CPQCC Network Database
2018 Member Instructions for Electronic Data Submission
Version 18.2
6/19/2018

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Acknowledgments

The CPQCC Data Center staff would like to thank the Data Contacts at all the CPQCC member centers who have participated in Electronic Data Submission in past years, for their patience, effort, and dedication to data quality. We welcome additional feedback from all interested center contacts.

I. What Is Electronic Data Submission (EDS)?

Electronic Data Submission (EDS) is an optional method for submitting data to CPQCC. Centers who participate in EDS submit electronic data files, usually containing multiple infant records, instead of paper forms. There are some notable differences in the data submission procedures and data elements for the 2018 CPQCC Database.

EDS is optional, and all centers are welcome to participate and take advantages of the benefits EDS provides. However, there are some caveats as well, and EDS is not recommended for every member center.

A. Benefits of EDS Participation. When EDS works smoothly, both the member hospital and the CPQCC Data Center benefit from the efficiency of paperless transactions at every step. Laborious tasks such as abstracting, mailing, logging, filing, and entering data are eliminated. In place of these steps, computer queries, programs, logs, and output are stored electronically at the center, and electronic files are processed at CPQCC. There are savings for both the hospital staff and the Data Center in time, space, and paper.

B. Caveats and Considerations. Centers that elect to participate in EDS are usually those with an existing internal database, used for tracking admissions, discharges, clinical events, and outcomes in the NICU. At such centers, electronic files, which comply with

CPQCC specifications, are extracted via database queries or other types of programming code. Utilizing such customized queries or programming statements, the member center's Data Contact is able to read in existing hospital data and to output files that are in compliance with the specifications described in these *Instructions*.

Each participating center must build a system that is compatible with their own resources. It is very important that the system produces output files that meet CPQCC requirements for both data submissions and for documentation of the eligibility and enrollment status of individual infants.

An experienced programmer or software developer is an integral part of the data collection team for any center interested in participating in EDS. Only centers with existing electronic databases and programming staff available for building and testing data extract procedures are encouraged to participate in EDS.

II. How To Participate in EDS

A. **For Centers who currently participate in EDS.** Centers who have participated in EDS in past years for reporting their data are encouraged to continue. These *Instructions* give a summary of the changes to procedures and data elements being introduced for 2018. Please read through these instructions and contact the CPQCC Data Center with any specific questions you may have.

B. **For Centers who are new to EDS.** Centers who have not participated in EDS in past years are encouraged to gather information by reading these *Instructions* and assessing their resources. If your center has the appropriate resources (at minimum, an existing clinical database from which CPQCC data elements can be extracted, and a programmer or developer available to build a system capable of producing CPQCC-standard files), we will be happy to facilitate your participation. Please submit a help ticket at the CPQCC Help Desk (https://cpqcchelp.org/) to discuss your center's capacities and to make specific plans for submitting 2018 data electronically.

III. Glossary of Important Terms

A. **Files.** A file is an electronic entity, which may be copied or transmitted using electronic media. Starting in 2018, files must be sent as comma-delimited ASCII text files only.

B. **File names.** CPQCC adheres to rigid guidelines for the naming of files. Data files submitted to CPQCC must observe these rules or else the files will be rejected. Filenames should follow this pattern: **HnnnnEDSxxxx** where "nnnn" represents the four-digit center ID number with leading zero(s) and "xxxx" represents a four-digit sequential file number. The FILENUM field must be sequentially numbered by the Member's system to uniquely identify each electronic file submitted to the Network (no gaps in sequence). Since 2006, CPQCC required members to assign their first file with number 1000. File numbers must stay sequential for all data submissions. Every file submitted after the first submission must have the file number incremented by 1 so that missing file submissions can be identified. Every record in an export file must have the same File Number, and no file will be processed until the previous File Number has been processed. In other words, you will eventually have files 1000, 1001, 1002, etc. For example, the first EDS file submitted by Center 999 would be called H0999EDS1000, the second H0999EDS1001, etc.

C. **File contents.** The first row of data must contain the field names, in correct order. This row of field names should be repeated in the first row of all file submissions. The field names and their order are reviewed in the new 2018 CPQCC EDS Specifications. Remember to put the field names in the first row for each data file submitted. These files do not have component tables or worksheets. A text file submission would simply be a "flat file" named either **HnnnnEDSxxxx.csv or HnnnnEDSxxxx.txt.**

- **NOTE:** For Text file submitters MUST submit all Date/Time variables as string variable values enclosed in quotes. In other words in a comma separated ascii file, a date variable must be submitted as "12/12/2018{space}12:00" instead of 12/12/2018{space}12:00.

D. **Records.** Each unique admission reported in your data constitutes a record. A record is made up of its component Fields (for definition of Field, see below). The following is a glossary of common terminology that we will use in describing the records contained in submitted EDS files.

New Record. A record, which has been sent to CPQCC for the first

time, in a file that is compatible with our specifications, and is processed.

Updated Record. A record, which has been resubmitted, and has changed since its prior submission to CPQCC.

- ***Deleted Record.*** A record that has been resubmitted with the Delete field set to 1 (this field coded instructs the CPQCC Data Center to delete the record from the center's data). ID numbers for submitted records that are later deleted **CANNOT** be re-used for another infant's record.

- ***Complete Record.*** A processed record in which there are no blank fields.

- ***Correct Record.*** A Complete Record that has been checked by the CPQCC Data Center and determined to be without error.

E. Fields. A field contains a single piece of information about each unique admission being submitted to the CPQCC database. The new 2018 EDS Specifications for the combined CPQCC Network – CPeTS Database lists all the fields required for electronic submitted of data beginning in 2018. The table also specifies the ranges and coding rules for each field. (Refer to Appendix F. 2018 EDS Specifications).

Submission of Date/Time Variables

Text Files.

- **NOTE:** For 2018, Text file submitters MUST submit all Date/Time variables as string variable values enclosed in double quotes. In other words in a comma separated ascii file, a date variable must be submitted as "12/12/2018{space}12:00" instead of 12/12/2018{space}12:00.

IV. Summary of EDS Procedures for 2018

A. Data Center Procedures. CPQCC will adhere to rigid specifications regarding file names, file types, file contents, and file submission procedures in 2018. Files will be screened within 24 hours of receipt, and the CPQCC Data Center will notify Members if there are any problems with the electronic data submission. Any files that do not meet the specifications described in these *Instructions* will be rejected. Our staff will be available to discuss emergent issues as files are passed through our screening procedures beginning in January 2018.

B. How to submit EDS files for infants born in 2018.

1. Send data files for infants born on or after January 1, 2018 in an e-mail attachment to eds@cpqcc.org. As the subject line for your 2018 EDS file please use "2018 EDS file for center nnnn," with nnnn replaced by your center's CPQCC membership number. The attached file must be to the specifications described in these *Instructions*, and must be zipped and password protected. If you do not know your password, please contact the Data Center.

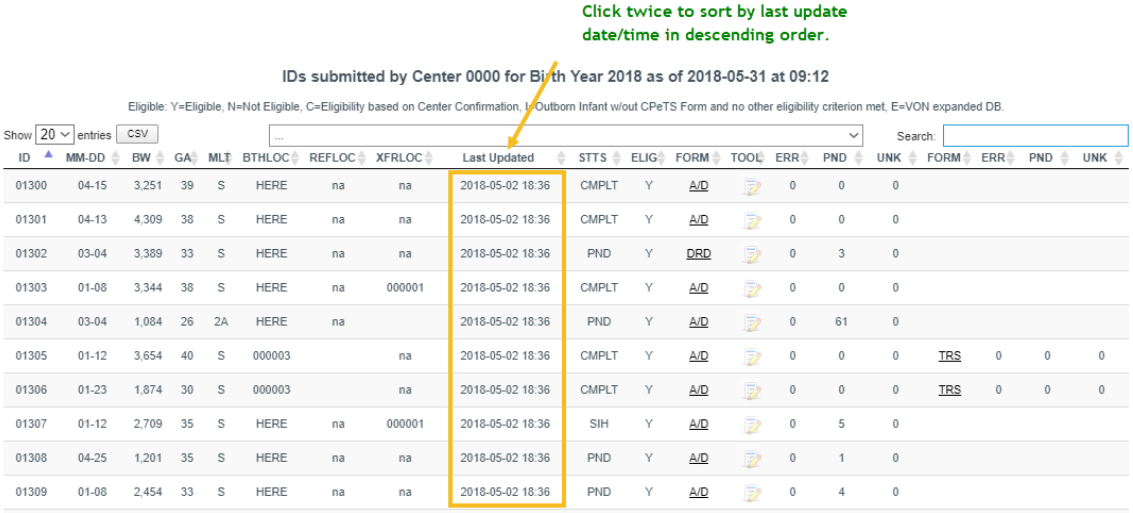
2. EDS Upload. Login into www.cpqccdata.org. Select Upload EDS File on the navigation pane.

    a. After uploading the EDS file, you will get a summary report on the number of records uploaded and updated.
        - If the EDS file does not meet the specifications described in these instructions the following error message will show: "Unable to process EDS file". Please contact CPQCC Support if you have questions" with the error description.
        - Example: If The length of the filename including the extension and period is not equal to 16 the following error message will pop up.

        Error: The length of the filename including the extension and period is not equal to 16.

        Unable to process EDS file. Please contact CPQCC support if you have questions.

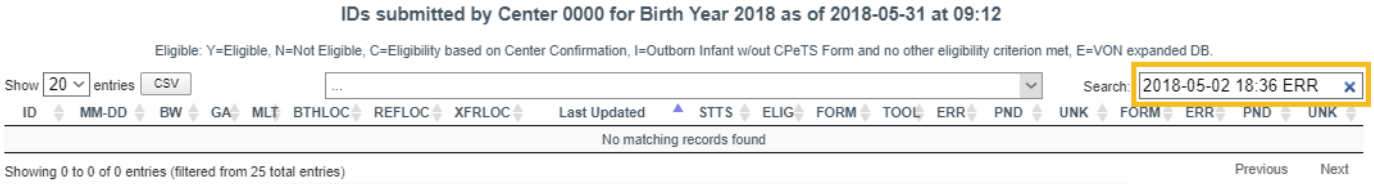
    b. Select Edit Data > Year 2018. Sort your edit ID list by date of last update and verify that new records were added. They all should have the same date/time of last update.



ID	MM-DD	BW	GA	MLT	BTHLOC	REFLOC	XFRLOC	Last Updated	STTS	ELIG	FORM	TOOL	ERR	PND	UNK	FORM	ERR	PND	UNK
01300	04-15	3,251	39	S	HERE	na	na	2018-05-02 18:36	CMPLT	Y	A/D		0	0	0				
01301	04-13	4,309	38	S	HERE	na	na	2018-05-02 18:36	CMPLT	Y	A/D		0	0	0				
01302	03-04	3,389	33	S	HERE	na	na	2018-05-02 18:36	PND	Y	DRD		0	3	0				
01303	01-08	3,344	38	S	HERE	na	000001	2018-05-02 18:36	CMPLT	Y	A/D		0	0	0				
01304	03-04	1,084	26	2A	HERE	na		2018-05-02 18:36	PND	Y	A/D		0	61	0				
01305	01-12	3,654	40	S	000003		na	2018-05-02 18:36	CMPLT	Y	A/D		0	0	0	TRS	0	0	0
01306	01-23	1,874	30	S	000003		na	2018-05-02 18:36	CMPLT	Y	A/D		0	0	0	TRS	0	0	0
01307	01-12	2,709	35	S	HERE	na	000001	2018-05-02 18:36	SIH	Y	A/D		0	5	0				
01308	04-25	1,201	35	S	HERE	na	na	2018-05-02 18:36	PND	Y	A/D		0	1	0				
01309	01-08	2,454	33	S	HERE	na	na	2018-05-02 18:36	PND	Y	A/D		0	4	0				

c. Note that by filtering on the date of last update, you will be able to verify that all records in your EDS file were successfully uploaded:

d. Filter the list, so only the most recent updates are included, and add ERR to the filter, so you can see whether the new records have any errors (you can also just enter ERR in the search box, but that will include any records with errors, not just those uploaded):



e. If there are errors, run an error report by selecting Data Reports> Year 2018 >Select Error Report or Error and Warning Report to understand the errors. If you find a systematic error, please talk to your data team who creates the EDS files to have them address the problem.

f. Note that you can also find all records that are pending after the update by using PND rather than ERR in the filter above. These would be all the records that need your additional edits after the upload.

g. Review the Detailed Data Submission Summary Report by select Data Reports on the navigation pane.
   - Run the Detailed Data Submission Summary Report.
   - Review Rejected IDs (EDS Summary Only)
   - Review EDS File Numbers and Dates with WWW submissions

➢ **NOTE**: Records of infants born in 2018 SHOULD NOT be submitted in the same file for any records of infants born BEFORE 2018, otherwise these files will be rejected.

C. How to submit EDS files for infants born in 2017.

Records for infants born in 2017 MUST be submitted or updated in their original format in 2017. However, the files must comply with the 2017 All Baby EDS file specifications as described in the 2017 EDS Instructions. Send any new records or updates to records for infants born in 2017 as an e-mail attachment, zipped and password protected, to eds@cpqcc.org. As the subject line for your 2017 EDS file please use "2017 EDS file for center nnnn," with nnnn replaced by your center's CPQCC membership number.

D. How to update records for Still In House Babies born in 2017.

Records for infants born in 2017 MUST be submitted or updated through the on-line data management system through http://www.cpqccdata.org. The CPQCC Data Center will not process any 2017 EDS records, otherwise files will be rejected.

E. How the EDS Error Check within the CPQCC Data Management System issues errors for EDS file uploads

The EDS Error Check issues errors for any of the following conditions:

1. File name does not begin with the letter H.
2. File name does not have EDS in positions 6 through 8.
3. File does not have the .zip extension.
4. Center is not approved for EDS submissions (based on characters 2 through 5 of the EDS file name).
5. File number is not in sequence (still allows addition of EDS file, but issues a user warning).
6. Password is incorrect.
7. Either ZIP file could not be unzipped successfully (pw incorrect) or file in ZIP archive is not named correctly.
8. File number already present in master DB.
9. Incorrect extension (not one of txt, or csv).
10. Data fields required are not present or not in the correct order in submitted data (CSV files).
12. The submitted Access DB includes all the required variables. However, at least one is not of the correct data type.
13. The submitted DB does not have the same file number and center number for ALL records.
14. The length of the filename including the extension and period is not equal to 16.
15. Not approved for EDS submissions based on NICU settings information in cpqcc.cpqccnicus (this means that the center was approved for the prior year, but has not yet undergone testing for the current year).
16. ZIP file is corrupted! Cannot use this file! (Recommendation:

Use the Test archive feature of your archiving software to ensure that the archive is not corrupt.)

V. Summary of Changes to Data Elements and Procedures for 2018

A. Combined CPQCC Network – California Perinatal Transport System (CPeTS) Database. Since 2007, CPQCC began managing the CPeTS Database. The 2018 EDS file is divided into three sections: 1) ID section, 2) CPeTS section, and 3) CPQCC section.

B. Tracking Fields. The following fields are used for record and file control. Although these fields are not included on the CPeTS and the CPQCC data forms, they are part of the export file structure as indicated in the new 2018 CPQCC EDS Specifications.

1. **File Number (FILENUM).** The FILENUM field must be sequentially numbered by the Member's system to uniquely identify each electronic file submitted to the Network (no gaps in sequence). The first file number submitted in 2018 MUST sequentially follow the last file number that was submitted in 2018. For example if the last file number submitted in 2017 was 999 then the first file number submitted for 2018 should be 1000. Every file submitted after the first submission must have the file number incremented by 1 so that missing file submissions can be identified (i.e., 1000, 1001, 1002). Every record in an export file must have the same File Number, and no file will be processed until the previous File Number has been processed.

2. **File Date (FILEDATE).** The FILEDATE field identifies the date that the file was exported from the Member's system. Every record in a file must have the same File Date.

3. **Deleted Records (DELETED).** There are occasions when an infant record must be removed from the database. For example, a user may discover that a reported infant was not eligible. To accommodate these situations, each record must include a field named DELETED. To delete a record, the DELETED field must be coded with the numeric value 1. For records that have not been deleted, the DELETED field should be left blank. When a valid or deleted record has been submitted to the Network, the ID number of the infant must not be re-used for another infant. Submitted records which have been deleted must remain in the system.

   - **NOTE**: Records deleted before being exported to the Network

may be removed from the Member's computer system entirely and the ID number may be reused.

4. **Application Used to Submit Records (APPLICATION).** Beginning in 2005, this text field became available to include the name of the application used for data submissions. Although not required, the application name will be useful if Network assistance is needed to resolve file submission problems.

   Application Version (VERSION). Since 2005, this text field allows a user to report the version number of the application used for data submissions. Although not required, the application version information will be useful if Network assistance is needed to resolve file submission problems.

5. **Acute Transfer-In Eligibility (ACUTETRS).** In 2018, each record is tracked for eligibility into the CPeTS database. This field is required for all records submitted, otherwise files will be rejected. Infants who aren't eligible into the CPeTS Database should mark all CPeTS fields as Not Applicable.

C. Record Keys. The Center Number (HOSPNO) and CPQCC Network Patient Identification Number (ID) fields must uniquely identify each record in an exported file.

1. Center Number (HOSPNO). The HOSPNO field is the confidential code number representing the Center Number and has been provided to the Member by the Network. Except for special group submissions, each record in a file must have the same value for the HOSPNO field.

2. CPQCC Network Identification Number (ID). Each infant record must include a unique CPQCC Network Identification Number (ID) and no two infants at a center may have the same ID.

- **NOTE: 2018 Starting ID Number.** In 2018 all CPQCC members are advised NOT to skip 10 IDs between submission years UNLESS the user has not yet closed out for 2017. For example, if a user is still submitting IDs for infants born in 2017 AND is also submitting new IDs for infants born in 2018, you may still skip 10 IDs between submission years to avoid overlapping. Otherwise, please continue with the next ID number that is in sequence with the previous ID number. For example, if the last infant in 2017 was 490, then the 2018 Starting ID Number should be 491.

If you are unsure about your Starting ID Number please submit a help ticket through the CPQCC Help Desk at https://cpqcchelp.org/.

D. Data Field Changes for 2018

For Section II of the EDS specifications, refer to the CPeTS Manual of Definitions for Infants Born in 2018 for more specific data collection instructions.

For Section III of the EDS specifications, refer to the CPQCC Manual of Definitions for Infants Born in 2018 for more specific data collection instructions.

E. 2018 Acute Transport Records.

- **NOTE:** Data definitions developed by CPQCC are consistent with the CPeTS definitions. Please use the 2018 CPeTS Manual of Operations for instructions in completing the 2018 Acute Transport data items.

1. Selection Criteria. An infant is eligible for inclusion in the 2018 CPeTS database if:

a. The infant is an acute transport-in from one in-patient facility to another.

AND

b. The infant fulfills the CPQCC selection criteria as specified in the next section.

F. 2018 Admission/Discharge Records.

- **NOTE:** Data definitions developed by CPQCC are consistent with the VLBW definitions developed by VON wherever feasible. CPQCC and VON are committed to using the identical data definitions to the greatest possible extent, to promote database compatibility. Please use the 2018 CPQCC Manual of Operations for instructions in completing the 2018 Admission/Discharge data items. Also, please note that for 2018, all data must be recorded using the new 2018 CPQCC EDS Specifications. Any EDS specifications released by VON or CPQCC before 2018 are not compatible with the 2018 CPQCC data entry system, and should not be used due to field reordering and the addition and deletion of fields.

1. **Selection Criteria.** An infant is eligible for inclusion in the 2018 CPQCC Database if **<u>any</u>** of the following three conditions apply:

   a. Any infant who is born at your hospital and whose birth weight is between 401 and 1500 grams OR whose gestational age is between 22 weeks 0 days and **31 weeks 6 days (inclusive)** is eligible, regardless of where in your hospital the infant receives care.

   b. Any outborn infant who is admitted to any location in your hospital within 28 days of birth, without first having gone home, and whose birth weight is between 401 and 1500 grams OR whose gestational age is between 22 weeks 0 days and **31 weeks 6 days (inclusive)** is eligible, regardless of where in your hospital the infant receives care.

   c. Any infant who is born at or admitted to your hospital within 28 days of birth, with a birth weight that is greater than 1500 grams **<u>MUST</u>** also meet one of the following 10 criteria:

      1) Death,
      2) Acute Transport-In,
      3) Nasal IMV/SIMV (or any other form of non-intubated assisted ventilation) for greater than four continuous hours (for 2009 and later),
      4) Intubated Assisted Ventilation for greater than four continuous hours,
      5) Early Bacterial Sepsis,
      6) Major surgery requiring anesthesia,
      7) Acute Transport-Out of your NICU,
      8) Previously Discharged Home and Readmitted to your hospital for Total Serum Bilirubin => 25mg/dL (427 micromols/Liter) and/or exchange transfusion,
      9) Suspected Encephalopathy or suspected perinatal asphyxia.
      10) Active therapeutic hypothermia.

   - ***NOTE:*** *Any Big Baby infant is eligible into the CPQCC database if the infant is admitted to your NICU within 28 days of birth, and then fulfills one of the 10 above criteria during the episode of care in your NICU. For criteria 8 (hyperbilirubinemia/ exchange transfusion), the infant may or*

may not be admitted to your NICU.

2. There is no longer Big Baby or Small Baby datasets which previously required members to send two separate EDS files. There is only one dataset for 2018, which should be used on all infants that are eligible for inclusion in the 2018 dataset.

3. All data submission is done at the time of discharge. There is no longer a 28-Day form as was used previously with the Small Baby dataset.

4. **Assignment of IDs.** For the 2018 dataset, the unit of analysis is unique infants cared for at your center, whether over one admission or multiple admissions. All data forms are updated to include information from multiple admissions when necessary. New ID numbers are not assigned when infants are readmitted to your center from another hospital.

- ***Note:*** **Reassignment of New IDs for infants discharged home then readmitted back to your center.** New ID Numbers MUST be assigned if a baby is discharged home from your center, AND THEN readmitted back to your center. Refer to Section XII. *Procedures for Completing Forms for specific instructions* of the CPQCC Manual of Definitions for Infants Born in 2018.

- **NOTE: Deletion of IDs.** If an ineligible infant is incorrectly entered into the database, the particular ID will reflect in the Error Report as ineligible. Once this ID is deleted, it cannot be re-used or re-assigned to another infant. A list of deleted IDs is reflected in your Error and Warning Reports. Refer to Section X. *How the Database Work, CPQCC ID Numbers and Logs* of the CPQCC Manual of Definitions For Infants Born in 2018.

G. **Records of Infants Who Do Not Transfer**. If an infant does not transfer from your center to another hospital, all fields on the Transport/Post-Transport Form should be submitted with the appropriate N/A codes.

H. **Delivery Room Death Records**. For infants who die in the delivery room, the fields which appear on the Admission/Discharge Form and Transport/Post-Transport Form, but which do not appear on the Delivery Room Death Form, must be coded using the appropriate not applicable (N/A) code.

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Appendix A. Revisions for 2018

I. CPQCC Eligibility Criteria

2018 VON Revised Eligibility:
Eligibility criteria for the Very Low Birth Weight (VLBW)and Expanded Databases have been revised to include infants who have been previously discharged home and who were never previously admitted to the reporting NICU.

Very Low Birth Weight (VLBW) Eligibility:
Any live born infant whose birth weight ranges from 401 to 1500 grams OR whose gestational age ranges from 22 weeks 0 days to 29 weeks 6 days who is admitted to or dies in any location in your center within 28 days of birth.

VON Expanded Eligibility:

- Any infant who meets the VLBW eligibility, plus:
- Any live born infant whose birth weight is greater than 1500 grams and who:
    - Is admitted to a NICU in your center within 28 days of birth; OR
    - Dies in any location in your center within 28 days of birth.

There are no changes to the 2018 CPQCC Eligibility criteria as we already collect data for Small Baby infants who are previously discharged home and readmitted by DOL 28. Starting in 2018, CPQCC will submit to VON the Small Baby infants who were previously discharged home and readmitted by DOL 28 to the reporting NICU and who never previously stayed at the reporting NICU.

II. Electronic Data Submission (EDS)

Starting in 2018, CPQCC will discontinue the support of the Microsoft Access files for EDS submission. EDS submission will only be accepted as comma-delimited ASCII text files (csv).

III. New and Revised Items for the CPeTS Transport Form

Starting in 2018, CPeTs will add the following definition:

E. Transport Form Use During a Declared Disaster

When the Governor of the State of California has declared a region a "Designated Disaster Area," infants being transported from or to a facility, in order to comply with evacuation orders, do not need a completed CPeTS Neonatal Transport Form.

Starting in 2018, CPeTs will include the Delayed Cord Clamping variables (19a-e) on the hard copy 2018 CPeTs form.

Was delayed umbilical cord clamping performed? [DCCDONE]

How long was umbilical cord clamping delayed [DCCTIME]
If DCC was not done, reason why (OPTIONAL)?[DCCNOTWHY]
[DCCNOTWHYDESC]
Was umbilical cord milking performed? [DCCCORDMILK]
Did breathing begin before umbilical cord clamping? [DCCBREATH]

IV. New and Revised Items for the CPQCC Admission/Discharge (AD) and Delivery Room Death (DRD) Form:

Starting in 2018, items following delayed cord clamping, beginning with Item 20. Apgar Scores, will be numbered per Appendix G. Items Number Cross Walk of this mandate.

1. Demographics:

Item 3. Best Estimate of Gestational Age [GAWEEKS, GADAYS]

CPQCC will change the definition for gestational age to align with the current Joint Commission definition:

"Gestational age is defined as the best obstetrical estimate (OE) of the newborn's gestation in completed weeks based on the birth attendant's final estimate of gestation, irrespective of whether the gestation results in a live birth or a fetal death. This estimate of gestation should be determined by all perinatal factors and assessments such as ultrasound, but not the newborn exam. Ultrasound taken early in pregnancy is preferred (source: American College of Obstetricians and Gynecologists reVITALize Initiative)."

https://manual.jointcommission.org/releases/TJC2017A/DataElem0265.html

Starting in 2018, the following note will be added to the definition:

Note: (This is a note added by CPQCC, which is separate from the Joint Commission definition)

In the cases where there is no prenatal care or there are significant discrepancies between the obstetrical gestational age and neonatal gestational age (i.e. over two weeks), please determine the gestational age from the neonatologist exam.

2. Maternal History and Delivery:

Starting in 2018 and for reporting purposes, CPQCC, will expand the current CPQCC gestational age definition of Antenatal Steroids (for infants 24/0 to 31/6) to Joint Commision Antenatal Steroids (for infants 24/0 to 33/6 weeks of gestation). The definition change will affect **Item 13b. Antenatal Steroids Documentation [ASTERDOCUMENT]**, and **Item 13c. Antenatal Steroids Reason [ASTERREASON]**. Starting from 2018, these items will be applicable to infants less 34 weeks of completed

gestation. The revision is based on the Joint Commission (JC) Measure PC-03 (Version 2016A) (link below):

https://manual.jointcommission.org/releases/TJC2016A/MIF0168.html

Performance Measure Name: Antenatal Steroids

Description: Patients at risk of preterm delivery at >=24 and <34 weeks gestation receiving antenatal steroids prior to delivering preterm newborns.

Rationale: The National Institutes of Health 1994 recommendation is to give a full course of corticosteroids to all pregnant women between 24 weeks and 34 weeks of gestation who are at risk of preterm delivery. Repeated corticosteroid courses should not be used routinely, because clinical trials show decreased brain size, decreased birth weight, and adrenal insufficiency in newborns exposed to repeated doses. Treatment should consist of two doses of 12 mg of betamethasone given intramuscularly 24 hours apart or four doses of 6 mg dexamethasone given intramuscularly every 12 hours.

Item 13b. Antenatal Steroids Documentation [ASTERDOCUMENT]

Is there documentation in the medical record for reasons for NOT initiating antenatal steroid therapy before delivery? (Note: Starting from 2018, this item is only applicable and OPTIONAL for inborn infants who are <34 weeks gestational age.)

Select **Yes** if there is documentation by a physician/Advanced Practice Nurse/Physician's Assistant/Certified Nurse Midwife that the patient has one or more reasons for not initiating antenatal steroid therapy before delivery.

Select **No** if there is no documentation by physician/Advanced Practice Nurse/Physician's Assistant/Certified Nurse Midwife of a reason for not initiating antenatal steroid therapy before delivery or unable to determine from medical record documentation.

Select **Unknown** if this information cannot be obtained.

Note:

1. The Joint Commission (JC) will exclude all cases marked as YES from the numerator/denominator so there is advantage to find this documentation if present.

2. When determining whether there is a reason documented by a physician/ Advanced Practice Nurse/Physician's Assistant/Certified Nurse Midwife for not initiating antenatal steroid therapy, reasons must be explicitly documented (e.g., "patient had an adverse reaction to the medication - unable to initiate antenatal steroid therapy") or clearly implied (i.e., there is documentation the delivery occurred before antenatal steroid therapy could be initiated, or there is documentation

the fetus has anomalies which are not compatible with life, or there is documentation that the patient has chorioamnionitis). If reasons are not mentioned in the context of antenatal steroid administration, do not make inferences.

3. This item is Not Applicable (NA) if the infant was ≥ 34 weeks gestational age at birth or if the mother did receive antenatal steroids.

Item 13c. Antenatal Steroids Reason [ASTERREASON]

Select **Chorioamnionitis** if it includes infections of the amniotic sac and fluid (amnionitis) and those of the uterine wall (endometritis**).**

Select **Other active infection** if sepsis, pyelonephritis, active herpes or similar infection was given as the reason.

Select **Immediate delivery** if the mother is admitted with advanced cervical dilation or fetal/maternal condition requiring immediate delivery.

Select **Fetus** has anomalies incompatible with life if only comfort measures are to be provided.

Select **History of adverse reaction to corticosteroids** if the mother has a history of adverse reaction to corticosteroids.

Select **Comfort care** if infant is pre-viable and planning for non-resuscitation due to immaturity or birth defects.

Select **Other** if there is another documented reason that does not fall into a category above.

Select **Unknown** if this information cannot be obtained.

Note: This is an optional field and would only be used if your hospital has a high rate of excluded cases to understand why. The reason should be found in the same spot as Item 13b.

3. Starting in 2018, CPQCC will adhere to the ACOG Standards by changing **Items 17b. Fetal Antenatal Conditions: Fetal Distress [ANCFDIS]** AND **Item 18. Indications for Cesarean Section: Fetal Distress [INDCESFD]** to: "**Non-reassuring Fetal Status** (formerly known as Fetal Distress)".

Item 17b. Fetal Antenatal Conditions
Non-reassuring Fetal Status [ANCFDIS]

Non-reassuring Fetal Status [ANCFDIS]. The medical record should state the diagnosis of fetal distress, poor biophysical profile, or non-reassuring (abnormal) stress test or fetal monitoring or fetal status. The following situations are also often associated with non-reassuring fetal status (but do not in themselves constitute non-reassuring fetal status, unless accompanied by documentation as noted above): decrease in amniotic fluid (low AFL, oligohydramnios),

decreased blood flow or oxygenation to the infant, cord entaglement; cord prolapse, decreased fetal movement, fetal arrhythmia or fetal bradycardia.

Item 18. Indications for Cesarean Section
Non-reassuring Fetal Status [INDCESFD]

Select Yes for **Non-reassuring Fetal Status [INDCESFD]** if non-reassuring fetal status was a reason why a cesarean section was performed.

4. Delivery Room and First Hour after Birth:

Starting in 2018, CPQCC mandates the Delayed Cord Clamping (DCC) data collection.

"The 2015 ILCOR systematic review confirms that delayed cord clamping (DCC) is associated with less IVH of any grade, higher blood pressure and blood volume, less need for transfusion after birth, and less necrotizing enterocolitis…"

"The only negative consequence appears to be a slightly increased level of bilirubin…"

NRP Guidelines Update: Initial Steps of Newborn Care:
Current evidence suggests that cord clamping should be delayed for at least 30 to 60 seconds for most vigorous term and preterm newborns. If placental circulation is not intact, such as after a placental abruption, bleeding placenta previa, bleeding vasa previa, or cord avulsion, the cord should be clamped immediately after birth. There is insufficient evidence to recommend an approach to cord clamping for newborns who require resuscitation at birth.

As delayed cord clamping is being recommended now by international and national guidelines, quality improvement to implement delayed cord clamping may be warranted. Hence an assessment of the variation in DCC practice is helpful. The different impacts of delayed cord clamping (or milking) – whether beneficial (or harmful) is not fully established.

The DCC variables will be collected on both, the Admission/Discharge and Delivery Room Death Forms. **The delayed cord clamping (DCC) variables will numbered as Items 19 a-e.**

Item 19a. Was delayed umbilical cord clamping performed? [DCCDONE]

Select **Yes** if delayed umbilical cord clamping was performed.
Select **No** if delayed umbilical cord clamping was not performed.
Select **Unknown** if this information cannot be obtained.

Item 19b. How long was umbilical cord clamping delayed [DCCTIME]
Select **30 to 60 seconds** if delayed umbilical cord clamping was performed for 30 to 60 seconds.

Select **>60 seconds** if delayed umbilical cord clamping was performed for greater than 60 seconds.

If 19a. is **No**, then **Not Applicable** will be automatically selected and this item will be grayed out.

Select **Unknown** if this information cannot be obtained.

Item 19c. If DCC was not done, reason why (OPTIONAL)? [DCCNOTWHY] [DCCNOTWHYDESC]

Select **Maternal Bleeding** if delayed umbilical cord clamping was not performed due to abruption, placental separation, uterine rupture, cord avulsion.

Select **Neonatal Causes** if delayed umbilical cord clamping was not performed due to neonatal complications i.e very depressed apneic baby requiring resuscitation, hydropic.

Select **Other** if delayed umbilical cord clamping was not performed for reasons other than maternal bleeding and neonatal causes. Please enter a description if Other is selected in the space provided. [DCCNOTWHYDESC]

If 19a. is **Yes**, then **Not Applicable** will be automatically selected and this item will be grayed out.

Select **Unknown** if this information cannot be obtained

Item 19d. Was umbilical cord milking performed? [DCCCORDMILK]

Select **Yes** if cord milking was performed.
Select **No** if cord milking was not performed.
Select **Unknown** if this information cannot be obtained.

Note: Umbilical cord milking - The 2015 ILCOR review on umbilical cord milking states:

"In light of the limited information regard- ing the safety of rapid changes in blood volume for extremely pre- term infants, we suggest against the routine use of cord milking for infants born at less than 29 weeks of gestation outside of a research setting. Further study is warranted because cord milking may improve initial mean blood pressure and hematologic indices and reduce intracranial hemorrhage, but thus far there is no evidence for improvement in long-term outcomes."

Although this practice is not currently recommended, we recognize that some

centers / clinicians are performing this related therapy. Therefore, we will also collect data on this practice.

Item 19e. Did breathing begin before umbilical cord clamping? [DCCBREATH]

Select **Yes** if breathing began before umbilical cord clamping was performed. If the infant has signs of breathing, such as crying, chest wall movement, and/or grunting, select Yes.

Select **No** if breathing did not begin before umbilical cord clamping was performed.

Select **Unknown** if this information cannot be obtained.

Starting in 2018, items following delayed cord clamping, beginning with Item 20 Apgar Scores, will be numbered per Appendix G. Items Number Cross Walk of this mandate.

5. Starting in 2018, the definition for **Item 21e. Base deficit in umbilical cord blood / baby blood gas within first hour of life** will be updated to include "Too low to register."

Check **Too Low to Register** box if the equipment indicates the base deficit as too low to register or incalculable.

2018 CPQCC Definition:

Base Deficit within 1 Hour of Life

This item only applies to infants >1,500 grams who also meet at least one of the following criteria:

- admitted with suspected encephalopathy (Yes to Item 21a)
- admitted with suspected perinatal asphyxia (Yes to Item 21a)
- 5-minute Apgar less than or equal to 3 or 10-minute Apgar less than or equal to 4 (per Item 20)
- received active hypothermia (Selective or Whole Body Cooling to Item 24d), or
- diagnosis of HIE (Mild/Moderate/Severe to Item 51).
- and for whom an umbilical cord blood gas or baby blood gas during the first hour of life has been obtained (Yes to 21b).

Record the base deficit to 1 decimal place from the source listed in Item 21b.
If this item is not applicable, the data entry box is grayed.

Check **Too Low to Register** box if the equipment indicates the base deficit as too low to register or incalculable.

Check the **Unknown** box if this information cannot be obtained.

Notes:
"Base deficit" is defined in reference to a negative integer, but written as a positive integer. However, some places use the equivalent term "base excess" which is written as a negative integer. Thus, a base excess of "-17.7" is equivalent

to a base deficit of "17.7."

6. **Item 22. Delivery Room Resuscitation**

   Item 22a. Oxygen [DROX] will be renamed to **"Supplemental Oxygen."** This will make it a consistent label throughout the form and definition.

7. Starting in 2018, a new item **Laryngeal Mask Airway during Initial Resuscitation [DRLMA]** will be added to match VON. This item will be added to **Item 22. Delivery Room Resuscitation** as:

   Item 22h. Laryngeal Mask Airway during Initial Resuscitation [DRLMA]

   Select **Yes** if the infant received any intermittent positive pressure breaths via a laryngeal mask airway in the delivery room or during the initial resuscitation performed immediately after birth. Intermittent positive pressure breaths may be administered using an anesthesia bag, self-inflating bag, or other device that generates intermittent positive pressure.

   Select **No** if the infant did not receive any intermittent positive pressure breaths via a laryngeal mask airway device in the delivery room or during the initial resuscitation performed immediately after birth.

   Select **No** if a laryngeal mask airway device was only used to administer continuous positive airway pressure and no intermittent positive pressure breaths were given.

   Select **Unknown** if this information cannot be obtained.

8. **Item 25. Respiratory Support After Initial Resuscitation**

   Item 25a. Oxygen [OXY] will be renamed "Supplemental Oxygen"

9. Starting in 2018, two new items, **Item 32. Caffeine for Any Reason [CAFFEINE]** and **Item 33. Intramuscular Vitamin A for Any Reason [VITAMINA]** will be added to match VON.

   Item 32. Caffeine for Any Reason [CAFFEINE]

   Select **Yes** if caffeine was administered at any time after birth for any reason.

   Select **No** if caffeine was not administered at any time after birth for any reason.

   Select **Unknown** if this information cannot be obtained.

   Item 33. Intramuscular Vitamin A for Any Reason [VITAMINA]

   Select **Yes** if intramuscular vitamin A was administered at any time after birth
   for any reason.

Select **No** if intramuscular vitamin A was not administered at any time after birth for any reason.

Select **Unknown** if this information cannot be obtained.

Note: Do not Select "Yes" if Vitamin A was only given as a component of parenteral nutrition or an oral multivitamin.

10. Starting in 2018, the definition and field description for **Item 34. Inhaled Nitric Oxide [NITRICO]** has been revised to match "HRIF Eligibility Criteria – f) Infants who received inhaled nitric oxide greater than four hours, and/or treatment during hospitalization with pulmonary vasodilators for pulmonary hypertension."

Updated definition:

Item 34. Inhaled Nitric Oxide > 4 hours [NITRICO]

Select **Yes Here** if infant received Inhaled Nitric Oxide (iNO) > 4 hours at your hospital prior to initial disposition or following readmission after initial transport.

Select **Yes Elsewhere** if infant received Inhaled Nitric Oxide (iNO) > 4 hours at another hospital.

Select **Yes Here and Elsewhere** if infant received Inhaled Nitric Oxide (iNO) > 4 hours both at your hospital and another hospital as defined above.

Select **No** if infant did not receive Inhaled Nitric Oxide (iNO) > 4 hours during this admission or during transport from a referring hospital.

Select **Unknown** if this information cannot be obtained.

11. Starting in 2018, **Item 35b. Intubated Mechanical Ventilation [SUCFINAL]** will be removed and replaced with **Item 39b. Intubated Conventional Ventilation at Discharge [VENTFINAL]** and **Item 39c. Intubated High Frequency Ventilation at Discharge [HFVFINAL]**.

12. Starting in 2018, "**Item 39. Respiratory Support at Discharge"** will be renamed "**Item 39. Respiratory Monitoring and Support Devices at Discharge",** and five new respiratory items will be added to **Item 39. Respiratory Monitoring and Support Devices at Discharge** to match with VON:

Item 39c. Intubated Conventional Ventilation at Discharge [VENTFINAL]

Select **Yes** if the infant went home or was transferred on intermittent positive pressure ventilation through an endotracheal tube with a conventional ventilator (IMV rate <240/minute).

Select **No** if the infant was not discharged on intermittent positive pressure ventilation through an endotracheal tube with a conventional ventilator (IMV rate <240/minute).

Select **Unknown** if this information cannot be obtained.

For an infant who died prior to discharge, select "Yes" if the infant received conventional ventilation at any time on the day of death. Select "No" if the infant did not receive conventional ventilation at any time on the day of death.

Notes:

- Intermittent positive pressure ventilation (Nasal IMV) via nasal prongs is not considered conventional ventilation.
- Synchronized intermittent positive pressure ventilation (SIMV) via nasal prongs is not considered conventional ventilation.

Item 39d. Intubated High Frequency Ventilation at Discharge [HVFINAL]

Select **Yes** if the infant went home or was transferred on high frequency ventilation (IMV rate ≥ 240/minute).

Select **No** if infant was not discharged on high frequency ventilation (IMV rate ≥ 240/minute).

Select **Unknown** if this information cannot be obtained.

For an infant who died prior to discharge, select "Yes" if the infant received high frequency ventilation at any time on the day of death. Select "No" if the infant did not receive high frequency ventilation at any time on the day of death.

Item 39e. High Flow Nasal Cannula at Discharge [HFNCFINAL]

Select **Yes** if the infant went home or was transferred on air or oxygen (any FiO2) at a flow rate of one liter per minute or more via nasal cannula.

Select **No** if the infant was not discharged on air or oxygen (any FiO2) at a flow rate of one liter per minute or more via nasal cannula.

Select **Unknown** if this information cannot be obtained.

For an infant who died prior to discharge, select "Yes" if the infant received air or oxygen (any FiO2) at a flow rate of one liter per minute or more via nasal cannula at any time on the day of death. Select "No" if the infant did not receive air or oxygen (any FiO2) at a flow rate of one liter per minute or more via nasal cannula at any time on the day of death.

Item 39f. Nasal IMV or SIMV at Discharge [NIMVFINAL]

Select **Yes** if the infant went home or was transferred on noninvasive positive pressure ventilation via nasal prongs or other nasal device.

Select **No** if the infant was not discharged on noninvasive positive pressure ventilation via nasal prongs or other nasal device.

For an infant who died prior to discharge, select "Yes" if the infant received

noninvasive positive pressure ventilation via nasal prongs or other nasal device at any time on the day of death. Select "No" if the infant did not receive noninvasive positive pressure ventilation via nasal prongs or other nasal device at any time on the day of death.

Item 39g. Nasal CPAP at Discharge [CPAPFINAL]

Select **Yes** if the infant went home or was transferred on continuous positive airway pressure applied through the nose.

Select **No** if the infant was not discharged on continuous positive airway pressure applied through the nose.

Select **Unknown** if this information cannot be obtained.

For an infant who died prior to discharge, select "Yes" if the infant received continuous positive airway pressure applied through the nose at any time on the day of death. Select "No" if the infant did not receive continuous positive airway pressure applied through the nose at any time on the day of death.

Notes:
CPAP administered through a face mask covering the nose without the administration of intermittent breaths is considered nasal CPAP for the purpose of this definition.

High flow nasal cannula oxygen is not considered nasal CPAP for the purpose of this definition.

13. Item 35d. Other Device at Discharge [OTHFINAL]

Starting in 2018, **Item 35d. Other Device at Discharge [OTHFINAL]** and **Other Device at Discharge Description [OTHFINALDESC]** will be deleted from the data set.

14. Post-Delivery Diagnoses and Interventions – Infections

Item 40. Early Bacterial Sepsis and/or Meningitis On or Before Day 3 [EBSEPS] [EBSEPSCD1-3]

Starting in 2018, CPQCC will update the coding rules for **Item 40. Early Bacterial Sepsis and/or Meningitis On or Before Day 3 [EBSEPS] [EBSEPSCD1-3].**
For the on-line form, CPQCC will add a drop-down list with pathogen choices. Members can select up to three Early Bacterial Sepsis pathogen codes **[EBSEPSCD1**, **EBSEPSCD2, EBSEPSCD3]** from Appendix C. Bacterial Pathogens List. The "Other" choice and "Other Description" **[EBSEPSDESC]** will be deleted from the database. The answer choices for this item will be updated to the following:

Select **Yes** if a bacterial pathogen from the Bacterial Pathogens List was recovered from a blood and/or cerebrospinal fluid culture obtained on day 1, 2, or
3 of life.

Select **No** if a bacterial pathogen from the Bacterial Pathogens List was not recovered from a blood culture or cerebrospinal fluid culture obtained on day 1, 2,
or 3 of life, or if no blood or cerebrospinal fluid cultures were obtained on day 1,
2, or 3 of life.

Select **Unknown** if this information cannot be obtained.

If Bacterial Sepsis and/or Meningitis on or before Day 3 is answered "Yes", then the drop-down list will be activated. Select up to three pathogen codes from the Bacterial Pathogens List that were recovered from a blood and/or cerebrospinal fluid culture. This item is not applicable if Bacterial Sepsis and/or Meningitis on or before Day 3 is answered "No".

Item 41. Late infection after Day 3 [LBPATH]

Item 41a. Late Bacterial Sepsis and/or Meningitis [LBPATH] [LBPATHCD1-3]

Starting in 2018, CPQCC will update the coding rules for **Item 41a. Late Bacterial Sepsis and/or Meningitis [LBPATH] [LBPATHCD1-3]**. For the on-line form, CPQCC will add 2 drop-down lists for this item. Starting in 2018, the "Other" choice and "Other Description" **[LBPATHDESC]** will be deleted from the database.

1. **Late Bacterial Sepsis and/or Meningitis [LBPATH].** In the first drop-down list, users will select from the following answer choices:

   Select **Yes Here** if a bacterial pathogen from the list of Bacterial Pathogens was recovered from a blood and/or cerebrospinal fluid culture after Day 3 of life at YOUR hospital prior to initial disposition or following readmission after initial transport.

   Select **Yes Elsewhere** if a bacterial pathogen from the list of Bacterial Pathogens was recovered from a blood and/or cerebrospinal fluid culture obtained after Day 3 of life at ANOTHER hospital prior to initial disposition or following readmission after initial transport.

   Select **Yes Here, and Elsewhere** if a bacteria pathogen from the list of Bacterial Pathogens was recovered from a blood and/or cerebrospinal fluid culture obtained after Day 3 of life BOTH at your hospital AND another hospital prior to initial disposition or following readmission after initial transport.

   Select **No** if a bacterial pathogen from the list of Bacterial Pathogens was not recovered from a blood and/or cerebrospinal fluid culture, or if no blood or cerebrospinal fluid cultures were obtained after Day 3.

   Select **Unknown** if this information cannot be obtained.

   Select **Not Applicable** if any of the following applies:
   The infant is discharged home or dies on or before Day 3; OR
   The infant is transported from your center to another hospital on or before

day 3 and either is not readmitted to your center before discharge home, death or first birthday or, is transported a second time on or before the Day 3.

2. **Late Bacterial Sepsis Code [LBPATHCD1-3].** In the second drop-down, if late Bacterial Sepsis and/or Meningitis after Day 3 is answered "Yes", then select up to 3 pathogens **[LBPATHCD1, LBPATHCD2, LBPATHCD3]** from the Appendix C. Bacterial Pathogens List. This item is not applicable if late bacterial sepsis and/or meningitis did not occur.

Starting in 2018, CPQCC will add 6 new pathogens to Appendix C: Bacterial Pathogens List to match with VON. All 35 Bacterial Pathogens have been assigned codes, which will be listed in Appendix C.

2018 VON 6 New Pathogens
1302 Morganella morganii
1601 Pantoea
1901 Salmonella species including drug-resistant Salmonella serotype Typhi
1903 Staphylococcus coagulase positive [aureus] including Methicillin resistant Staphylococcus aureus and Vancomycin-resistant Staphylococcus aureus
1905 Group B Streptococcus or GBS [also known as Streptococcus agalactiae]
1908 Streptococcus pyogenes [Group A Streptococcus]

15. Item 42. Congenital Infection [VIRAL, VIRALCD 1-3]

Starting in 2018, CPQCC will change the field description from "Congenital Viral Infection" to "Congenital Infection" to match with VON. CPQCC will add Appendix F: Congenital Infection Pathogens, which includes a list of Congenital Infection Pathogen codes. CPQCC will add a drop-down list with Congenital Infection Pathogen codes. Members can select up to three Congenital Infection Pathogen codes **[VIRALCD1] [VIRALCD2] [VIRALCD3]** from the Appendix F. Congenital Infections list. If Congenital Infection is answered "Yes", select up to three pathogen codes from the Congenital Infection Pathogens List. This Item is not applicable if Congenital Infection is answered "No".

In addition, CPQCC will add a note that includes the definition for STORCH: "STORCH (stōrch) Acronym for disease group comprising syphilis, toxoplasmosis, other infections, rubella, cytomegalovirus infection, and herpes simplex; fetal infections that can cause congenital malformations."

Select **Yes** if the infant was diagnosed with an infection on the Congenital Infection Pathogens list acquired in utero or during birth.

Select **No** if the infant was not diagnosed with an infection on the Congenital Infection Pathogens list acquired in utero or during birth.

Select **Unknown** if this information cannot be obtained

CPQCC APPENDIX F: CONGENITAL INFECTIONS
Code Description
101 Toxoplasmosis (Toxoplasma gondii)

102 Rubella virus
103 Syphilis (Treponema pallidum)
104 Cytomegalovirus
105 Herpes simplex
106 Parvovirus B19
107 Zika virus
108 Varicella zoster virus

16. Post-Delivery Diagnoses and Interventions - Other diagnoses, surgeries

Starting in 2018, CPQCC will change the field description for **Item 43c. Ibuprofen for PDA [IBUPROFEN]** to **Item 43c. Ibuprofen for prevention or treatment of PDA [IBUPROFEN]** in order with match VON**.**

Item 43c. Ibuprofen for Prevention or Treatment of PDA [IBUPROFEN]

Select **Yes** if Ibuprofen was administered at any time after birth for the prevention or treatment of PDA.

Select **No** if Ibuprofen was not administered for the prevention or treatment of PDA.

Select **Unknown** if this information cannot be obtained.

Notes:
Ibuprofen used for reasons other than the prevention or treatment of PDA should NOT be coded as Yes for this item.

17. Starting in 2018, CPQCC/VON mandates the addition of **Item 43d. Acetaminophen (Paracetamol) for prevention and treatment of PDA [ACETAMIN].**

Item 43d. Acetaminophen (Paracetamol) for prevention and treatment of PDA [ACETAMIN].

Select **Yes** if acetaminophen (paracetamol) was administered at any time after birth for the prevention or treatment of PDA.

Select **No** if acetaminophen (paracetamol) was not administered at any time after birth for the prevention or treatment of PDA.

Select **Unknown** if this information cannot be obtained.

18. Starting in 2018, CPQCC will delete the fields **Item 39d. PDA Ligation [SRGLIG]** and **Item 39e. PDA Closure by Catheterization [PDACLOSE].** CPQCC will exclude these data items from the daily VON submission file. These fields will be combined into **43e. PDA Ligation or PDA Closure by Catheterization [PDASURG].**

Starting in 2018, CPQCC/VON has mandated the addition of a new **item 43e. PDA Ligation or PDA Closure by Catheterization [SRGPDA].**

Item 43e. PDA Ligation or PDA Closure by Catheterization [SRGPDA]

Select **Yes, here** if closure of the ductus arteriosus by ligation or catheterization was attempted either in the operating room or NICU at YOUR hospital prior to initial disposition or following readmission after initial transport,

Select **Yes, elsewhere** if closure of the ductus arteriosus by ligation or catheterization was attempted either in the operating room or NICU at ANOTHER hospital.

Select **Yes, here and elsewhere** if closure of the ductus arteriosus by ligation or catheterization was attempted either in the operating room or NICU BOTH at your hospital and another hospital.

If item 43e is coded Yes (Here, Elsewhere or Here and Elsewhere), at least one of the following three surgery codes should be listed as Other Surgery code:

S515 Open thoracotomy for patent ductus arteriosus closure
S516 Thoracoscopic surgery for patent ductus arteriosus closure
S605 Interventional catheterization for patent ductus arteriosus closure

Select **No** if closure of the ductus arteriosus was not attempted with surgery or by interventional catheterization.

Select **Unknown** if this information cannot be obtained.

19. Starting in 2018, CPQCC will match VON's Discontinued Data Items and Surgery Code Items.

The following Surgery Code Items have been discontinued for infants born in 2018 and later.

Discontinued Surgery Items:
S316 Gastroschisis repair (primary or staged)
S317 Omphalocele repair (primary or staged)

The following Surgery Code Items have been added for infants born in 2018 and later.

New Surgery Items:
S338 Primary closure for gastroschisis
S339 Staged closure for gastroschisis
S340 Primary closure for omphalocele
S341 Staged closure for omphalocele
S507 Norwood procedure with Sano modification
S508 Norwood procedure with aortopulmonary shunt
S509 Hybrid surgery (ductal stenting and bilateral branch pulmonary artery banding)
S510 Truncus arteriosus repair
S511 Arterial switch
S512 Repair of total anomalous pulmonary venous return
S513 Aorta pulmonary shunt
S514 Pulmonary artery banding

S515 Open thoracotomy for patent ductus arteriosus closure
S516 Thoracoscopic surgery for patent ductus arteriosus closure
S605 Interventional catheterization for patent ductus arteriosus closure

Item 47b. Surgery Codes and Surgical Site Infections at Your Hospital [SRGCD1-10] [SRGSSI 1-10]

Starting in 2018, CPQCC will add a check box to each surgery code. The checkbox will be active only if the surgery was done **Here**, and it will indicate whether this surgery had a surgical site infection associated with it at your hospital. **Surgical Site Infection [SRGSSI 1-10]**

Check the box if, at any time prior to discharge, the infant had a surgical site infection associated with this surgical procedure at Your Hospital.

Do not check the box if, at any time prior to discharge, the infant did not have a surgical site infection associated with this surgical procedure at Your Hospital.

NOTES:
Surgical site infections include superficial, deep incisional, or organ space. Please refer to the Centers for Disease Control website for descriptions of these infections: http://www.cdc.gov/nhsn/acute-carehospital/ssi/.

If the infant had multiple surgical procedures at the same episode of surgery, code only one surgical code that resulted in the surgical site infection.

In the on-line form, if there are multiple surgeries that occurred at the NICU, then the user can only check one of these boxes. The check boxes will be added for each surgery code that occurred at Your Hospital; they will be disabled if one surgery is associated with a surgical site infection or if the surgery was performed elsewhere.

20. <u>Post-Delivery Diagnoses and Interventions -Congenital Malformations:</u>

<u>Item 52. Congenital anomaly</u>

Starting 2018, the field description for "Birth Defect" will be changed to "Congenital Anomaly". CPQCC will match this change in this item's code descriptions and in Appendix E: Congenital Anomaly.

[CMAL] – Major Congenital Anomaly
[BDCD1]- Congenital Anomaly Code 1
[BDCD2] - Congenital Anomaly Code 2
[BDCD3]- Congenital Anomaly Code 3
[BDCD4] - Congenital Anomaly Code 4
[BDCD5] – Congenital Anomaly Code 5
[BDEFECT] – Congenital Anomaly Description

21. <u>Close-Out Checklist</u>

Starting in 2017, CPQCC will add **Item 11. Minimized use of Confirmed Unknown to ≤ 3% for key risk factors and outcomes.** to the 2017 Close-Out Checklist.

The variables included in this requirement are currently listed in the Confirmed Unknown Report in the first row, at least one **Risk Factor Unknown [RFMISS]**

Variable Name	Description
rfmiss	At Least 1 Risk Factor Unknown (Birth Weight, Gestational Age, Prenatal Care, Sex, Congenital Anomaly (including specific anomalies if applicable), Multiple, 5-Minute Apgar, Maternal Age)

and third row, at least one **CCS Report Outcome/Process Measure Unknown [OUTMISS]**

outmiss	At Least 1 CCS Report Outcome/Process Measure Unknown (Enteral Feeding at Home Discharge, Any Disposition Item, Initial LOS, Total LOS, Oxygen @ 36 weeks, Oxygen @ Age 28 days, Antenatal Steroids, Temperature at NICU Admission, Cooling Status, Late Bacterial Infection, CNegStaph Infection, Fungal Infection, Eye Exam, Grade of ROP, Cranial Image by Age 28 Days, Grade of Hemorrhage, Shunt Placed, Pneumothorax, NEC, PVL, Postnatal Steroids Given, Postnatal Steroids for CLD, PDA Ligation, NEC Surgery, ROP Surgery, Discharged on Oxygen)

If confirmed unknown percentages for key risk factor and outcomes are >3%. The member can note the reason in the comment section of the Close-Out Checklist.

The Close-Out Checklist items following Item 11. will be renumbered:
Item 12. Addressed and resolved all inconsistencies listed in the DCR for birth year 2017.

Item 13. HRIF registration is 100% of 2017 VLBW infants, infants < 32 completed weeks gestation, infants with HIE/Cooling, infants with ECMO, Congenital Heart Disease, Inhaled Nitric Oxide > 4hrs, and seizures born in 2017 and discharged home from reporting NICU.

Item 14. Confirmation of CCS report for birth year 2017. The CCS reports will be available for review continuously starting from April 1, 2018.

V. New and Revised Items for the CCS Supplemental Form and the CCS Report

1. Starting in 2017, a warning will be added to Section F. Central line-Associated Bloodstream Infections (CLABSI) of Infants born in 2017 by Birth Weight, if a CLABSI rate is > 2X the highest rate from the previous year based on all NICUs and all birth weight groups.

2. **CPQCC All NICU Admissions Database. (OPTIONAL).** The CPQCC All NICU Admissions Database is a superset of the CPQCC data collection consisting of all admissions to a NICU participating in CPQCC.

Starting in 2018, participation in the CPQCC All NICU Admissions Database is optional. The CPQCC All NICU Admissions Database can be browsed and ultimately edited through the CPQCC website. Note that this feature will initially be developed primarily as an EDS submission feature.

The layout of the CPQCC All NICU Admissions Database is based on a tracking mechanism that CPQCC NICUs have in place in one way or the other. This mechanism tracks for all NICU admissions whether or not an infant is CPQCC eligible.

Delivery room deaths should not be entered in the CPQCC All NICU Admissions Database.

What are the advantages of participating in the CPQCC All NICU Admissions Database?

- Provide an optional tool that allows tracking of all NICU admissions for NICUs. The goal is to have a tool that is flexible enough to work for different data collection strategies.
- Update NICU admissions volume on cpqccreport.org dashboards
- Update volume and other control charts on cpqccreport.org for those items that are required to be entered for all infants (e.g., infants deaths completely reported for the first year of life among all NICU admissions)
- Use NICU admissions as denominator for big baby metrics
- Use NICU admissions as denominator for big baby metrics
- CCS form Section A row 4 (NICU deaths after day 28) can be populated
- CCS form Section B can be populated
- CCS form Section C can be populated
- CCS form Section D row 2 (inborn NICU admits by GA) can be populated
- Better verification of row 1 of CCS form Section E (should be >= cumulate initial LOS)

What are the disadvantages of participating in the CPQCC All NICU Admissions Database?

- Additional EDS data preparation
- Additional data entry (should an editing tool be offered)

Please review NICU Admissions Database v3 for detailed information (including the Layout, examples of EDS files, and FAQs) on this optional data collection.

VI. New and Revised Items for HRIF

1. CCS Congential Heart Disease (CHD)

Program Letter: 01-0917
September 27, 2017

The HRIF Numbered Letter 05-1016 and HRIF Program Letter 01-1016, both dated October 12, 2016, updated the Medical Eligibility criteria for HRIF to include Congenital Heart Disease (CHD) requiring surgery or minimally invasive intervention. This letter is written to address several requests from HRIF local programs to further clarify the CHD Medical Eligibility criteria and provide some case examples.

HRIF Medical Eligibility in these cases requires admission to a Neonatal Intensive Care Unit (NICU) or directly to a Pediatric Intensive Care Unit or Cardiovascular Intensive Care Unit (CVICU) within the neonatal period, and surgery or minimally invasive therapeutic intervention (such as catheter-based balloon angioplasty) for CHD during that hospitalization.

Given these clarifications, an example of a patient who would **not meet HRIF eligibility**: an infant who was diagnosed prenatally with Tetralogy of Fallot, admitted briefly to a NICU for monitoring and evaluation, discharged to home without intervention and without meeting other HRIF eligibility criteria, and subsequently admitted to a CVICU at four months of age for surgical intervention.

These clarifications are consistent with the CCS Program mandate for HRIF and with the goal of assuring identification and referral of those who are most vulnerable and at highest risk.

2. <u>2018 New/Revised items added to Referral/Registration (RR) Form</u>

Program Registration (section) - **"Infant enrolled in a CCS clinic (service) other than the HRIF Program"**

i. Definition - Other CCS clinic services include:

- Medical Therapy Program (http://www.dhcs.ca.gov/services/ccs/Pages/MTP.aspx)
- Special Care Centers (other than HRIF) (http://www.dhcs.ca.gov/services/ccs/scc/Pages/SCCType.aspx)
- Being seen by a specialist (e.g. neurologist) who is a CCS-paneled provider
- Being seen by a CCS-paneled provider (not necessarily a specialist) – since HRIF offers diagnostic services, not therapeutic services

ii. Medical Eligibility Profile (section) - "**Was the Norwood / Single Ventricle Palliation procedure performed"**

1. This question will only display when "CHD Requiring Surgery / Interventions" is selected.

3. <u>2018 New/Revised Items added to Standard Visit (SV) Form:</u>

1) New Item = "Infant seen by a CCS-paneled provider or enrolled in a CCS service other than the HRIF Program"

- Check **"Yes"** if the infant/child is being seen by a CCS-paneled provider or enrolled in a CCS clinic (services) other than the HRIF Program.
- Other CCS services include:
    - Being seen by a specialist (e.g. neurologist) who is a CCS-paneled provider
    - Being seen by a CCS-paneled provider (not necessarily a specialist) – since HRIF offers diagnostic services, not therapeutic services
    - Medical Therapy Program (http://www.dhcs.ca.gov/services/ccs/Pages/MTP.asp)
    - Special Care Centers (other than HRIF) (http://www.dhcs.ca.gov/services/ccs/scc/Pages/SCCType.aspx)
- Check **"No"** if the infant/child is not enrolled in any CCS clinic (services).
- Check **"Unknown"** if the information can not be obtained.

2) Section Update = **"Early Start Program"** and **"Medical Therapy Program"**

    - Adding **"Currently"** to the ES and MTP questions. (Is the child currently receiving early intervention services through….?)
    - Select only one option
    - 2 new options: **"No, Re-Referred"** and **"No, Pending Services"**
        - **No, Re-Referred** = initially referred did not receive, now referred for services
        - **No, Pending Services** = referred, but pending an appointment

3) New section = **"Other Medical Conditions" - Were there Additional Medical Conditions Identified that may impact the Child's Outcome?**

    By including categories and text field for specificity, we hope to identify other diagnoses and disorders that may impact outcomes and resource utilization above and beyond the initial HRIF eligibility criteria-related diagnoses.

    Categories: Cardiovascular and Circulatory; Endocrine and Metabolic; Eye, Ear, Nose; Gastrointestinal and Hepatobiliary; Genetic; Hematologic, Immunology, or Oncologic/Neoplasm; Infectious Diseases; Injuries, Accident, Poisoning; Renal and Genitourinary Tract; Respiratory System; Nervous System; and Other.

Starting in 2017, the CPQCC/HRIF Linked Match Summary Reports will be updated to include infants who receive inhaled nitric oxide, infants who experience seizures, and infants who receive surgery for Congenital Heart Disease.

1. Extremely Low Birth Weight Infants (ELBW) or infants with a birth weight of ≤ 1,000 grams who are admitted to the reporting NICU at age 28 days or earlier.
2. Very Low Birth Weight Infants (VLBW) or infants with a birth weight of ≤ 1,500 grams who are admitted to the reporting NICU at age 28 days or earlier.
3. Infants born at less than 28 weeks completed gestation who are admitted to the reporting NICU at age 28 days or earlier.
4. Infants born at 29 to less than 32 weeks completed gestation who are admitted to the reporting NICU at age 28 days or earlier.
5. Infants who received a diagnosis of moderate or severe HIE (AD Form Item #48 (2017) / Item # 51 (2018) - Moderate or Severe) during their NICU stay who were admitted to the reporting NICU at age 28 days or earlier.
6. Infants who experienced active cooling (AD Form Item #22c (2017) / Item # 24c (2018)) during their NICU stay and who were admitted to the reporting NICU at age 28 days or earlier.
7. Infants with ECMO (AD Form Item #31 (2017) / Item # 35 (2018)) during their NICU stay and who were admitted to the reporting NICU at age 28 days or earlier.
8. Infants who receive surgery for Congenital Heart Disease (**AD Form Item #43 (2017) / Item # 48 (2018), Surgery Codes: S500, S502, S503, S504, S505, S600, S602, S603 and S604**) during their NICU stay and who were admitted to the reporting NICU at age 28 days or earlier.
9. Infants who received Inhaled Nitric Oxide >4 hours (**AD Form Item #30 (2017) / Item # 34 (2018)**) during their NICU stay and who were admitted to the reporting NICU at age 28 days or earlier.
10. Infants who experience seizures (**AD Form Item #47 (2017) / Item # 50 (2018)**) during their NICU stay and who were admitted to the reporting NICU at age 28 days or earlier.

Appendix B - Bacterial Pathogens (For Infants Born in 2018)

Code	Description
101	Achromobacter species [including A. xylosoxidans (also known as Alcaligenes xylosoxidans) and others]
102	Acinetobacter species including multidrug-resistant Acinetobacter
103	Aeromonas species
104	Alcaligenes species [A. xylosoxidans and others]
201	Bacteroides species
202	Burkholderia species [B. capecia and others]
301	Campylobacter species [C. fetus, C. jejuni and others] including drug-resistant Campylobacter
302	Chryseobacterium Species
303	Citrobacter species [C. diversus, C. freundii, C. koseri and others]
304	Clostridium species
501	Enterobacter species [E. aerogenes, E. cloacae, and others] including Carbapenem-resistant Enterobacter
502	Enterococcus species [E. faecalis (also known as Streptococcus faecalis), E. faecium, and others] including Vancomycin-resistant Enterococcus
503	Escherichia coli including Carbapenem-resistant Escherichia coli
601	Flavobacterium species
801	Haemophilus species [H. influenzae and others]

1101	[K. oxytoca, K. pneumoniae and others] including Carbapenem-resistant Klebsiella and Cephalosporin-resistant Klebsiella
1201	Listeria monocytogenes
1301	Moraxella species [M. catarrhalis (also known as Branhamella catarrhalis) and others]
1302	Morganella morganii
1401	Neisseria species [N. meningitides, N. gonorrhoeae and others] including drug-resistant N. gonorrhoeae
1601	Pantoea
1602	Pasteurella species
1603	Prevotella species
1604	Proteus species [P. mirabilis, P. vulgaris and others]
1605	Providencia species [P. rettgeri and others]
1606	Pseudomonas species [P. aeruginosa and others] including multidrug resistant Pseudomonas aeruginosa
1801	Ralstonia species
1901	Salmonella species including drug-resistant Salmonella serotype Typhi
1902	Serratia species [S. liquefaciens, S. marcescens and others]
1903	Staphylococcus coagulase positive [aureus] including Methicillin-resistant Staphylococcus aureus and Vancomycin-resistant Staphylococcus aureus
1904	Stenotrophomonas maltophilia
1905	Group B Streptococcus or GBS [also known as Streptococcus agalactiae]
1906	Streptococcus anginosus [formerly Streptococcus milleri]
1907	Streptococcus pneumoniae
1908	Streptococcus pyogenes [Group A Streptococcus]

Appendix C – Surgery Codes for Item 47. **(For Infants Born in 2018)**

Head and Neck Surgery

Code	Description
S101	Tracheostomy/Tracheotomy
S102	Cricoid split
S103	Ophthalmologic surgery OTHER THAN laser or cryosurgery for ROP **NOTE:** Record ROP surgery in the ROP Surgery Data Item. Do not record ROP surgery in the Surgery Codes Data Item.
S104	Cleft lip or palate repair
S105	Branchial cleft sinus excision
S106	Thyroglossal duct excision
S107	Palliative or definitive repair of choanal atresia
S108	Mandibular (jaw) distraction
S109	Craniotomy
S100	Other head and neck surgery requiring general or spinal Anesthesia (Description required)

Thoracic Surgery

Code	Description
S201	Tracheal Resection
S202	Aortopexy
S203	Tracheoesophageal atresia and/or fistula repair
S204	Thoracoscopy (with or without pleuridesis/pleurectomy)
S205	Thoracotomy (with or without pleural or lung biopsy)
S206	Thoracotomy (or thoracoscopy) with pneumonectomy, lobectomy, or partial lobectomy
S207	Resection of pulmonary sequestration (intrathoracic or extrathoracic)
S208	Resection of mediastinal mass
S209	Resection of chest wall
S210	Bronchoscopy (with or without biopsy)
S211	Esophagoscopy (with or without biopsy)
S212	Surgery for Congenital Cystic Adenomatoid Malformation of the Lung
S213	Lung transplant
S214	Sternal closure
S200	Other thoracic surgery requiring general or spinal anesthesia (Description required)

Abdominal and Gastro-Intestinal Surgery

Code	Description
S301	Rectal biopsy with or without anoscopy
S302	Laparoscopy (diagnostic, with/without biopsy) ***Note:*** *If the infant has NEC surgery, record all applicable codes in Item 47. Other Surgery even if Item 44c. NEC surgery, has already been checked, "Yes".*
S303	Laparotomy (diagnostic or exploratory, with/without biopsy)
S304	Fundoplication
S305	Pyloromyotomy
S306	Pyloroplasty
S307	Jejunostomy, ileostomy, enterostomy, colostomy for intestinal diversion (with or without bowel resection, with or without fistula creation)
S308	Small bowel resection with or without primary anastomosis
S309	Large Bowel Resection
S310	Duodenal Atresia/Stenosis/Web Repair
S311	Jejunal, ileal, or colonic atresia repair (or repair of multiple intestinal atresias)
S312	Excision of Meckel's diverticulum
S313	Drainage of intra-abdominal abscess (not as primary treatment for NEC, see code S333).
S314	Surgery for meconium ileus
S315	Excision of omphalomesenteric duct or duct remnant
S318	Lysis of adhesions
S319	Repair of imperforate anus (with or without vaginal, urethral, or vesicle fistula)

S320	Pull through for Hirschsprung's disease (any technique)
S321	Pancreatectomy (partial, near total or total)
S322	Splenectomy or splenorrhaphy (partial or complete)
S323	Resection of retroperitoneal tumor
S324	Resection of sacrococcygeal tumor
S325	Repair of diaphragmatic hernia
S326	Plication of the diaphragm
S327	Gastrostomy tube/jejunostomy tube
S328	Upper endoscopy (stomach or duodenum, with or without biopsy)
S329	Colonoscopy/sigmoidoscopy (with or without biopsy)
S330	Takedown of ostomy and/or reanastomosis of bowel (small or large bowel)
S331	Ladd's or other procedure for correction of malrotation
S332	Appendectomy
S333	Primary peritoneal drainage for NEC, suspected NEC, or intestinal perforation (If infant subsequently has other applicable surgical procedures, code those also.)
S334	Anoplasty
S335	Kasai procedure
S336	Liver biopsy done during laparotomy or laparoscopy (includes wedge or needle techniques)
S337	Umbilical hernia repair
S338	Primary closure for gastroschisis
S339	Staged closure for gastroschisis
S340	Primary closure for omphalocele
S341	Staged closure for omphalocele
S300	Other abdominal surgery requiring general or spinal anesthesia (Description required)

Genito-Urinary Surgery

Code	Description
S401	Cystoscopy (diagnostic, with or without biopsy)
S402	Adrenalectomy
S403	Nephrectomy
S404	Nephrostomy
S405	Ureterostomy
S406	Resection of urachal cyst
S407	Cystostomy
S408	Closure of bladder exstrophy
S409	Resection of posterior urethral valves
S410	Inguinal hernia repair
S411	Orchiopexy
S412	Orchiectomy
S413	Drainage, excision or removal of ovarian cyst
S414	Oopherectomy (partial or complete)
S416	Pyeloplasty
S417	Renal transplant
S400	Other genito-urinary surgery requiring general or spinal anesthesia

	(description required)

Open Heart or Vascular Surgery

Code	Description
S501	Vascular Ring division
S502	Repair of coarctation of the aorta
S503	Repair of major vascular injury
S504	Repair or palliation of congenital heart disease
S505	Heart transplant
S506	Implated pacemaker (permanent-do not use code for temporary pacemaker)
S507	Norwood procedure with Sano modification
S508	Norwood procedure with aortopulmonary shunt
S509	Hybrid surgery (ductal stenting and bilateral branch pulmonary artery banding)
S510	Truncus arteriosus repair
S511	Arterial switch
S512	Repair of total anomalous pulmonary venous return
S513	Aorta pulmonary shunt
S514	Pulmonary artery banding
S515	Open thoracotomy for patent ductus arteriosus closure
S516	Thoracoscopic surgery for patent ductus arteriosus closure
S500	Other open heart or vascular surgery requiring general or spinal anesthesia (Description required)

Diagnostic or Interventional Cardiac Catheterization

Code	Description
S601	Diagnostic cardiac catheterization
S602	Interventional catheterization with balloon septostomy
S603	Interventional catheterization with aortic valvuloplasty
S604	Interventional catheterization with pulmonary valvuloplasty
S605	Interventional catheterization for patent ductus arteriosus closure
S600	Other interventional catheterization whether or not anesthesia was required (Description required)

Skin and Soft Tissue Surgery

Code	Description
S700	Skin or soft tissue surgery requiring general or spinal anesthesia (Description required)

Musculo-Skeletal System Surgery

Code	Description
S800	Other musculoskeletal surgery requiring general or spinal anesthesia (Description required)

Central Nervous System Surgery

Code	Description
S901	Ventriculoperitoneal or other ventricular shunt
S902	External ventricular drain
S903	Ventricular drain with reservoir placement or removal
S904	Meningocele or myelomeningocele repair
S905	Encephalocele repair
S900	Other central nervous system surgery requiring general or spinal anesthesia (Description required)

Fetal Surgery (record if fetal surgery was done at your hospital or another hospital)

Code	Description
S1000	Fetal surgery at your hospital (description required)
S1001	Fetal surgery at another hospital (description required)

Conjoined Twins

Code	Description
S1101	Separation of conjoined twins

Appendix D – Congenital Anomalies Item 52. (For Infants Born in 2018)

The following Congenital Anomaly Codes require a detailed description in the space provided for Item 52 on the Admission/Discharge Form:

Code	Description
100	Other Lethal or Life Threatening Defects not listed in Appendix C
150	Other Lethal or Life Threatening Central Nervous System Defects
200	Other Lethal or Life Threatening Congenital Heart Defects
300	Other Lethal or Life Threatening Gastro-Intestinal Defects
400	Other Lethal or Life Threatening Genito-Urinary Defects
504	Other Chromosomal Anomaly
601	Skeletal Dysplasia
605	Inborn Error of Metabolism
800	Other Lethal of Life Threatening Pulmonary Malformation
900	Other Vascular or Lymphatic Defects

The following conditions should NOT be coded as Major Congenital Anomalies:

Cleft Lip without Cleft Palate
Club Feet
Congenital Dislocation of the Hips
Extreme Prematurity
Fetal Alcohol Syndrome
Hypospadias
Hypothyroidism

Intrauterine Growth Retardation
Intrauterine Infection
Limb Abnormalities
Patent Ductus Arteriosus
Persistent Pulmonary Hypertension (PPHN)
Polydactyly
Pulmonary Hypoplasia (use code 401 for bilateral renal agenesis or 604 for oligohydramnios sequence, if applicable)
Small Size for Gestational Age
Syndactyly

Central Nervous System Anomalies

Code	Description
101	Anencephaly
102	Meningomyelocele
103	Hydranencephaly
104	Congenital Hydrocephalus
105	Holopresencephaly
106	Microcephaly
107	Hypopituitary
108	Septic Optic Dyplasia
109	Encephalocele
150	Other lethal or life threatening CNS anomaly not listed above (Description required)

Congenital Heart Anomalies

Codes	Description
201	Truncus Arteriosus
202	Transposition of the Great Vessels
203	Tetralogy of Fallot with or without Pulmonary Atresia
204	Single Ventricle
205	Double Outlet Right Ventricle
206	Complete Atrio-Ventricular Canal
207	Pulmonary Atresia with Intact Ventricular Septum
208	Tricuspid Atresia
209	Hypoplastic Left Heart Syndrome
210	Interrupted Aortic Arch
211	Total Anomalous Pulmonary Venous Return
212	Coarctation of the Aorta
213	Atrial septal defect (ASD)
214	Ventricular septal defect (VSD)
215	Arrythmias
216	Ebsteins Anomaly
217	Pericardial Effusion
218	Pulmonary Stenosis
219	Hypertrophic Cardiomyopathy

220	Penatalogy of Cantrell (Thoraco-Abdominal Ectopia Cordis)
200	Other lethal or life threatening Congenital Heart Anomalies not listed above (Description required)

Gastro-Intestinal Anomalies

Code	Description
301	Cleft Palate
302	Tracheo-Esophageal Fistula
303	Esophageal Atresia
304	Duodenal Atresia
305	Jejunal Atresia
306	Ileal Atresia
307	Atresia of Large Bowel or Rectum
308	Imperforate Anus
309	Omphalocele
310	Gastroschisis
311	Pyloric Stenosis
312	Annular Pancreas
313	Biliary Atresia
314	Meconium Ilius
315	Malrotation Volvuvu
316	Hirschsprung's Disease
300	Other lethal or life-threatening GI Anomalies not listed above (Description required)

Genito-Urinary Anomalies

Code	Description
401	Bilateral Renal Agenesis
402	Bilateral Polycystic, Multicystic, or Dysplastic Kidneys
403	Obstructive Uropathy with Congenital Hydronephrosis
404	Exstrophy of the Urinary Bladder
400	Other lethal or life-threatening Genito-Urinary Anomalies not listed above (Description required)

Chromosomal Anomalies

Code	Description
501	Trisomy 13
502	Trisomy 18
503	Trisomy 21
504	Other Chromosomal Anomaly (Description Required)
505	Triploidy

Other Congenital Anomalies

Code	Description
601	Skeletal Dysplasia (Description Required)
602	Congenital Diaphragmatic Hernia
603	Hydrops Fetalis with anasarca and one or more of the following: ascites, pleural effusion, pericardial effusion
604	Oligohydramnios Sequence including all 3 of the following: (1) Oligohydramnios documented by antenatal ultrasound 5 or more days prior to delivery, (2) evidence of fetal constraint on postnatal physical exam (such as Potter's facies, contractures, or positional physical exam (such as Potter's facies, contractures or positional deformities of limbs), and (3) postnatal respiratory failure requiring endotracheal intubation and assisted ventilation.
605	Inborn Error of Metabolism (Description Required)
606	Myotonic Dystrophy requiring endotracheal intubation and assisted ventilation
607	Conjoined Twins
608	Tracheal Agenesis or Atresia
609	Thanatophoric Dysplasia Types 1 and 2
610	Hemoglobin Barts

Pulmonary Anomalies

Code	Description
701	Congenital Cystic Adenomatoid Malformation of the Lung
801	Congenital Lobar Emphysema
802	Congenital Cystic Adenomatoid Malformation of the Lung
803	Sequestered Lung
804	Aveolar Capillary Dysplasia
800	Other lethal or life-threatening Pulmonary Defects not listed above (Description required)

Vascular and Lymphatic Anomalies

Code	Description
901	Cystic Hygroma
902	Hemangioma
903	Sacrococcygeaal Teratoma
904	Cerebral AV Malformation
900	Other Vascular or Lymphatic not listed above (DESCRIBE)

Other Diagnoses

Code	Description
121	Hematologic
122	Hemolytic Disease of the Newborn (Not ABO)

Other Lethal or Life Threatening Anomalies

Code	Description
100	Other lethal or life threatening anomalies not listed above (description required)

Appendix E – CONGENITAL INFECTIONS item 42. (For infants born in 2018)

Code	Description
101	Toxoplasmosis (Toxoplasma gondii)
102	Rubella virus
103	Syphilis (Treponema pallidum)
104	Cytomegalovirus
105	Herpes simplex
106	Parvovirus B19
107	Zika virus
108	Varicella zoster virus