

# 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 #: <b>0476</b> NQF Project: <b>Perinatal and Reproductive Health Project</b>
(for Endorsement Maintenance Review) Original Endorsement Date: <b>Oct 24, 2008</b> Most Recent Endorsement Date: <b>Oct 24, 2008</b>
<b>BRIEF MEASURE INFORMATION</b>
De.1 Measure Title: <b>PC-03 Antenatal Steroids</b>
Co.1.1 Measure Steward: <b>The Joint Commission</b>
De.2 Brief Description of Measure: <b>This measure assesses patients at risk of preterm delivery at &gt;=24 and &lt;32 weeks gestation receiving antenatal steroids prior to delivering preterm newborns. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-02: Cesarean Section, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding).</b>
2a1.1 Numerator Statement: <b>Patients with a full course of antenatal steroids completed prior to delivering preterm newborns (refer to Appendix B, Table 11.0, antenatal steroid medications available at: <a href="http://manual.jointcommission.org">http://manual.jointcommission.org</a>)</b>
2a1.4 Denominator Statement: <b>Patients delivering live preterm newborns with &gt;=24 and &lt;32 weeks gestation completed</b>
2a1.8 Denominator Exclusions: <b>• Less than 8 years of age</b> <ul style="list-style-type: none"> <li>• Greater than or equal to 65 years of age</li> <li>• Length of Stay &gt;120 days</li> <li>• Enrolled in clinical trials</li> <li>• Documented Reason for Not Administering Antenatal Steroid</li> <li>• ICD-9-CM Principal Diagnosis Code or ICD-9-CM Other Diagnosis Codes for fetal demise as defined in Appendix A, Table 11.09.1 available at: <a href="http://manual.jointcommission.org">http://manual.jointcommission.org</a></li> </ul>
1.1 Measure Type: <b>Process</b> 2a1. 25-26 Data Source: <b>Electronic Clinical Data, Electronic Clinical Data : Registry, Paper Records</b> 2a1.33 Level of Analysis: <b>Facility, Population : National</b>
1.2-1.4 Is this measure paired with another measure? <b>No</b>
De.3 If included in a composite, please identify the composite measure ( <i>title and NQF number if endorsed</i> ):

<b>STAFF NOTES</b> ( <i>issues or questions regarding any criteria</i> )
Comments on Conditions for Consideration:
Is the measure untested? Yes <input type="checkbox"/> No <input type="checkbox"/> 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 ( <i>check De.5</i> ): 5. Similar/related <b>endorsed</b> or submitted measures ( <i>check 5.1</i> ): Other Criteria:
Staff Reviewer Name(s):

**1. IMPACT, OPPORTUNITY, 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): Disparities, Functional Status, Safety : Complications

1a.1 Demonstrated High Impact Aspect of Healthcare: A leading cause of morbidity/mortality, 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):

An updated systematic review by the Cochrane Collaboration analyzed 21 studies including 3885 women and 4269 infants. This review concluded that the reported use of antenatal corticosteroids resulted in significant reductions in neonatal death, (RR 0.69), respiratory distress syndrome (RDS) (RR 0.66), intraventricular hemorrhage (IVH) (RR 0.54), necrotizing enterocolitis (NEC) (RR 0.46), early onset infection (RR 0.56), and NICU admission (RR 0.80). There were no adverse maternal effects.

RDS affects up to one fifth of low birthweight babies defined as less than 2500 grams, and extremely low birthweight babies defined as less than 1500 grams. This deadly illness that preterm babies commonly suffer from is the primary cause of early neonatal death and disability (Roberts & Dalziel, 2010).

The evidence from this new systematic review supports the continued use of a single course of antenatal corticosteroids to accelerate fetal lung maturation in women at risk of preterm birth. This evidence greatly supports the use of a single course of antenatal corticosteroids to be considered routine for preterm delivery with few exceptions (Roberts & Dalziel, 2010).

1a.4 Citations for Evidence of High Impact cited in 1a.3: • Roberts, D. & Dalziel, S.R. (2010) Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth (Review). The Cochrane Collaboration. Issue 9.

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:

Antenatal corticosteroid therapy is indicated for women at risk of premature delivery with few exceptions and will result in a substantial decrease in neonatal morbidity and mortality, as well as substantial savings in health care costs. The use of antenatal corticosteroids for fetal maturation is a rare example of a technology that yields substantial cost savings in addition to improving health. The Royal College of Obstetricians and Gynaecologists (RCOG) calculated that an increase in use from 15% to 60% in babies of less than 2000 GM born in the US would result in an annual savings of \$157 million.

The measure will assist health care organizations (HCOs) to track evidence of an increase in the appropriate use of antenatal steroids prior to preterm deliveries.

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.]**

The first randomized trial was published in 1972 showing benefit with antenatal corticosteroids with others subsequently (Roberts & Dalziel, 2010). Despite this evidence, less than 20% of eligible pregnant women were receiving the therapy. As a result in 1994 the National Institutes of Health (NIH) convened a panel to determine the indications for therapy, the risks of adverse events for the mother, develop recommendations for use, and compile a research agenda which was re-affirmed again in 2000. Since that time, steroid use has increased, but is still not universal. From 2005-2007, data covering more than 90% of deliveries in California found

that 23% of the more than 15,000 eligible infants did not receive antenatal steroids (Lee et. al., 2011). In 2009, the Vermont Oxford Network (VON) database included eligible infants that did not receive therapy to consist of more than 54,000 infants between 500 and 1500 gms. The mean rate of this study was 77% with an inter-quartile range of 68-86%. It is noteworthy to mention that not all eligible infants in either of these databases were actually able to receive antenatal corticosteroids, because of rapid delivery shortly after presentation, there still is obvious room for improvement.

Based on 4 quarters of data reported to The Joint Commission, PC-03 has an aggregate performance rate of 64.9 %, indicating a potential performance gap of 35.1 %.

**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*]

- Lee, H.C., Lyndon, A., Blumenfeld, Y.J., Dudley, R.A. & Gould, J.B. (2011). Antenatal steroid administration for premature neonates in California. *Obstetrics & Gynecology*, 117(3), 603-9.
- National Institutes of Health (NIH) Consensus Conference. (1995). Effect of corticosteroids for fetal maturation on perinatal outcomes. *JAMA*. 273(5), 413-8.
- National Institutes of Health (NIH) Consensus Statement. (2000). Antenatal corticosteroids revisited: repeat courses. 17(2)1-18.
- Roberts, D. & Dalziel, S.R. (2010) Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth (Review). *The Cochrane Collaboration*. Issue 9.
- Vermont Oxford Network (VON) Database Manual of Operations for Infants Born in 2009. Release 13.2 2008. Revised April 2009, Retrieved on September 12, 2011 at: [http://www.vtoxford.org/tools/2009manualofOperationswithindex13\\_2pdf](http://www.vtoxford.org/tools/2009manualofOperationswithindex13_2pdf).
- 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*]

No national data were available to report disparities; however, clinical data for premature newborns born in 2005-2007 in California for antenatal steroid administration for newborns with a birth weight of less than 1500 gms or gestational age less than 34 weeks was reviewed by the California Perinatal Quality Care Collaborative. They collect data on more than 90% of newborn admissions in California. Hispanic mothers (25.6%), mothers younger than age 20 (27.6%), and those without prenatal care (52.2%) were less likely to receive antenatal steroids. Mothers giving birth vaginally (26.8%) and mothers with a diagnosis of fetal distress (26.5%) were also less likely to receive antenatal steroids. After risk adjustment, the most prominent factors noted were neonatal level of care and lack of prenatal care (Lee et. al., 2011).

**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*]

- Lee, H.C., Lyndon, A., Blumenfeld, Y.J., Dudley, R.A. & Gould, J.B. (2011). Antenatal steroid administration for premature neonates in California. *Obstetrics & Gynecology*, 117(3), 603-9.

**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 <input type="checkbox"/>
L	M-H	M	Yes <input type="checkbox"/> IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise No <input type="checkbox"/>
M-H	L	M-H	Yes <input type="checkbox"/> IF potential benefits to patients clearly outweigh potential harms: otherwise No <input type="checkbox"/>
L-M-H	L-M-H	L	No <input type="checkbox"/>
Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service			Does the measure pass subcriterion1c? Yes <input type="checkbox"/> 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 increase the appropriate use of antenatal steroids in preterm deliveries >> population determined >> population assessed >> antenatal steroids administered >> improved fetal lung maturity >> decreased 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 appropriate administration of a full course of antenatal steroids prior to a live preterm delivery at 24 0/7 to 32 0/7 weeks gestation. The target population for the performance measure is consistent with the body of evidence supporting the use of antenatal steroids for preterm deliveries.

**1c.5 Quantity of Studies in the Body of Evidence** (Total number of studies, not articles): The Cochrane review updated and published in 2010 included 21 randomized control trials with nearly 3,900 women and more than 4,200 infants.

**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 appropriate use of antenatal steroids is high as noted in the recent Cochrane review published in 2010. All evidence was Grade I with strength of recommendation for use for nearly all outcomes evaluated A or B, i.e., significant reductions in neonatal death, (RR 0.69), respiratory distress syndrome (RDS) (RR 0.66), intraventricular hemorrhage (IVH) (RR 0.54), necrotizing enterocolitis (NEC) (RR 0.46), early onset infection (RR 0.56), and NICU admission (RR 0.80). There were no outcomes where the strength of the recommendation was D or E. No study design flaws were noted. In all studies, a complete course of antenatal steroids compared to a placebo demonstrated accelerated fetal lung maturation supporting the continued use of antenatal steroids for preterm deliveries.

**1c.7 Consistency of Results across Studies** (Summarize the consistency of the magnitude and direction of the effect): The Cochrane review (2010) looks at multiple outcomes many of which are highlighted in 1.a.3. Although the results consistently showed benefit across studies, the confidence intervals are often wide for individual studies. Benefits include the significant reduction in neonatal death, (RR 0.69), respiratory distress syndrome (RDS) (RR 0.66), intraventricular hemorrhage (IVH) (RR 0.54), necrotizing enterocolitis (NEC) (RR 0.46), early onset infection (RR 0.56), and NICU admission (RR 0.80) were noted. There was no increase in maternal chorioamnionitis with a narrow confidence interval. There was also no increase in maternal mortality; however, the confidence interval is very wide due to the rarity of the event.

**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, appropriate use of antenatal steroids consistently resulted in improved outcomes and a substantial decrease in neonatal morbidity and mortality, as well as substantial savings in health care costs The Royal College of Obstetricians and Gynaecologists (RCOG) calculated that an increase in use from 15% to 60% in babies of less than 2000 GM born in the US would result in an annual savings of \$157 million.

**1c.9 Grading of Strength/Quality of the Body of Evidence.** Has the body of evidence been graded? Yes

**1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:** US Preventive Services Task Force

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

**1c.12 If other, identify and describe the grading scale with definitions:**

**1c.13 Grade Assigned to the Body of Evidence:** The NIH consensus report included graded evidence for multiple endpoints relating to the benefits of antenatal corticosteroids. All evidence was Grade I with strength of recommendation for use for nearly all outcomes evaluated A or B. There were no outcomes where the strength of the recommendation was D or E.

**1c.14 Summary of Controversy/Contradictory Evidence:** There is no documented evidence regarding controversy related to appropriate use of antenatal steroids. Research reviewed many studies supporting the administration of a full course of antenatal steroids. The 1994 NIH consensus statement has remained the standard of care which was reaffirmed by NIH in 2000 and again in the recent Cochrane review published in 2010. There is some older literature suggesting antenatal steroids may not be effective in hypertensive patients, but this has not been borne out. There is basic science literature suggesting that hyperglycemia may inhibit surfactant action. Since steroids raise glucose levels this is a theoretic concern in diabetics, but there is no clinical evidence to alter practice. There are animal data and limited retrospective human data that higher doses have adverse effects on growth and development, but not at the doses currently used. There is long term follow-up as long as 30 years showing no adverse effects in humans given this regime.

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

- National Institutes of Health (NIH) Consensus Conference. (1995). Effect of corticosteroids for fetal maturation on perinatal outcomes. JAMA. 273(5), 413-8.
- National Institutes of Health (NIH) Consensus Statement. (2000). Antenatal corticosteroids revisited: repeat courses. 17(2)1-18.
- Roberts, D. & Dalziel, S.R. (2010) Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth (Review). The Cochrane Collaboration. Issue 9.

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

Summary of Recommendations on Page 417: The benefits of antenatal administration of corticosteroids to fetuses at risk of preterm delivery vastly outweigh the potential risks. These benefits include not only a reduction in the risk of RDS but also a substantial reduction in mortality and IVH.

- All fetuses between 24 and 34 weeks' gestation at risk of preterm delivery should be considered candidates for antenatal treatment with corticosteroids.
- The decision to use antenatal corticosteroids should not be altered by fetal race or gender or by the availability of surfactant replacement therapy.
- Patients eligible for therapy with tocolytics should also be eligible for treatment with antenatal corticosteroids.
- Treatment consists of two doses of 12 mg of betamethasone given intramuscularly 24 hours apart or four doses of 6 mg of dexamethasone given intramuscularly 12 hours apart. Optimal benefit begins 24 hours after initiation of therapy and lasts 7 days.
- Because treatment with corticosteroids for less than 24 hours is still associated with significant reductions in neonatal mortality, RDS, and IVH, antenatal corticosteroids should be given unless immediate delivery is anticipated.
- In PPRM at less than 30 to 32 weeks' gestation in the absence of clinical chorioamnionitis, antenatal corticosteroid use is recommended because of the high risk of IVH at these early gestational ages.
- In complicated pregnancies where delivery prior to 34 weeks' gestation is likely, antenatal corticosteroid use is recommended unless there is evidence that corticosteroids will have an adverse effect on the mother or delivery is imminent.

**1c.17 Clinical Practice Guideline Citation:** • National Institutes of Health (NIH) Consensus Conference. (1995). Effect of corticosteroids for fetal maturation on perinatal outcomes. JAMA. 273(5), 413-8.

**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:** National Institutes of Health

**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 I](#)

1c.24 Rationale for Using this Guideline Over Others: [These guidelines have been developed for healthcare personnel by a nonfederal, nonadvocate, 16-member consensus panel including representatives from neonatology, obstetrics, family medicine, behavioral medicine, psychology, biostatistics, and the public; 19 experts in neonatology, obstetrics, and pharmacology presented data to the consensus panel and a conference audience of approximately 500. An extensive bibliography of references was produced for the consensus panel and the conference audience using a variety of on-line databases including MEDLINE. The consensus panel met several times prior to the conference to review the literature. It also commissioned an updated meta-analysis, a neonatal registry review, and an economic analysis that were presented at the conference. The experts prepared abstracts for distribution at the conference, presented data, and answered questions from the panel and audience. The panel evaluated the strength of the scientific evidence using the grading system developed by the Canadian Task Force on the Periodic Health Examination and adapted by the US Preventive Services Task Force. The guidelines continue to be affirmed by the American College of Obstetrics and Gynecology \(ACOG\) and the American Academy of Pediatrics \(AAP\) in their guidelines for perinatal care.](#)

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: [High](#) 1c.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/releases/TJC2012B/>

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 a full course of antenatal steroids completed prior to delivering preterm newborns \(refer to Appendix B, Table 11.0, antenatal steroid medications available at: <http://manual.jointcommission.org>\)](#)

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*):  
[One data element is used to calculate the numerator:](#)

1. Antenatal Steroids Administered- Documentation that a full course of antenatal steroids was administered before delivery. A full course of antenatal steroids consists of two doses of 12 mg betamethasone IM 24 hours apart OR four doses of 6 mg dexamethasone IM every 12 hours. Allowable values: Yes or No/UTD. Cases are eligible for the numerator population when allowable value = Yes is selected.

**2a1.4 Denominator Statement** *(Brief, narrative description of the target population being measured):*  
 Patients delivering live preterm newborns with  $\geq 24$  and  $< 32$  weeks 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):*  
 Eight 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.
8. Reason for Not Administering Antenatal Steroid - Reasons for not administering a full course of antenatal steroids before delivery are clearly documented in the medical record. Reasons for not administering a full course of antenatal steroids may include fetal distress, imminent delivery or other reasons documented by physician/APN/PA/CNM. Allowable Values: Yes or No/UTD

**2a1.8 Denominator Exclusions** *(Brief narrative description of exclusions from the target population):*

- Less than 8 years of age
- Greater than or equal to 65 years of age
- Length of Stay  $> 120$  days
- Enrolled in clinical trials
- Documented Reason for Not Administering Antenatal Steroid
- ICD-9-CM Principal Diagnosis Code or ICD-9-CM Other Diagnosis Codes for fetal demise as defined in Appendix A, Table 11.09.1 available at: <http://manual.jointcommission.org>

**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):*

- 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.
- The data element Reason for Not Administering Antenatal Steroid is used to determine if the patient had a documented reason for not receiving the antenatal steroid.
- Patients with ICD-9-CM Principal Diagnosis Code or ICD-9-CM Other Diagnosis Codes for fetal demise are excluded.

**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, the measure is not stratified.

**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 = Higher 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 or Other Diagnosis Code
  - a. If at least one of the ICD-9-CM Principal or Other Diagnosis Code is on Table 11.09.1, 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 11.09.1, 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 24 or greater than 32, 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 D and will be in the measure population. Stop processing.
  - d. If Gestational Age is between 24 and 32, continue processing and proceed to Antenatal Steroid.
5. Check Antenatal Steroid
  - a. If Antenatal Steroid is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.



- b. If Antenatal Steroid equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.
  - c. If Antenatal Steroid equals No, continue processing and proceed to Reason for Not Administering Steroid.
6. Check Reason for Not Administering Steroid
- a. If Reason for Not Administering Steroid is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
  - d. If Reason for Not Administering Steroid equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.
  - b. If Reason for Not Administering Steroid equals No, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing.

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

URL

<http://manual.jointcommission.org/releases/TJC2012B/>

**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)  $\geq 8$  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  $\geq 501$  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:  
Electronic Clinical Data, Electronic Clinical Data : Registry, 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/releases/TJC2012B/>

**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

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**2a2.2 Analytic Method** *(Describe method of reliability testing & rationale):*

This measure was adapted from NQF-endorsed measure 0476 Appropriate Use of Antenatal Steroids. 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 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-03.

Data Elements with a Mismatch -	Mother	total n	total d rate
Antenatal Steroid Administered		20	21 99.16%

This agreement rate is considered to be well within acceptable levels.

**2b. VALIDITY. Validity, Testing, including all Threats to Validity:** 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 the rate of antenatal steroids administered prior to a live preterm delivery at 24 0/7 to 32 0/7 weeks gestation. The literature supports the focus on patients delivering live newborns within this gestational age range. Also, consonant with the literature, this measure excludes patients with fetal demise. 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  
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 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 90 submissions regarding specifications for this measure since its implementation in 2010. Predominant themes of these submissions involved questions regarding clarification of the data elements Antenatal Steroid Administered and Reason for Not Administering Antenatal Steroid with respect to timing of the repeat dose and implied reasons for not administering a full course of antenatal steroids. Additional notes for abstractors were added to the data elements for clarification. In addition, the denominator excluded population and algorithm were revised to exclude patients with fetal demise with an additional ICD-9-CM diagnosis code table. The gestational age range for the denominator statement was also revised to exclude patients with a gestational age of 32 1/7 to 32 6/7 weeks of gestation, since the data element for gestational age instructs the abstractors to round gestational age down to the nearest completed week.

**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

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**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 100% 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 =0.06%

**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:

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 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 organizations (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-03 Distribution of Outliers

2011 1st Quarter Data:

Scores on this measure: N=79, Mean 64.6%, SD 0.40336

10th Percentile= 0%

25th Percentile= 25%

50th Percentile= 80%

75th Percentile= 100%

90th Percentile= 100%

79 (100%) Neutral – results not significantly different from target range

**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:**

The California Perinatal Quality Care Collaborative database for California births reports disparities for Hispanic mothers, mothers younger than age 20, mothers without prenatal care, mothers giving birth vaginally and mothers with a diagnosis of fetal distress. This measure is not stratified. The Joint Commission does not currently capture data 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. Future measure data could also be evaluated according to sex, age, presence of prenatal care, type of delivery and geographic location.

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, Quality Improvement with Benchmarking (external benchmarking to multiple organizations), Quality Improvement (Internal to the specific organization)

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-03 (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/](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-03 began with 2010 Quarter 2 reporting data at 59.0 % or a performance gap of 41.0 %, 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 70.5 %.*

**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-03 were revised because patients with a gestational age of 32 1/7 to 32 6/7 days and patients with fetal demise were not excluded from the measure. In response, a new table the ICD-9-CM diagnosis codes for fetal demise was added to identify those patients. Since implementation, the Notes for Abstraction section of the data elements 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 Boulevard, Oakbrook Terrace, Illinois, 60181](#)

Co.2 Point of Contact: [Jerod, Loeb, PhD, jloeb@jointcommission.org, 630-792-5920-](#)

Co.3 Measure Developer if different from Measure Steward: [Providence/St. Vincents Hospital, 9701 SW Barnes Road Suite 299, Portland, Oregon, 27225](#)

Co.4 Point of Contact: [Mark, Tomlinson, MD, mwtomlinson@comcast.net, 503-297-3660-](#)

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 National Perinatal Information Center](#)  
[Providence/St. Vincent's Hospital/Council of Women and Infant's Specialty Hospitals](#)

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:** 0476 Appropriate Use of Antenatal Steroids  
The National Perinatal Information Center (NPIC) was the original 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 NPIC and the original measure developer, Providence/St. Vincent's Hospital/Council of Women and Infant's Specialty Hospitals 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**

Ad.3 Year the measure was first released: 2010

Ad.4 Month and Year of most recent revision: 08, 2010

Ad.5 What is your frequency for review/update of this measure? Biannual

Ad.6 When is the next scheduled review/update for this measure? 02, 2010

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