# NATIONAL QUALITY FORUM

**Measure Submission and Evaluation Worksheet 5.0**

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the submitting standards web page.

NQF #: 0469 NQF Project: Perinatal and Reproductive Health Project

(for Endorsement Maintenance Review)
Original Endorsement Date: Oct 24, 2008 Most Recent Endorsement Date: Oct 24, 2008

## BRIEF MEASURE INFORMATION

De.1 Measure Title: PC-01 Elective Delivery

Co.1.1 Measure Steward: The Joint Commission

De.2 Brief Description of Measure: This measure assesses patients with elective vaginal deliveries or elective cesarean sections at >= 37 and < 39 weeks of gestation completed. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-02: Cesarean Section, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding)

2a1.1 Numerator Statement: Patients with elective deliveries with ICD-9-CM Principal Procedure Code or ICD-9-CM Other Procedure Codes for one or more of the following:
- Medical induction of labor as defined in Appendix A, Table 11.05 available at: http://manual.jointcommission.org
- Cesarean section as defined in Appendix A, Table 11.06 while not in Active Labor or experiencing Spontaneous Rupture of Membranes available at: http://manual.jointcommission.org

2a1.4 Denominator Statement: Patients delivering newborns with >= 37 and < 39 weeks of gestation completed

2a1.8 Denominator Exclusions: • ICD-9-CM Principal Diagnosis Code or ICD-9-CM Other Diagnosis Codes for conditions possibly justifying elective delivery prior to 39 weeks gestation as defined in Appendix A, Table 11.07
- Less than 8 years of age
- Greater than or equal to 65 years of age
- Length of Stay >120 days
- Enrolled in clinical trials

1.1 Measure Type: Process
2a1. 25-26 Data Source: Administrative claims, Electronic Clinical Data, Paper Records
2a1.33 Level of Analysis: Facility, Population : National

1.2-1.4 Is this measure paired with another measure? No

De.3 If included in a composite, please identify the composite measure (*title and NQF number if endorsed*):
Not Applicable

## STAFF NOTES (*issues or questions regarding any criteria*)

Comments on Conditions for Consideration:

Is the measure untested? Yes☐ No☐ If untested, explain how it meets criteria for consideration for time-limited endorsement:

1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (*check De.5*):
5. Similar/related endorsed or submitted measures (*check 5.1*):
Other Criteria:

Staff Reviewer Name(s):

## 1. IMPACT, OPPORTUITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT

Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See guidance on evidence.
*Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.* (evaluation criteria)

1a. High Impact: H☐ M☐ L☐ I ☐
(*The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.*)

De.4 Subject/Topic Areas *(Check all the areas that apply)*: Perinatal
De.5 Cross Cutting Areas (*Check all the areas that apply*): Overuse, Safety : Complications

1a.1 Demonstrated High Impact Aspect of Healthcare: Frequently performed procedure, Patient/societal consequences of poor quality

1a.2 If "Other," please describe:

1a.3 Summary of Evidence of High Impact *(Provide epidemiologic or resource use data)*:
For almost 3 decades, the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP) have had in place a standard requiring 39 completed weeks gestation prior to elective delivery, either vaginal or operative (ACOG, 1996). In 2009, ACOG published guidelines listing some of the acceptable medical indications for early induction of labor. Early term deliveries (between 37 and 38 weeks gestation) have increased dramatically from 1990 through 2006 and account for 17.5% of live births in the U.S. (Davidoff et al., 2006). A survey conducted in 2007 of almost 20,000 births in Hospital Corporation of America (HCA) hospitals throughout the U.S. carried out in conjunction with the March of Dimes at the request of ACOG, revealed that almost 1/3 of all babies delivered in the United States (US) are electively delivered earlier than the recommended 39 weeks of gestation (citation). These procedures are conducted without documented evidence supporting medical indication for early delivery. This number of elective cesarean deliveries under 39 weeks gestation, without medical indication, represents 5% of all deliveries in the U.S., those deliveries violating ACOG/AAP guidelines (Clark et al., 2009).
Clark, S., et.al., (2009) found that most early elective deliveries are for convenience, and result in significant short term neonatal morbidity (neonatal intensive care unit admission rates of 13- 21%). Clark conducted a subsequent retrospective cohort study examining 27 hospitals, and determined that when strategies were implemented to reduce non-medically indicated elective early term deliveries, there was a reduction in elective deliveries of 9.6% to 4.3% (Clark, S., et. al., 2010). Consequently, the rate of term neonatal intensive care admission also fell by 16%.
According to Glantz (2005), when comparing spontaneous labor, elective inductions result in more cesarean deliveries and longer maternal length of stay. The American Academy of Family Physicians (2000) also notes that elective induction doubles the cesarean delivery rate. Repeat elective cesarean sections before 39 weeks gestation also results in higher rates of adverse respiratory distress syndrome (RDS), mechanical ventilation, sepsis, and hypoglycemia for the newborns (Tita,, et. al., 2009). Newborns born at 37 weeks gestation have a 7.5 fold greater rate of developing RDS versus those born at 39 to 41 weeks gestation (Tita, et al., 2009). Early-term newborns born at 37-38 weeks gestation also are at higher risk for transient tachypnea of the newborn, pulmonary hypertension, hospital stays greater than 5 days as well as diagnoses associated with severe morbidities or death versus newborns delivered at 39 weeks gestation (Engle & Kominiarek, 2008).

1a.4 Citations for Evidence of High Impact cited in 1a.3:

- American Academy of Family Physicians. (2000). Tips from Other Journals: Elective induction doubles cesarean delivery rate, 61, 4.Retrieved September 16, 2011 at: http://www.aafp.org/afp/20000215/tips/39.html.
- American College of Obstetricians and Gynecologists. (November 1996). ACOG Educational Bulletin.
- American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin No 107. (2009). Induction of labor. Obstetrics & Gynecology. 114(2). 386-97.
- Clark, S., Miller, D., Belfort, M., Dildy, G., Frye, D., & Meyers, J. (2009). Neonatal and maternal outcomes associated with elective delivery. [Electronic Version]. Am J Obstet Gynecol. 200:156.e1-156.e4.
- Clark, S., Frye, D., Meyers, J., Belfort, M., Dildy, G., Kofford, S et al. (2010). Reduction in elective delivery at <39 weeks of

gestation: comparative effectiveness of 3 approaches to change and the impact on neonatal intensive care admission and stillbirth. Am J Obstet Gynecol. 203:449.e1-6.
• Davidoff, M., Dias, T., Damus, K., Russell, R., Bettegowda, V.R., Dolan, S., et al. (2006). Changes in the gestational age distributin among U.S. singleton births: impacts on rates of late preterm birth, 1992-2002. Semin Perinatol. Feb; 30(1):8-15.
• Engle, W.A. & Kominiarek, M.A. (2008). Late preterm infants, early term infants, and timing of elective deliveries. Clin Perinatol. 35:325-41.
• Glantz, J. (Apr.2005). Elective induction vs. spontaneous labor associations and outcomes. [Electronic Version]. J Reprod Med. 50(4):235-40.
• Tita, A., Landon, M., Spong, C., Lai, Y., Leveno, K., Varner, M, et al. (2009). Timing of elective repeat cesarean delivery at term and neonatal outcomes. [Electronic Version]. NEJM. 360:2, 111-120.

1b. Opportunity for Improvement: H☐ M☐ L☐ I ☐
(*There is a demonstrated performance gap - variability or overall less than optimal performance*)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:
A reduction in the number of non-medically indicated elective deliveries at >=37 to <39 weeks gestation will result in a substantial decrease in neonatal morbidity and mortality, as well as a significant savings in health care costs. In addition, the rate of cesarean sections should decrease with fewer elective inductions resulting in decreased length of stay and health care costs.

The measure will assist health care organizations (HCOs) to track non-medically indicated early term elective deliveries and reduce the occurrence.

1b.2 Summary of Data Demonstrating Performance Gap *(Variation or overall less than optimal performance across providers)*: [*For **Maintenance** – Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.*]
Despite recommendations by ACOG, current data from HCA noted previously, indicates there is a performance rate of 5% of all deliveries in the U.S. that are performed electively without medical indication. Similar data were also found in the Intermountain Healthcare Hospital of Utah and Southeastern Idaho, along with the Ohio Perinatal Quality Collaborative (OPQC). Oshiro et. al., (2009) reports an elective delivery rate of 28% in Utah and Southeastern Idaho, while the OPQC reported at rate of 25% in July of 2008.

Both of these programs were determined to reduce their rate of elective delivery using quality data measurement systems. Intermountain Healthcare Hospital of Utah and Southeastern Idaho was able to drop their reported rate of 28% to 10% after six months, and again drop to <3% after six years (Oshiro, et. al., 2009). OPQC was able to improve their rate of elective caesarian deliveries without medical indication between 36 1/7 and 38 6/7 gestation, from a reported 25% in July of 2008, to <5% in September of 2009 (OPQC 2010). Non-medically indicated inductions also decreased from 13% to 8% in the same time period.

Based on 4 quarters of data reported to The Joint Commission, PC-01 has an aggregate performance rate of 18.0%, indicating a potential performance gap of 18 % as well, when the optimal rate is 0%. There is no reportable benchmark to compare this performance rate.

1b.3 Citations for Data on Performance Gap: [*For **Maintenance** – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*]
• Clark, S., Miller, D., Belfort, M., Dildy, G., Frye, D., & Meyers, J. (2009). Neonatal and maternal outcomes associated with elective delivery. [Electronic Version]. Am J Obstet Gynecol. 200:156.e1-156.e4.
• Clark, S., Frye, D., Meyers, J., Belfort, M., Dildy, G., Kofford, S et al. (2010). Reduction in elective delivery at <39 weeks of gestation: comparative effectiveness of 3 approaches to change and the impact on neonatal intensive care admission and stillbirth. Am J Obstet Gynecol. 203:449.e1-6.
• Ohio Perinatal Quality Collaborative Writing Committee. A Statewide initiative to reduce inappropriate scheduled births at 36 0/7-38 6/7 weeks' gestation. (2010) Am J Obstet Gynecol.202:243.e1-8.
• Oshiro, B., Henry, E., Wilson, J., Branch, D., Varner, M. (2009). Decreasing elective deliveries before 39 weeks of gestation in an integrated health care system. Am J Obstet Gynecol. 113(4):804-11.
• The Joint Commission, unpublished data, 2011.

1b.4 Summary of Data on Disparities by Population Group: [*For **Maintenance** –Descriptive statistics for performance results*

*for this measure by population group*]
In a review of two studies by Engle & Kominiarek published in 2008,,it was determined that race and ethnicity have an impact on early term deliveries. When comparing Non-Hispanic White births with Hispanic and Black births, they found that the Non-Hispanic White births at 36 weeks accounted for the largest increase in elective cesarean deliveries from 1992 and 2002. This accounted for 3.1% to 3.9% of the total births reviewed in their study.

Interestingly, an overall increase was noted for all three groups. The reason for the increase has not been determined; however, factors speculated to account for the increase include socioeconomic status, access to health care and maternal demand for elective delivery. The rise in induction of labor is present for all racial groups with the highest increase in non-Hispanic whites.

1b.5 Citations for Data on Disparities Cited in 1b.4: [*For Maintenance – Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*]

• Engle, W.A. & Kominiarek, M.A. (2008). Late preterm infants, early term infants, and timing of elective deliveries. Clin Perinatol. 35:325-41.

1c. Evidence (*Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.*)
Is the measure focus a health outcome? Yes☐ No☐ If not a health outcome, rate the body of evidence.

Quantity: H☐ M☐ L☐ I☐ Quality: H☐ M☐ L☐ I☐ Consistency: H☐ M☐ L☐ I☐

| Quantity | Quality | Consistency | Does the measure pass subcriterion1c? |
|---|---|---|---|
| M-H | M-H | M-H | Yes☐ |
| L | M-H | M | Yes☐ IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise No☐ |
| M-H | L | M-H | Yes☐ IF potential benefits to patients clearly outweigh potential harms: otherwise No☐ |
| L-M-H | L-M-H | L | No ☐ |

| Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service | Does the measure pass subcriterion1c? Yes☐ IF rationale supports relationship |
|---|---|

1c.1 Structure-Process-Outcome Relationship *(Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process- health outcome; intermediate clinical outcome-health outcome)*:
The focus of the measure is to decrease the number of elective deliveries >> population determined >> population assessed >> patient delivers spontaneously or planned delivery greater or equal to 39 weeks gestation >> improved maternal and fetal outcomes >> decreased length of stay and fetal morbidity and mortality.

1c.2-3 Type of Evidence *(Check all that apply)*:
Clinical Practice Guideline, Systematic review of body of evidence (other than within guideline development)

1c.4 Directness of Evidence to the Specified Measure *(State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population)*:
The central topic for the measure is the reduction of elective deliveries at >= 37 and < 39 weeks of gestation completed. The target population for the performance measure is consistent with the body of evidence supporting the reduction of elective deliveries.

1c.5 Quantity of Studies in the Body of Evidence (*Total number of studies, not articles*): No randomized-control trials (RCTs) were identified for early-term elective deliveries. RCTs were only identified for post-term elective deliveries versus expectant management. Given the current amount of population data available on the harms of early term and late pre-term delivery, it would be unethical to conduct such a study. Several studies were identified which were retrospective cohort or prospective observational in design examining thousands of births and the potential for adverse outcomes for both mother and newborn. In addition, several recent studies were identified addressing quality improvement interventions that were successful in reducing non-medically indicated early term elective deliveries.

1c.6 Quality of Body of Evidence (*Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events*): The quality of evidence supporting the reduction in the number of non-medically indicated elective deliveries is moderate . It is noteworthy to examine the fact that randomized control trials cannot be conducted, as one cannot randomly select women to agree to an elective delivery at < 39 weeks gestation.

As previously noted, both ACOG and AAP have had guidelines in place for a number of years which do not support non-medically indicated elective deliveries at > 39 weeks gestation. Several studies consistently document increased morbidity associated with elective delivery before 39 weeks. The studies note that elective deliveries performed at < 39 weeks carry significant risk for the newborn (odds ratios 2.0-3-0 compared to newborns born between 39-41 weeks).

In spite of the fact that all studies reviewed were either retrospective or prospective cohort studies, no study design flaws were noted.

1c.7 Consistency of Results across Studies *(Summarize the consistency of the magnitude and direction of the effect):* The body of evidence consistently supports the benefit of reduction of non-medically indicated early term elective deliveries. All studies show an increase in the number of neonatal morbidities associated with early term deliveries, subsequent reduction of elective non-medically indicated deliveries reduces harm to the neonate. All studies demonstrated similar findings related to the direction of effect, though the magnitude varied from study to study, i.e., 8-17.8% increase in NICU admissions, rates of adverse respiratory outcomes, mechanical ventilation, newborn sepsis, hypoglycemia, admission to the NICU and hospitalization of 5 days or more increased by a factor of 1.8 to 4.2. and the incidence of transient tachypnea of the newborn, respiratory distress syndrome (RDS) and persistent pulmonary hypertension of the newborn were 3.1%, 0.25% and .17% respectively.

1c.8 Net Benefit *(Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms)*:

As described before, elective deliveries performed at =>39 weeks gestation results in improved maternal and neonatal outcomes and will result in a substantial decrease in cesarean sections and neonatal morbidity, as well as substantial savings in health care costs. A recent study showed that by waiting until 39 weeks gestation, the NICU admissions fell from 12.8% to 5.9%, RDS fell from 3.7% to 0.9%, newborn sepsis fell from 7.0% to 2.5% and hospitalization > 5 days fell from 9.1% to 3.6%. This same study estimated that one-half million newborn intensive care unit days could be avoided in the U.S. population were a national rate of 1.7% to be achieved, with cost savings approaching $1 billion annually.

1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? No

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: Not Applicable

1c.11 System Used for Grading the Body of Evidence: Other

1c.12 If other, identify and describe the grading scale with definitions: Although grading of the evidence was not determined during our systematic review, it was determined that the guideline developers accounted for a balanced representation of information, looked beyond one specialty group or discipline, and provided information that was accessible and met the requirements set out in this measure maintenance form.

1c.13 Grade Assigned to the Body of Evidence: Not Applicable

1c.14 Summary of Controversy/Contradictory Evidence: There is no documented evidence regarding controversy related to the reduction of non-medically indicated early term elective deliveries. A review of recent studies also supports the use of quality improvement interventions to further reduce the number of such deliveries.

1c.15 Citations for Evidence other than Guidelines*(Guidelines addressed below)*:

• American Academy of Family Physicians. (2000). Tips from Other Journals: Elective induction doubles cesarean delivery rate, 61, 4.Retrieved September 16, 2011 at: http://www.aafp.org/afp/20000215/tips/39.html.

- American College of Obstetricians and Gynecologists. (November 1996). ACOG Educational Bulletin.
- American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin No 107. (2009). Induction of labor. Obstetrics & Gynecology. 114(2). 386-97.
- Clark, S., Miller, D., Belfort, M., Dildy, G., Frye, D., & Meyers, J. (2009). Neonatal and maternal outcomes associated with elective delivery. [Electronic Version]. Am J Obstet Gynecol. 200:156.e1-156.e4.
- Clark, S., Frye, D., Meyers, J., Belfort, M., Dildy, G., Kofford, S et al. (2010). Reduction in elective delivery at <39 weeks of gestation: comparative effectiveness of 3 approaches to change and the impact on neonatal intensive care admission and stillbirth. Am J Obstet Gynecol. 203:449.e1-6.
- Davidoff, M., Dias, T., Damus, K., Russell, R., Bettegowda, V.R., Dolan, S., et al. (2006). Changes in the gestational age distributin among U.S. singleton births: impacts on rates of late preterm birth, 1992-2002. Semin Perinatol. Feb;30(1):8-15.
- Engle, W.A. & Kominiarek, M.A. (2008). Late preterm infants, early term infants, and timing of elective deliveries. Clin Perinatol. 35:325-41.
- Glantz, J. (Apr.2005). Elective induction vs. spontaneous labor associations and outcomes. [Electronic Version]. J Reprod Med. 50(4):235-40.
- Tita, A., Landon, M., Spong, C., Lai, Y., Leveno, K., Varner, M, et al. (2009). Timing of elective repeat cesarean delivery at term and neonatal outcomes. [Electronic Version]. NEJM. 360:2, 111-120.


1c.16 Quote verbatim, the specific guideline recommendation *(Including guideline # and/or page #)*:
Clinical Considerations and Recommendations Page 389

What are the indications and contraindications to induction of labor?

Indications for induction of labor are not absolute but should take into account maternal and fetal conditions, gestational age, cervical status, and other factors. Following are examples of maternal or fetal conditions that may be indications for induction of labor:
- Abruptio placentae
- Chorioamnionitis
- Fetal demise
- Gestational hypertension
- Preeclampsia, eclampsia
- Premature rupture of membranes
- Postterm pregnancy
- Maternal medical conditions (eg, diabetes mellitus, renal disease, chronic pulmonary disease, chronic hypertension, antiphospholipid syndrome)
- Fetal compromise (eg, severe fetal growth restriction, isoimmunization, oligohydramnios)

Labor also may be induced for logistic reasons, for example, risk of rapid labor, distance from hospital, or psychosocial indications. In such circumstances, at least one of the gestational age criteria in the box should be met, or fetal lung maturity should be established. A mature fetal lung test result before 39 weeks of gestation, in the absence of appropriate clinical circumstances, is not an indication for delivery. The individual patient and clinical situation should be considered in determining when induction of labor is contraindicated. Generally, the contraindications to labor induction are the same as those for spontaneous labor and vaginal delivery. They include, but are not limited to, the following situations:
- Vasa previa or complete placenta previa
- Transverse fetal lie
- Umbilical cord prolapse
- Previous classical cesarean delivery
- Active genital herpes infection
- Previous myomectomy entering the endometrial cavity

What criteria should be met before the cervix is ripened or labor is induced?

Assessment of gestational age and consideration of any potential risks to the mother or fetus are of paramount importance for

appropriate evaluation and counseling before initiating cervical ripening or labor induction. The patient should be counseled regarding the indications for
induction, the agents and methods of labor stimulation, and the possible need for repeat induction or cesarean delivery. Although prospective studies are limited in evaluating the benefits of elective induction of labor, nulliparous women undergoing induction of labor with
unfavorable cervices should be counseled about a twofold increased risk of cesarean delivery (Level II-2). In addition, labor progression differs significantly for women with an elective induction of labor compared with women who have spontaneous onset of labor (Level II-2).
Allowing at least 12–18 hours of latent labor before diagnosing a failed induction may reduce the risk of cesarean delivery (Level II-2, 3). Additional requirements for cervical ripening and
induction of labor include assessment of the cervix, pelvis, fetal size, and presentation. Monitoring FHR and uterine contractions is recommended as for any high-risk patient in active labor. Although trained nursing personnel can monitor labor induction, a physician capable
of performing a cesarean delivery should be readily available.

1c.17 Clinical Practice Guideline Citation: • American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin No 107. (2009). Induction of labor. Obstetrics & Gynecology. 114(2). 386-97.

1c.18 National Guideline Clearinghouse or other URL:

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? Yes

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: The American College of Obstericians and Gynecologists

1c.21 System Used for Grading the Strength of Guideline Recommendation: USPSTF

1c.22 If other, identify and describe the grading scale with definitions:

1c.23 Grade Assigned to the Recommendation: Level II

1c.24 Rationale for Using this Guideline Over Others: The American College of Obstetricians and Gynecologists the nation´s leading group of professionals providing health care for women. Practice Bulletins provide obstetricians and gynecologists with current information on established techniques and clinical management guidelines. The American College of Obstetricians and Gynecologists (the College) continuously surveys the field for advances to be incorporated in these series and monitors existing bulletins to ensure they are current. Individual bulletins are withdrawn from and added to the series on a continuing basis and reaffirmed periodically.

Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?
1c.25 Quantity: High 1c.26 Quality: Moderate1c.27 Consistency: High

Was the threshold criterion, *Importance to Measure and Report*, met?
(*1a & 1b must be rated moderate or high and 1c yes*) Yes☐ No☐
Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.
For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

## 2. RELIABILITY & 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. (evaluation criteria)
Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be

conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See guidance on measure testing.

S.1 Measure Web Page *(In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained*). Do you have a web page where current detailed specifications for this measure can be obtained? Yes

S.2 If yes, provide web page URL: http://manual.jointcommission.org

**2a. RELIABILITY. Precise Specifications and Reliability Testing: H☐ M☐ L☐ I ☐**

**2a1. Precise Measure Specifications.** (*The measure specifications precise and unambiguous.*)

2a1.1 Numerator Statement *(Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome)*:
Patients with elective deliveries with ICD-9-CM Principal Procedure Code or ICD-9-CM Other Procedure Codes for one or more of the following:

- Medical induction of labor as defined in Appendix A, Table 11.05 available at: http://manual.jointcommission.org
- Cesarean section as defined in Appendix A, Table 11.06 while not in Active Labor or experiencing Spontaneous Rupture of Membranes available at: http://manual.jointcommission.org

2a1.2 Numerator Time Window *(The time period in which the target process, condition, event, or outcome is eligible for inclusion)*:
Episode of care

2a1.3 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, codes with descriptors, and/or specific data collection items/responses*:
Four data elements are used to calculate the numerator:

1. Active Labor- Documentation that the patient was in active labor or presented with regular uterine contractions with cervical change before medical induction and/or cesarean section. Allowable values: Yes or No/UTD.
2. ICD-9-CM Other Procedure Codes - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies significant procedures performed other than the principal procedure during this hospitalization.
3. ICD-9-CM Principal Procedure Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) 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.
4. Spontaneous Rupture of Membranes-Documentation that the patient had spontaneous rupture of membranes (SROM) before medical induction and/or cesarean section. Allowable values: Yes or No/UTD.

Patients are eligible for the numerator population with ICD-9-CM Other Procedure Codes or ICD-9-CM Principal Procedure Code for medical induction or with ICD-9-CM Other Procedure Codes or ICD-9-CM Principal Procedure Code for cesarean section when the allowable value equals “no” for the data elements Active Labor and Spontaneous Rupture of Membranes.

2a1.4 Denominator Statement *(Brief, narrative description of the target population being measured)*:
Patients delivering newborns with >= 37 and < 39 weeks of gestation completed

2a1.5 Target Population Category *(Check all the populations for which the measure is specified and tested if any)*: Maternal Care

2a1.6 Denominator Time Window *(The time period in which cases are eligible for inclusion)*:
Episode of care

2a1.7 Denominator Details (*All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)*:
Seven data elements are used 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. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with pregnancy were being studied. Allowable values: Yes or No/UTD
4. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.
5. Gestational Age – Documentation of the weeks of gestation completed at the time of delivery. Allowable Values: 1-50 or UTD.
6. ICD-9-CM Other Diagnosis Codes - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes associated with the secondary diagnoses for this hospitalization.
7. ICD-9-CM Principal Diagnosis Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.

2a1.8 Denominator Exclusions *(Brief narrative description of exclusions from the target population)*:
- ICD-9-CM Principal Diagnosis Code or ICD-9-CM Other Diagnosis Codes for conditions possibly justifying elective delivery prior to 39 weeks gestation as defined in Appendix A, Table 11.07
- Less than 8 years of age
- Greater than or equal to 65 years of age
- Length of Stay >120 days
- Enrolled in clinical trials

2a1.9 Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)*:
- Patients with ICD-9-CM Principal Diagnosis Code or Other Diagnosis Codes for conditions for possibly justifying elective delivery are excluded.
- 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 are excluded if "Yes" is selected for Clinical Trial.

2a1.10 Stratification Details/Variables *(All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses )*:
Not Applicable

2a1.11 Risk Adjustment Type *(Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13)*: No risk adjustment or risk stratification 2a1.12 If "Other," please describe:

2a1.13 Statistical Risk Model and Variables *(Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.)*:
Not Applicable

2a1.14-16 Detailed Risk Model Available at Web page URL (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:

2a1.17-18. Type of Score: Rate/proportion

2a1.19 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

2a1.20 Calculation Algorithm/Measure Logic*(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; 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-9-CM Principal Diagnosis Code
a. If at least one of the ICD-9-CM Principal or Other Diagnosis Code is on Table 11.07, 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-9-CM Principal or Other Diagnosis Code is on Table 11.07, continue processing and proceed to Clinical Trial.

3. Check Clinical Trial
a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
c. If Clinical Trial equals No, 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 greater than or equal to 39, 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 equals a Non Unable to Determine Value, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
d. If Gestational Age is greater than or equal to 37 and less than 39, continue processing and proceed to ICD-9-CM Principal Procedure or Other Procedure Code.

5. Check ICD-9-CM Principal or Other Procedure Code
a. If all of the ICD-9-CM Principal or Other Procedure Codes are missing, 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-9-CM Principal or Other Procedure Code is on Table 11.05, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
c. If none of the ICD-9-CM Principal Procedure Code is missing or not on Table 11.05, continue processing and proceed to recheck ICD-9-CM Principal or Other Procedure Code.

6. Recheck ICD-9-CM Principal or Other Procedure Code
a. If none of the ICD-9-CM Principal or Other Procedure Code 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-9-CM Principal or Other Procedure Code is on Table 11.06, continue processing and proceed to Active Labor.

7. Check Active Labor
a. If Active Labor is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If Active Labor equals Yes, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
c. If Active Labor equals No, continue processing and proceed to Spontaneous Rupture of Membranes.

8. Check Spontaneous Rupture of Membranes
a. If Spontaneous Rupture of Membranes is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
b. If Spontaneous Rupture of Membranes equals Yes, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing
c. If Spontaneous Rupture of Membranes equals No, the case will proceed to a Measure Category Assignment of E and will

be in the Numerator Population. Stop processing.

2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:
URL
http://manual.jointcommission.org

2a1.24 Sampling (Survey) Methodology. If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):
The initial patient population includes patients admitted to the hospital for inpatient acute care are included in the PC Mother Initial sampling group if they have: ICD-9-CM Principal or Other Diagnosis Code as defined in Appendix A, Tables 11.01, 11.02, 11.03, or 11.04, 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

2a1.25 Data Source *(Check all the sources for which the measure is specified and tested*). If other, please describe:
Administrative claims, Electronic Clinical Data, Paper Records

2a1.26 Data Source/Data Collection Instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*): Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification as been passed.

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment:

2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:
URL
http://manual.jointcommission.org

2a1.33 Level of Analysis (*Check the levels of analysis for which the measure is specified and tested)*: Facility, Population : National

2a1.34-35 Care Setting *(Check all the settings for which the measure is specified and tested)*: Hospital/Acute Care Facility

2a2. Reliability Testing. (*Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability*.)

2a2.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
The PC measure set has been in national use since the 2nd quarter of 2010. It is a requirement of participation in the ORYX initiative that data on all measures in the set are collected. (ORYX is the term used by The Joint Commission to describe the component of the hospital accreditation program which requires data collection and reporting on standardized national performance measures.) Demographics of organizations collecting and reporting data on these measures are as follows:
163 health care organizations representing various types, locations and sizes:
10 For Profit, 91 Not for Profit, 46 Military Facilities, 9 County, 2 State, 5 Other
15 >=500 beds; 29 250-499 beds; 50 100-249 beds; 69 <100 beds
Located in: AE, AK, AL, AP, AR, AZ, CA, DO, DC, FL, GA, HI, ID, IL, IN, KS, KY, LA, MA, MD, MI, MN, MO, MS, MT, NC, NE,

NV, NY, OH,OK, PA, PR, RI, SC, TN, TX, VA, WA, WI, WV
26 performance measurement systems

2a2.2 Analytic Method *(Describe method of reliability testing & rationale)*:
This measure was adapted from NQF-endorsed measure 0469 Elective Delivery Prior to 39 Completed Weeks Gestation. As such, initial data reliability would have been addressed during the original endorsement. The Joint Commission will be conducting additional reliability studies on this measure as well as the entire PC measure set beginning in October 2011.
Currently, hospitals are supported in their data collection and reporting efforts by 26 contracted performance measurement system (PMS) vendors. It is a contractual requirement of Joint Commission listed vendors that the quality and reliability of data submitted to them by contracted health care organizations must be monitored on a quarterly basis. In addition, The Joint Commission analyzes these data by running 17 quality tests on the data submitted into ORYX. (ORYX is the term used by The Joint Commission to describe the component of the hospital accreditation program which requires data collection and reporting on standardized national performance measures). The following is a list of the major tests done on the submitted ORYX data, taken from the 2011 ORYX Performance Measurement System Requirements manual.

- Transmission of complete data
- Usage of individual core measure data received: To understand if the HCO provides the relevant service to treat the relevant population
- Investigation of aberrant data points
- Verification of patient population and sample size
- Identification of missing data elements
- Validation of the accuracy of target outliers
- Data integrity
- Data corrections

Data Element Agreement Rate:
Inter-rater reliability testing methodology utilized by contracted performance measure system vendors as outlined in the contract is as follows:
- All clinical data elements and all editable demographic elements are scored.
- All measure data are reabstracted with originally abstracted data having been blinded so that the reabstraction is not biased.
- Reabstracted data are compared with originally abstracted data on a data element by data element basis. A data element agreement rate is calculated. Clinical and demographic data are scored separately, and an overall agreement rate is computed.

2a2.3 Testing Results *(Reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
Data element agreement rates were reported to The Joint Commission for 1Q11 This reflects the findings of 108 hospitals, comprising 13,279 records (100% sample). The following table delineates calculated agreement rates for individual data elements that are used to compute measure rates for PC-01.

| Data Elements with a Mismatch - Mother | total n | total d | rate |
|---|---|---|---|
| Active Labor | 33 35 | 94.29% | |
| Gestational Age | 639 | 712 | 89.75% |

These agreement rates are considered to be well within acceptable levels.

2b. VALIDITY. Validity, Testing, <u>including all Threats to Validity</u>: H☐ M☐ L☐ I ☐

2b1.1 Describe how the measure specifications *(measure focus, target population, and exclusions)* are consistent with the evidence cited in support of the measure focus (*criterion 1c)* and identify any differences from the evidence:
This measure focuses on reducing non-medically indicated elective deliveries at >= 37 and < 39 weeks of gestation completed. The literature supports the focus on patients delivering newborns within this gestational age range. Accordingly, this measure excludes patients with conditions possibly justifying elective delivery. Also excluded from the measure are patients with a length of stay greater than 120 days, and those enrolled in a clinical trial. These exclusions are not addressed in the literature, but are included for this measure in order to harmonize with other CMS/Joint Commission aligned measures.

2b2. Validity Testing. (*Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.)*

2b2.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if*

*a sample, characteristics of the entities included)*:
As previously mentioned the PC measure set has been in national use since the 2nd quarter of 2010. Demographics of organizations collecting and reporting data on these measures are as follows:
163 health care organizations representing various types, locations and sizes:
10 For Profit, 91 Not for Profit, 46 Military Facilities, 9 County, 2 State, 5 Other
15 >=500 beds; 29 250-499 beds; 50 100-249 beds; 69 <100 beds

Located in: AE, AK, AL, AP, AR, AZ, CA, DO, DC, FL, GA, HI, ID, IL, IN, KS, KY, LA, MA, MD, MI, MN, MO, MS, MT, NC, NE, NV, NY, OH,OK, PA, PR, RI, SC, TN, TX, VA, WA, WI, WV
26 performance measurement systems

2b2.2 Analytic Method *(Describe method of validity testing and rationale; if face validity, describe systematic assessment)*:
Since the measure has been in national use, continued face validity of the measure has been determined through analysis of feedback from measure users. The Joint Commission provides a web-based application with which measure users can provide feedback regarding appropriateness of measure specifications, request clarification of specifications, and/or provide other comments pertinent to the measure. This feedback is systematically, continually, reviewed in order to identify trends and to identify areas of the measure specifications that require clarification or revision. Additionally, Joint Commission staff continually monitors the national literature and environment in order to assess continued validity of this measure.

As noted previously, The Joint Commission is currently performing reliability site visits. A component of these visits will include focus group interviews with hospital staff working with the PC measures to obtain feedback regarding the validity of the measures and suggestions for further refinement of the specifications.

2b2.3 Testing Results *(Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment)*:
Analysis of feedback obtained via our automated feedback system reveals slightly more than 180 submissions regarding specifications for this measure since its implementation in 2010. Predominant themes of these submissions involved questions regarding clarification of the data elements Active Labor and Gestational Age with respect to both definitions and the calculation of gestational age and the order of priority sources to retrieve the data. Additional notes for abstractors were added to the data elements for clarification. In addition, the data elements Active Labor and Spontaneous Rupture of Membranes were moved from the numerator population to the denominator population and the algorithm was revised in order to capture all deliveries in the denominator population. Additional ICD-9-CM diagnosis codes were added to Table 11.07 to update exclusions based on consultation with the perinatal care experts. The gestational age range for the denominator statement and included population was also revised to exclude patients with a gestational age of 39 weeks of gestation completed, since the upper range for gestational age for 38 weeks ends at 38 6/7 weeks gestation.

POTENTIAL THREATS TO VALIDITY. (*All potential threats to validity were appropriately tested with adequate results.*)

2b3. Measure Exclusions. (*Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.*)

2b3.1 Data/Sample for analysis of exclusions *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
As previously mentioned the PC measure set has been in national use since the 2nd quarter of 2010. Demographics of organizations collecting and reporting data on these measures are as follows:
163 health care organizations representing various types, locations and sizes:
10 For Profit, 91 Not for Profit, 46 Military Facilities, 9 County, 2 State, 5 Other
15 >=500 beds; 29 250-499 beds; 50 100-249 beds; 69 <100 beds
Located in: AE, AK, AL, AP, AR, AZ, CA, DO, DC, FL, GA, HI, ID, IL, IN, KS, KY, LA, MA, MD, MI, MN, MO, MS, MT, NC, NE, NV, NY, OH,OK, PA, PR, RI, SC, TN, TX, VA, WA, WI, WV
26 performance measurement systems

2b3.2 Analytic Method (*Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference)*:
Measure exclusions that were not derived directly from the evidence are presented below. Please note that these are population

exclusions that are necessary to ensure consistency in all measures in this 5 measure set.
These exclusions were analyzed for frequency of occurrence. An issue that is of great concern to users of this measure is that due to the presence of exceptions to the measure, attainment of a 0% measure rate is not possible. Because of the role of this measure in the current Joint Commission accreditation process this is especially troubling to measure users. This concern is the basis for a number of the non-evidence-based exclusions to these measures. Additional reasons for these population exclusions are enumerated in our response to section 2b1.1 above. The following measure exclusions that were not derived directly from the evidence are as follows:

1. Patients with LOS <120 days
2. Patients less than 8 years of age or greater than or equal to 65 years of age
3. Patients enrolled in clinical trials

2b3.3 Results *(Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):*
N=353,671
1. Patients who have a length of stay (LOS) greater than 120 days =0%
2. Patients less than 8 years of age or greater than or equal to 65 years of age=0%
3. Patients enrolled in clinical trials =0.04%

2b4. Risk Adjustment Strategy. (*For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.*)

2b4.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
Not Applicable

2b4.2 Analytic Method (*Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables)*:
Not Applicable

2b4.3 Testing Results *(Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata)*:
Not Applicable

2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: Not Applicable

2b5. Identification of Meaningful Differences in Performance. (*The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.*)

2b5.1 Data/Sample *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
As previously mentioned the PC measure set has been in national use since the 2nd quarter of 2010. Demographics of organizations collecting and reporting data on these measures are as follows:
163 health care organizations representing various types, locations and sizes:
10 For Profit, 91 Not for Profit, 46 Military Facilities, 9 County, 2 State, 5 Other
15 >=500 beds; 29 250-499 beds; 50 100-249 beds; 69 <100 beds
Located in: AE, AK, AL, AP, AR, AZ, CA, DO, DC, FL, GA, HI, ID, IL, IN, KS, KY, LA, MA, MD, MI, MN, MO, MS, MT, NC, NE, NV, NY, OH,OK, PA, PR, RI, SC, TN, TX, VA, WA, WI, WV
26 performance measurement systems

2b5.2 Analytic Method *(Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance)*:
The method used to analyze meaningful differences in performance at The Joint Commission is Target Analysis. The object of target analysis is to compare a health care organization's (HCO) data against a comparative norm for the purpose of evaluating

performance improvement opportunities. When an organization's performance level is statistically significantly different from a comparative norm, it is considered a statistical deviation. A statistical deviation may be desirable or undesirable depending on the "direction of improvement" of the measure.
There are two components to the target analysis methodology used at The Joint Commission. Given the national average for a performance measure, a target range is constructed. Using generalized linear mixed models methodology (also known as hierarchical models), a predicted estimate of an HCO's performance, with a corresponding 95% confidence interval, is generated. This confidence interval is compared to the target range, to determine the HCOs' rating. The estimate of the organization's true performance is based on both the data from that organization and on data from the entire set of reporting organizations.

2b5.3 Results *(Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:
PC-01 Distribution of Outliers

2011 1st Quarter Data:
Scores on this measure: N=160, Mean 13.6%, SD 0.1594
10th Percentile= 0%
25th Percentile= 0%
50th Percentile= 9%
75th Percentile= 19%
90th Percentile= 34%

156 (97.5%) Neutral – results not significantly different from target range
4 (2.5%) Unfavorable - results statistically significantly lower than the national rate

2b6. Comparability of Multiple Data Sources/Methods. (*If specified for more than one data source, the various approaches result in comparable scores.*)

2b6.1 Data/Sample *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
Multiple data sources are not used for this measure.

2b6.2 Analytic Method *(Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure)*:
Not Applicable

2b6.3 Testing Results *(Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted)*:
Not Applicable

2c. Disparities in Care: H☐ M☐ L☐ I☐ NA☐ (*If applicable, the measure specifications allow identification of disparities.*)

2c.1 If measure is stratified for disparities, provide stratified results *(Scores by stratified categories/cohorts)*: The measure is not stratified for disparities.

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:
Although a rise in induction of labor is present for all racial groups with the highest increase in non-Hispanic whites, there are no plans to stratify the measure. The Joint Commission does not currently capture date elements for race or ethnicity because these data elements have not been shown to be reliably collectable due to the fact that no national standardized definitions exist for these data elements. Also, not all hospitals collect race and ethnicity. In the future, it may be feasible for The Joint Commission to explore how race and ethnicity and other relevant disparity data, might be collected reliably in the future.

2.1-2.3 Supplemental Testing Methodology Information:

Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met? (*Reliability and Validity must be rated moderate or high*) Yes☐ No☐
Provide rationale based on specific subcriteria:

If the Committee votes No, STOP

## 3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)

C.1 Intended Purpose/ Use *(Check all the purposes and/or uses for which the measure is intended)*: Public Reporting, Quality Improvement (Internal to the specific organization), Quality Improvement with Benchmarking (external benchmarking to multiple organizations), Regulatory and Accreditation Programs

3.1 Current Use *(Check all that apply; for any that are checked, provide the specific program information in the following questions)*: Public Reporting, Regulatory and Accreditation Programs

3a. Usefulness for Public Reporting: H☐ M☐ L☐ I ☐
(*The measure is meaningful, understandable and useful for public reporting.*)

3a.1. Use in Public Reporting - disclosure of performance results to the public at large *(If used in a public reporting program, provide name of program(s), locations, Web page URL(s)).* If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: [*For Maintenance – If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.*]
The Joint Commission has a longstanding commitment to providing meaningful information about the comparative performance of accredited organizations to the public. The Quality Check® Web site, www.qualitycheck.org, launched in 1996, fulfills this commitment. Among other things, Quality Check allows consumers to view or download free hospital performance measure results. Measure rates for PC-01 (and all the PC measures) will be included in the hospital performance measure results beginning in 2012.

3a.2.Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting. If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results: All measure specifications (e.g., numerator, denominator, exclusions, data elements and measure calculation algorithms) are standardized in order to produce consistent measure results. Specifications are updated biannually based on feedback from vendors, and hospitals, as well as technical advisory member recommendations and updated clinical practice guidelines. Data are collected using data collection tools that have been verified by The Joint Commission to accurately collect measure data elements and compute measure assignment categories according to the measure specifications. Quarterly data reported to The Joint Commission are subject to a number of data quality tests to ensure the accuracy of the data. The measure rate is computed using a standardized measure calculation algorithm.

The Joint Commission provides an opportunity for measure users to submit questions and feedback about the measure specifications via an on-line website. As discussed previously, this information is used to evaluate the need for revisions and provide users with a database of frequently asked questions. Measure updates and issues about the measures are presented and discussed at an annual performance measurement system vendor conference. These activities support the Joint Commission's effort to provide results that are useable, understandable and useful for public reporting.

3.2 Use for other Accountability Functions (payment, certification, accreditation). If used in a public accountability program, provide name of program(s), locations, Web page URL(s): The Joint Commission is a national (and international) accreditor of hospitals and other healthcare organizations. This measure set is one of 10 available measure sets from which hospitals can select to meet The Joint Commission´s ORYX accreditation program requirement for data collection and reporting. Additional information located at: http://www.jointcommission.org/facts_about_oryx_for_hospitals/

3b. Usefulness for Quality Improvement: H☐ M☐ L☐ I ☐

(*The measure is meaningful, understandable and useful for quality improvement.*)

3b.1. Use in QI. If used in quality improvement program, provide name of program(s), locations, Web page URL(s):
[*For Maintenance – If not used for QI, indicate the reasons and describe progress toward using performance results for improvement*].
While The Joint Commission developed this measure for and uses results from this measure in its accreditation activities, the measure is also intended for use in internal quality improvement by accredited organizations.

3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement. If usefulness was demonstrated *(e.g., QI initiative),* describe the data, method and results:
From an accreditation perspective, measure results have proven useful in that they are used in the Priority Focus Process, which helps to focus accreditation survey activities toward areas of greatest need. From the hospital quality improvement perspective, measure rates are included in the Joint Commission's Strategic Surveillance System (S3) product, which is made available, at no additional cost to accredited organizations and is used by them to identify gaps in the care they provide relative to other measure users. Aggregate measure results have improved over time, indicating that they are being used by hospitals to identify and address areas in need of improvement. Since this measure was introduced nationally in 2010, aggregate performance has improved. PC-01 began with 2010 Quarter 2 reporting data at 19.9 % or a performance gap of 19.9 %, There has been consistent improvement in aggregate performance rates for the following consecutive four quarters, with the most recent 2011 Quarter 1 reportable performance at 14.7 %.

Overall, to what extent was the criterion, *Usability*, met? H☐ M☐ L☐ I ☐
Provide rationale based on specific subcriteria:

## 4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)

4a. Data Generated as a Byproduct of Care Processes: H☐ M☐ L☐ I ☐

4a.1-2 How are the data elements needed to compute measure scores generated? *(Check all that apply).*
Data used in the measure are:
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)

4b. Electronic Sources: H☐ M☐ L☐ I ☐

4b.1 Are the data elements needed for the measure as specified available electronically *(Elements that are needed to compute measure scores are in defined, computer-readable fields)*: Some data elements are in electronic sources

4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources: The Joint Commission is in the process of preparing for conversion to eMeasure specifications beginning in the 4th quarter 2011 for the PC measure set.

4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H☐ M☐ L☐ I ☐

4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:
The denominator population and algorithm for PC-01 was revised because patients with a gestational age of 39 weeks completed were not excluded from the measure. The denominator population and algorithm for PC-01 were also revised because patients with active labor and spontaneous rupture of membranes were moved from the numerator to the denominator population in order to capture all deliveries. Since implementation, the Notes for Abstraction section of the data element definition has been updated to clarify issues that have been identified after review of the feedback received from measure users.

4d. Data Collection Strategy/Implementation: H☐ M☐ L☐ I ☐

A.2 Please check if either of the following apply (*regarding proprietary measures*):

4d.1 Describe what you have learned/modified 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 *(e.g., fees for use of proprietary measures)*:
At the present time, hospitals using this performance measure generally collect measure data via manual review of the paper medical record, the EMR or a combination of both. Collected data are submitted to The Joint Commission on a quarterly basis, by way of contracted performance measurement system vendors, 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 described above, as feedback from measure users has indicated the need for clarification or revision of measure specifications, this has taken place.

Overall, to what extent was the criterion, *Feasibility*, met? H☐ M☐ L☐ I ☐
Provide rationale based on specific subcriteria:

## OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement? Yes☐ No☐
Rationale:

If the Committee votes No, STOP.
If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

## 5. COMPARISON TO RELATED AND 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 before a final recommendation is made.

5.1 If there are related measures *(either same measure focus or target population)* or competing measures *(both the same measure focus and same target population*), list the NQF # and title of all related and/or competing measures:

### 5a. Harmonization

5a.1 If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?

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

### 5b. Competing Measure(s)

5b.1 If this measure has 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)*:

## CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner): The Joint Commission, One Renaissance Blvd., Oakbrook Terrace, Illinois, 60181

Co.2 Point of Contact: Jerod M., Loeb, PhD, jloeb@jointcommission.org, 630-792-5920-

Co.3 Measure Developer if different from Measure Steward: Hospital Corporation of America-Women's and Children's Clinical Services Group, 2515 Park Plaza Building 2, 4W, Nashville, Tennessee, 37203

Co.4 Point of Contact: Steven, Clark, MD, Steven.Clark@Mountainstarhealth.com, 615-344-1807-

Co.5 Submitter: Ann, Watt, MBA, RHIA, awatt@jointcommission.org, 630-792-5944-, The Joint Commission

Co.6 Additional organizations that sponsored/participated in measure development:
The Hospital Corporation of America -Women´s and Children´s Clinical Services

Co.7 Public Contact: Celeste, Milton, MPH, BSN, RN, cmilton@jointcommission.org, 630-792-5925-, The Joint Commission

## ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

Michael Ross, MD, MPH (Chair)
Harbor-UCLA Medical Center
Torrance, CA

Wanda Barfield, MD, MPH
Centers for Disease Control and Prevention
Atlanta, GA

Kenneth E. Brown, MD, MBA, FACOG, FACHE
Woman´s Hospital
Lafayette, LA

Martin McCaffrey, MD
UNC North Carolina Children's Hospital
Chapel Hill, NC

Cathy Collins-Fulea, MSN, CNM
Henry Ford Hospital
Detroit, MI

Janet H. Muri, MBA
National Perinatal Information Center/
Quality Analytic Services
Providence, RI

Kathleen Simpson, PhD, RNC, FAAN
St. John's Mercy Medical Center
St. Louis, MO

Michael Socol, MD
Northwestern University Medical School
Chicago, IL

Rebecca Zimmermann, MPP
America's Health Insurance Plans
Washington, DC

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.

| |
|---|
| Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward: 0469 Elective Delivery Prior to 39 Completed Weeks Gestation<br>The Hospital Corporation of America -Women´s and Children´s Clinical Services was the original measure developer and measure steward. The measure was recommended for inclusion by the PC TAP as one of five measures in the Joint Commission's Perinatal Care (PC) core measure set. The Joint Commission held a series of conference calls to discuss the measure specifications and proposed revisions and worked with the original measure developer for agreement on specifications revisions prior to national implementation. As work began to re-endorse the measure, The Joint Commission assumed stewardship of the measure. |
| Measure Developer/Steward Updates and Ongoing Maintenance<br>Ad.3 Year the measure was first released: 2010<br>Ad.4 Month and Year of most recent revision: 08, 2011<br>Ad.5 What is your frequency for review/update of this measure? Biannual<br>Ad.6 When is the next scheduled review/update for this measure? 02, 2012 |
| Ad.7 Copyright statement: No royalty or use fee is required for copying or reprinting this manual, but the following are required as a condition of usage: 1) disclosure that the Specifications Manual is periodically updated, and that the version being copied or reprinted may not be up-to-date when used unless the copier or printer has verified the version to be up-to-date and affirms that, and 2) users participating in Joint Commission accreditation, including ORYX® vendors, are required to update their software and associated documentation based on the published manual production timelines. |
| Ad.8 Disclaimers: |
| Ad.9 Additional Information/Comments: |
| Date of Submission (*MM/DD/YY*): 10/17/2011 |