

# Perinatal Enhancements – April 5, 2017

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## Maternal Data Elements

BORN ID	Data Element Name	Description
M0500	Maternal Date of Admission	L/BM encounter: <u>Add validation rule:</u> Add rule: If a value is provided, it cannot be greater than 45 weeks before the EDB. Add red error message: Maternal Date of Admission cannot be greater than 45 weeks before the EDB.
M0035	# of Previous Cesarean Births	<u>Add validation rule:</u> Add rule: If All Indications for C/S='Maternal   Previous C/Section' then [M0035] # of Previous Cesarean Births cannot = '0'. Add red error message: If All Indications for C/S equals 'Maternal   Previous C/Section' then # of Previous Cesarean Births cannot equal '0'.
D0018	Medication Exposure in Pregnancy	AG and L/BM encounters: <u>Add validation rule:</u> Add rule: If M0013 Maternal Health Conditions= 'Diabetes Type I' then D0018 Medication Exposure in Pregnancy must = 'Insulin'. Add red error message: If Maternal Health Conditions equals 'Diabetes Type I' then Medication Exposure in Pregnancy must equal Insulin."
M0527	Group B Strep Screening Results (35-37 wks)	L/BM encounter: <u>Add validation rule:</u> Add rule: Group B Strep Screening Results (35-37 wks) can not be 'Done, positive result', 'Done, negative result' or 'Done, result unknown' if Gestational Age at Birth is less than 35 weeks. Add red error message: Group B Strep Screening Results (35-37 weeks) can not be 'Done' if Gestational Age at Birth is less than 35 weeks.
M0701	GBS Screening Not Done Reason	L/BM encounter: <u>Add pick list value:</u> Add 'Previous GBS screening done in this pregnancy'.

		<p>Final pick list values:</p> <p>Previous baby with GBS disease</p> <p>Previous GBS screening done in this pregnancy</p> <p>Urine positive for GBS</p> <p>Declined screening</p> <p>Other</p> <p>Unknown</p>
M0531	Complications of Pregnancy	<p>AG, AS and L/BM encounters:</p> <p><u>Rename pick list values:</u></p> <p>Rename 'Fetal \ Anomalies' to 'Fetal \ Anomaly(ies)'</p> <p>Rename 'Fetal \ IUGR' to 'Fetal \ Intrauterine Growth Restriction'</p> <p>Final pick list values:</p> <p>None</p> <p>Fetal \ Anomaly(ies)</p> <p>Fetal \ Isoimmunization/Alloimmunization</p> <p>Fetal \ Intrauterine Growth Restriction</p> <p>Fetal \ LGA</p> <p>Fetal \ Oligohydramnios</p> <p>Fetal \ Polyhydramnios</p> <p>Fetal \ Other</p> <p>Maternal \ Anemia unresponsive to therapy</p> <p>Maternal \ Antepartum Bleeding (Persistent and unexplained)</p> <p>Maternal \ Gestational diabetes</p> <p>Maternal \ Hyperemesis Gravidarum (Requiring Hospital Admission)</p> <p>Maternal \ Hypertensive Disorders in Pregnancy</p> <p>Maternal \ Prelabour rupture of membranes (PROM)</p> <p>Maternal \ Preterm labour prior to this admission</p> <p>Maternal \ Preterm prelabour rupture of membranes (PPROM)</p> <p>Maternal \ Other</p> <p>Placental \ Placenta accreta</p> <p>Placental \ Placenta increta</p> <p>Placental \ Placenta percreta</p> <p>Placental \ Placenta previa</p> <p>Placental \ Placental Abruption</p> <p>Placental \ Other</p> <p>Unknown</p>
M0530	Labour & Birth Complications	<p>L/BM encounter:</p> <p><u>Remove pick list:</u></p> <p>Remove 'Nonprogressive labour / lack of descent / dystocia'</p> <p>Final pick list values:</p> <p>None</p> <p>Atypical or abnormal fetal surveillance</p> <p>Meconium</p> <p>Cord prolapse</p> <p>Shoulder dystocia</p> <p>Fever &gt;38.5 C</p> <p>Nonprogressive first stage of labour</p> <p>Nonprogressive second stage of labour</p>

		<p>Placental Abruption  Uterine rupture  Uterine dehiscence  Retained Placenta Manual Removal  Retained Placenta Surgical Removal  Postpartum hemorrhage  Uterine Atony  Perineal Hematoma  Pulmonary Embolism  Hysterectomy  Other  Unknown</p> <p>Rename historical data pick list value: 'Nonprogressive labour / lack of descent / dystocia (prior to April 2017)'</p> <p><u>Remove validation rule:</u>  Remove rule and yellow warning flag in UI: If Labour and Birth Complications is 'Nonprogressive labour / lack of descent / dystocia' then please select ' Nonprogressive first stage of labour' or ' Nonprogressive second stage of labour'.</p>
M0537L BR	Maternal Outcome (Labour/No Labour)	<p>L/BM encounter:  <u>Remove pick list value:</u>  Remove "Discharged Home" from the Intrapartum tab of the L/BM encounter.</p> <p>Final pick list values:  No Transfer  Transfer to other hospital  Transfer to ICU/CCU  Transfer to other non-obstetrical unit, same hospital  Maternal Death - Not related to Pregnancy or Birth  Maternal Death - Related to Pregnancy or Birth</p> <p>Rename pick list value (for existing data) to 'Discharged Home (prior to April 2017)'.  <u>Modify validation rule:</u>  Current rule: If Maternal Outcome = 'Transfer to other hospital' or 'Discharged Home', then disable the Birth and Outcome tabs.  Modified rule: If Maternal Outcome = 'Transfer to other hospital', disable Birth and Outcome tabs.</p> <p>Update functional specs for all affected fields on the Birth tab and Outcome tab that use this rule.</p>
MW000 6	MW - Second Attendant Type if no Second Midwife	<p>L/BM and PPM encounters:  <u>Rename pick list value:</u>  Rename "CMO approved TAPA' to 'CMO approved APA'.</p>

M0503	Type of Birth	<p>L/BM encounter:  <u>Add validation rules:</u>  Add rule: Type of Birth must = 'No labour – Cesarean Section' if Type of Labour='No Labour'. [Type of Labour M0502]  Add red error message: If Type of Labour equals 'No Labour' then Type of Birth must equal 'No labour – Cesarean Section'.</p> <p>Add rule: If Type of Labour='Induced' or 'Spontaneous' then Type of Birth cannot = 'No labour - Cesarean Section'  Add red error message: If Type of Labour equals 'Induced or Spontaneous' then Type of Birth cannot equal 'No labour - Cesarean Section'.</p>
M510	If C/S dilation (cm)	<p>L/BM encounter, Birth tab:  <u>Modify validation rules:</u>  Change yellow warning messages to red error messages:  If C/S Stage equals 'First Stage' then C/S Dilation (cm) must be less than '10' or 'Unknown' or 'Not Examined'.  If C/S Stage equals 'Second Stage' then C/S Dilation (cm) should equal '10'.</p> <p>Add above validation rules to upload specs.</p>
M511	If C/S, Stage	<p>L/BM encounter:  <u>Rename pick list value:</u>  Rename 'If C/S, Stage' = 'Not applicable' to 'No labour'.</p> <p>Final pick list values (single select):  First Stage  Second Stage  Perimortem  No labour  Unknown</p> <p><u>Modify validation rule:</u>  Current rule: Required if Type of Birth='Induced or Spontaneous Labour Cesarean Section' and Optional if Type of Birth='No labour - Cesarean Section'.  Modified rule: Required if Type of Birth='Induced or Spontaneous Labour Cesarean Section' or 'No labour - Cesarean Section'.</p> <p>UI: If Type of Birth='No labour - Cesarean Section' make it visible, greyed out and auto-populate to 'No Labour'.</p> <p><u>Add warning message rule:</u>  Add rule for yellow warning message: If If C/S Stage='No Labour' then Type of Birth should not = 'Induced or Spontaneous Labour Cesarean Section'  Add message: If 'If C/S, Stage' is 'No Labour' then Type of Birth should be 'No labour Cesarean Section'</p>
D0040	All Indications for C/S	<p>L/BM encounter only:  <u>Add/rename pick list values:</u>  Add 'Maternal \Gestational hypertension'</p>

		<p>Add 'Maternal\Previous T incision/classical incision/uterine surgery'  Rename 'Fetal \ Anomaly' to 'Fetal \ Anomaly(ies)'  Rename 'Fetal \ IUGR' to 'Fetal \ Intrauterine Growth Restriction'  Add 'Maternal \ Placenta Increta/Accreta/Percreta' pick list value to All Indications for CS.</p> <p>Final pick list values:  Fetal \ Anomaly(ies)  Fetal \ Atypical or Abnormal Fetal Surveillance  Fetal \ Cord prolapse  Fetal \ Intrauterine Growth Restriction  Fetal \ Macrosomia  Fetal \ Malposition/Malpresentation  Fetal \ Other Fetal Indication  Maternal \ Failed forceps / vacuum  Maternal \ Failed Induction  Maternal \ Gestational hypertension  Maternal \ HIV – Human Immunodeficiency Virus  Maternal \ HSV - Herpes Simplex Virus  Maternal \ Hypertensive disorders of pregnancy - Eclampsia  Maternal \ Hypertensive disorders of pregnancy - HELLP  Maternal \ Hypertensive disorders of pregnancy - Preeclampsia  Maternal \ Maternal Health Condition(s)  Maternal \ Multiple gestation  Maternal \ Nonprogressive first stage of labour  Maternal \ Nonprogressive second stage of labour  Maternal \ Obesity  Maternal \ Other Obstetrical Complication  Maternal \ Placenta Increta/Accreta/Percreta  Maternal \ Placenta previa  Maternal \ Placental abruption  Maternal \ Prelabour Rupture of Membranes (PROM) in women with planned C/Section  Maternal \ Preterm prelabour rupture of membranes (PPROM) in women with planned C/Section  Maternal \ Previous C/Section  Maternal \ Previous T incision/classical incision/uterine surgery  Maternal \ Previous uterine rupture  Maternal \ Suspected chorioamnionitis  Maternal \ Uterine rupture  Maternal \ VBAC - Declined VBAC  Maternal \ VBAC - Failed attempt  Maternal \ VBAC - Not eligible  Other \ Accommodates Care Provider/Organization  Other \ Maternal Request  Unknown</p> <p><u>Add validation rules:</u>  Add rule: If All Indications for C/S='Maternal   Previous C/Section' then [M0035] # of Previous Cesarean Births cannot = '0'.  Add red error message: If All Indications for C/S equals 'Maternal  </p>
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		<p>Previous C/Section' then # of Previous Cesarean Births cannot equal '0'.</p> <p>Add rule: If M0531 Complications of Pregnancy='Placental \ Placental accreta' or 'Placental \ Placental increta' or 'Placental \ Placental percreta' then All Indications for C/S must = 'Maternal \ Placenta Increta/Accreta/Percreta'</p> <p>Add red error message: If Complications of Pregnancy equals 'Placental \ Placental accreta' or 'Placental \ Placental increta' or 'Placental \ Placental percreta' then All Indications for C/S must equal 'Maternal \ Placenta Increta/Accreta/Percreta'</p>
N0005	Birth Location	<p>L/BM, PPM-only, BC, PPC-only, and NICU encounters:</p> <p><u>Add pick list values:</u>  Add 'Other Ontario location'.  Add 'Outside of Ontario'. [Field Level Help: BORN's mandate is to capture Ontario births only; the identification of out of province births enables the creation of accurate validation rules to prevent BM and BC encounters for these births.]  Rename 'Other' to 'Other (prior to April 2017)' for historical data.</p> <p>Final pick list values:  Hospital  Home  Birth Centre  Nursing Station  Other Ontario location  Outside of Ontario</p> <p><u>Add validation rules:</u>  Add rule on L/BM and BC: If Birth Location='Outside of Ontario' then L/BM and BC encounter cannot be submitted.  Add red error message on L/BM: You have selected Birth Location as 'Outside of Ontario'. A Labour/Birth Mother encounter is not permitted. Please create a PPM-only encounter and contact your coordinator to delete the L/BM encounter.</p> <p>Add rule on L/BM and BC: If Birth Location='Hospital' and Birth Hospital = a facility outside of Ontario then L/BM and BC encounter cannot be submitted.  Add red error message on BC: You have selected Birth Location as 'Outside of Ontario'. A Birth Child encounter is not permitted. Please create a PPC-only encounter and contact your coordinator to delete the BC encounter.</p> <p>On NICU and PPM-only, no new validation rule flags.</p>

F0053	Pregnancy Outcome	<p>Encounters: AG, AS, L/BM, BC, PSO-DERF.</p> <p><u>Rename pick list values:</u>  Rename 'Pregnancy Loss &lt;20 weeks \ Spontaneous Miscarriage' to 'Pregnancy Loss &lt;20 weeks and &lt;500 gms\ Spontaneous Miscarriage'</p> <p>Rename 'Pregnancy Loss &lt;20 weeks \ Termination' to 'Pregnancy Loss &lt;20 weeks and &lt;500 gms\ Termination'.</p> <p>Final pick list values:  Live birth  Stillbirth at &gt;=20wks or &gt;=500gms \ Spontaneous - Occurred during antepartum period  Stillbirth at &gt;=20wks or &gt;=500gms \ Spontaneous - Occurred during intrapartum period  Stillbirth at &gt;=20wks or &gt;=500gms \ Termination  Pregnancy Loss &lt;20 weeks and &lt;500 gms\ Spontaneous Miscarriage  Pregnancy Loss &lt;20 weeks and &lt;500 gms\ Termination  Pregnancy Continued [AS, AG(MW), PSODERF only]</p> <p>L/BM encounter only:  <u>Add validation rule:</u>  Add rule on the Outcome tab, if Number of Fetuses='1' and N0014-Gestational Age at Birth is &gt;=20 weeks then F0053-Pregnancy Outcome cannot ='Pregnancy Loss &lt;20 weeks &amp; &lt;500gms\Spontaneous Miscarriage' or 'Pregnancy Loss &lt;20 weeks &amp; &lt;500gms\Termination'.</p> <p>Add red error message: If Gestational Age at Birth is greater than or equal to 20 weeks then Pregnancy Outcome cannot equal 'Pregnancy Loss &lt;20 weeks &amp; &lt;500gms\Spontaneous Miscarriage' or 'Pregnancy Loss &lt;20 weeks &amp; &lt;500gms\Termination'.</p> <p>Remove yellow warning message in UI: If Pregnancy Outcome='Pregnancy Loss &lt;20 weeks\Spontaneous Miscarriage' or 'Pregnancy Loss &lt;20 weeks\Termination' then Gestational Age at Birth must be less than 20 weeks and birth weight must be less than 500 grams.</p>
M0080	Intrapartum Length of Stay	<p>L/BM encounter:  <u>Rename data element:</u>  Rename 'Intrapartum Length of Stay' to 'Admission to Birth Duration'. This is a calculated field and the calculations are accurate-no changes are being made to the calculations.</p> <p>Notes: The field M0080 Intrapartum Length of Stay is called 'Admission to Birth Duration' in the User Interface. 'Admission to Birth Duration' is a more accurate description.</p>

N0051	Postpartum Breastfeeding Support [PPM]	<p>PPM encounter:  <u>Add/rename pick list values:</u>  Rename 'Not applicable' to 'Not Provided' (Field Level Help: Select 'Not provided' if none of the types of postpartum breastfeeding support listed were provided, whether or not the mother is intending to or is breast feeding.)  Add 'Declined'. (Field Level Help: Select 'Declined' if none of the types of postpartum breastfeeding support listed were provided because the mother declined.)</p> <p>Final pick list values (multi-select*):  Provided assistance with breastfeeding within six hours of delivery after initial feeding  Consult with lactation consultant  Frequent skin to skin  Hand expression/pumping  Latch achieved prior to discharge  Referred mother to breastfeeding clinic, community health or peer support  Declined  Not provided  Unknown  *'Declined', 'Not provided' and 'Unknown' are mutually exclusive and cannot be selected with any other pick list value.</p>
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## Child Data Elements

BORN ID	Data Element Name	Description
N0005	Birth Location	<p>L/BM, PPM-only, BC, PPC-only, and NICU encounters:  <u>Add pick list values:</u>            Add 'Other Ontario location'.            Add 'Outside of Ontario'. [Field Level Help: BORN's mandate is to capture Ontario births only; the identification of out of province births enables the creation of accurate validation rules to prevent BM and BC encounters for these births.]            Rename 'Other' to 'Other (prior to April 2017)' for historical data.</p> <p>Final pick list values:            Hospital            Home            Birth Centre            Nursing Station            Other Ontario location            Outside of Ontario</p> <p><u>Add validation rules:</u>            Add rule on L/BM and BC: If Birth Location='Outside of Ontario' then L/BM and BC encounter cannot be submitted.            Add red error message on L/BM: You have selected Birth Location as 'Outside of Ontario'. A Labour/Birth Mother encounter is not permitted. Please create a PPM-only encounter and contact your coordinator to delete the L/BM encounter.</p> <p>Add rule on L/BM and BC: If Birth Location='Hospital' and Birth Hospital = a facility outside of Ontario then L/BM and BC encounter cannot be submitted.            Add red error message on BC: You have selected Birth Location as 'Outside of Ontario'. A Birth Child encounter is not permitted. Please create a PPC-only encounter and contact your coordinator to delete the BC encounter.</p> <p>UI: Change rules for PPC-only.            Add grey and yellow warning messages on PPC-only:            Add logic: A Birth Child encounter is required if Birth Location='Hospital' and Birth Hospital = an Ontario hospital that is not a birthing hospital, 'Other Ontario Hospital Not Specified' or 'Other Hospital-Ontario Mental Health Facility'.            Add logic: A Birth Child encounter is required if Birth Location='Home', 'Nursing Station' or 'Other'.            Add logic: A Birth Child encounter is required if Birth Location='Birth Centre' and Birth Centre Organization does not = Ottawa Birth and Wellness Centre or Toronto Birth Centre.            Warning message on entry: A Birth Child encounter is required for all Ontario births that did not occur at a birthing facility or under the care of a</p>

		<p>Registered Midwife. Yellow warning message on submit: A Birth Child encounter is required for all Ontario births that did not occur at a birthing facility or under the care of a Registered Midwife.</p> <p>Remove logic for grey and yellow warning messages on PPC-only:  1) If Newborn Transfer From Location Type = ('Nursing Station' or 'Other' or 'Other unit, same hospital') and Birth Location Organisation (Birth Hospital or Birth Centre) is not equal to 'Toronto Birth Centre Inc' Or 'Ottawa Birth and Wellness Centre' and there is no pre-existing BC encounter created by any organization.  2) If Newborn Transfer From Location Type = ('Nursing Station' or 'Other' or 'Other unit, same hospital') and Birth Organisation (Birth Hospital or Birth Centre) is not an Ontario birthing hospital (hospital is not located in Ontario or maternal_newborn status is set to false) and there is no pre-existing BC encounter created by any organization.  3) If Newborn Transfer From Location Type = 'Hospital' and Newborn Transfer From Organization is not an Ontario birthing hospital (hospital is not located in Ontario or maternal_newborn status is set to false) and there is no pre-existing BC encounter created by any organization.  4) If Newborn Transfer From Location Type = 'Birth Centre' and Newborn Transfer From Organization is not 'Toronto Birth Centre Inc' Or 'Ottawa Birth and Wellness Centre' and there is no pre-existing BC encounter created by any organization.</p> <p>On NICU and PPM-only, no new validation rule flags.</p>
D0152	Neonatal Health Conditions	<p>BC encounter only: <u>Remove data element:</u> Neonatal Health Conditions should remain on the PPC and NICU/SCN encounters. Update DD Tool to indicate that field is no longer Active (but is Retired) on the BC encounter only.</p> <p>Background: Neonatal Health Conditions are not identified within an hour of birth. They should be captured on the PPC and NICU/SCN.</p> <p>PPC encounter only: <u>Add validation rules:</u> Add rule on PPC encounter: If Hyperbilirubinemia Requiring Treatment = 'Yes' then D0152 Neonatal Health Conditions must = 'Hyperbilirubinemia'. Add red error messages should flag: If Hyperbilirubinemia Requiring Treatment equals 'Yes' then Neonatal Health Conditions must equal 'Hyperbilirubinemia'.</p> <p><u>Remove validation rule:</u> Remove rule on PPC: If Hyperbilirubinemia Treatment = 'Phototherapy' then Neonatal Health Conditions must contain 'Hyperbilirubinemia'</p>

N0205	Hyperbilirubinemia Requiring Treatment (PPC & NICU)	<p>PPC and NICU/SCN encounters:  <u>Change from conditional to mandatory.</u></p> <p><u>Remove validation rules:</u>  Remove rule on PPC: Required if Neonatal Health Conditions='Hyperbilirubinemia'.  Remove rule on NICU/SCN: Required if Neonatal Health Conditions='Other Health Conditions   Hyperbilirubinemia'.</p>
N0207	Highest Serum Bilirubin >340 µmol/L	<p>PPC and NICU/SCN encounters:  <u>Rename data element:</u>  The units for N0207 and N0208 should be µmol/L not mmol/L.  Rename N0207 to 'Highest Serum Bilirubin &gt;340 µmol/L'.</p> <p>Background: An interim fix was deployed in 2016 to change the UI label, field level help and related reports.</p> <p><u>Change from optional to conditional.</u></p> <p><u>Add validation rule:</u>  Add rule to PPC and NICU/SCN: Highest Serum Bilirubin &gt;340µmol/L is visible and required if Hyperbilirubinemia Requiring Treatment='Yes'.  Add red error message to PPC and NICU/SCN: Highest Serum Bilirubin &gt;340µmol/L is required if Hyperbilirubinemia Requiring Treatment equals 'Yes'.</p> <p><u>Modify validation rule:</u>  Current rule: Highest Serum Bilirubin &gt;340µmol/L is only visible and optional if Bilirubin Measured Within 72 Hours of Birth='Total Serum Bilirubin (TSB)'.  Modified rule: Highest Serum Bilirubin &gt;340µmol/L is visible and required if Bilirubin Measured Within 72 Hours of Birth='Total Serum Bilirubin (TSB)'.  Add red error message: Highest Serum Bilirubin &gt;340µmol/L is required if Bilirubin Measured Within 72 Hours of Birth equals 'Total Serum Bilirubin (TSB)'.</p>
N0208	Highest Serum Bilirubin >425 µmol/L	<p>PPC and NICU/SCN encounters:  <u>Rename data element:</u>  The units for N0207 and N0208 should be µmol/L not mmol/L.  Rename N0208 to 'Highest Serum Bilirubin &gt;425 µmol/L'.</p> <p><u>Change from optional to conditional.</u></p> <p><u>Modify validation rule:</u>  Current rule: If Highest Serum Bilirubin &gt;340µmol/L ='Yes', then Highest Serum Bilirubin &gt;425µmol/L is visible and optional  Modified rule: Highest Serum Bilirubin &gt;425 µmol/L is visible and required if N0207 Highest Serum Bilirubin &gt;340µmol/L ='Yes'.</p>

N0020	Reason for Breast Milk Substitute	<p>PPC encounter:  <u>Modify validation rule:</u>  Add 'Breast milk substitute-Other' to the existing rule:  Current rule: Reason for Breast Milk Substitute is required if Neonatal Death = 'No' and Newborn Feeding from Birth to Discharge = 'Breast milk substitute-Formula only' or 'Combination of breast milk and breast milk substitute'.</p> <p>Modified rule: Reason for Breast Milk Substitute is required if Neonatal Death = 'No' and Newborn Feeding from Birth to Discharge = 'Breast milk substitute-Formula only' or 'Combination of breast milk and breast milk substitute' or 'Breast milk substitute-Other'.</p> <p>Modified red error message: Reason for Breast Milk Substitute is required if Neonatal Death equals 'No' and Newborn Feeding From Birth to Discharge from Hospital or Birth Centre equals 'Breast milk substitute-Formula only' or 'Combination of breast milk and breast milk substitute' or 'Breast milk substitute-Other'.</p>
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## NICU/SCN Data Elements

BORN ID	Data Element Name	Description
N0005	Birth Location	<p>L/BM, PPM-only, BC, PPC-only, and NICU encounters:  <u>Add pick list values:</u>            Add 'Other Ontario location'.            Add 'Outside of Ontario'.            Rename 'Other' to 'Other (prior to April 2017)' for historical data.</p> <p>Final pick list values:            Hospital            Home            Birth Centre            Nursing Station            Other Ontario location            Outside of Ontario</p>
N0212	Transport Personnel In (NICU Adm)	<p>NICU encounter:  <u>Add pick list values:</u>            Add 'Registered Midwife'.            Add 'Unknown'</p> <p>Final pick list values:            CNS/NP            MD            Paramedic            Registered Midwife            RN            RRT            Transport team            Other            Unknown</p> <p>'Unknown' is mutually exclusive. All other values multi-select.</p> <p><u>Modify validation rule:</u>            Current rule: Must be provided if Neonatal Transferred From is equal to 'Other hospital'            Modified rule: Must be provided if Neonatal Transferred From is equal to 'Other hospital' 'Home' or 'Birth Centre'.</p> <p>UI: Visible and required when N0067 Neonatal Transferred From='Other hospital', 'Home' or 'Birth Centre'.</p>
D0152	Neonatal Health Conditions (NICU)	<p>NICU/SCN encounter:  <u>Rename/move pick list values:</u>            Take three Health Conditions out of "Other Health Conditions" and make them first level pick list values.</p> <p>Rename 'Other Health Conditions   Neonatal Abstinence Syndrome (NAS)' to 'Neonatal Abstinence Syndrome (NAS)'.</p>

		<p>Rename 'Other Health Conditions   Hypoglycemia (Gluc)' to 'Hypoglycemia (Gluc)'.</p> <p>Rename 'Other Health Conditions   Hyperbilirubinemia (NICU)' to 'Hyperbilirubinemia (NICU)'.</p> <p>Make pick list values alphabetical.</p> <p>Final pick list values:</p> <p>First level:</p> <p>None</p> <p>Hyperbilirubinemia (NICU)</p> <p>Hypoglycemia (Gluc)</p> <p>Neonatal abstinence syndrome (NAS)</p> <p>Cardiovascular Conditions (+)</p> <p>CNS (+)</p> <p>Gastrointestinal Conditions (+)</p> <p>Hypoxic Ischemic Encephalopathy (HIE) (+)</p> <p>Patent Ductus Arteriosus (+)</p> <p>Pneumothorax (+)</p> <p>Respiratory (+)</p> <p>Seizures (+)</p> <p>Sepsis (+)</p> <p>Other Health Conditions (+)</p> <p>Other</p> <p>Unknown</p> <p>Revised level 2 for 'Other Health Conditions':</p> <p>Other Health Conditions \ Dehydration</p> <p>Other Health Conditions \ Fever</p> <p>Other Health Conditions \ Hemolytic disease due to ABO incompatibility</p> <p>Other Health Conditions \ Hemolytic disease due to Rh incompatibility</p> <p>Other Health Conditions \ Hemolytic diseases of fetus and newborn, other</p> <p>Other Health Conditions \ Hydrocele</p> <p>Other Health Conditions \ Hydrops fetalis due to isoimmunization</p> <p>Other Health Conditions \ Hydrops fetalis due to other and unspecified haemolytic disease</p> <p>Other Health Conditions   Hyperglycemia (Gluc)</p> <p>Other Health Conditions \ Hyperkalemia (K)</p> <p>Other Health Conditions \ Hyponatremia (Na)</p> <p>Other Health Conditions \ Hypertonia</p> <p>Other Health Conditions \ Hypokalemia (K)</p> <p>Other Health Conditions \ Hyponatremia (Na)</p> <p>Other Health Conditions \ Hypothermia (Temp)</p> <p>Other Health Conditions \ Hypotonia</p> <p>Other Health Conditions \ Inguinal hernia</p> <p>Other Health Conditions \ IUGR - Intrauterine Growth Restriction</p> <p>Other Health Conditions \ Neutropenia</p> <p>Other Health Conditions \ Osteopenia of prematurity</p> <p>Other Health Conditions \ Renal failure</p> <p>Other Health Conditions \ Transient myocardial ischemia</p> <p>Other Health Conditions \ Umbilical hernia</p> <p>Other Health Conditions \ Vocal cord palsy</p>
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		<p><u>Modify validation rule:</u>  Current rule: If Neonatal Therapies/Interventions = 'Other interventions in hospital   Phototherapy' then Neonatal Health Conditions must = 'Other Health Conditions   Hyperbilirubinemia'."  Modified rule: If Neonatal Therapies/Interventions = 'Phototherapy' then Neonatal Health Conditions must = 'Hyperbilirubinemia (NICU)'.</p> <p><u>Remove validation rule:</u>  Remove rule on NICU: If Hyperbilirubinemia Treatment = 'Phototherapy' then Neonatal Health Conditions must contain 'Other Health Conditions   Hyperbilirubinemia'</p> <p><u>Add validation rule:</u>  Add rule on NICU/SCN encounter: If Hyperbilirubinemia Requiring Treatment = 'Yes' then D0152 Neonatal Health Conditions must = 'Hyperbilirubinemia (NICU)'.  Add red error messages: NICU/SCN: If Hyperbilirubinemia Requiring Treatment equals 'Yes' then Neonatal Health Conditions must equal 'Hyperbilirubinemia (NICU)'.</p>
N0042	Neonatal Therapies/ Interventions	<p>NICU/SCN encounter:  <u>Rename/move pick list values:</u>  Remove 'Other interventions in hospital' header, and make all pick list values first level picks:</p> <p>Rename 'Other interventions in hospital   Phototherapy' to 'Phototherapy'.  Rename 'Other interventions in hospital   Exchange transfusion' to 'Exchange transfusion'.  Rename 'Other interventions in hospital   Therapeutic Hypothermia' to 'Therapeutic Hypothermia'.  Rename 'Other interventions in hospital   Intubation' to 'Intubation'.</p> <p>Make pick list values alphabetical.</p> <p>Final pick list values:  None  Exchange transfusion  Intubation  Phototherapy  Therapeutic Hypothermia  Blood Products in Hospital \ Albumin  Blood Products in Hospital \ Cryoprecipitate  Blood Products in Hospital \ Fresh Frozen Plasma  Blood Products in Hospital \ Immunoglobulin  Blood Products in Hospital \ Other Blood products  Blood Products in Hospital \ Packed Red Blood Cells  Blood Products in Hospital \ Platelets  Blood Products in Hospital \ Whole Blood  Intravascular Devices in Hospital \ PAL</p>

		<p>Intravascular Devices in Hospital \ PICC Line  Intravascular Devices in Hospital \ PIV  Intravascular Devices in Hospital \ Surgical CVL  Intravascular Devices in Hospital \ UAC  Intravascular Devices in Hospital \ UVC  Pharmacologic Support in Hospital \ Antibiotics for GBS  Pharmacologic Support in Hospital \ Antibiotics-other  Pharmacologic Support in Hospital \ Anticonvulsants  Pharmacologic Support in Hospital \ Corticosteroids  Pharmacologic Support in Hospital \ Inotropes  Pharmacologic Support in Hospital \ Methylxanthines  Pharmacologic Support in Hospital \ Morphine for NAS  Pharmacologic Support in Hospital \ Paralytic Agents  Pharmacologic Support in Hospital \ Surfactant  Other  Unknown</p> <p><u>Add validation rule:</u>  Add rule: If Hyperbilirubinemia Treatment='Phototherapy' then Neonatal Therapies/Interventions must = 'Phototherapy'.  Add red error message: If Hyperbilirubinemia Treatment equals 'Phototherapy' then Neonatal Therapies/Interventions must equal 'Phototherapy'.</p>
N0217	Respiratory Support in Hospital	<p>NICU/SCN encounter:  <u>Add pick list value:</u>  Add 'None'.</p> <p>Final pick list values:  Invasive High Frequency Ventilation  Intermittent Positive Pressure Ventilation  Non-Invasive Ventilation  Oxygen  Other  Nitric Oxide  None  Unknown</p> <p><u>Change field from Conditional to Mandatory.</u></p> <p><u>Remove validation rule:</u>  Remove rule: Respiratory Support in Hospital is required if Highest Mode of Respiratory is not equal to 'None' and NICU/SCN Type = 'NICU'.</p> <p>Modify red error message:  Current message: Respiratory Support in Hospital is mandatory if Highest Mode of Respiratory not equal to 'None'.  Modified message: Respiratory Support in Hospital is mandatory.</p> <p><u>Add validation rule:</u>  Add rule: If Neonatal Therapies / Interventions = 'Intubation' then</p>



		<p>Respiratory Support in Hospital must = 'Invasive Ventilation' or 'Intermittent Positive Pressure Ventilation'.</p> <p>Add red error message: If Neonatal Therapies / Interventions equals 'Intubation' then Respiratory Support in Hospital must equal 'Invasive Ventilation' or 'Intermittent Positive Pressure Ventilation'.</p> <p>Reorder in UI so N0217 Respiratory Support in Hospital comes before N02016 Highest Mode of Respiratory Support.</p> <p><u>Conversion (Prior to April 2017):</u>  Convert N0216='None' values to N0217='None'.  Convert N0216='Unknown' values to N0217='Unknown'.</p>
N0216	Highest Mode of Respiratory Support	<p>NICU/SCN encounter:  <u>Remove pick list values:</u>  Remove 'None'.  Remove 'Unknown'.</p> <p>Final pick list values:  Invasive High Frequency Ventilation  Intermittent Positive Pressure Ventilation  Non-Invasive Ventilation  Oxygen</p> <p><u>Change field from Mandatory to Conditional.</u></p> <p><u>Add validation rule:</u>  Add rule: N0216 Highest Mode of Respiratory Support is only visible and required if N0217 Respiratory Support in Hospital does not equal 'None', 'Unknown' or 'Nitric Oxide'.  Add red error message: Highest Mode of Respiratory Support is required if Respiratory Support in Hospital does not equal 'None', 'Unknown' or 'Nitric Oxide'.</p> <p>UI: Auto-populate N0216 to the highest mode based on pick list values selected in N0217 Respiratory Support in Hospital and a validation rule hierarchy (Highest to Lowest=Invasive High Frequency Ventilation, Intermittent Positive Pressure Ventilation; Non-Invasive Ventilation, Oxygen, Other). Highest Mode of Respiratory Support will be greyed out and un-editable in the User Interface.</p> <p><u>Conversion: (Prior to April 2017)</u>  Convert N0216='None' values to N0217='None'.  Convert N0216='Unknown' values to N0217='Unknown'.</p>
N0048	Oxygen Therapy Days	<p>NICU/SCN encounter:  <u>Add validation rule:</u>  Add rule and red error message: Oxygen Therapy Days cannot be greater than NICU/SCN Length of Stay (LOS).</p>

N0046-1	Non- invasive ventilation days	<p>NICU/SCN encounter:  <u>Add validation rule:</u>  Add rule and red error message: Non-invasive Ventilation Days cannot be greater than NICU/SCN Length of Stay (LOS).</p>
N0218	Feeding Methods in Hospital	<p>NICU/SCN encounter:  <u>Remove pick list value:</u>  Remove 'Not applicable'</p> <p>Final pick list values:  None  Breast  Bottle  Supplementation Device on Breast  Supplementation Device not on Breast ie, finger feed, cup, other  NPO  Gavage tube  Supplementary feeding systems  Gastrostomy tube  Mucus Fistula Re-feed  Other  Unknown</p> <p>Field level help: Select 'None' if no feeding method was used.</p> <p><u>Conversion (Prior to April 2017):</u>  Convert existing 'Not applicable' values to 'None'.</p>
N0204	Bilirubin Measured within 72 hours of Birth (NICU)	<p>NICU/SCN encounter only:  <u>Change from mandatory to conditional.</u></p> <p><u>Add validation rule:</u>  Add rule: Required if NICU Admit Date(D0137) /NICU Admit Time(D0138) minus the Newborn Date of Birth(N0002)/Newborn Time of Birth(N0006) is less than or equal to 72 hours.  Modify red error message:  Current message: Bilirubin Measured Within 72 Hours is mandatory.  Modified message: Bilirubin Measured Within 72 Hours is mandatory if baby is admitted to NICU/SCN within 72 hours of birth.</p> <p>On the NICU UI encounter, this field will be greyed out if NICU Admit Date/Time minus the Newborn Date of Birth/Time of Birth is greater than 72 hours.</p>
N0205	Hyperbilirubinemia Requiring Treatment (PPC & NICU)	<p>NICU/SCN and PPC encounters:  <u>Change from conditional to mandatory.</u></p> <p><u>Remove validation rule:</u>  Remove rule on NICU/SCN: Required if Neonatal Health Conditions='Other Health conditions   Hyperbilirubinemia'.</p>

N0206	Hyperbilirubinemia Treatment	<p>NICU only:  <u>Add validation rule:</u>  Add rule: If Neonatal Therapies/Interventions = 'Phototherapy' then Hyperbilirubinemia Treatment must = 'Phototherapy'.  Add red error message: If Neonatal Therapies/Interventions equals 'Phototherapy' then Hyperbilirubinemia Treatment must equal 'Phototherapy'.</p>
N0207	Highest Serum Bilirubin >340 µmol/L	<p>PPC and NICU/SCN encounters:  <u>Rename data element:</u>  The units for N0207 and N0208 should be µmol/L not mmol/L.  Rename N0207 to 'Highest Serum Bilirubin &gt;340 µmol/L'.</p> <p>Background: An interim fix was deployed in 2016 to change the UI label, field level help and related reports.</p> <p><u>Change from optional to conditional.</u></p> <p><u>Add validation rule:</u>  Add rule to PPC and NICU/SCN: Highest Serum Bilirubin &gt;340µmol/L is visible and required if Hyperbilirubinemia Requiring Treatment='Yes'.  Add red error message to PPC and NICU/SCN: Highest Serum Bilirubin &gt;340µmol/L is required if Hyperbilirubinemia Requiring Treatment equals 'Yes'.</p> <p><u>Modify validation rule:</u>  Current rule: Highest Serum Bilirubin &gt;340µmol/L is only visible and optional if Bilirubin Measured Within 72 Hours of Birth='Total Serum Bilirubin (TSB)'.  Modified rule: Highest Serum Bilirubin &gt;340µmol/L is visible and required if Bilirubin Measured Within 72 Hours of Birth='Total Serum Bilirubin (TSB)'.  Add red error message: Highest Serum Bilirubin &gt;340µmol/L is required if Bilirubin Measured Within 72 Hours of Birth equals 'Total Serum Bilirubin (TSB)'.</p>
N0208	Highest Serum Bilirubin >425 µmol/L	<p>PPC and NICU/SCN encounters:  <u>Rename data element:</u>  The units for N0207 and N0208 should be µmol/L not mmol/L.  Rename N0208 to 'Highest Serum Bilirubin &gt;425 µmol/L'.</p> <p><u>Change from optional to conditional.</u></p> <p><u>Modify validation rule:</u>  Current rule: If Highest Serum Bilirubin &gt;340µmol/L = 'Yes', then Highest Serum Bilirubin &gt;425µmol/L is visible and optional  Modified rule: Highest Serum Bilirubin &gt;425 µmol/L is visible and required if N0207 Highest Serum Bilirubin &gt;340µmol/L = 'Yes'.  Add red error message: Highest Serum Bilirubin &gt;425 µmol/L is required if Highest Serum Bilirubin &gt;340µmol/L equals 'Yes'.</p>

N0015	Feeding Methods (on day of discharge)	<p>NICU/SCN encounter:  <u>Remove pick list value:</u>  Remove 'Not applicable'</p> <p>Final pick list values:  None  Breast  Bottle  Supplementation Device on Breast  Supplementation Device not on Breast ie, finger feed, cup, other  NPO  Gavage tube  Supplementary feeding systems  Gastrostomy tube  Mucus Fistula Re-feed  Other  Unknown</p> <p>Field level help: Select 'None' if no feeding method was used.</p> <p><u>Conversion</u> (Prior to April 2017):  Convert existing 'Not applicable' values to 'None'.</p>
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## Glossary of Terms

**Conditional Data Element:** A data element that is required on in certain conditions. A validation rule will apply. Distinguished from mandatory data elements which are required in all scenarios and optional which are never required.

**Conversion:** Refers to changing one value in the BIS to another. This may be required when pick list values or data elements are modified in an enhancement and the old/existing values need to change in order to capture the same information in one place. This enables reports to be generated for time frames that include data before and after an enhancement has been deployed. For example, in the April 2014 NICU enhancements the pick list value 'Nitric Oxide' was moved from the Neonatal Therapies/Interventions data element to a new Respiratory Support in Hospital data element so data previously entered in the old field was moved to the new field.

**Field Level Help:** Field level help provides definitions of data elements and pick list values in the User Interface(UI) by hovering the mouse over the data element name and left clicking when a '?' appears. The same information is provided in the online data dictionary but information in the BORN Information System (BIS) tends to be more up to date.

**Pick list value** (sometimes also referred to 'drop-down' list in the *UI* or Lookup value in the Data Dictionary) refers to the various types of answers that can be selected for a particular question (referred to as a 'data element' or 'field'. For example, for the data element Baby's Sex, the pick list values are Male, Female, Ambiguous genitalia and Unknown. Pick lists may be single-select (meaning only one value can be saved) or multi-select, meaning one or more may be saved. Exclusive values are values that cannot be selected with any other value (in multi-select data elements), for example, 'None' or 'Unknown'.

**Red error messages:** These are messages in the User Interface (UI) that flag when a hard validation rule is not met. Red error messages prevent an encounter from being submitted and thus prevent month end acknowledgment because the record will only be able to be saved in draft. The same rules for red error messages are in the upload specifications.

**Validation rule:** Rules that define when a data element must, may or should not be completed or visible or that prevent inaccuracies in the data. Validation rules use logic that includes 'if' and 'then'. They are intended to streamline user data entry burden and ensure or enhance data quality.

**Yellow warning messages:** These are messages in the User Interface (UI) that flag when a soft validation rule is not met. Yellow warning messages encourage data accuracy but do not prevent an encounter from being submitted. Yellow warning message rules are only in the UI and do not apply to upload hospital specifications.

**UI (User Interface):** The web-based screens where users enter BORN data. Most hospitals and all Midwife Practice Groups (MPGs) use the UI.