NATIONAL QUALITY FORUM

Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 0471
Corresponding Measures:
De.2. **Measure Title:** PC-02 Cesarean Birth
Co.1.1. **Measure Steward:** The Joint Commission
De.3. **Brief Description of Measure:** This measure assesses the rate of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth. This measure is part of a set of four nationally implemented measures that address perinatal care (PC-01: Elective Delivery, ePC-01: Elective Delivery; PC-02: Cesarean Birth, ePC-02: Cesarean Birth will be added as an eCQM 1/1/2020; PC-05: Exclusive Breast Milk Feeding, ePC-05: Exclusive Breast Milk Feeding; PC-06 Unexpected Complications in Term Newborns was added 1/1/2019).
PC-02: Cesarean Birth is one of three measures in this set that have been re-engineered as eCQMs (ePC-01 Elective Delivery, ePC-02 Cesarean Birth and ePC-05 Exclusive Breast Milk Feeding).

A reduction in the number of nulliparous patients with live term singleton newborns in vertex position (NTSV) delivering by cesarean birth will result in increased patient safety, a substantial decrease in maternal and neonatal morbidity and substantial savings in health care costs, Main et al. (2011). Successful quality improvement efforts incorporate audit and feedback strategies combined with provider and nurse education, guidelines and peer review.

The measure will assist health care organizations (HCOs) to track nulliparous patients with live term singleton newborns in vertex position delivering by cesarean birth to reduce the occurrence. Nulliparous women have 4-6 times the cesarean birth rate than multiparous women; thus, the NTSV population is the largest driver of primary cesarean birth rate. Furthermore, nulliparity varies greatly among hospitals (20% to 60%) making it the most important risk factor for stratification or adjustment, Main et al. (2006). NTSV has the large variation among facilities, thus identifying an important population on which to focus quality improvement efforts.

In addition, a reduction in primary cesarean births will reduce the number of women having repeat cesarean births (currently >90% of mothers who have a primary cesarean birth will have a Cesarean for all her subsequent births). Thus, improvement in the rates of cesarean birth for the first birth will reduce the morbidity of all future births and avoid all the controversies with trial of labor after cesarean/elective repeat cesareans.

Main, E.K., Moore, D., Farrell, B., Schimmel, L.D., Altman, R.J., Abrahams, C., et al., (2006). Is there a useful cesarean birth measure? Assessment of the nulliparous term singleton vertex cesarean birth rate as a tool for obstetric quality improvement. Am J Obstet Gynecol. 194:1644-51.
Main, E.K., Morton, C.H., Hopkins, D., Giuliani, G., Melsop, K. and Gould, J.B. (2011). Cesarean Deliveries, Outcomes, and Opportunities for Change in California: Toward a Public Agenda for Maternity Care Safety and Quality. Palo Alto, CA: CMQCC.
1b.1. **Developer Rationale:** The removal of any pressure to not perform a cesarean birth has led to a skyrocketing of hospital, state and national cesarean birth (CB) rates. Some hospitals now have CB rates over 50%. Hospitals with CB rates at 15-20% have infant outcomes that are just as good and better maternal outcomes (Gould et al., 2004). There are no data that higher rates improve any outcomes, yet the CB rates continue to rise. This measure seeks to focus attention on the most variable portion of the CB epidemic, the term labor CB in nulliparous women. This population segment accounts for the large majority of the variable portion of the CB rate, and is the area most affected by subjectivity.
As compared to other CB measures, what is different about NTSV CB rate (Low-risk Primary CB in first births) is that there are clear cut quality improvement activities that can be done to address the differences. Main et al. (2006) found that over 60% of the

variation among hospitals can be attributed to first birth labor induction rates and first birth early labor admission rates. The results showed if labor was forced when the cervix was not ready the outcomes were poorer. Alfirevic et al. (2004) also showed that labor and delivery guidelines can make a difference in labor outcomes. Many authors have shown that physician factors, rather than patient characteristics or obstetric diagnoses are the major driver for the difference in rates within a hospital (Berkowitz, et al., 1989; Goyert et al., 1989; Luthy et al., 2003). The dramatic variation in NTSV rates seen in all populations studied is striking according to Menacker (2006). Hospitals within a state (Coonrod et al., 2008; California Office of Statewide Hospital Planning and Development [OSHPD], 2007) and physicians within a hospital (Main, 1999) have rates with a 3-5 fold variation.
A reduction in the number of nulliparous patients with live term singleton newborns in vertex position (NTSV) delivering by cesarean birth will result in increased patient safety, a substantial decrease in maternal and neonatal morbidity and substantial savings in health care costs. Successful quality improvement efforts incorporate audit and feedback strategies combined with provider and nurse education, guidelines and peer review

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Sources

- Agency for Healthcare Research and Quality. (2002). AHRQ Quality Indicators Guide to Inpatient Quality Indicators: Quality of Care in Hospitals Volume, Mortality, and Utilization. Revision 4 (December 22, 2004). AHRQ Pub. No. 02-RO204.
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S.4. **Numerator Statement:** Patients with cesarean births with ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for cesarean birth as defined in Appendix A, Table 11.06.
S.6. **Denominator Statement:** The outcome target population being measured is: Nulliparous patients with an ICD-10-CM Principal or Other Diagnosis Code for outcome of delivery as defined in Appendix A, Table 11.08 and with a delivery of a newborn with 37 weeks or more gestation completed or with an ICD-10-PCS Principal or Other Procedure Codes for delivery as defined in Appendix A, Tables 11.01.1.
S.8. **Denominator Exclusions:** • ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for multiple gestations and other presentations as defined in Appendix A, Table 11.09
• Less than 8 years of age
• Greater than or equal to 65 years of age
• Length of Stay >120 days
• Gestational Age < 37 weeks or UTD

De.1. **Measure Type:** Outcome
S.17. **Data Source:** Electronic Health Records, Other, Paper Medical Records
S.20. **Level of Analysis:** Facility, Other

IF Endorsement Maintenance – Original Endorsement Date: Oct 24, 2008 **Most Recent Endorsement Date:** Nov 20, 2020

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. **IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?** Not Applicable

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. ***Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.***

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form
2020_nqf_evidence_attachment_PC02_0471.docx
1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?
Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.
Yes

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure *(e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)*
If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

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1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

2020 Submission

CY 2018: Recent data continues to show considerable variability, with over half of hospitals reporting rates above The Healthy People 2020 goal of 23.9%. Statistics for 2018 discharges are as follows:

CY 2018 Statistics:
Number of hospitals: 1936
Total Number of Patients: 490,481
Mean (SD): 25.7% (7.6%)
IQR: 8.9%
Deciles (0,10,20,30,40,50,60,70,80,90,100): 2.0%, 16.9%, 19.7%, 21.8%, 23.5%, 25.0%, 26.8%, 28.6%, 30.9%, 34.8%, 100%

Correction

The trend for this measure shows a significant decrease in the rate in 2018. Recent data continues to show considerable variability, with over half of hospitals reporting rates above the Healthy People 2020 goal of 23.9%.
2015-26.2%
2016-26.1%
2017-26.0%
2018-25.5%

2016 Submission
Nulliparous term singleton vertex cesarean births continue to remain above The Healthy People 2020 goal of 23.9% (DHHS, 2010). The Perinatal Care (PC) core measures were added as a new core measure set in 2010 for hospitals to select in order to meet their ORYX performance measurement requirement for Joint Commission accreditation purposes. At that time, approximately 165 hospitals reported the data with an average measure rate of 26.7% (n=25,143 patients). In January 2014, The Joint Commission required mandatory reporting of the PC measure set for all accredited hospitals with 1100 births or more annually. 1388 hospitals reported the data with an average rate of 26.8% (n=363,400 patients). The 2014 performance gap persists with improvement noted primarily in the lower quartile (21.1%) and 10th percentile (17.6%) hospitals. It is important to note that a performance gap of 12.4% exists for the 90th percentile of hospitals performing at 36.3% (if 23.9% is considered goal performance). The 2014 mean rate of 26.7% also remains above the HP 2020 goal. The threshold for mandatory reporting was recently lowered to 300 births annually effective January 2016. The new reporting requirement will now capture approximately 80% of all accredited birthing hospitals. As a result, the rates increased with the addition of approximately 821 more hospitals reporting data. Below is the specified level of analysis for PC-02 beginning with discharges April 1, 2010 through December 31, 2014.

- 2Q 2010: 25,143 denominator cases; 6,708 numerator cases; 165 hospitals; 26.7% national aggregate rate; 0.26636 mean of hospital rates; 0.09659 standard deviation; 40.0% 90th percentile rate; 31.9% 75th percentile rate/upper quartile; 26.3% 50th percentile rate/median rate; 20.5% 25th percentile rate/lower quartile; and 15.4% 10th percentile rate.
- CY 2011: 33,379 denominator cases; 8,779 numerator cases; 166 hospitals; 26.3% national aggregate rate; 0.26283 mean of hospital rates; 0.08961 standard deviation; 35.3% 90th percentile rate; 30.7% 75th percentile rate/upper quartile; 25.7% 50th percentile rate/median rate; 20.8% 25th percentile rate/lower quartile; and 16.8% 10th percentile rate.
- CY 2012: 33,944 denominator cases; 9,428 numerator cases; 169 hospitals; 26.2% national aggregate rate; 0.26335 mean of hospital rates; 0.08582 standard deviation; 36.1% 90th percentile rate; 31.1% 75th percentile rate/upper quartile; 25% 50th percentile rate/median rate; 20.2% 25th percentile rate/lower quartile; and 17.1% 10th percentile rate.
- CY 2013: 44,679 denominator cases; 11,553 numerator cases; 200 hospitals; 25.9% national aggregate rate; 0.25792 mean of hospital rates; 0.09181 standard deviation; 35.7% 90th percentile rate; 30.8%% 75th percentile rate/upper quartile; 25% 50th percentile rate/median rate; 20% 25th percentile rate/lower quartile; and 16.4% 10th percentile rate.
- CY 2014: 363,400 denominator cases; 97,270 numerator cases; 1388 hospitals; 26.8% national aggregate rate; 0.26732 mean of hospital rates; 0.09064 standard deviation; 36.3% 90th percentile rate; 31.0% 75th percentile rate/upper quartile; 25.9% 50th percentile rate/median rate; 21.2% 25th percentile rate/lower quartile; and 17.6% 10th percentile rate.

Note: PC-02 hospital rates listed in this section were not age standardized.

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.
Not applicable

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. *(This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.) For measures that show high levels of performance, i.e., "topped out", disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*
For 2018 discharges:
Rates by Age category

Age	Rate (%)
<20	16.1
20-24	21.6
25-29	25.2
30-34	28.9
35-39	38.1
40+	53.0

Rates by Hispanic Ethnicity

Hispanic Ethnicity	Rate (%)
No	24.9
Yes	24.7

Rates by Race	
Race	Rate (%)
White	24.1
African American	29.0
American Indian	24.3
Asian	25.0
Pacific Islander	26.7
Unable to Determine	24.2

1b.5. **If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4**
Not applicable

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. ***Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.***

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. **Subject/Topic Area** *(check all the areas that apply):*
Perinatal Health

De.6. **Non-Condition Specific***(check all the areas that apply):*
Disparities Sensitive, Safety : Complications, Safety : Overuse

De.7. **Target Population Category** *(Check all the populations for which the measure is specified and tested if any):*
Women

S.1. **Measure-specific Web Page** *(Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)*
https://manual.jointcommission.org/releases/TJC2020A2/

S.2a. **If this is an eMeasure**, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)
This is not an eMeasure **Attachment:**

S.2b. **Data Dictionary, Code Table, or Value Sets** *(and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)*
Attachment **Attachment:** PC02AppendixATJCTablesv2020A2.xlsx

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.
No, this is not an instrument-based measure **Attachment:**

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.
Not an instrument-based measure

S.3.1. **For maintenance of endorsement:** Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.
Yes

S.3.2. **For maintenance of endorsement,** please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.
Updated data element Gestational Age: Notes for abstraction and Suggested Data Sources have been updated and reordered to clarify, reduce burden of abstraction and align with the eCQM measure specifications.

Updated data element Prior Uterine Surgery: Added notes in order to clarify abstraction of prior uterine surgeries.

Appendix A - ICD-10 Code Tables: Revised to reflect the ICD-10 code updates for Fiscal Year (FY) 2019, effective for discharges October 1, 2018

Updated data elements: Data element Number of Previous Live Births replaced with the new data element Previous Live Births to allow for capture of nulliparous by a yes or no allowable value and to reduce the burden of abstracting the actual number of previous live births.

S.4. **Numerator Statement** *(Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.*
IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).
Patients with cesarean births with ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for cesarean birth as defined in Appendix A, Table 11.06.

S.5. **Numerator Details** *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)*
IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).
Two data elements are used for the observed outcome and to calculate the numerator:

1. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization.

2. ICD-10-PCS Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.

S.6. **Denominator Statement** *(Brief, narrative description of the target population being measured)*
The outcome target population being measured is: Nulliparous patients with an ICD-10-CM Principal or Other Diagnosis Code for outcome of delivery as defined in Appendix A, Table 11.08 and with a delivery of a newborn with 37 weeks or more gestation completed or with an ICD-10-PCS Principal or Other Procedure Codes for delivery as defined in Appendix A, Tables 11.01.1.

S.7. **Denominator Details** *(All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).
Seven data elements are used to identify the outcome target population and to calculate the denominator:

1. Admission Date – The month, day, and year of admission to acute inpatient care.

2. Birthdate - The month, day, and year the patient was born.

3. Discharge Date – The month, day, and year the patient was discharged from acute care, left against medical advice, or expired during the stay.

4. Gestational Age – Documentation of the weeks of gestation completed at the time of delivery. Allowable Values: 1-50 or UTD.

5. ICD-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the other or secondary diagnoses for this hospitalization.

6. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification diagnosis code that is primarily responsible for the admission of the patient to the hospital for care during this hospitalization.

7. Number of Previous Live Births - The number of deliveries resulting in a live birth the patient experienced prior to current hospitalization. Allowable Values: 0-50 or UTD (as of 1/1/2019 Previous Live Births - Documentation that the patient experienced a live birth prior to the current hospitalization. Allowable values: Yes or No/UTD.)

S.8. **Denominator Exclusions** *(Brief narrative description of exclusions from the target population)*
• ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for multiple gestations and other presentations as defined in Appendix A, Table 11.09
• Less than 8 years of age
• Greater than or equal to 65 years of age
• Length of Stay >120 days
• Gestational Age < 37 weeks or UTD

S.9. **Denominator Exclusion Details** *(All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*
• Patients with ICD-10-CM Principal Diagnosis Code or Other Diagnosis Codes for multiple gestations and other presentations are excluded. Appendix A, Table 11.09
• The patient age in years is equal to the Admission Date minus the Birthdate. Patients less than 8 years of age or greater or equal to 65 years of age are excluded.
• Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded.
• Patients with a Gestational Age less than 37 weeks or UTD are excluded from the measure.

S.10. **Stratification Information** *(Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)*
Not Applicable

S.11. **Risk Adjustment Type** (Select type. Provide specifications for risk stratification in measure testing attachment)
No risk adjustment or risk stratification
If other:

S.12. **Type of score:**
Rate/proportion
If other:

S.13. Interpretation of Score *(Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)*
Better quality = Lower score

S.14. Calculation Algorithm/Measure Logic (*Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)*
1. Start processing. Run cases that are included in the PC-Mother Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.

2. Check ICD-10-CM Principal or Other Diagnosis Codes
a) If at least one of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.09, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
b) If none of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.09, continue processing and proceed to recheck ICD-10-CM Principal or Other Diagnosis Codes.

3. Recheck ICD-10-CM Principal or Other Diagnosis Codes
a) If none of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.08, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
b) If at least one of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.08, continue processing and proceed to Gestational Age.

4. Check Gestational Age
a) If Gestational Age is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b) If Gestational Age is less than 37 or equal to an Unable to Determine Value, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
c) If Gestational Age is greater than or equal to 37, continue processing and proceed to Number of Previous Live Births.

5. Check Previous Live Births
a) If Previous Live Births is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop Processing.
b) If Previous Live Births is Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop Processing.
c) If Previous Live Births is No, continue processing and proceed to recheck ICD-10- CM Principal Procedure or Other Diagnosis Codes.

6. Check ICD-10-PCS Principal or Other Procedure Codes
a) If all of the ICD-10-PCS Principal or Other Procedure Codes are missing or none of the ICD-10-PCS Principal or Other Procedure Codes is on Table 11.06, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.
b) If at least one of the ICD-10-PCS Principal or Other Procedure Code is on Table 11.06, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

S.15. Sampling *(If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)*
IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.
The initial patient population includes patients admitted to the hospital for inpatient acute care for deliveries. Patients are included if they have: ICD-10-PCS Principal or Other Procedure Code as defined in Appendix A, Table 11.01.1, a Patient Age (Admission Date – Birthdate) >= 8 years and < 65 and a Length of Stay (Discharge Date - Admission Date) = 120 days. The sample is taken randomly as follows for a monthly sample:
- Average monthly Initial Patient Population >= 501 results in a minimum random sample size of 101.
- Average monthly Initial Patient Population 126 – 500 results in a minimum random sample size of 20% of the population size.
- Average monthly Initial Patient Population 25 – 125 results in a minimum random sample size of 25.
- Average monthly Initial Patient Population < 25 results in no sampling; 100% Initial Patient Population required

S.16. **Survey/Patient-reported data** *(If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)*
Specify calculation of response rates to be reported with performance measure results.
Not Applicable

S.17. **Data Source** *(Check ONLY the sources for which the measure is SPECIFIED AND TESTED).*
If other, please describe in S.18.
Electronic Health Records, Other, Paper Medical Records

S.18. **Data Source or Collection Instrument** *(Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)*
IF instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.
Starting in 2020, hospitals will use the Direct Data Submission Platform for submission of chart abstracted measures. Thus, in 2020, organizations have one place to submit both eCQM and chart abstracted data. The goal of the Direct Data Submission Platform is to ease the burden and expense of submission and empower organizations with data for quality improvement.

S.19. **Data Source or Collection Instrument** *(available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)*
No data collection instrument provided

S.20. **Level of Analysis** *(Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)*
Facility, Other

S.21. **Care Setting** *(Check ONLY the settings for which the measure is SPECIFIED AND TESTED)*
Inpatient/Hospital
If other:

S.22. **COMPOSITE Performance Measure** - Additional Specifications *(Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)*
Not Applicable

2. Validity – See attached Measure Testing Submission Form
2020_nqf_testing_attachment_PC02_0471_final-637227328605591311.docx

2.1 For maintenance of endorsement
Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.
Yes

2.2 For maintenance of endorsement
Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.
Yes

2.3 For maintenance of endorsement
Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1,2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.
No - This measure is not risk-adjusted

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. **Data Elements Generated as Byproduct of Care Processes.**
generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition, Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)
If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. **To what extent are the specified data elements available electronically in defined fields** (*i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields*) Update this field for **maintenance of endorsement**.
Some data elements are in defined fields in electronic sources

3b.2. **If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources.** For **maintenance of endorsement**, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).
The Joint Commission recognizes that not all hospitals currently have the capacity to abstract the electronic version of this measure, so continues to offer this chart abstracted version which allows for data capture from unstructured data fields. All data elements needed to compute the PC-02 performance measure score were retooled for capture from electronic sources in 2016. Specifications were updated in 2019 based on testing and current eCQM standards. The measure will be available to hospitals in 2020 for data collection to meet Joint Commission accreditation requirements for eCQM submission.

3b.3. **If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.**
Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. **Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.**
IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.
At the present time, hospitals using this performance measure generally collect measure data via manual review of the EMR, data derived from vital records reports received from state or local departments of public health, delivery logs or clinical information systems or a combination. Collected data are submitted to The Joint Commission on a quarterly basis, as described previously. Specifications for this measure are freely available to anyone who wishes to use the measure. Feedback from hospitals using this measure indicates that required data elements are generally available in the medical record, and measure specifications are robust and easy to understand. As feedback from measure users has indicated the need for clarification or revision of measure specifications, this has taken place.

3c.2. **Describe any fees, licensing, or other requirements to use any aspect of the measure as specified** *(e.g., value/code set, risk*

model, programming code, algorithm).
There are no fees or licensing requirements to use the Joint Commission performance measures, all of which are in the public domain.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)
Public Reporting	Regulatory and Accreditation Programs Hospital Accreditation Program http://jointcommission.org Hospital Accreditation Program http://jointcommission.org Quality Improvement (Internal to the specific organization) Perinatal Care Certification http://www.jointcommission.org/certification/perinatal_care_certification.aspx

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

Name of program and sponsor: Hospital Accreditation Program-The Joint Commission

- Purpose: An accreditation program that recognizes hospitals that meet standard requirements to provide safe and effective patient care.
- Geographic area and number and percentage of accountable entities and patients included: Nationwide; 2005 Joint Commission-accredited hospitals reported PC-02 in 2018 (67% of Joint Commission-accredited hospitals), 1986 reported one or more denominator cases (2018)

Name of program and sponsor: The Joint Commission Perspective's-The Official Newsletter of the Joint Commission. (2019). The joint commission recognizes 20 years of ORYX performance measure reporting; look back at the 20-year evolution of performance measure reporting and review the ORYX chart-abstracted measure results for 2017 and 2018, 39, 10.

- Purpose: The Perspective's article provides authoritative, accurate, and timely information about revisions and updates to Joint Commission standards, policies, and other requirements for all Joint Commission-accredited and -certified organizations and healthcare settings.

Name of program and sponsor: Quality Check®- The Joint Commission
Public Reporting of PC-02 will begin July 2020
Quality Check®
http://www.qualitycheck.org/consumer/searchQCR.aspx

- Purpose: A public website that allows consumers to: search for accredited and certified organizations by city and state, by name or by zip code (up to 250 miles); find organizations by type of service provided within a geographic area; download free hospital performance measure results; and, print a list of Joint Commission certified disease-specific care programs and health care staffing firms.
- Geographic area and number and percentage of accountable entities and patients included: Nationwide; 3895 Joint Commission-accredited hospitals (2019)

Name of program and sponsor: Perinatal Care Certification- The Joint Commission
- Purpose: A certification program that recognizes hospitals that have achieved integrated, coordinated, patient-centered care for clinically uncomplicated pregnancies and births.
- Geographic area and number and percentage of accountable entities and patients included: Nationwide; 65 Joint Commission-accredited hospitals (2018)

4a1.2. **If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons?** (*e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?*)
The Joint Commission will begin publicly reporting hospitals with consistently high cesarean birth rates on Quality Check® July 1, 2020, using data reported by hospitals.

4a1.3. **If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement.** (*Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.*)
The Cesarean Birth measure PC-02 measures the rates of cesarean births amongst a subset of the general obstetric population of low-risk women having their first birth with a term, singleton baby in a vertex position (NTSV).
The Joint Commission will use data reported by hospitals during the calendar years 2018 and 2019, along with the following three criteria to determine a hospital's PC-02 rating:
1. =30 cases reported in both years
2. PC-02 rate >30% for the current year
3. Overall twenty-four-month aggregate PC-02 rate >30% (see note below)
Note: 2018 and 2019 data will be used for the initial release. Moving forward the overall twenty-four-month aggregate rate will be calculated from a rolling eight calendar quarters and refreshed on Quality Check biannually in July and January.
Hospitals will be identified on Quality Check with either a plus (+) or minus (-) symbol for the PC-02 measure.
- The plus (+) symbol will signify the hospital has an acceptable rate.
- A minus (-) symbol will signify the hospital's rate is consistently high and has a large enough sample size to make this determination.

Avoiding Unhealthy Consequences
For those hospitals identified as having high rates (-), The Joint Commission will also show those hospitals' actual 2019 PC-02 rates. Hospitals with acceptable rates (+) will not have the actual PC-02 rates reported. The Joint Commission believes hospitals should work to reduce unnecessary cesarean births; however, it does not want to differentiate between groups of hospitals whose rates are in the acceptable range. Lower is not always better in these cases, and The Joint Commission does not want to encourage inappropriately low rates that may be unsafe to patients.

4a2.1.1. **Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.**
How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.
The Joint Commission provides accredited healthcare organizations feedback reports for the measures submitted. The results are shared with organizations on a quarterly and/or annual basis depending on the reporting cycle of the measure. In addition, the Joint Commission has launched a new program called Continuous Customer Engagement (CCE) to assist organization in improving the quality of the performance measures. CCE includes enhanced dashboards with QI tools embedded into the dashboard, as well as focused and targeted solutions to assist organizations with gaps in the performance of their measures. The initial outreach to organizations utilizes an email process for hospital contact related to their measure rates and analysis. Response is provided in a

timely manner either by email or directly by phone. Additionally, the data is available publicly through The Joint Commission Quality Check website. Individual hospital data for each rolling yearly time period is viewable and can be downloaded from this website.

4a2.1.2. **Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.**
The Joint Commission is committed to provided valuable and actionable feedback to accredited organizations submitted the performance measurement data. The Joint Commission aggregates the Patient level data is aggregated at the hospital level quarterly. The hospital Performance Measure Report and Quality Check website are updated either quarterly or annually to reflect organization results, as well as National Benchmarks. A user guide to the Performance Measure Report is posted on the Joint Commission website. Quality Check includes yearly and quarterly hospital rates, state and national averages, and the top 10 percentile at the national and state level.

4a2.2.1. **Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.**
Describe how feedback was obtained.
The Joint Commission utilizes an automated feedback system with access available to the measured entities and the vendors contracted by measured entities. A clinical lead is responsible for each individual measure set. The system is monitored daily and response is provided typically within 8 business hours. If queries cannot be managed via written response, arrangements are made to address any issues or concerns via phone. In addition, the Joint Commission developed dashboards as part of an ongoing project to provide continuous customer engagement. The Joint Commission analyzes aggregate performance in each of measure and identifies the measures for which the greatest opportunities for improvement exist among accredited hospitals. Based on those findings, an educational webinar series that address the high-opportunity topics is developed. All accredited hospitals have access to the educational webinar series. Organizations with high opportunity for improvement are particularly encouraged to participate. The dashboard report—posted in the Resources and Tools section of an accredited hospital's secure Joint Commission Connect® extranet site—is representative of each organization's relative performance on each of the selected measures. For each measure, the dashboard shows that organization's performance compared to national, state, and Joint Commission–accredited organization averages. The dashboard is not a score-able element on survey, but rather, a tool to facilitate discussion about ongoing quality improvement work. For example, surveyors may ask an organization how it addresses the subset of performance measures in the report and what action(s) the organization is taking to improve processes.

4a2.2.2. **Summarize the feedback obtained from those being measured.**
The Joint Commission provides several venues for the organizations being measured to provide feedback. Questions on the measures are most likely to come through the clinical and data receipt mailboxes provided on all communications. In addition, the Joint Commission has advisory committees for the Hospital Accreditation Program, which meet on a quarterly basis, and have the opportunity to provide feedback on the measures being collected.

Most statistical questions on this measure were regarding how this measure was to be publicly reported in 2020. There was strong support for the public reporting of this measure from multiple stakeholders.

Queries submitted via the automated feedback system have decreased significantly for the early elective delivery measure in the past three years.

Correction
The statement "Queries submitted via the automated feedback system have decreased significantly for the measure in the past three years." does apply for PC-02.

4a2.2.3. **Summarize the feedback obtained from other users**
Same as above in 4a2.2.2.

4a2.3. **Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.**
Note: All feedback is tracked and considered. If upon analysis there are trends noted giving cause for updates, this is reviewed by the measure workgroup to confirm the need for revision. Additionally, The Joint Commission engages a Technical Advisory Panel (TAP) for review and/or approval of updates which may require their additional subject matter expertise. All measure specifications are reviewed twice a year and updates are made as needed based on feedback from the measure users, input from the TAP,

changes in the guidelines, or changes in clinical practice.

Minor modifications have been made to this measure based upon feedback received.

Improvement
Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. **Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)**
If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.
Not Applicable

4b2. Unintended Consequences
The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. **Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.**
Unintended Consequence:
Patients who did not receive prenatal care were inappropriately included in the measure denominator, as the gestational age data element was abstracted as unable to be determined (UTD).
Mitigating Action: In order to avoid penalizing hospitals, cases with UTD were removed from the measure population.

Unintended Consequence:
Some hospitals have reported higher rates due to small denominator populations as a result of sampling.
Mitigating Action:
Vital Records reports, delivery logs and clinical information systems were added as acceptable data sources to help hospitals identify all cases with =>37 weeks gestation, so that 100% of these cases could be reviewed to increase the denominator population size.

4b2.2. **Please explain any unexpected benefits from implementation of this measure.**
Not applicable

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures
Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.
No

5.1a. **List of related or competing measures (selected from NQF-endorsed measures)**

5.1b. **If related or competing measures are not NQF endorsed please indicate measure title and steward.**

5a. Harmonization of Related Measures
The measure specifications are harmonized with related measures;

OR
The differences in specifications are justified

5a.1. **If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):**
Are the measure specifications harmonized to the extent possible?
No

5a.2. **If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.**
Not Applicable

5b. Competing Measures
The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);
OR
Multiple measures are justified.

5b.1. **If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):**
Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)
Not Applicable

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.
Available at measure-specific web page URL identified in S.1 **Attachment:**

Contact Information

Co.1 **Measure Steward (Intellectual Property Owner):** The Joint Commission
Co.2 **Point of Contact:** JohnMarc, Alban, jalban@jointcommission.org, 630-792-5304-
Co.3 **Measure Developer if different from Measure Steward:** The Joint Commission
Co.4 **Point of Contact:** Tricia, Elliott, TElliott2@jointcommission.org, 630-792-5643-

Additional Information

Ad.1 **Workgroup/Expert Panel involved in measure development**
Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
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The technical advisory panel (TAP) members determined priority areas that could be evaluated to improve care related to perinatal care during the development timeframe. After implementation, minor revisions, acknowledged by TAP representatives, were made to improve clarity. Hospital feedback will be reviewed during the reliability testing phase of the project to assist the TAP in making the final measure recommendations.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 **Year the measure was first released:** 2010
Ad.3 **Month and Year of most recent revision:** 10, 2015
Ad.4 **What is your frequency for review/update of this measure?** Biannual
Ad.5 **When is the next scheduled review/update for this measure?** 01, 2020

documentation based on the published manual production timelines.

Ad.7 **Disclaimers:**

Ad.8 **Additional Information/Comments:**