Add: 'Declined' (upload code: PPBFS007) - Renamed: 'Not applicable' → 'Not provided' (same upload code: 'NA') 	No, the new picklist cannot be added or updated. Validation rule cannot be updated.	<p>Records failing validation rule will error</p> <p>Records using the depreciated code will error</p> <p>Value 'Declined' will not be collected</p>
118	M0701	GBS Screening Not Done Reason	<p>Picklist value changes:</p> <ul style="list-style-type: none"> - Add: 'Previous GBS screening done in this pregnancy' (upload code: 'RGS004') 	No, the new picklist cannot be added.	New picklist value will not be collected

Child Encounters:

Birth Child (BC), Postpartum Child (PPC), NICU/SCN (NICU)

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29	N0005	Birth Location (BC, NICU)	<p>Note: Birth outside of Ontario will not be recorded to a BC encounter and will be ignored.</p> <p>Picklist value changes: - Remove: 'Other' → 'Other (prior to April 2017)' (for historical data only. Will no longer be accepted') - Add: - 'Outside of Ontario' (upload code: 'OUT') - Add: - 'Other Ontario location' (upload code: 'ONT')</p>	No, the new picklist cannot be added or updated.	All out of province births will be incorrectly coded as Ontario births
60	N0020	Reason for Breast Milk Substitute	<p>Validation rule changes: - Modify: <u>Reason for Breast Milk Substitute</u> is required if <u>Neonatal Death</u> is 'No' and <u>Newborn Feeding from Birth to Discharge</u> is 'Breast milk substitute-Formula only' or 'Combination of breast milk and breast milk substitute' or 'Breast milk substitute-Other'.</p>	No, Validation will not be applied to BIS until deployment	Data value will not be collected or validated consistently

Upload Column Position	BORN Code	Data Element Name [Encounters]	April 2017 Changes	Can site implement changes prior to April 5, 2017?	What is impact if not supported by April 5, 2017?
77	D0152	Neonatal Health Conditions	<p>Condition Change</p> <ul style="list-style-type: none"> - Change from mandatory to not used (BC encounter only, other encounters are not impacted) <p>Background: Neonatal Health Conditions are not identified within an hour of birth. They should be captured on the PPC and NICU/SCN. The data element has been removed from the BC encounter.</p> <p>Picklist value changes:</p> <ul style="list-style-type: none"> - Rename 'Other Health Conditions Neonatal Abstinence Syndrome (NAS)' → 'Neonatal Abstinence Syndrome (NAS)' - Rename 'Other Health Conditions Hyperbilirubinemia (NICU)' → 'Hyperbilirubinemia (NICU)' - Rename 'Other Health Conditions Hypoglycemia (Gluc)' → 'Hypoglycemia (Gluc)'. <p>Validation rule changes:</p> <ul style="list-style-type: none"> - Add: If <u>Hyperbilirubinemia Requiring Treatment</u> is 'Yes' then <u>Neonatal Health Conditions</u> must be 'Hyperbilirubinemia' - Remove: PPC: If Hyperbilirubinemia Treatment = 'Phototherapy' then Neonatal Health Conditions must contain 'Hyperbilirubinemia' - Modify: NICU: If <u>Neonatal Therapies/Interventions</u> = 'Other interventions in hospital †Phototherapy' then <u>Neonatal Health Conditions</u> must contain 'Other Health Conditions †Hyperbilirubinemia'. 	Yes	<p>Data element labels will not align with BIS</p> <p>Records failing validation will error</p> <p>Data element will be ignored for BC encounter but will remain in PPC and NICU</p>

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78	N0042	Neonatal Therapies/Interventions	<p>Validation rule changes:</p> <ul style="list-style-type: none"> - Add: If <u>Hyperbilirubinemia Treatment</u> is 'Phototherapy' then <u>Neonatal Therapies/Interventions</u> must contain 'Phototherapy'. <p>Picklist value changes:</p> <ul style="list-style-type: none"> - Rename 'Other interventions in hospital Phototherapy' → 'Phototherapy'. - Rename 'Other interventions in hospital Exchange transfusion' → 'Exchange transfusion'. - Rename 'Other interventions in hospital Therapeutic Hypothermia' → 'Therapeutic Hypothermia'. Rename 'Other interventions in hospital Intubation' → 'Intubation'. 	Yes	Data element labels will not align with BIS
81	N0048	Oxygen Therapy Days	<p>Validation rule changes:</p> <ul style="list-style-type: none"> - Add: <u>Oxygen Therapy Days</u> cannot be greater than <u>Length of Stay (LOS)</u> (Calculated field). 	Yes	Data received failing validation will error
83	N0046-1	Non- invasive ventilation days	<p>Validation rule changes:</p> <ul style="list-style-type: none"> - Add: <u>Non-invasive Ventilation Days</u> cannot be greater than <u>Length of Stay (LOS)</u> (Calculated field). 	Yes	Data received failing validation will error
100	N0015	Feeding Methods (on day of discharge)	<p>Picklist value changes:</p> <ul style="list-style-type: none"> - Remove: 'Not applicable' 	Yes	Data received with retired value will error
106	N0123	Transport Personnel Out	<p>Picklist value changes:</p> <ul style="list-style-type: none"> - Add: 'Registered Midwife' (upload code: RMW) - Add: 'Unknown' (upload code: UN) 	No, Picklist entry will not be available	New data value will not be collected

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120	N0204	Bilirubin Measured within 72 hours of Birth (NICU)	<p>Condition Change: - Change from mandatory to conditional</p> <p>Validation rule changes: - Add: Required if <u>NICU Admit Date/Time</u> minus the <u>Newborn Date/Time of Birth</u> is less than or equal to 72 hours.</p>	No, the system will require field population until deployment	Users will continue to have trouble entering data for the scenario
121	N0205	Hyperbilirubinemia Requiring Treatment (PPC & NICU)	<p>Condition Change: - Change from conditional to mandatory</p> <p>Validation rule changes: - Remove: Required if <u>Neonatal Health Conditions</u> is 'Other Health conditions Hyperbilirubinemia'</p>	Yes	Data quality around affected fields may be decrease
122	N0206	Hyperbilirubinemia Treatment	<p>Validation rule changes: - Add: If <u>Neonatal Therapies/Interventions</u> is 'Phototherapy' then <u>Hyperbilirubinemia Treatment</u> must contain 'Phototherapy'</p>	Yes	Data quality around affected fields may be decrease
123	N0207	Highest Serum Bilirubin > 340 µmol/L	<p>Condition Change: - Change from Optional to Conditional</p> <p>Validation rule changes: - Modify: Optional Required if '<u>Bilirubin measured within 72 hours of birth</u>' is = 'Total Serum Bilirubin (TSB)'</p> <p>Rename data element: - <u>Highest Serum Bilirubin >340 mmol/L</u> → <u>Highest Serum Bilirubin >340 µmol/L</u></p>	Yes	Records failing validation rule will error. Unit of measure will not be accurate and may cause confusion or incorrect entry

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124	N0208	Highest Serum Bilirubin > 425 µmol/L	<p>Condition Change: - Change from Optional to Conditional</p> <p>Validation rule changes: - Modify: Optional Required If <u>Highest Serum Bilirubin > 340µmol/L</u> is 'Yes'</p> <p>Rename data element: - <u>Highest Serum Bilirubin > 425 mmol/L</u> → <u>Highest Serum Bilirubin > 425 µmol/L</u></p>	Yes	Unit of measure will not be accurate and may cause confusion or incorrect entry
128	N0212	Transport Personnel In	<p>Validation rule changes: - Modify: Must be provided if <u>Neonatal Transferred From</u> is equal to 'Other hospital', 'Home' or 'Birth Centre'. - Add: 'Unknown' is mutually exclusive. All other values multi-select.</p> <p>Picklist value changes: - Add: 'Registered Midwife' (upload code: RMW) - Add: 'Unknown' (upload code: UN)</p>	<p>Partially</p> <p>Yes, validation rule can be updated and added</p> <p>No, Picklist entry will not be available</p>	<p>Validation may obstruct data entry</p> <p>New data value will not be collected</p>

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132	N0216	Highest Mode of Respiratory Support	<p>Condition Change: - Change from mandatory to conditional</p> <p>Validation rule changes: - Add: <u>Highest Mode of Respiratory Support</u> is only required if <u>Respiratory Support in Hospital</u> does not equal 'None', 'Unknown' or 'Nitric Oxide'.</p> <p>Picklist value changes: - Remove: 'None' - Remove: 'Unknown'</p>	No, values will need to be collected and submitted until deployment	Field may give validation error
133	N0217	Respiratory Support in Hospital	<p>Condition Change: - Change from conditional to mandatory</p> <p>Validation rule changes: - Add: If <u>Neonatal Therapies / Interventions</u> is 'Intubation' then <u>Respiratory Support in Hospital</u> must contain 'Invasive Ventilation' or 'IPPV'. - Remove: Required if <u>Highest Mode of Respiratory</u> not equal to 'None' and <u>NICU/SCN Type</u> is 'NICU'</p> <p>Picklist value changes: - Add: 'None' (upload code: 'NONE')</p>	No, new value will not be available is BIS Yes, new validation and condition change can be updated	Field may give validation error
134	N0218	Feeding Methods in Hospital	<p>Picklist value changes: - Remove: 'Not applicable'</p>	Yes	Old picklist value will error