Perinatal and Reproductive Health 2015 - 2016

DRAFT REPORT FOR COMMENT

June 7, 2016

NATIONAL QUALITY FORUM

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Executive Summary

Despite the fact that the United States spends more on perinatal healthcare than any other health sector ($111 billion in 2010) the US is ranked 61st in the world for maternal health. In 2014, there were nearly 4 million births in the US. In 2011, of the 7.6 million hospital stays with Medicaid as the primary payer, 29% (or 3 of the top 5 conditions) were related to pregnancy and childbirth: newborn infant, trauma to the perineum and vulva caused by childbirth, and delivery following a Cesarean section. For the 61 million women of reproductive age in the US, access to high-quality care before and between pregnancies, including pregnancy planning, contraception, and preconception care, can reduce the risk of pregnancy-related complications, including maternal and infant mortality.

The National Quality Forum's (NQF) portfolio of measures for Perinatal and Reproductive Health includes measures for reproductive health; pregnancy, labor and delivery; high-risk pregnancy; newborn, premature, or low birthweight newborns; and postpartum patients (see Appendix B).

For this project, the Standing Committee evaluated 9 newly submitted measures and 15 measures undergoing maintenance review against NQF's standard evaluation criteria. 18 measures were recommended for endorsement, the Committee did not reach consensus on 1 measure, and 5 measures were not recommended.

The 18 measures that were recommended by the Standing Committee are:

Reproductive health

- 0033 Chlamydia Screening in Women (CHL)
- 2903: Contraceptive Care – Most & Moderately Effective Methods
- 2902: Contraceptive Care – Postpartum
- 2904: Contraceptive Care - Access to LARC (Long Acting Reversible Contraception)

Labor and Delivery

- 0469: PC-01 Elective Delivery
- 0469:2829: PC-01 Elective Delivery [eMeasure]
- 0470: incidence of Episiotomy
- 0471: PC-02 Cesarean Section

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- 0476: PC-03 Antenatal Steroids

Newborn

- 0716: Unexpected Complications in Term Newborns

- 0475: Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Center Discharge

Newborn: Premature/Low Birthweight

- 1382: Percentage of low birthweight births
- 0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)
- 0478: Neonatal Blood Stream Infection Rate (NQI #3)
- 1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
- 0483: Proportion of infants 22 to 29 weeks gestation screened for retinopathy of prematurity

Postpartum

- 0480: PC-05 Exclusive Breast Milk Feeding
- 0480:2830: PC-05 Exclusive Breast Milk Feeding [eMeasure]

The Committee did not reach consensus on the following measures:

Pregnancy

- 1517: Prenatal & Postpartum Care (PPC)

The Committee did not recommend the following measures:

Pregnancy

- 1391: Frequency of Ongoing Prenatal Care (FPC)

Labor and Delivery

- 2892: Birthrisk Cesarean Birth Measure

Labor and Delivery: High-risk pregnancy

2896: Structural Attributes of Facility in which High Risk Women Deliver Newborns: A PQMP Measure

Newborn: Premature/Low birthweight

- 2895: Thermal Condition of Low Birthweight Neonates Admitted to Level 2 or Higher Nurseries in the First 24 Hours of Life: A PQMP Measure
- 2893: Neonatal Intensive Care All-Condition Readmissions

Brief summaries of the measures currently under review are included in the body of the report; detailed summaries of the Committee's discussion and ratings of the criteria for each measure are in Appendix A.

Introduction

Despite the fact that the US spends more on perinatal healthcare than any other health sector ($111 billion in 2010)[1] the US is ranked 61st in the world for maternal health.[2] In 2014, there were nearly 4 million births in the US. In 2011, of the 7.6 million hospital stays with Medicaid as the primary payer, 29% (or 3 of the top 5 conditions) were related to pregnancy and childbirth: newborn infant, trauma to the perineum and vulva caused by childbirth, and delivery following a Cesarean section.[3] For the 61 million women of reproductive age in the US, access to high-quality care before and between pregnancies, including pregnancy planning, contraception and preconception care, can reduce the risk of pregnancy-related complications, including maternal and infant mortality.[4]

Disparities in access to quality reproductive and perinatal care and in outcomes among different racial and ethnic groups in the US, as well as sociodemographic disparities, are major topics of interest for quality measurement.[5] Deaths during pregnancy and childbirth have doubled for all US women in the past 20 years. Figures compiled by the Centers for Disease Control and Prevention (CDC) show that black women are nearly four times more likely to die from pregnancy-related causes than white women.[6] Moreover, numerous studies have documented persistent racial, ethnic, and socioeconomic disparities in maternal morbidity and mortality, preterm births, low birthweight infants, access to contraception and reproductive healthcare, and other adverse outcomes.

Research suggests that morbidity and mortality associated with pregnancy and childbirth are largely preventable through adherence to existing evidence-based guidelines. Lower quality care during pregnancy, labor and delivery, and the postpartum period can translate into unnecessary complications, prolonged lengths of stay, costly neonatal intensive care unit (NICU) admissions, and anxiety and suffering for patients and families. However, without appropriate information about performance at a national level, perinatal quality improvement efforts will be unfocused and incentives for improvement limited.

Trends and Performance

The CDC monitors trends in a variety of perinatal indicators:

- The preterm birth rate fell slightly in 2014 to 9.57% of births, down 8% from the 2007 high. Preterm rates declined among most race and Hispanic origin groups during 2007–2014. The 2014 rate of low birthweight (less than 2,500 grams) was 3% lower than the 2006 high (8.26%).[7]
- Cesarean section rates for low-risk women (same measure as NQF #471) peaked in 2009 at 28.1% and have declined to 26.9% in 2013. The rates were down for more than one-half of states and for all term gestational ages (37 or more completed weeks). The largest decline was at 38 weeks, down 9%. Rates for all maternal age groups and race and Hispanic origin groups were also down. The largest declines were for women under 40 (6%–8%) and for non-Hispanic white women (6%).[8]

- Women with no previous cesarean delivery who had vaginal deliveries had lower rates for all maternal morbidities compared with those who had cesarean deliveries. Rates per 100,000 of transfusion (525.1) and ICU admission (383.1) were highest for primary cesarean deliveries, while rates of ruptured uterus (88.9) and unplanned hysterectomy (143.1) were highest for repeat cesarean deliveries. Higher rates of maternal morbidity for cesarean compared with vaginal deliveries were found for nearly all maternal age groups and for women of all races and ethnicities.[9]

National Healthcare Quality and Disparities Report

The 2015 National Healthcare Quality and Disparities Report[10] identified several trends and disparities in the quality of obstetric care:

- From 2001 to 2013, the rate of obstetric trauma associated with instrument-assisted vaginal deliveries fell overall and for all racial/ethnic groups.
- Blacks and Hispanics had lower rates of obstetric trauma associated with instrument-assisted vaginal deliveries than whites did in all years.
- The gap between the Asian or Pacific Islander rate and the white rate was not statistically significant in 2001 but grew larger over time.

NQF Portfolio of Performance Measures for Perinatal and Reproductive Health

The Perinatal and Reproductive Health Standing Committee (see Appendix D) oversees NQF's portfolio of measures for Perinatal and Reproductive Health that includes measures for reproductive health; pregnancy, labor and delivery; high-risk pregnancy; newborns; and premature or low birthweight neonates (see Appendix B). At the onset of this project, the portfolio contained 23 measures: 14 process measures, 7 outcome measures, and 2 intermediate outcome measures.

Table 1. NQF Perinatal and Reproductive Health Portfolio of Measures

	Process	Outcome	Intermediate Clinical Outcome	Structure	Composite
Reproductive Health	3	0	0	0	0
Pregnancy	3	0	0	0	0
Labor and Delivery	4	1	2	0	0
High-risk Pregnancy	1	0	0	0	0
Newborn	1	1	0	0	0
Premature/Low Birthweight	1	5	0	0	0

	Process	Outcome	Intermediate Clinical Outcome	Structure	Composite
Postpartum	1	0	0	0	0
Total	14	7	2	0	0

Additional measures related to perinatal and reproductive health are assigned to other projects. These include various diabetes assessment and screening measures (Health and Well-being/Behavioral Health project) and complications and outcomes measures (Surgery project).

National Quality Strategy

NQF-endorsed measures for perinatal and reproductive health support the National Quality Strategy (NQS). NQS serves as the overarching framework for guiding and aligning public and private efforts across all levels (local, state, and national) to improve the quality of healthcare in the US. The NQS establishes the "triple aim" of better care, affordable care, and healthy people/communities, focusing on six priorities to achieve those aims: *Safety, Person and Family Centered Care, Communication and Care Coordination, Effective Prevention and Treatment of Illness, Best Practices for Healthy Living, and Affordable Care.*

Quality measures for perinatal and reproductive health align with several of the NQS priorities, including:

- Making care safer by reducing harm caused in the delivery of care: Reducing rates of Cesarean births and early elective deliveries reduce the potential harms to mothers and babies.
- Promoting the most effective prevention and treatment practices for the leading causes of mortality:
    - Low birthweight babies have high mortality, morbidity and costs and the declining rate of low birthweight babies reflects improved prevention practices and cost savings.
    - Pregnancy planning and preconception care improve perinatal outcomes. Three new contraception measures will address a gap in this important area of prevention.

Use of Measures in the Portfolio

Endorsement of measures by NQF is valued not only because the evaluation process itself is both rigorous and transparent, but also because evaluations are conducted by multi-stakeholder committees comprised of clinicians and other experts from the full range of healthcare providers, employers, health plans, public agencies, community coalitions, and patients—many of whom use measures on a daily basis to ensure better care. Moreover, NQF-endorsed measures undergo routine "maintenance" (i.e., re-evaluation) to ensure that they remain the best-available measures and reflect current science. Importantly, federal law requires that preference be given to NQF-endorsed measures for use in federal public reporting and performance-based payment programs. NQF-endorsed measures also are used by a variety of stakeholders in the private sector, including hospitals, health plans, and communities.

Many of the measures in the perinatal and reproductive health portfolio are in use in at least one federal program. Additionally, several of the reproductive health, pregnancy, labor and delivery, and premature/low birthweight measures have been included in the Medicaid Adult and Child Core Set by the NQF-convened Measure Applications Partnership (MAP). Appendix C provides details of federal programs that currently use NQF-endorsed perinatal measures.

Improving NQF's Perinatal and Reproductive Health Portfolio

Committee Input on Gaps in the Portfolio

Many priorities for quality measurement and improvement do not yet have metrics available to address them, and the gaps for perinatal and reproductive health are even greater. During the Perinatal and Reproductive Health Standing Committee discussions, the Committee identified numerous areas where additional measure development is needed, including:

Reproductive health

- Preconception care measures as a subset of women's health, taking existing preventive measures and creating either a formal or an informal preconception measure set
- Patient-reported experience of contraceptive care composite measure that captures whether women felt respected, whether they were informed, and whether they experienced shared decision making
- Contraception measure to track whether women were screened for pregnancy intention and desire to use a contraceptive measure

Pregnancy and prenatal care

- Prenatal care measures that are meaningful and demand higher performance
- Counseling during prenatal care such as nutrition counseling, weight gain, contraception, and all other counseling that should occur during the course of prenatal care
- Risk screening and management for behavioral risks, depression, intimate partner violence or domestic violence, opioid use
- Measures for gestational diabetes

Over/Appropriate use measures

- Overuse of procedures such as induction of labor

Postpartum care

- Postpartum care measures that are meaningful and that demand higher performance.
- Breast feeding measures that evaluate breast milk feeding at six weeks, six months, and other times

Outcome measures

- Patient-centered outcome measures around maternity care that include women's perspective of their own pregnancy care as an indicator of good care
- Maternal morbidity measures
- Neonatal readmissions measures at the health plan level of analysis

Measure Application Partnership (MAP): Reproductive Health Measure Gaps in the Medicaid Adult and Child Core Sets

Reproductive health is the most frequently measured topic across the Medicaid Child and Adult Core Sets, and MAP's 2015 recommendations would expand these measures even further. Measures of contraceptive access and use gained strong, albeit conditional, support from MAP because of the robust and growing evidence that well-timed, intentional pregnancies are associated with better health outcomes for both the mother and the infant. Additionally, there is significant opportunity for improvement and cost effectiveness in this area. For example, eleven states have made specific policy changes to encourage placement of long-acting reversible contraception immediately postpartum, with the potential for other states to follow.

MAP also identified specific gaps in current perinatal and reproductive health measure sets intended to communicate MAP's vision for the future of perinatal and reproductive health measurement.

- Inter-conception care to address risk factors
- Poor birth outcomes (e.g. premature birth)
- Postpartum complications
- Support with breastfeeding after hospitalization

Perinatal and Reproductive Health Measure Evaluation

On May 2-3, 2016, the Perinatal and Reproductive Health Standing Committee evaluated 9 new measures and 15 measures undergoing maintenance review against NQF's standard evaluation criteria. To begin the evaluation process, the Committee met via conference call in four smaller workgroups to conduct preliminary reviews of the measures against the evaluation criteria.

Comments Received Prior to Committee Evaluation

NQF solicits comments on endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF solicits comments prior to the evaluation of measures via an online tool located on the project webpage. For this evaluation cycle, the pre-evaluation comment period was open from March 22-April 5, 2016, for all 24 of the measures under review. A total of 7 pre-evaluation comments were received (Appendix G).

All submitted comments were provided to the Committee prior to its initial deliberations during the workgroups calls.

Refining the NQF Measure Evaluation Process

To streamline and improve the periodic evaluation of currently endorsed measures, NQF has updated guidance for the evaluation of measures for maintenance of endorsement effective October 1, 2015. NQF's endorsement criteria have not changed, and all measures continue to be evaluated using the same criteria. However, under the new approach, there is a shift in emphasis for evaluation of currently endorsed measures:

- **Evidence:** If the developer attests that the evidence for a measure has not changed since its previous endorsement evaluation, there is a decreased emphasis on evidence, meaning that the Committee may accept the prior evaluation of this criterion without further discussion or need for a vote. This applies only to measures that previously passed the evidence criterion without an exception. If a measure was granted an evidence exception, the evidence for that measure must be revisited.
- **Opportunity for Improvement (Gap):** For re-evaluation of endorsed measures, there is increased emphasis on current performance and opportunity for improvement. Endorsed measures that are "topped out" with little opportunity for further improvement are eligible for Inactive Endorsement with Reserve Status.
- **Reliability**
    - Specifications: There is no change in the evaluation of the current specifications.
    - Testing: If the developer has not presented additional testing information, the Committee may accept the prior evaluation of the testing results without further discussion or need for a vote.
- **Validity:** There is less emphasis on this criterion if the developer has presented no additional testing information, and the Committee may accept the prior evaluation of this sub-criterion without further discussion and vote. However, the Committee still considers whether the specifications are consistent with the evidence. Also, for outcome measures, the Committee discusses questions required for the SDS Trial even if no change in testing is presented.
- **Feasibility:** The emphasis on this criterion is the same for both new and previously endorsed measures, since feasibility issues might have arisen as endorsed measures have been implemented.
- **Usability and Use:** For re-evaluation of endorsed measures, there is increased emphasis on the use of the measure, especially use for accountability purposes. There also is an increased emphasis on improvement in results over time and on unexpected findings, both positive and negative.

Committee Evaluation

Of the 9 new measures and 15 measures undergoing maintenance of endorsement considered by the Committee at its May 2-3, 2016 meeting, 18 were recommended for endorsement, the Committee did not reach consensus on 1 measure, and 5 measures were not recommended. Table 2 summarizes the results of the Committee's evaluation.

Table 2. Perinatal and Reproductive Health Measure Evaluation Summary

	Maintenance	New	Total
Measures under consideration	15	9	24
Measures recommended for endorsement	13	5	18
Measures where consensus is not yet reached	1	0	1
Measures not recommended for endorsement	1	4	5
Reasons for not recommending	Importance – 1 Scientific Acceptability – 0 Overall – 0 Competing Measure – 0	Importance – 2 Scientific Acceptability –1 Overall – 1 Competing Measure – 0	

Overarching Issues

During the Standing Committee's discussion of the measures, several overarching issues emerged that were factored into the Committee's ratings and recommendations for multiple measures.

Competing measures of neonatal infection

The Committee determined that 3 similar measures of neonatal infection all met NQF's criteria and were recommended for endorsement – measures #0307, #0478 and #1731. The Committee strongly agreed that these multiple measures were burdensome for hospitals and looked to the developers to create a single measure. Ultimately, the Committee agreed that, for the time being, all three measures should remain endorsed for the following reasons:

- planned changes in the specifications of measure #0478 to achieve further harmonization;
- update of specifications to ICD-10 CM codes and the lack of information regarding the effect of revised coding on the measures;
- the population of hospitals reporting on measure #1731 was much larger this year - the greater experience will provide more information on the usefulness of the measure; and
- the need for data to compare the slightly different populations captured in each measure.

Given concerns about measurement burden, the Committee directed the developers to work together to arrive at a single measure with supporting data in 18 months for the Committee to consider during an off-cycle review.

Additionally, the Committee noted that the majority of babies born are larger babies that also develop infections but at a lower rate compared to the premature babies, so measures that focus only on the

smaller babies miss the opportunity to improve processes and reduce infections in many facilities that do not care for very low birthweight babies. Full details of the Committee discussion are in Appendix A.

Need for "balancing" measures

The Committee noted a potential concern that some measures may have unintended consequences that can be addressed by a "balancing measure" that would identify potential unintended effects. Balancing measures ensure that changes made in response to one measure are not worsening outcomes in another area. For example, a decrease in Cesarean sections, which is intended to be a positive outcome, should not increase compromised newborns or stillbirths.

Measures for normal pregnancies

Many of the measures under review focused on high-risk mothers or babies, yet the vast majority of pregnancies, deliveries, and newborns are not high-risk. Committee members noted the need for measures that assess normal, healthy pregnancies and babies, in part to assess and improve the quality of care that most patients and families are receiving, and in part to ensure that the majority of the population is not excluded from quality improvement and measurement.

Impact of ICD-10 CM coding

The maintenance measures in this project were all recently updated to ICD-10 CM codes and performance data using ICD-10 CM coding is not yet available. Committee members were hopeful that the new codes would improve accuracy and ease of reporting; however, without data, concerns remain over the accuracy, burden, gap, and actual performance of many of the measures.

Need for better measures

Since NQF's 2012 Perinatal project, Committee members noted that the measurement world has changed dramatically. While all of the measures evaluated had some opportunity for improvement, they highlighted the need for measures that "raise the bar" to further improve care and demand a higher level of performance. In addition, they noted a need for more measures of outcomes that matter to patients and families.

Summary of Measure Evaluation

The following brief summaries of the measure evaluations (organized by sub-topic area) highlight the major issues that were considered by the Committee. Details of the Committee's discussion and ratings of the criteria for each measure are included in Appendix A.

Reproductive Health

0033 Chlamydia Screening in Women (CHL) (National Committee for Quality Assurance): RECOMMENDED

Description: The percentage of women 16–24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year. **Measure Type**: Process; **Level of Analysis**: Health Plan, Integrated Delivery System; **Setting of Care**: Ambulatory Care: Clinician Office/Clinic; **Data Source**: Administrative claims, Electronic Clinical Data, Electronic Clinical Data: Imaging/Diagnostic Study, Electronic Clinical Data: Laboratory, Electronic Clinical Data: Pharmacy

This measure assesses the percentage of sexually active women 16–24 years of age who had at least one test for chlamydia during the measurement year. This longstanding HEDIS measure appears in both Medicaid Adult and Child Core Sets, with different age groups reported in each one. The Committee agreed that the underlying evidence continues to be sufficient despite a reduction to Grade B by the US Preventive Services Task Force (USPSTF). The Committee expressed concerns about the exclusive focus on women and the unintended consequences of not including men in this measure. The Committee highlighted that the USPSTF recommendation acknowledged the importance of men in this population, citing extensively the CDC recommendations in screening and treating men, but recognized the limitation of current data. The Committee noted that even though the developer presents evidence from the literature that describes racial/ethnic differences in screening rates (higher in African-Americans and Hispanics) and prevalence of the disease (higher in African-Americans and Mexican-Americans), the developer did not collect performance data stratified by race, ethnicity, or language.

The Committee noted that this measure may be affected by the new Pap smear screening guidelines that reduce patient visits and may also reduce opportunities for chlamydia screening. The Committee suggested the two measures – cervical cancer screening and chlamydia screening - be monitored together. The Committee questioned how this measure would account for transgender individuals and females between 16 and 24 years who are using contraception for non-contraceptive benefits. The developer clarified that teenagers sometimes state that they are using oral contraceptives for non-contraceptive reasons, but because of confidentiality and privacy concerns, may not disclose that they are sexually active. Overall, the Committee agreed the measure meets the NQF criteria and recommended NQF #0033 for continued endorsement.

2903 Contraceptive Care – Most & Moderately Effective Methods (US Office of Population Affairs): RECOMMENDED

Description: The percentage of women aged 15-44 years at risk of unintended pregnancy that is provided a most effective (i.e., sterilization, implants, intrauterine devices or systems (IUD/IUS) or moderately effective (i.e., injectables, oral pills, patch, ring, or diaphragm) FDA-approved method of contraception. The proposed measure is an intermediate outcome measure because it represents a decision that is made at the end of a clinical encounter about the type of contraceptive method a woman will use, and because of the strong association between type of contraceptive method used and

risk of unintended pregnancy. **Measure Type**: Intermediate Clinical Outcome; **Level of Analysis**: Facility, Health Plan, Population: Regional, Population: State; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Administrative claims.

This new measure assesses the percentage of women at risk of unintended pregnancy who are provided a method of contraception considered either "most effective" or "moderately effective." Contraceptive care is important because it prevents teen and unintended pregnancy and improves birth spacing. The developer classifies this measure as an intermediate outcome measure because it reflects a decision after a discussion between the provider and client/patient. The use of those methods considered "moderately" or "most" effective is strongly associated with reduced risk of unintended pregnancy. Contraceptive access and use is important because of the robust and growing evidence that well-timed, intentional pregnancies are associated with better health outcomes for both the mother and the infant. The Committee noted that although a high percentage of women will choose one of the "most" or "moderately" effective methods, some women will choose other less effective methods – a choice that must be respected – so the goal for this measure is not 100%. The goal is to see improvement over time rather than a specific target. The Committee discussed the fact that only 24 states have full access to contraception for teenagers and access to certain methods is limited by payers. The measure is intended to be used by plans, systems and family planning programs such as the federal Title X program. The measure has been extensively piloted by 2 state Medicaid programs and is being reported by 13 state Medicaid programs. Those Medicaid programs are funded by the Center for Medicaid and Children's Health Insurance Program (CHIP) Services (CMCS) and the measures are being reported from 2015-2018 as part of the Maternal and Infant Health initiative.

The developer and Committee discussed at length the concern of potential coercion of patients. The developer noted that CDC-OPA (Office of Population Affairs) recommendations describe in detail how to provide client-centered, non-coercive contraceptive counseling, and efforts to support use of the measure should be accompanied by efforts to increase awareness of the CDC-OPA recommendations (CDC/OPA 2014). Further, OPA has funded the development of training on how to provide client-centered training, which is available to all providers on the OPA-supported training website (www.fpntc.org).

This measure is based on administrative data that cannot determine a woman's desire for pregnancy, and the Committee welcomed the developer's plan to develop an electronic or hybrid measure in the near future. To estimate the number of women at risk for pregnancy within a plan or system, data from the National Survey of Family Growth (NSFG) can be used to adjust the measure rates. The Committee recommended this measure because of its importance to women's health.

2904 Contraceptive Care - Access to LARC (US Office of Population Affairs): RECOMMENDED

Description: Percentage of women aged 15-44 years at risk of unintended pregnancy that is provided a long-acting reversible method of contraception (i.e., implants, intrauterine devices or systems (IUD/IUS).

It is an access measure because it is intended to identify situations in which women do not have access to the long-acting reversible methods of contraception (LARC), i.e., contraceptive implants and intrauterine devices. **Measure Type**: Structure; **Level of Analysis**: Facility, Health Plan; Population: Regional; Population: State; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Administrative claims

The new measure is a subset of measure *#2903 Contraceptive Care – Most & Moderately Effective Methods* but is quite different because it is focused on access to long-acting reversible contraceptive methods (LARCs) -- IUDs and contraceptive implants. Availability of LARCs is variable and depends on payer coverage and availability of trained providers. The measure encourages health systems to look at reporting units with very low rates of provision of LARC to identify unnecessary barriers to LARCs. A low rate indicates a lack of availability or access to LARCs. The Committee agreed that, while there are a few issues specific to LARCs as a form of contraception (including side effects particular to these contraceptive) the overarching issues surrounding the evidence were addressed in the discussion of NQF #2903: Contraceptive Care – Most & Moderately Effective Methods.

This measure is used to identify women who do not have access to LARCs. The Committee discussed the use of the population denominator versus the encounters as the denominator. The developer explained that the reason they chose the population versus the encounter was because provision of the contraceptive is not always readily attributed to just one encounter or one type of provider. The Committee noted that this measure provides a good metric for access, not necessarily quality, since there are many different factors that contribute to provider quality of care. The Committee expressed serious concerns about coercive practices in which women are not offered a complete choice of methods and are pressured into using a LARC method. The developer stated that coercison is unlikely because the focus is on ensuring access to these methods by monitoring very low rates (well below the median) and the measure is not intended to be used for benchmarking. Ultimately, the Committee agreed the measure meets the NQF criteria and recommended NQF #2904 for continued endorsement.

2902 Contraceptive Care - Postpartum (US Office of Population Affairs): RECOMMENDED

Description: Among women ages 15 through 44 who had a live birth, the percentage that is provided:
1) A most effective (i.e., sterilization, implants, intrauterine devices or systems (IUD/IUS) or moderately (i.e., injectables, oral pills, patch, ring, or diaphragm) effective method of contraception within 3 and 60 days of delivery.
2) A long-acting reversible method of contraception (LARC) within 3 and 60 days of delivery.
Two time periods are proposed (i.e., within 3 and within 60 days of delivery) because each reflects important clinical recommendations from the U.S. Centers for Disease Control and Prevention (CDC) and the American College of Obstetricians and Gynecologists (ACOG). The 60 day period reflects ACOG recommendations that women should receive contraceptive care at the 6 week postpartum visit. The 3 day period reflects CDC and ACOG recommendations that the immediate postpartum period (i.e., at delivery, while the woman is in the hospital) is a safe time to provide contraception, which may offer greater convenience to the client and avoid missed opportunities to provide contraceptive care.

Measure Type: Intermediate Clinical Outcome; **Level of Analysis**: Health Plan, Population: Regional; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Administrative claims

This new intermediate outcome measure assesses the percentage of women provided a "most" or "moderately" effective method of contraceptive or a long-acting reversible method of contraception (LARC) after childbirth. Contraceptive care for postpartum women is important to facilitate birth spacing and this measure identifies women more clearly at risk for pregnancy. Two separate time periods are measured: the 60-day period reflects ACOG recommendations that women should receive contraceptive care at the 6-week postpartum visit; and the 3-day period reflects CDC and ACOG recommendations that the immediate postpartum period (at delivery, while the woman is in the hospital) is a safe time to provide contraception, which may offer greater convenience and avoid missed opportunities to provide contraceptive care. Eleven states have made specific policy changes to encourage placement of LARC immediately postpartum, with the potential for other states to follow these policy changes. The Committee agreed that patient choice must be respected thus 100% is not an appropriate target.

Pregnancy

1517 Prenatal & Postpartum Care (PPC) (National Committee for Quality Assurance): CONSENSUS NOT REACHED

Description: The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year. For these women, the measure assesses the following facets of prenatal and postpartum care:
Rate 1: Timeliness of Prenatal Care. The percentage of deliveries that received a prenatal care visit as a member of the organization in the first trimester or within 42 days of enrollment in the organization.
Rate 2: Postpartum Care. The percentage of deliveries that had a postpartum visit on or between 21 and 56 days after delivery. **Measure Type**: Process; **Level of Analysis**: Health Plan, Integrated Delivery System; **Setting of Care**: Ambulatory Care: Clinician Office/Clinic; **Data Source**: Administrative claims, Electronic Clinical Data, Paper Medical Records

This health plan measure was originally endorsed in 2011 and is currently used in programs for both health plan and state reporting. This measure assesses prenatal and postpartum visits but not the content of those visits. The Committee agreed that ACOG guidelines recommend a schedule of prenatal visits that are based primarily on expert consensus rather than empirical evidence. The Committee acknowledged that while data shows that patients who have no prenatal care have worse outcomes, there is no evidence for the timing of visits. The Committee invoked the exception to the evidence criterion and agreed that empirical evidence is not needed to hold providers accountable for the measure. The Committee also noted performance for prenatal care was about the same for Medicaid and commercial plans at 80-85%, but postpartum visits are lower for both: commercial plans reporting 73-76% and Medicaid plans reporting 61-63%.

The Committee noted that early post-partum care before 21 days may be important for wound care, breastfeeding support, depression screening, follow-up of blood pressure, and contraception. The Committee noted that women also are being seen for depression screening and breastfeeding support during their babies' pediatric visits. The Committee expressed concerns about the validity of the measure, noting the limited number of codes and the fact that the measure is not addressing the content of the visits. The Committee also identified concerns with the Usabilty and Use criteria because the measure potentially discourages earlier postpartum care and it is unclear whether quality is improving. Overall, the Committee did not reach consensus on the suitability for continued endorsement of NQF #1517. Despite significant concerns, several Committee members were reluctant to remove endorsement until better measures for prenatal care are available.

1391 Frequency of Ongoing Prenatal Care (FPC) (National Committee for Quality Assurance): NOT RECOMMENDED

Description: The percentage of Medicaid deliveries that had the following number of expected prenatal visits:

- less than 21 percent of expected visits.
- 21 percent–40 percent of expected visits.
- 41 percent–60 percent of expected visits.
- 61 percent–80 percent of expected visits.
- greater than or equal to 81 percent of expected visits.;

Measure Type: Process; **Level of Analysis**: Health Plan, Integrated Delivery System; **Setting of Care**: Ambulatory Care: Clinician Office/Clinic; **Data Source**: Administrative claims, Electronic Clinical Data, Paper Medical Records

This health plan measure was originally endorsed in 2011 and is used in programs for both Medicaid plans and state reporting. The Committee agreed that ACOG guidelines recommend a schedule of prenatal visits that are based primarily on expert consensus. The Committee adds that there is no empirical evidence for the visit schedule or that the number of visits is associated with improvement in outcomes for mothers and babies. The measure is considered a "proxy for access"; however, it does not assess the capacity of a plan to provide prenatal care, but rather the measure reflects the challenges women face such in accessing care, such as taking time off work, transportation, and childcare.The Committee emphasized that frequency does not equal quality and that this measure inhibits innovative strategies and new models of care delivery. Overall, the Committee agreed the measure did not meet the Evidence criterion and did not recommend NQF #1391 for continued endorsement.

Labor and Delivery

0469 PC-01 Elective Delivery (The Joint Commission): RECOMMENDED

Description: This measure assesses patients with elective vaginal deliveries or elective cesarean births 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 Birth, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding); **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

This endorsed, facility-level measure assesses the number of infants delivered electively between 37 weeks and 38 weeks and 6 days gestation, providing an assessment of providers' adherence to the American College of Obstetricians and Gynecologists (ACOG) guidelines restricting elective delivery (i.e., deliveries without maternal or fetal indication for delivery before the onset of spontaneous labor) prior to 39 completed weeks' gestation. Evidence shows that early elective, non-medically indicated delivery carries increased risks for the newborn and new evidence shows that reducing the number of elective deliveries before 39 weeks does not increase the rate of stillbirths. Data from The Joint Commission (TJC) shows a decline in performance from 13.6% in 166 hospitals in 2011 to 3.3% in 1,388 hospitals in 2014. The developer reported that the greatest decline is for repeat Cesarean births at 37 weeks. In 2016, an additional 821 hospitals are required to report this measure. The Committee agreed with the developer that the goal is not to reach zero elective deliveries, as there will always be circumstances for which an early elective delivery is appropriate. Some Committee members suggested that the measure is approaching that limit at 3% and there may be little room for further improvement though most agreed that further measurement is needed to assure high levels of performance will continue.

The Committee noted that not all agree with the appropriateness of some exclusions and that inappropriate use of the exclusion codes occurs. Some Committee members expressed concern with the lack of reduction in NICU admissions and Cesarean births that, according to the evidence, should occur with the significant decline in early elective deliveries. The developer notes that National Center for Health Statistics data demonstrates overall reduction in deliveries at 37 and 38 weeks. Some updates were made to the measure specifications, including a check for the presence of labor and a new data element for prior uterine surgery as well as additional codes for exclusions. The Committee noted that it is not yet clear how the change to ICD-10 may affect the reliability. The Committee noted that it is very easy for the public to understand this measure and it is effective in capturing attention of policymakers. The Committee unanimously recommended measure #0469 for continued endorsement.

0469:2829 [eMeasure] PC-01 Elective Delivery (The Joint Commission): RECOMMENDED

Description: This measure assesses patients with elective vaginal deliveries or elective cesarean births 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). PC-01, Elective Delivery is one of two of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program. **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data: Electronic Health Record; Electronic Clinical Data: Pharmacy

This is the new eMeasure version of measure *0469: PC-01 Elective Delivery*. The information on evidence and opportunity for improvement is the same as measure #0469. NQF's technical review found this eMeasure to have appropriate specifications and value sets, and an adequate feasibility assessment that addressed the data elements and measure logic. The Committee found the results of the BONNIE testing in a simulated data set provided by the developers acceptable. The developer reported that 7 healthcare organizations reported this eMeasure to The Joint Commission in 2015 and 69 healthcare organizations will be reporting the eMeasure in 2016.

0470 Incidence of Episiotomy (National Perinatal Information Center): RECOMMENDED

Description: Percentage of vaginal deliveries (excluding those coded with shoulder dystocia) during which an episiotomy is performed. **Measure Type**: Process; **Level of Analysis**: Facility; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Administrative claims, Paper Medical Records

This measure of overuse has been endorsed since 2008. Episiotomy is associated with increased perineal trauma and subsequent pain, sexual dysfunction, and anal incontinence, without evidence of benefit. While there has been a significant decrease in episiotomies overall, there continues to be considerable variation among facilities. Data from 63 hospitals reporting to the National Perinatal Information Center (NPIC) found results ranging from 0.8 – 22.1% in 2014. Committee members reported fewer 3rd and 4th degree lacerations in their facilities when episiotomy rates declined. Several Committee members shared their experiences using clinician-level measure results and peer-to-peer education to effectively change behaviors in their institutions but agreed that the measure is best used at the facility level for accountability. Committee members noted that conversion to ICD-10 CM will address some coding issues, and that the procedure is easy to code. The Leapfrog Group is publicly reporting this measure for nearly 1,000 hospitals. The Committee unanimously recommended this measure for continued endorsement.

0471 PC-02 Cesarean Birth (The Joint Commission): RECOMMENDED

Description: This measure assesses the number of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth. This measure is part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding). **Measure Type**: Outcome; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Paper Medical Records

This measure assesses the rate of Cesarean births in a subset of pregnant women thought to be at low-risk for an operative delivery. ACOG has said that this is the "optimal measure" for Cesarean birth because it focuses on first-time, uncomplicated pregnancy and assesses the outcome of labor management. The Committee compared the Healthy People 2020 target of 23.9% and the 2014 mean result of 26.8% for 1,388 hospitals reporting to The Joint Commission. The variation among hospitals is still quite large (10^{th} percentile is 17.6% and the 90^{th} percentile is 36.3%) and disparities exist (African Americans have higher Cesarean birth rates). The Committee cautioned that tying payment to a specific target value, such as 23.9%, might lead to poor outcomes.

The developer has revised the measure to remove the age stratification. The Committee discussed, at length, the possible need for additional risk adjustment. Some Committee members reported data that varied in terms of whether additional risk factors affected the Cesarean birth rate. The developer stated that exclusion for clinical trials is no longer in the measure. The Committee pointed out that this Cesarean birth measure needs a balancing measure, such as *NQF #0716 Unexpected Complications in the Term Newborn,* to monitor potential unintended consequences during efforts to reduce the Cesarean birth rate. Committee members noted that ACOG and the Society for Maternal and Fetal Medicine (SMFM) use this measure. In response to questions about plans for publicly reporting measure results, the developer noted that they are working out details for public reporting but specific dates are not available. The Committee suggested that the brief measure title may be misleading and a more descriptive title would be helpful for audiences.

2892 Birthrisk Cesarean Birth Measure (Birthrisk.com, LLC.): NOT RECOMMENDED

Description: This is a measure of the effect that obstetrical care provider´s labor management strategies have on their laboring patient´s risk for cesarean birth. The target population is limited to women who attempt labor with a singleton vertex pregnancy without a history of a prior cesarean birth and give birth between 37 and 42 weeks of gestation. **Measure Type**: Outcome; **Level of Analysis**: Facility, Clinician: Individual; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Other

This new measure uses a different approach to measuring Cesarean birth rates than #0471 that includes all mothers undergoing labor, i.e., not limited to first time mothers and excludes elective repeat Cesarean births. The Committee had no reference data to evaluate the results calculated by the developer using birth certificate data from New York State in 2005-2007. Committee members indicated that many of the birth certificate data fields used in this measure, such as previous Cesarean birth, induction of labor and attempt of labor, are known to be unreliable. This hospital- and clinician-level measure also uses a fee-based, proprietary method of risk adjustment using cohort comparisons. Committee members were unfamiliar with this methodology and found the information provided to be inadequate to understand the data presented. The developer notes that efforts to have the method published have been unsuccessful. Given concerns regarding the proprietary nature of the risk

adjustment method and the use of 10-year-old data, the Committee did not recommend this measure for endorsement.

Labor and Delivery: High-risk Pregnancy

0476 PC-03 Antenatal Steroids (The Joint Commission): RECOMMENDED

Description: This measure assesses patients at risk of preterm delivery at >=24 and <34 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 Birth, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding). **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Paper Medical Records

This measure has been endorsed since 2008. Steroids are given to mothers at risk of premature delivery to improve the lung function of premature newborns. The measure has been changed to capture initiation of antenatal steroids rather than "antenatal steroids administered." The developers found that if the first dose of steroids is given, then the follow-up doses are also given and this change reduces the burden of data collection. In response to the 2013 ACOG Practice Bulletin on Premature Rupture of Membranes (PROM), the developer expanded the denominator to include patients delivering live preterm newborns up to 34 weeks. The updates to the measure allow for data collection from medical records, vital records, delivery logs and clinical information systems as acceptable data sources to help hospitals identify all cases 24 - 34 weeks of gestation.

The Committee was advised that the exclusion for clinical trials has been removed. Committee members expressed concern that the exclusion for "documented reason" is too readily used and will result in a premature newborn not receiving the benefits of steroid therapy. Committee members also noted that giving mothers with hypertension and diabetes that need immediate delivery may be harmed by waiting the 48 hours for full benefit of the steroids prior to delivery. Although hospitals with lower delivery volumes will be required to report on this measure, it is unlikely to capture many more cases because these high-risk patients are generally cared for in hospitals with higher volumes. This measure is included in the Medicaid Adult Core Set of measures.

2896 Structural Attributes of Facility in which High Risk Women Deliver Newborns: A PQMP Measure (Collaboration for Pediatric Quality Measures (CAPQuaM)): NOT RECOMMENDED

Description: This measure characterizes the facility that is the site of delivery of newborn infants born to high risk women by four key structural characteristics. These four characteristics were identified as critical structures by a national expert panel who served CAPQuaM's 360 degree process for measure development. This work was undertaken in the context of developing innovative measures of the availability of High Risk Obstetrical (HROB) care as assigned by AHRQ and CMS.

The four key structures are:
(a) Level 3 or higher NICU services on campus. Level 3 NICU is defined as meeting either the American Academy of Pediatrics (AAP) criteria or a locally used set of explicit criteria recognized by that state's Department of Health.
(b) 24/7 on-site blood banking services/transfusion services that are always available for obstetrical patients. By 24/7 blood banking/transfusion services we mean that the following are always available to obstetrical patients: testing of blood group and Rh Type; cross matching; antibody testing; transfusion with on-site and available blood, either ABO specified or O-Rh-negative; transfusion with fresh frozen plasma; and transfusion with cryoprecipitate.
(c) 24/7 in - house physician dedicated to labor and delivery who is capable of safely managing labor and delivery, and of performing a cesarean section, including an emergent cesarean section.
(d) 24/7 in - house physician coverage dedicated to the obstetrical service by an anesthesiologist who is qualified to provide obstetrical anesthesia. **Measure Type**: Composite; **Level of Analysis**: Population : Community, Population: County or City, Health Plan, Integrated Delivery System, Population: National, Population: Regional, Population: State; **Setting of Care**: Hospital/Acute Care Facility, Other; **Data Source**: Administrative claims, Healthcare Provider Survey

This new composite measure includes 4 components of care delivery for high-risk mothers. The Committee did not agree that this is a measure of quality or accountability for providers. The evidence provided for the 4 components is expert opinion, not empirical evidence. The Committee noted that the information may be important as a designation of care provision. The developers stated that this is a "population measure de-linked from individual patient care" and "the measure does not make a distinction between good care and bad care." The Committee also noted that the measure includes mothers with birth complications that are mostly unpredictable and patients cannot always be transferred to a different facility after birth. The developer presented no measure results for any plans/systems. The Committee agreed that directing high-risk mothers and high-risk babies to facilities most capable of caring for them may impact outcomes; however, the Committee agreed this measure needs further development to become an accountability measure.

Newborn

0716 Unexpected Complications in Term Newborns (California Maternal Quality Care Collaborative): RECOMMENDED

Description: This is a hospital level performance score reported as the percent of infants with Unexpected Newborn Complications among full term newborns with no preexisting conditions, typically calculated per year. **Measure Type**: Outcome; **Level of Analysis**: Facility, Integrated Delivery System, Population: Regional, Population: State; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Administrative claims

This measure was originally endorsed as *#0716 Healthy Term Newborn* in 2012. The developer has since inverted the measure to report on the unexpected outcomes for healthy, full-term newborns. The developer explained the decision to reverse the measure is to focus attention on the 3-6% of babies with unexpected complications. The Committee agreed that this is an important outcome measure and that the rate is not expected to be zero. Data from California demonstrate modest differences in outcomes. The Committee also suggested this was a good balancing measure that should be used to monitor newborn outcomes as practices change.

This outcome measure is not risk-adjusted. The developers provided an analysis of potential risk adjustors but concluded that "while there are some individual factors that can statistically affect the score, when examined together at the hospital level they cancel each other out or are distributed evenly among hospitals so as not to significantly affect the rankings." The data source is administrative claims linked to Vital Statistics; unlike the underused ICD codes for gestational age, the birth certificate data fields for "Best Obstetric Gestational Age" and "Birthweight" have high degrees of completeness and accuracy. The measure is currently in use in several states, and the Committee agreed that reframing the measure is more meaningful to audiences. The Commmittee unanimously recommended the revised measure for continued endorsement.

0475 Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge (Centers for Disease Control and Prevention): RECOMMENDED

Description: Percent of live newborn infants that receive Hepatitis B vaccination before discharge (or within 1 month of life, if the infant had an extended hospital stay) at each single hospital/birthing facility during given time period (one year). **Measure Type**: Process; **Level of Analysis**: Facility; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data: Electronic Health Record, Other, Paper Medical Records, Electronic Clinical Data: Pharmacy, Electronic Clinical Data: Registry

Almost 90% of infants who are infected with Hepatitis B virus during birth will develop chronic infections, which carry about a 25% lifetime risk for premature death from liver failure or liver cancer. Immunization at birth prevents development of chronic Hepatitis B infection. The developer has revised the measure to exclude parent refusals since the goal is to measure how many babies are protected. Data from the 2014 National Immunization Survey reported a mean performance rate of 72.4% - down from the rate of 74.2% in 2013. The measure is specified for electronic clinical data, registry and abstraction from electronic health records with all the codes necessary to calculate the measure presented (ICD-9 and ICD-10 and CPT II codes). Testing shows that the measure reliability is improved when refusals are removed from the measure. Hospitals may have some challenges with the measure if parents and pediatricians prefer that a newborn be immunized in the pediatrician's office rather than the hospital. The Committee emphasized the preventive and public health importance of this immunization measure and unanimously recommended the measure for continued endorsement.

Newborn: Premature/ Low birthweight

1382 Percentage of low birthweight births (Centers for Disease Control and Prevention): RECOMMENDED

Description: The percentage of births with birthweight <2,500 grams; **Measure Type**: Outcome; **Level of Analysis**: Population: County or City, Population: National, Population: Regional; **Setting of Care**: Hospital/Acute Care Facility, Other; **Data Source**: Patient Reported Data/Survey

This is a population outcome measure reported by the National Center for Health Statistics to monitor low birthweight babies. The Committee noted this is a global indicator of quality that has shown a slow improvement since a high of 8.26% in 2006 to 8% in 2014. The US percentage of low birthweight births is substantially higher than in most other developed countries. Differences in low birthweight vary significantly by race and ethnicity: white – 7%, black – 12.8%, Hispanic – 7.1%, American Indian/Alaskan native – 8.1%, Asian/Pacific Islander – 8.1%.

The Committee noted that this state-level measure is not a direct reflection of quality of care for specific providers, but rather it is a reflection of perinatal care in general that is important to measure and track. The gradual decline of low birthweight babies is likely a result of the aggregate efforts of many participants - clinicians, plans, educators, etc. In addition, from a public health and planning point of view, it is helpful to know how many babies are going to need NICU care and support services. The Committee unanimously recommended this measure for continued endorsement.

2895 Thermal Condition of Low Birthweight Neonates Admitted to Level 2 or Higher Nurseries in the First 24 Hours of Life: A PQMP Measure (Collaboration for Pediatric Quality Measures (CAPQuaM)): NOT RECOMMENDED

Description: This measure describes in terms of admission temperature the status of live-born neonates less than 2,500 grams that are admitted to a Level 2 or higher nursery.
This measure reports on the temperature at admission. Temperatures are reported both in categorical terms and as a distribution. The distribution should be presented as a cumulative incidence curve with a chart to present key moments in the distribution. The categorization data may be presented in chart or graphical form, such as a pie chart, with parents. Each admission is categorized into one of five strata on the basis of their admission temperature. The strata, which were defined by our expert panel, are cold (<34.5), very cool (34.51-35.50), cool (35.51-36.50), about right (36.51-37.50) and overly warm (>37.5). All temperatures are analyzed using degrees Celsius and reported to one decimal place. The FIRST temperature taken in the nursery is to be recorded and used.
To avoid the potential for gaming the measure by delaying a recorded temperature after arrival, the results are stratified in three ways:
- Main Stratum: Time between arrival at Level 2 or higher nursery is between 0 and 15 minutes.
- Delayed stratum: Time between arrival at Level 2 or higher nursery is more than 15 minutes.

- Other: Inadequate documentation to determine timing of temperature; **Measure Type**: Outcome; **Level of Analysis**: Population: Community, Population: County or City, Facility, Health Plan, Integrated Delivery System, Population: Regional, Population: State; **Setting of Care**: Hospital/Acute Care Facility, Other; **Data Source**: Administrative claims, Electronic Clinical Data: Electronic Health Record, Other, Paper Medical Records

This new, intermediate outcome measure for newborn temperature management reports the distribution of temperatures on arrival to the NICU for babies weighing less than 2500 grams. Strong evidence has shown that low birthweight babies who are allowed to lose body heat are at increased risk for morbidity and mortality. Data from the test population in New York provided by the developer demonstrated variation in performance. The Committee did not reach consensus on the reliability and validity of the measure due to multiple concerns: temperature strata determined by expert consensus rather than empirical evidence; difficulty in interpreting the measure results that are intended to be displayed as a distribution in a table and cumulative distribution curve rather than a single numerical result; the validity testing performed on a variant of the measure; and confusion as to how to interpret the measure results for accountability purposes. The Committee agreed that temperature data are readily collected in the medical record; however, extracting that data would be challenging for this measure. The developer reported that they are creating a web portal to submit data. The Committee agreed that neonatal temperature management is an important topic but did not recommend this measure as constructed for endorsement.

0304 Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted) (Vermont Oxford Network): RECOMMENDED

Description: Standardized morbidity ratio and observed minus expected measure for nosocomial bacterial infection after day 3 of life in very low birth weight infants; **Measure Type**: Outcome; **Level of Analysis**: Facility; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data: Registry

This outcome measure was last endorsed in 2012. Low birthweight babies are particularly vulnerable to infection and the Committee agreed that while the mean rate of infection has declined from 19.2% in 2006 to 10.8% in 2014 based on the Vermont Oxford Network (VON) data, a gap remains. VON data also show that rates of hospital acquired bacterial infection varied by race/ethnicity of the mother, ranging from 11.4% for infants with black mothers to 8.9% for infants with Asian mothers. The developer noted that updated reliability testing (signal-to-noise = 0.63) was lower than expected, suggesting "that the definition may not be applied in the same manner across all infants in all hospitals." This VON measure contains proprietary algorithms available only to VON members. The requirement for VON membership raised some concerns for the Committee for feasibility and usability, but as most hospital NICUs are VON members, they ultimately agreed it was feasible, but did not achieve consensus

on usability. The measure is not publicly reported. The Committee voted to recommend measure #0304 for continued endorsement.

This measure is similar to two other measures #*0478: Neonatal Blood Stream Infection Rate (NQI 03*) and #*1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns*. Many hospital NICUs are reporting the 3 different measures, which the Committee noted is an unnecessary measurement burden. The Committee held an extensive discussion on which of the 3 was best in class. Ultimately, due to changes in the AHRQ measure, the update to ICD-10 CM, the expanded number of facilities reporting, and the slightly different populations included, the Committee agreed that, for the time being, all 3 measures should remain endorsed, since they report slightly different information. However, they directed the 3 developers to work together to create a single measure and bring back new data in 18 months for an off-cycle review.

0478 Neonatal Blood Stream Infection Rate (NQI 03) (Agency for Healthcare Research and Quality): RECOMMENDED

Description: Discharges with healthcare-associated blood stream infection per 1,000 discharges for newborns and outborns with birth weight of 500 grams or more but less than 1,500 grams; with gestational age between 24 and 30 weeks; or with birth weight of 1,500 grams or more and death, an operating room procedure, mechanical ventilation, or transferring from another hospital within two days of birth. Excludes discharges with a length of stay less than 3 days and discharges with a principal diagnosis of sepsis, sepsis or bacteremia, or newborn bacteremia. **Measure Type**: Outcome; **Level of Analysis**: Facility; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Administrative claims

This risk-adjusted outcome measure, initially endorsed in 2008, is based on administrative claims to assess infection in low birthweight newborns. Data are collected from 48 states via the Agency for Healthcare Research and Quality's (AHRQ) Healthcare Cost and Utilization Project (HCUP) dataset. For more than 1,200 hospitals, the mean results have declined from 11.53 per 1,000 in 2011 to 9.15 per 1,000 in 2013. The developer presented measure results stratified by gender, zip code median income, rural v. urban, payment source and region. Lower rates were found for females, highest income quartile, rural facility, self pay/no insurance and the Northeast. Updated reliability testing reported an overall signal-to-noise rate of 0.63 with higher reliability with larger sample sizes.

This measure is similar to two other measures, #*0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)* and #*1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns.* Many hospital NICUs are reporting the 3 different measures, which the Committee noted is an unnecessary measurement burden. The Committee held an extensive discussion on which of the three was best in class. Ultimately, due to the changes in the AHRQ measure, the update to ICD-10, the expanded number of facilities reporting, and the slightly different populations included, the Committee agreed that for the time being all 3 measures should remain endorsed, since they report slightly

different information. However, they directed the 3 developers to work together to create a single measure and bring back new data in 18 months for an off-cycle review.

1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns (The Joint Commission): RECOMMENDED

Description: This measure assesses the number of staphylococcal and gram negative septicemias or bacteremias in high-risk 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 Birth, PC-03: Antenatal Steroids, PC-05: Exclusive Breast Milk Feeding). **Measure Type**: Outcome; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Paper Medical Records

This outcome measure has been endorsed since 2012. National aggregate data for newborn infection from 1218 hospitals in 2014 reported to The Joint Commission was 3.2%. The mean hospital rate in 2014 was 2.98% and the range was 0-7.1%. The Committee agreed that there is a significant opportunity for improvement as the national results have worsened since 2011. The developer explained that additional, smaller hospitals are now reporting (as of 2016, all hospitals with more than 300 births annually are required to report), so new gaps are appearing. The measure was recently updated to ICD-10 CM and some changes were made to the specifications, but the Committee agreed these changes were appropriate. It was also agreed that the measure is feasible and usable, especially with the updates to the specifications, although they noted that data to compare the ICD-9 CM based results and ICD-10 CM based results are not yet available.

This measure is similar to two other measures*, #0478, Neonatal Blood Stream Infection Rate (NQI 03*) and *#0304: Late Sepis or Meningitis in Very Low Birth Weight Neonates (Risk Adjusted)*. Many hospital NICUs are reporting the 3 different measures, which the Committee noted is an unnecessary measurement burden. The Committee held an extensive discussion on which of the 3 was best in class. Ultimately, due to the changes in the AHRQ measure, the update to ICD-10 CM, the expanded number of facilities reporting, and the slightly different populations included, the Committee agreed that for the time being all 3 measures should remain endorsed, since they report slightly different information. However, they directed the 3 developers to work together to create a single measure and bring back new data in 18 months for an off-cycle review.

0483 Proportion of infants 22 to 29 weeks gestation screened for retinopathy of prematurity. (Vermont Oxford Network): RECOMMENDED

Description: Proportion of infants born from 22 weeks, 0 days to 29 weeks, 6 days gestational age who were in the reporting hospital at the postnatal age recommended for screening for retinopathy of prematurity (ROP) by the American Academy of Pediatrics (AAP) and who received a retinal examination

for ROP prior to discharge. **Measure Type**: Process; **Level of Analysis**: Facility; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data: Registry

The endorsed process measure from the Vermont Oxford Network (VON) assesses whether premature infants who are at risk for eye complications due to prematurity have had an eye evaluation prior to hospital discharge. The Committee noted that the data collected is a simple yes/no and does not include the date or gestational age. The Committee discussed alternative methods for the eye evaluation because of shortages of pediatric ophthalmologists in some areas. For the 916 hospitals in the VON network, average performance on this measure improved slightly from 90.1% in 2006 to 91.8% in 2014. Reliability testing of the measure score indicates higher reliability for larger sample sizes. For VON members, this measure requires chart abstraction and submission to VON, but the measure specifications can be used by any hospital to calculate their own performance. The Committee was concerned that this measure is not publicly reported; however, due to the importance of preventing eye problems for premature babies, the Committee recommended this measure for continued endorsement.

2893 Neonatal Intensive Care All-Condition Readmissions (The Children's Hospital of Philadelphia): NOT RECOMMENDED

Description: The NICU Readmissions metric assess the hospital- or state-level readmission rate at 30 days after a stay in the Neonatal Intensive Care Unit. **Measure Type**: Outcome; **Level of Analysis**: Facility, Population: State; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Administrative claims, Electronic Clinical Data: Electronic Health Record, Other

This new outcome measure assesses readmission to the hospital for infants discharged from the Neonatal Intensive Care Unit (NICU). The Committee agreed that transitions of care are important; discharge planning and outpatient care coordination can influence the outcome; readmission is sensitive to racial/ethnic disparities; and there is significant variation in care. The Committee noted that there are numerous readmission measures for adults and children; however, newborns may be cared for in 2 types of NICUs: a maternity/birth hospital that does not readmit neonates and a general acute care facility that does readmit neonates (though the infants are typically readmitted to the general pediatrics unit rather than the NICU). This measure is specified for facilities/hospitals that may not be able to track readmissions to other facilities. Though health information exchanges may improve the data capture in the future, the Committee noted that insurers, managed care organizations and Medicaid may be better able to track readmissions across facilities.

The measure relies on hospital data linked to vital statistics, which may not be available in all locations. The Committee was concerned that the measure does not account for planned readmissions or planned transfers and does not differentiate between a hospitalization and an observation stay – both are included as readmissions. The developer indicated “accurate implementation of this metric will require

new data collection linkage with birth certificates or more widespread and standardized use of the EHR for publicly reported measures." The Committee did not recommend the measure because of the questions around reliability of data capture and recommends further development of this important measure. The Committee also suggested including larger babies that may not have been in the NICU but experience a significant number of readmissions.

Postpartum

0480 PC-05 Exclusive Breast Milk Feeding (The Joint Commission): RECOMMENDED

Description: PC-05 assesses the number of newborns exclusively fed breast milk during the newborn's entire hospitalization. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-02: Cesarean Birth, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns). **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Paper Medical Records

This process measure was last endorsed in 2012. Numerous studies have demonstrated the benefits of breastfeeding including reductions in asthma, diarrheal illness and childhood obesity. Committee members noted that not all mothers are able to breastfeed and agreed with the developer that a target goal rate for the measure of 70% of patients exclusively breastfeeding during their hospital stay is reasonable. Data reported to The Joint Commission demonstrated wide variation in performance and, in over half the hospitals reporting, rates have not yet reached 50%. This measure engendered extensive discussion about patient choice, external circumstances that affect a woman's ability to breastfeed (such as the availability of maternity leave and the ability of working mothers to pump), and concerns about pressuring mothers and about the availability and quality of counseling. A Committee member summarized the concerns around the measure as the tension between pressure on mothers whose circumstances do not support breastfeeding (such as women who have less than 4 weeks leave or who have jobs where they cannot pump) and promoting the health benefits for the baby by keeping the goal at 70% to move the nation forward. The measure was recently updated to ICD-10 CM, and the sub-measure, exclusion of mothers who declined to breastfeed, was removed because stakeholders felt it was too much burden to get the data. As the measure is currently in widespread use, it was agreed it was both usable and feasible. Despite some concerns, the Committee ultimately voted to recommend the measure for continued endorsement, highlighting the lifetime benefits, and the many ways that process improvements can positively impact a facility's rates.

0480:2830 [eMeasure] PC-05 Exclusive Breast Milk Feeding (The Joint Commission): RECOMMENDED

Description: PC-05 assesses the number of newborns exclusively fed breast milk during the newborn's entire hospitalization. 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-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns). PC-05, Exclusive Breast Milk Feeding,

is one of two measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program. **Measure Type**: Process; **Level of Analysis**: Facility, Population: National; **Setting of Care**: Hospital/Acute Care Facility; **Data Source**: Electronic Clinical Data, Electronic Clinical Data: Electronic Health Record

This is the eMeasure version of measure *#0480 PC-05 Exclusive Breast Milk Feeding*. The information on evidence and opportunity for improvement is the same as measure #0480. The technical review found this eMeasure to have appropriate specifications and value sets, and an adequate feasibility assessment that addressed the data elements and measure logic. The Committee found the results of the BONNIE testing in a simulated data set provided by the developers acceptable. The developer reported that 6 healthcare organizations reported this eMeasure to The Joint Commission in 2015 and 31 healthcare organizations will be reporting the eMeasure in 2016.

Measures Withdrawn from Consideration

Five measures previously endorsed by NQF were not re-submitted for maintenance of endorsement. Endorsement for these measures will be removed.

Measure	Reason for withdrawal
0472 Appropriate Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision – Cesarean section.	Unable to continue as steward. Would be willing to transfer ownership to another willing steward.
0477 Under 1500g infant Not Delivered at Appropriate Level of Care	The developer indicated that resubmission was too much work for a measure that the steward themselves are not using, uncertainty that others were truly using it as a quality measure, and the best role seemed to be as a population level measure rather than a hospital level measure, which is the steward's main interest.
0567 Appropriate Work up Prior to Endometrial Ablation Procedure	No reason provided.
0651 Ultrasound determination of pregnancy location for pregnant patients with abdominal pain	No reason provided.
1395 Chlamydia Screening and Follow Up	NCQA is not currently using this measure in other major programs to the extent that the level of effort required to maintain endorsement.
1746 Intrapartum Antibiotic Prophylaxis for Group B Streptococcus (GBS)	Unable to continue as steward. Would be willing to transfer ownership to another willing steward.

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Appendix A: Details of Measure Evaluation

Rating Scale: H=High; **M**=Moderate; **L**=Low; **I**=Insufficient; **NA**=Not Applicable; **Y**=Yes; **N**=No

Measures Recommended

0033 Chlamydia Screening in Women (CHL)

Submission | Specifications

Description: The percentage of women 16–24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year.

Numerator Statement: Females who were tested for chlamydia during the measurement year.

Denominator Statement: Females 16-24 years who had a claim or encounter indicating sexual activity.

Exclusions: Females who received a pregnancy test to determine contraindications for medication (isotretinoin) or x-ray.

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Health Plan, Integrated Delivery System

Setting of Care: Ambulatory Care: Clinician Office/Clinic

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data, Electronic Clinical Data: Imaging/Diagnostic Study, Electronic Clinical Data: Laboratory, Electronic Clinical Data: Pharmacy

Measure Steward: National Committee for Quality Assurance

STANDING COMMITTEE MEETING [May 02 2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-21**; **M-6**; **L-0**; **I-0**

Rationale:

- The developer provided updated US Preventative Services Task Force (USPSTF) (2014) recommendations for screening for chlamydia in sexually active females aged 24 years or younger and in older women who are at increased risk for infection. Evidence synthesis concluded, “Chlamydia screening in young women may reduce pelvic inflammatory disease.” USPSTF notes “the studies it reviewed on the direct effects of screening for chlamydia, including one new good-quality RCT, showed mixed results. This led to the change in grade for screening for chlamydia, which is now based on “moderate” certainty of a moderate net benefit rather than “high certainty” of a substantial net benefit.”
- Although the USPSTF recommendation has been changed to a “B” level, the Committee agreed that the underlying evidence presented appears to be directionally the same since the last NQF endorsement review.
- The Committee highlighted that only 38% of the visits in one cohort in 2014 had appropriate testing, signaling a significant gap in care.
- The Committee expressed concerns about the exclusive focus on women and the unintended consequences for not including men in the measure. The developer clarified that the Task Force evaluated this before this measure was originally approved and the evidence for a direct health benefit was limited to women. The Committee highlighted that the USPSTF recommendation acknowledged the importance of men in this population, citing extensively the CDC recommendations in screening and treating men but recognized the limitation of data.
- The Committee noted that even though the developer presents evidence from the literature that describes racial/ethnic differences in screening rates (higher in African-Americans and Hispanics) and prevalence of the disease (higher in African-Americans and Mexican-Americans), the developer did not collect performance data stratified by race, ethnicity, or language. The developer explained that they are very interested in having data that would help propel the improvement and elimination of disparities and

0033 Chlamydia Screening in Women (CHL)
the release of the Medicare Advantage data by race and ethnicity is a huge step forward, and one that they are closely tracking to leverage into opportunities for displaying data in stratified ways to push improvement. The developer also noted that health plans are able to stratify the data by race/ethnicity or any other variables they desire.
2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u> (2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity) 2a. Reliability: **Previous Reliability Evaluation Accepted** 2b. Validity: **Previous Validity Evaluation Accepted** <u>Rationale</u>: • The developer noted several updates to the specification codes (HCPCS, LOIN, ICD-9 diagnosis codes) since the prior evaluation. • The Committee noted the specifications state a patient only needs to be identified in 2 methods (i.e., pharmacy data and claim/encounter data indicating sexual activity) to be eligible for this measure. The Committee questioned how this measure would account for transgender individuals and females between 16 and 24 who are using some types of contraception for non-contraceptive benefits. • The developer clarified that the teenagers in that age group sometimes state that they are using oral contraceptives for non-contraceptive reasons, but because of confidentiality and privacy concerns, may not disclose that they are in fact sexually active. The developer found that the algorithm was a reasonable proxy and that the false negative rates were quite low. • There was no updated testing for reliability and validity. The developer previously conducted empirical testing at the measure score level and face validity. The prior testing demonstrated high reliability and adequate validity. The Committee agreed the measure was reliable and valid.
3. Feasibility: H-21; M-5; L-1; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* <u>Rationale</u>: • The Committee agreed the measure is feasible, since it is based on administrative claims data for which data collection is generally considered to be feasible and low burden. No concerns regarding feasibility were noted.
4. Usability and Use: H-13; M-14; L-0; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* <u>Rationale</u>: • This measure is publicly reported and used in the Medicaid Adult and Child Core Sets and California's Value Based Pay for Performance Program. • The Committee had no concerns about unintended consequences of continued use.
5. Related and Competing Measures • No related or competing measures noted.
Standing Committee Recommendation for Endorsement: **Y-27**; **N-0** <u>Rationale</u> • The Committee agreed that this measure meets all the NQF criteria for continued endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0304 Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)

Submission | **Specifications**

Description: Standardized morbidity ratio and observed minus expected measure for nosocomial bacterial infection after day 3 of life in very low birth weight infants

Numerator Statement: Eligible infants with one or more of the following criteria:

Criterion 1:

Bacterial Pathogen. A bacterial pathogen is recovered from a blood and/or cerebral spinal fluid culture obtained after Day 3 of life.

OR

Criterion 2:

Coagulase Negative Staphylococcus. The infant has all 3 of the following:

1. Coagulase negative staphylococcus is recovered from a blood culture obtained from either a central line, or peripheral blood sample and/or is recovered from cerebrospinal fluid obtained by lumbar puncture, ventricular tap or ventricular drain.
2. One or more signs of generalized infection (such as apnea, temperature instability, feeding intolerance, worsening respiratory distress or hemodynamic instability).
3. Teatment with 5 or more days of intravenous antibiotics after the above cultures were obtained. If the infant died, was discharged, or transferred prior to the completion of 5 days of intravenous antibiotics, this condition would still be met if the intention were to treat for 5 or more days.

Denominator Statement: Eligible infants who are in the reporting hospital after day 3 of life.

Exclusions: Infants who do not meet eligibility criteria for birth weight, gestational age or hospital admission, or if the infant is discharged home, is transferred or dies prior to day 3 of life.

Adjustment/Stratification: Statistical risk model

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Electronic Clinical Data : Registry

Measure Steward: Vermont Oxford Network

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-15**; **M-9**; **L-1**; **I-0**

Rationale:

- The Committee noted the evidence was updated with 11 observational and quasi-experimental studies and one clinical guideline further supporting the evidence of this measure, and that there are specific things that providers can do to reduce infections.
- The developer noted that the measure looks at bacterial infections in blood or cerebral spinal fluid, and it is based on clinical data, not claims. While members of Vermont Oxford Network have made improvements, some hospitals still have high rates. The developer is working creating an eMeasure version.
- The mean rate of infection has been reduced but there continues to be variation between the minimum and maximum performance, and disparities remain.

0304 Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-2**; **M-21**; **L-2**; **I-0** 2b. Validity: **M-20**; **L-4**; **I-0**

Rationale:

- The developer provided additional reliability testing using split-half analysis to assess signal-to-noise. The result of 0.63 was lower than expected.
- The Committee had some questions about the definition of infection, and noted that the measure was tested for babies weighing between 500-1,500 grams, but is being implemented for babies 400-1,500 grams.
- The Committee asked why meningitis had been added and how many cases it contributed, since this is the only one of the three infection measures that included it. The developer said they do not distinguish how many were meningitis as the definition includes positive blood culture or positive CSF.

3. Feasibility: H-4; M-20; L-2; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

Rationale:

- This measure is collected by the Vermont Oxford Network (VON) registry. The proprietary risk-adjustment method is available only to members. Members must pay a fee to belong to VON.

4. Usability and Use: H-2; M-12; L-10; I-0

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

Rationale:

- This measure is currently in use, but only within the VON Network. While it does capture 85% of birth hospital NICUs, 25% of neonatal care is provided by freestanding children's hospitals, not all of which are part of Vermont Oxford Network. Babies may be born at a VON center and then transferred out to a specialized hospital for further care, which would not be counted in this measure.
- The developer stated that they were looking into producing a publically reported panel that a hospital could put out if they would like, and which would include this measure. Further, while they will not publically report results (as per their member contract), they will make it easier for their members to publically report results if they would like to. They are working with AAP, CDC, NQF, Leapfrog, and other organizations to report on the data without reporting results from a particular hospital.
- Clarification was provided that the measure includes all admissions before day 28, and that the data includes which hospital the infant developed the infection at, if they are later admitted to a second hospital.
- The measure did not achieve consensus on usability and use.

5. Related and Competing Measures

- This measure competes with 0478: Neonatal Blood Stream Infection Rate (NQI 03) (AHRQ) and #1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns (The Joint Commission).
- The Committee had an extensive discussion on the 3 competing measures. NQF provided guidance on the related/competing measure process.
- The Joint Commission and AHRQ have done some work on harmonization. The Joint Commission (TJC) compared the 2 measures, #1731, which uses partial chart review and administrative data, and #0478, which only uses administrative data, and found the measure using chart review was able to identify more cases that had not been included in the other measure due to coding issues. In addition, #0478 excludes cases diagnosed 7 days or less after birth and #1731 measure excludes only 2 days or less, which they thought accounted for about 10% of the difference. (#0478 is now 3 days or less.) The Joint Commission stated that while the measures are similar, since codes are not uniformly assigned, their measure, which also uses chart review is able to identify more cases. This comparison was done using ICD-9 CM codes, and they think that that there will be less discrepancy between the two measures with the use of ICD-10

CM codes.

- AHRQ noted that they had made changes to #0478 based in part on the analysis done with TJC, and that the measure will also change with ICD-10 CM, and that the current versions are more aligned. In addition, #0478 looks at all causes and cases of sepsis, while #1731 focuses on those associated with central lines. In addition, the AHRQ measure is not reported at a hospital level.
- A Committee member related some of the history of this measure, noting that the AHRQ measure was originally endorsed and brought into The Joint Commission's core set, and then turned into a clinical data measure. During the previous review and discussion of competing measures, Medicaid programs stated that they could not collect the data unless it was administrative, and that is why there were 2 endorsed measures.
- Committee members requested more information on the change to ICD-10 CM, in particular wondering if this would now have less chart review burden, and the developer stated it was too soon to tell, especially with the learning curve associated with changing coding guidelines. It was also noted that with ICD-10 CM, "suspected" or "probable" is no longer included (cases are yes/no) which should reduce gaming.
- For the chart review Committee members who are using the measure did not think it was a large burden due to the very small number of charts that have to be reviewed, and that hospitals would be reviewing all of these charts anyway due as they work to reduce infection rates. Coding for neonatal sepsis is complicated and the chart review is used to make the measure more accurate. In addition, the developer noted, hospitals like to be able to exclude false positives. It was noted that false negatives are a larger issue.
- After discussion, the Committee felt there is not yet enough data on the performance of either measure under ICD-10 CM and that ICD-10 CM has the potential to reduce a lot of the burden associated with manual chart review. In addition, many new, smaller facilities (300 deliveries) are just beginning to report on this measure so current performance rates are not yet available (although these very small facilities are unlikely to be caring for these babies, who would be transferred).
- The Committee noted that EHRs are not yet to the point where this data can be automatically pulled out.
- The Committee then discussed the ways in which the VON measure, #0304, differs from the other 2 measures. Measure #0304 does not include babies more than 1,500 grams, and does include meningitis; however, it is not clear how big the group of babies with meningitis actually is. Currently the measure requires either a positive blood or CSF culture and is not collected separately, although the developer agreed that might be a good idea. The VON measure is risk adjusted, which allows for more even comparisons across facilities. However, the major issue with the VON measure is that it is not publically reported and requires a registration fee.
- The Committee noted they were struggling with the question of whether one was best, especially with the changes to the measures. Committee members using the measures noted they focus on slightly different populations. For example, there are about 40,000 VLBW babies born in each year and bloodstream infections are most prevalent in this population, but there are many more, larger babies born each year even if the infection rates are smaller. One Committee member stated that to actually move the needle, the VLBW babies are the target population, but only about a quarter of the NICUs in the country treat these babies, with the remaining three-fourths of NICUs treating LBW and premature babies. Another Committee member noted that focusing on the smaller, high-prevalence population misses the opportunity to improve processes and reduce infections in many facilities.
- Ultimately, due to the changes in the AHRQ measure, the update to ICD-10, the expanded number of facilities reporting, and the slightly different populations included, the Committee agreed that for the time being all 3 measures should remain endorsed, since they are being used for different things. In terms of burden, it was noted that the high-level NICUs are all already reporting to VON; that almost everyone has to report to the Joint Commission; and that there is no burden for hospitals for the AHRQ measure since it comes out of billing data and is reported by the state data organizations.
- The Committee requested that, for the next year, a specific effort be made to get the data from those facilities that collect and report on 2 or 3 of the measures in order to allow a more accurate comparison.

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VON noted that they do a member survey and they will ask members that are collecting on the other measures as well. They also offered to work with The Joint Commission to compare the data. • Committee members highlighted that while it is easy for them to understand the differences between the measures and rates, it may not be so clear to the public, and they reiterated the need for a single measure. • The Committee requested that the developers provide more information and new data in 18 months for the Committee to relook at the measures during an off-cycle review. They further requested that the developers work together toward a single future measure.
Standing Committee Recommendation for Endorsement: **Y-21**; **N-3** <u>Rationale</u> • The Committee agreed that this measure meets all the NQF criteria for continued endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0469 PC-01 Elective Delivery

Submission | **Specifications**

Description: This measure assesses patients with elective vaginal deliveries or elective cesarean births 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 Birth, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding)

Numerator Statement: Patients with elective deliveries with ICD-10-PCS Principal Procedure Code or ICD-10-PCS 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/releases/TJC2015B2/ while not in Labor prior to the procedure

• Cesarean birth as defined in Appendix A, Table 11.06 and all of the following:

not in Labor

no history of a Prior Uterine Surgery available at: http://manual.jointcommission.org/releases/TJC2015B2/

Denominator Statement: Patients delivering newborns with >= 37 and < 39 weeks of gestation completed with ICD-10-PCS Principal or Other Procedure Codes for delivery as defined in Appendix A, Table 11.01.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/ and with ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for planned cesarean birth in labor as defined in Appendix A, Table 11.06.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/

Exclusions: • ICD-10-CM Principal Diagnosis Code or ICD-10-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

• Gestational Age < 37 or >= 39 weeks or UTD

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility, Population : National

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data, Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [05/03/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-10**; **M-13**; **L-2**; **I-0**

Rationale:

- The developer did not submit new evidence during this maintenance review, but Committee members noted that ACOG recently reaffirmed the practice bulletin for timing of elective induction of labor.
- While performance is improving, there is still a gap in care in this area. Committee members noted that as of January 2016, more hospitals are reporting on this measure (now 80% of all birthing hospitals), so they expect more variation to appear. Committee members noted that one of the major drivers of morbidity was repeat elective C-sections at 37 weeks, and that number had dropped significantly.
- There was some discussion about whether this measure is "topped out" but Committee members agreed the change was very new, and that it was too soon to retire this measure, both because there are many outliers and because the improvement is too recent to ensure it will continue. In addition, it was noted this is a very good measure to educate people outside of healthcare about quality improvement. Further, it is relatively newly recognized that babies born at 37-39 weeks do, in fact, have more problems and much education remains to be done for parents and other stakeholders.

0469 PC-01 Elective Delivery

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **M-25**; **L-1**; **I-0** 2b. Validity: **Previous Validity Evaluation Accepted**

<u>Rationale</u>:

- The measure has recently been converted to ICD-10 CM, and it was noted that it is not yet clear how this may affect the measure.
- Some changes have been made to the specifications to further clarify and refine the measure, including now excluding patients with no prenatal care (since gestational age cannot be determined). Committee members noted that sampling for small populations can be problematic and that the measure is more reliable when the full population is used.
- Some Committee members questioned the appropriateness of some of the exclusions.

3. Feasibility: H-15; M-10; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

<u>Rationale</u>:

- Committee members noted that while the measure does require some manual chart review, it has been used for several years and the new codes should reduce the burden.
- The developer clarified that gestational age is based on best obstetric estimate, generally ultrasound, and that it should be counted from gestational age at delivery (not the date the baby leaves the hospital). Electronic records should reduce the possibility of gaming if the wrong date is written at the time of delivery.

4. Usability and Use: H-21; M-4; L-0; I-0

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

<u>Rationale</u>:

- This measure is in widespread use in Quality Check, Hospital Compare, accreditation, and hospital and patient quality reporting. In addition, it is measure easily understood by the public.
- It was noted some of the improvements to the measure made it more usable.

5. Related and Competing Measures

- No related or competing measures noted.

Standing Committee Recommendation for Endorsement: **Y-25**; **N-0**

<u>Rationale</u>

- The Committee agreed that this measure meets all the NQF criteria for continued endorsement.

6. Public and Member Comment

-

7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

8. Board of Directors Vote: Y-X; N-X

9. Appeals

0470 Incidence of Episiotomy

Submission | Specifications

Description: Percentage of vaginal deliveries (excluding those coded with shoulder dystocia) during which an episiotomy is performed.

Numerator Statement: Number of episiotomy procedures (ICD-9 code 72.1, 72.21, 72.31, 72.71, 73.6; ICD-10 PCS:0W8NXZZ performed on women undergoing a vaginal delivery (excluding those with shoulder dystocia ICD-10; O66.0) during the analytic period- monthly,quarterly, yearly etc.

Denominator Statement: All vaginal deliveries during the analytic period- monthly, quarterly, yearly etc. excluding those coded with a shoulder dystocia ICD-1: O66.0).

Exclusions: Women who have a coded complication of shoulder dystocia. In the case of shoulder dystocia, an episiotomy is performed to free the shoulder and prevent/mitigate birth injury to the infant.

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Administrative claims, Paper Medical Records

Measure Steward: Christiana Care Health System

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-20**; **M-4**; **L-0**; **I-0;**

Rationale:

- The evidence has not changed from the Cochrane Review and ACOG bulletins cited in the original submission that report an increased risk of perineal trauma with episiotomy.
- Committee members noted while there has been a 33% decrease in episiotomies, there is still great variation in performance between hospitals (0.8 - 22%) and much room remains for improvement. Committee members shared their experience with providing individual clinician results and peer teaching as effective in changing behavior to reduce episiotomies.
- A Committee member suggested that episiotomy and vacuum deliveries should be linked.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **Previous Reliability Evaluation Accepted** 2b. Validity: **Previous Validity Evaluation Accepted**

Rationale:

- The measure has been recently converted to ICD-10 CM.
- No changes to the specifications have been made and no new testing data was offered.

3. Feasibility: H-25; M-2; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

Rationale:

- Committee members noted that because this is a procedure, it is easy to code (yes/no). It is included in discharge data and administrative data sets.
- The developer noted that updating to ICD-10 CM codes helps make the measure more feasible by addressing some coding issues that had come up in the past.

0470 Incidence of Episiotomy
4. Usability and Use: H-25; M-2; L-0; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: • The Leapfrog Group has been publically reporting this measure for close to 1,000 hospitals. • Several Committee members have had experience using this measure to educate providers and hospitals and reduce rates, and all commented favorably about the usability. It was also noted that peer-to-peer education is the most effective way of changing performance.
5. Related and Competing Measures • No related or competing measures noted.
Standing Committee Recommendation for Endorsement: **Y-27**; **N-0** Rationale • The Committee agreed that this measure meets all the NQF criteria for continued endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0471 PC-02 Cesarean Birth

Submission | **Specifications**

Description: This measure assesses the number of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth. This measure is part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding).

Numerator Statement: The outcome being measured is: Patients with cesarean births with ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for cesarean birth as defined in Appendix A, Table 11.06 available at:

http://manual.jointcommission.org/releases/TJC2015B2/

Denominator Statement: The outcome target population being measured is: Nulliparous patients delivered of a live term singleton newborn in vertex presentation ICD-10-PCS Principal or Other Diagnosis Codes for delivery as defined in Appendix A, Tables 11.01.1 available at:

http://manual.jointcommission.org/releases/TJC2015B2 /

Exclusions: • ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for multiple gestations and other presentations as defined in Appendix A, Table 11.09

• Less than 8 years of age

• Greater than or equal to 65 years of age

• Length of Stay >120 days

• Enrolled in clinical trials

• Gestational Age < 37 weeks or UTD

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility, Population : National

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [May/03/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-23**; **M-3**; **L-0**; **I-0**

Rationale:

- The prior maintenance evaluation noted that "ACOG says this is the "optimal measure" for Cesarean section (C-section) because it focuses on first-time, uncomplicated pregnancy. The measure looks at the outcome of labor management. The developer reported that, "Among primary cesarean deliveries, more subjective indications (non-reassuring fetal status and arrest of dilation) contributed larger proportions than more objective indications (malpresentation, maternal-fetal, and obstetric conditions)." Cesarean sections are associated with increased risk of obstetric hemorrhage, uterine infection, and increased costs to the healthcare system.
- The Committee questioned whether this measure should be classified as an intermediary outcome measure instead of an outcome measure.
- The Committee highlighted that the Healthy People target is 23.9%, and the 2014 data with 1,388 hospitals reporting is 26.8%. Additionally, the Committee noted that the variation for this measure is quite large since the performance was 14% at the 10th percentile and 40% at the 90th percentile.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-23**; **M-3**; **L-0**; **I-0** 2b. Validity: **H-10**; **M-14**; **L-2**; **I-0**

Rationale:

0471 PC-02 Cesarean Birth

- The developer has changed the specifications since the last NQF endorsement review. The specifications have been updated to ICD-10 CM and the initial patient population is now identified with ICD-10-PCS-Principal or Other Procedure Codes for delivery instead of diagnosis codes for pregnancy, since the ICD-10-CM Principal or Other Diagnosis Codes do not indicate whether the delivery took place during the hospitalization. Additionally, cases with a gestational age of "unable to be determined (UTD)" are excluded, since UTD is highly correlated with no prenatal care.
- The Committee expressed concerns about the exclusions, including babies in clinical trials. The developer stated that clinical trials have been removed as an exclusion.
- The measure was tested using inter-rater reliability (IRR) by the ORYX vendor, for 108 hospitals with 13,279 records. IRR is an appropriate method of assessing data element reliability for chart abstraction. The agreement rate for the data element "Gestational age" was 89.75% and the data element "Parity" was 97.43%. The Committee agreed the reliability of the measure was demonstrated, with the developer providing reliability testing at data element levels (2012).
- The developer reported that continued face validity was determined through feedback from measure users as well as a website that picks up questions and issues from the field, and addresses them in a continuous process of clarification and refinement.
- The measure received a pre-meeting comment regarding adjustment for various demographic variables. To address this, the developer provided data from 231 California hospitals showing that hospitals with a higher concentration of older moms (over 35 years) and higher concentration of moms who had a BMI 30 or higher just before being pregnant were distributed across hospitals with higher, medium, and lower range measure results. This finding suggested that there is not a pure risk among women, but it depends on clinical practice.
- The developer noted that they would be eliminating the age stratification effective July 1, 2016.
- The Committee requested that the developer consider a balancing measure that monitors potential unintended adverse consequences. The developer noted that *NQF#0716 Unexpected Complications in the Term Newborn* is being used in this manner in California, Oregon, and Washington.
- The Committee expressed concerns that lowering C-section rates too much can be as bad as higher C-section rates. There may be variations based on medical issues that affect whether the babies tolerate labor and whether labor goes smoothly in a timely fashion that does not exhaust the baby or the placental reserve.
- The Committee cautioned that tying payment to certain percentage of C-section rate (i.e., Healthy People 2020 target of 23.9%) might lead to bad outcomes.
- The Committee questioned whether contraindications for a vaginal delivery should be excluded from the measure moving forward. The developer clarified that they looked extensively at other diagnoses that could be contraindications for vaginal delivery such as placenta previa and HIV +, which are both included in the coding. The developer found only 56 cases in all of California that were coded as HIV with the several codes for HIV in pregnancy nulliparous to term, suggesting they were under coded. Additionally, only a few hospitals reported 2% - 3% of their patients had placenta previa; half of those were delivered vaginally -- the coding was indicative of a placenta previa being present on ultrasound in the first or second trimester that was coded on the delivery chart. The developer emphasized that adding other diagnoses may result in coding issues that may or may not be real, which is one of the reasons why they decided to keep this measure simple with the highest quality codes.
- The Committee discussed further risk adjustment to be fair to the hospitals that have high-risk populations.

3. Feasibility: H-15; M-11; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

Rationale:

- The Committee noted that the developer is working on an eMeasure that will be tested this year, which would be a good addition.
- The Committee agreed all data elements are in defined fields in electronic sources. No concerns regarding

0471 PC-02 Cesarean Birth
feasibility were noted.
4. Usability and Use: H-21; M-6; L-0; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: • The measure is in use in The Joint Commission's Hospital Accreditation Program, is publically reported in the Joint Commission's Annual Report, America's Hospitals: Improving Quality and Safety, and is used for internal quality improvement via the Perinatal Care Certification program run by the Joint Commission. This measure is also included in the Medicaid Child Core Set. • The Committee expressed the need to have this measure publicly reported beyond what is done voluntarily. The developer stated that their public reporting system is set up for process measures and they are trying to figure out how to accurately report this outcome measure publicly as well as some others, so that they make sense to the public. • The Committee noted some challenges with reporting outcome measures such as determining the expected rate versus the actual rate and reporting that in a way that makes sense to people.
5. Related and Competing Measures • This measure is similar to the newly submitted measure #2892: Birthrisk Cesarean Birth Measure. The Committee did not discuss the competing measure issue since NQF #2892 was not recommended.
Standing Committee Recommendation for Endorsement: **Y-26**; **N-1** Rationale • The Committee agreed that this measure meets all the NQF criteria for endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0475 Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge

Submission | Specifications

Description: Percent of live newborn infants that receive Hepatitis B vaccination before discharge (or within 1 month of life, if the infant had an extended hospital stay) at each single hospital/birthing facility during given time period (one year).

Numerator Statement: The number of live newborn infants administered Hepatitis B vaccine prior to discharge (or within 1 month of life, if the infant had an extended hospital stay)from the hospital/birthing facility ("birth dose" of Hepatitis B vaccine).

Denominator Statement: The number of live newborn infants born at the hospital/birthing facility during the reporting window (one calendar year).

Exclusions: a. Determine number of live newborn infants born at the hospital/birthing facility whose parent/guardian refused Hepatitis B birth dose and exclude from the denominator. ICD-10 code for this information will include the following (link: http://www.icd10data.com/ICD10CM/Codes/Z00-Z99/Z20-Z28/Z28-/#Z28):

i. Z28.82 Immunization not carried out because of caregiver refusal

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Other, Paper Medical Records, Electronic Clinical Data : Pharmacy, Electronic Clinical Data : Registry

Measure Steward: Centers for Disease Control and Prevention

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-18**; **M-8**; **L-0**; **I-0**

Rationale:

- The developer submitted new evidence during this review, which includes 4 systematic reviews, that agree and demonstrate that hepatitis B vaccine administered shortly after birth effectively prevents perinatal hepatitis B transmission.
- Data from the 2014 National Immunization Survey shows the national Hepatitis B vaccine birth dose coverage overall was 72.4%.
- The developers provided disparities literature for the measure, that in the 22 states evaluated, approximately 16,500 births were estimated to be from HBV-infected women; 80.6% of these were foreign-born women.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-26**; **M-1**; **L-0**; **I-0** 2b. Validity: **Previous Validity Evaluation Accepted**

Rationale:

- The developer removed the exclusion for parent refusal from the measure that was in the previous version of this measure. The CDC wants to measure the babies protected by vaccination. The Committee agreed with the change in specifications.
- The Committee found the specifications to be detailed and consistent with the evidence. The measure is specified for electronic clinical data, registry and abstraction from electronic health records with all the codes necessary to calculate the measure presented (ICD-9 CM and ICD-10 CM and CPT II codes).
- Reliability testing was conducted at the performance measure score. For measure score reliability, the score ranged from 0.981 and 1.000, indicating very high reliability, indicating that variability between hospitals regarding the Hepatitis B vaccine birth dose is due to actual performance differences rather than

0475 Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge
measurement error. The Committee agreed the reliability testing provided was sufficient. • Face validity of the measure score was assessed by a 22 member expert panel, with a 63.6% response rate, who agreed that the measure could distinguish quality of care. • The Committee stressed that by excluding refusals to vaccinate within the denominator of the measure, the health community would have a more accurate vision of challenges facing vaccination. This would also encourage better communication and shared decision making between providers and patients. Members highlighted that while some facilities might have a measure performance score of 90%, they could potentially be excluding 50% of the measurement population.
3. Feasibility: H-20; M-7; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • The Committee agreed the measure is well specified and is in use by the New York City Department of Health and Mental Hygiene. Data elements are in defined fields in a combination of electronic sources and also in paper medical records, including EHRs.
4. Usability and Use: H-24; M-3; L-0; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: • The measure is currently used by the New York City Department of Health and Mental Hygiene. The developer presented data from the National Immunization Survey, demonstrating that Hepatitis B birth dose coverage has improved from 64.1% (+/-1.3) in 2010 to 72.4% (+/-1.5) in 2014.
5. Related and Competing Measures • No related or competing measures noted.
Standing Committee Recommendation for Endorsement: **Y-27**; **N-0** Rationale • The Committee recommended measure 0475: Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge for continued endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0476 PC-03 Antenatal Steroids

Submission | Specifications

Description: This measure assesses patients at risk of preterm delivery at >=24 and <34 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 Birth, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding).

Numerator Statement: Patients with antenatal steroids initiated prior to delivering preterm newborns (refer to Appendix C, Table 11.0, antenatal steroid medications available at: http://manual.jointcommission.org/releases/TJC2015B2/)

Denominator Statement: Patients delivering live preterm newborns with >=24 and <34 weeks gestation completed with ICD-10-PCS Principal or Other Procedure Codes for delivery as defined in Appendix A, Table 11.01.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/

Exclusions: • 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 Initiating Antenatal Steroids

• ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for fetal demise as defined in Appendix A, Table 11.09.1 available at: http://manual.jointcommission.org

• Gestational Age < 24 or >= 34 weeks or UTD

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility, Population : National

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [05/03/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-7**; **M-14**; **L-5**; **I-0**

Rationale:

- The developer reports that the measure has been changed to reflect the 2013 ACOG Practice Bulletin for Premature Rupture of Membranes that recommends antenatal steroids up to 34 weeks (change from 32 weeks).
- In January 2014, the measure became mandatory for all hospitals with more than 1,100 births per year. The measure performance increased from 54% in 2011 to 82% in 2014.
- The developer provides literature references rather than data from use of this measure. A 2011 report on births in California found that 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.
- The Committee acknowledged that there is still a significant gap in performance.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **M-22**; **L-3**; **I-0** 2b. Validity: **H-14**; **M-11**; **L-0**; **I-0**

Rationale:

- The specifications were detailed and consistent with the evidence. The measure is specified for paper medical records, Vital Records reports, and delivery logs and clinical information systems. All the codes

necessary to calculate the measure are presented (ICD-9 CM and ICD-10 CM and CPT II codes).

- The developer made the following updates to the measure specifications: The single numerator data element "Antenatal Steroids Administered" was changed to "Antenatal Steroids Initiated" to capture initiation of antenatal steroids instead of a full course. The denominator statement was changed from patients delivering live preterm newborns with >=24 and <32 weeks gestation completed to patients delivering live preterm newborns with >=24 and <34 weeks gestation based on the 2013 ACOG Practice Bulletin on Premature Rupture of Membranes (PROM).
- Reliability testing was conducted at the data element level. For data element reliability, the developer performed inter-rater reliability by ORXY vendor re-abstraction for 108 hospitals comprising 13,279 records. The agreement rate for the data element "Antenatal steroids administered" was 99.16%.
- Empirical validity of the measure score was assessed using the Spearman rank-order correlation to correlate the results from this measure with other measures in the Joint Commission's perinatal set. The correlation of PC-03 with the other PC measures in the PC measure set indicates that the correlations with two other PC measures are moderate and statistically significant.
- The Committee questioned whether clinical trials will remain in the denominator exclusion. The developer confirmed that clinical trials will be removed as an exclusion.

3. Feasibility: H-15; M-10; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

Rationale:

- The Committee agreed the measure is well specified for public reporting and accountability programs. According to the developer, "Hospitals using this performance measure generally collect measure data via manual review of the paper medical record, the EMR or a combination of both."
- The Committee did caution that data collection might be burdensome for smaller facilities.

4. Usability and Use: H-22; M-4; L-0; I-0

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

Rationale:

- The measure is currently used in public reporting and accountability programs such as Quality Check® and The Joint Commission's Hospital Accreditation Program. The Joint Commission presented ORYX performance measurement data demonstrating that the rate of patients receiving antenatal steroids prior to premature deliveries has improved from 63.3% in 2010 with 114 hospitals reporting to 91.6% in 2014 with 1,133 hospitals reporting.
- The developer reports on three unexpected findings during measure implementation:
    - Cases failed when the repeat dose of antenatal steroids was not given due to the delivery occurring prior to the routinely scheduled repeat dose being ordered. In response to this problem, the developer changed the data element "Antenatal Steroids Administered" to "Antenatal Steroids Initiated" to capture initiation of antenatal steroids instead of a full course.
    - Patients who did not receive prenatal care were inappropriately included in the measure denominator, as the gestational age data element was abstracted as "UDT." In response to this, the developer removed "undetermined cases" from the measure denominator.
    - Hospitals have reported lower rates due to small denominator populations as a result of sampling. In response to this, the developer added Vital Records reports, delivery logs, and clinical information systems as acceptable data sources to help hospitals identify all cases with at least 24 and less than 34 weeks gestation, so that 100% of these cases could be reviewed to increase the denominator population size.

5. Related and Competing Measures

- No related or competing measures noted.

0476 PC-03 Antenatal Steroids
Standing Committee Recommendation for Endorsement: **Y-26**; **N-0** Rationale • The Committee recommends measure 0476: PC-03 Antenatal Steroids for continued endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0478 Neonatal Blood Stream Infection Rate (NQI 03)

Submission | Specifications

Description: Discharges with healthcare-associated blood stream infection per 1,000 discharges for newborns and outborns with birth weight of 500 grams or more but less than 1,500 grams; with gestational age between 24 and 30 weeks; or with birth weight of 1,500 grams or more and death, an operating room procedure, mechanical ventilation, or transferring from another hospital within two days of birth. Excludes discharges with a length of stay less than 3 days and discharges with a principal diagnosis of sepsis, sepsis or bacteremia, or newborn bacteremia.

Numerator Statement: Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either:

- any secondary ICD-9-CM or ICD-10 CM diagnosis codes for other septicemia; or
- any secondary ICD-9-CM or ICD-10 CM diagnosis codes for newborn septicemia or bacteremia and
- any secondary ICD-9-CM or ICD-10 CM diagnosis codes for staphylococcal or Gram-negative bacterial infection

Denominator Statement: All newborns and outborns with either:

- a birth weight of 500 to 1,499 grams (Birth Weight Categories 2, 3, 4 and 5); or
- any-listed ICD-9-CM or ICD-10 CM diagnosis codes for gestational age between 24 and 30 weeks; or
- a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and death (DISP=20); or
- a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM or ICD-10 PCS procedure codes for operating room procedure; or
- a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM or ICD-10 PCS procedure codes for mechanical ventilation; or
- a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and transferring from another health care facility within two days of birth

See Pediatric Quality Indicators Appendices:

- Appendix A – Operating Room Procedure Codes
- Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn
- Appendix L – Low Birth Weight Categories

Exclusions: Exclude cases:

- with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis
- with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis or bacteremia
- with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for staphylococcal or Gram-negative bacterial infection
- with birth weight less than 500 grams (Birth Weight Category 1)
- with length of stay less than 3 days
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

† Only for cases that otherwise qualify for the numerator.

Adjustment/Stratification: Statistical risk model

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Administrative claims

Measure Steward: Agency for Healthcare Research and Quality

0478 Neonatal Blood Stream Infection Rate (NQI 03)

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-14**; **M-9**; **L-0**; **I-0**

<u>Rationale</u>:

- The developer reports that the evidence supporting this measure consists of 11 nonrandomized studies that demonstrate that effective preventive measures for decreasing blood infection "range from simple hand-washing protocols or closed medication delivery systems to more elaborate multidisciplinary quality improvement plans involving hand-washing, nutrition, skin care, respiratory care, vascular access, and diagnostic practices".
- The Committee acknowledged that there is still a significant gap in performance, noting that there are disparities between urban and rural populations, and between Medicaid, private insurance and the uninsured.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **Previous Reliability Evaluation Accepted** 2b. Validity: **Previous Validity Evaluation Accepted**

<u>Rationale</u>:

- The specifications were detailed and consistent with the evidence. The measure is specified for administrative claims. All the codes necessary to calculate the measure are presented (ICD-9 CM and ICD-10 CM and CPT II codes).
- The developer updated the measure by adding data from the AHRQ 2013 Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID).
- Reliability testing was conducted at the measure score level. Signal to noise was utilized to assess the reliability of the measure. In 2013 for 943 hospitals comprising on average 72.3 discharges per hospital, reliability testing found a signal-to-noise average of 0.63.
- Face validity was assessed using a multi-specialty panel with a rating scale from 1 - 9. The panel agreed that the measure would be useful for rating the usefulness for internal QI improvement and for comparative purposes.
- This measure is risk adjusted. The developer utilized a multivariable model with covariates grouped into four categories, then estimated on the pediatric analytic data using a backward stepwise bootstrap approach.

3. Feasibility: Previous Feasibility Evaluation Accepted

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

<u>Rationale</u>:

- The Committee agreed the measure is well specified for public reporting and accountability programs.
- The Committee did not raise concerns about the feasibility of this measure.

4. Usability and Use: H-16; M-7; L-0; I-0

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

<u>Rationale</u>:

- The measure is currently used in public reporting and accountability programs including the Wisconsin Hospital Association (WHA) Information Center and the Wisconsin Hospital Association (WHA) Quality Indicators Report.
- The developer presented data exhibiting improved performance. The average hospital neonatal blood stream infection rate decreased from 11.53 per 1,000 in 2011 to 9.15 per 1,000 in 2013.

5. Related and Competing Measures

0478 Neonatal Blood Stream Infection Rate (NQI 03)

- This measure competes with #1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns and #0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates.
- The Committee had an extensive discussion on the 3 competing measures. NQF provided guidance on the related/competing measure process.
- The Joint Commission (TJC) and AHRQ have done some work on harmonization. TJC compared measures #1731, which uses partial chart review and administrative data, and #0478, which only uses administrative data, and found the measure using chart review was able to identify more cases that had not been included in #1731 due to coding issues. In addition, the #0478 measure excludes cases diagnosed 7 days or less after birth and measure #1731 excludes only 2 days or less, which they thought accounted for about 10% of the difference. (#0478 is now three days or less.) The Joint Commission stated that the measures are similar; however, since codes are not uniformly assigned, their measure, which also uses chart review, is able to identify more cases. However, this comparison was done using ICD-9 CM codes, and they think that that there will be less discrepancy between the two measures with the use of ICD-10 CM codes.
- AHRQ noted that they had made changes to #0478 based in part on the analysis done with TJC, that the measure will change with ICD-10 CM, and that the current versions are more aligned. In addition, #0478 looks at all causes and cases of sepsis, while #1731 focuses on those associated with central lines. In addition, the AHRQ measure is not reported at a hospital level.
- A Committee member related some of the history of this measure, noting that the AHRQ measure was originally endorsed and brought into The Joint Commission's core set, and then turned into a clinical data measure. During the previous review and discussion of competing measures, Medicaid programs stated that they could not collect the data unless it was administrative, and that is why there were 2 endorsed measures.
- Committee members requested more information on the change to ICD-10 CM, in particular whether this would now have less chart review burden. The developer stated it was too soon to tell, especially with the learning curve associated with changing coding guidelines. It was also noted that with ICD-10 CM, "suspected" or "probable" is no longer included (cases are yes/no), which should reduce gaming.
- Committee members who are using the measure did not think chart review was a large burden due to the very small number of charts that have to be reviewed, and that hospitals would already be reviewing all of these charts as they work to reduce infection rates. Coding for neonatal sepsis is complicated and the chart review is used to make the measure more accurate. In addition, the developer noted, hospitals like to be able to exclude false positives. It was noted that false negatives are a larger issue.
- After discussion, the Committee felt there is not yet enough data on the performance of either measure under ICD-10 CM and that ICD-10 CM has the potential to reduce a lot of the burden associated with manual chart review. In addition, many new, smaller facilities (> 300 deliveries per year) are just beginning to report on this measure so current performance rates are not yet available (although these very small facilities are unlikely to be caring for these babies since they would be expected to be transferred).
- The Committee noted that EHRs are not yet to the point where this data can be automatically pulled out.
- The Committee then discussed the ways in which the VON measure, #0304, differs from the other 2 measures. Measure #0304 does not include babies more than 1,500 grams, and does include meningitis; however, the number of meningitis cases is not clear. Currently the measure requires either a positive blood or CSF culture and is not collected separately, although the developer agreed that might be a good idea. The VON measure is risk adjusted, which allows for more even comparisons across facilities. However, the major issue with the VON measure is that it is not publically reported and requires a registration fee.
- The Committee noted they were struggling with the question of whether one was best, especially with the changes to the measures. Committee members using the measures noted they focus on slightly different populations. For example, there are about 40,000 VLBW babies born each year and bloodstream infections are most prevalent in this population, but there larger babies at risk for infection

0478 Neonatal Blood Stream Infection Rate (NQI 03)
though the rates are lower. One Committee member stated that to actually move the needle, the VLBW babies are the target population, but only about a quarter of the NICUs in the country treat these babies, with the remaining three-fourths of NICUs treating LBW and premature babies. Another Committee member noted that focusing on the smaller, high-prevalence population misses the opportunity to improve processes and reduce infections in many facilities. • Ultimately, due to the changes in the AHRQ measure, the update to ICD-10 CM, the expanded number of facilities reporting, and the slightly different populations included, the Committee agreed that for the time being all three measures should remain endorsed, since they are being used for different things. In terms of burden, it was noted that all high-level NICUs are already reporting to VON; that almost everyone has to report to The Joint Commission; and that there is no burden for hospitals for the AHRQ measure since it comes out of billing data and is reported by the state data organizations. • The Committee requested that, for the next year, a specific effort be made to get the data from those facilities that collect and report on two or three of the measures in order to allow a more accurate comparison. VON noted that they do a member survey and will ask members that are collecting on the other measures as well. They also offered to work with The Joint Commission to compare the data. • Committee members highlighted that while it is easy for them to understand the differences between the measures and rates, it may not be so clear to the public, and they reiterated the need for a single measure. • The Committee requested that the developers provide more information and new data in 18 months for the Committee to relook at the measures during an off-cycle review. They further requested that the developers work together toward a single future measure.
Standing Committee Recommendation for Endorsement: **Y-22**; **N-1** <u>Rationale</u> • The Committee agreed that this measure meets all the NQF criteria for endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-22; N-1
9. Appeals

0480 PC-05 Exclusive Breast Milk Feeding

Submission | **Specifications**

Description: PC-05 assesses the number of newborns exclusively fed breast milk during the newborn's entire hospitalization. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-02: Cesarean Birth, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns).

Numerator Statement: Newborns that were fed breast milk only since birth

Denominator Statement: Single term liveborn newborns discharged alive from the hospital with ICD-10-CM Principal Diagnosis Code for single liveborn newborn as defined in Appendix A, Table 11.20.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/

Exclusions: • Admitted to the Neonatal Intensive Care Unit (NICU) at this hospital during the hospitalization

• ICD-10-CM Other Diagnosis Codes for galactosemia as defined in Appendix A, Table 11.21

• ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for parenteral infusion as defined in Appendix A, Table 11.22

• Experienced death

• Length of Stay >120 days

• Enrolled in clinical trials

• Patients transferred to another hospital

• Patients who are not term or with < 37 weeks gestation completed

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility, Population : National

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data, Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [05/03/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-X=18**; **M-5**; **L-1**; **I-0**

Rationale:

- The goal for performance of the measure is 70%, and in over half of The Joint Commission hospitals that reported this measure, rates are less than 50%. In the 10th percentile, hospitals are at 22%.
- More hospitals are reporting now (1,400, up from 166), so there are more opportunities for improvement.
- Committee members noted concerns around patient choice, and that an issue with this measure is that it puts pressure on patients to breastfeed when it may not be appropriate due to circumstances outside the control of the hospital (for example, work circumstances that do not allow pumping).
- Committee members discussed the resources available for hospitals as they work to improve performance on this measure, such as toolkits, and that one key focus is training staff to ensure they are counseling patients appropriately.
- The Committee discussed the potential for a balancing measure.

0480 PC-05 Exclusive Breast Milk Feeding

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **M-21**; **L-2**; **I-0** 2b. Validity: **H-8**; **M-12**; **L-2**; **I-0**

<u>Rationale</u>:

- The measure was updated to ICD-10 CM. The sub-measure, exclusion of mothers who declined to breastfeed, was removed because stakeholders felt it was too much burden to get the data.
- Committee members discussed validity extensively, with one noting the measure reflects what patients chose to do, not the actual action or quality of care provided, and another stating that almost all measures can be said to reflect patient choices (for example, the choice to take medicine, have a procedure, etc.).
- One Committee member noted doubts about the validity of results when facilities report more than 95% rates, but the developer stated only one hospital reported rates that high, and reiterated the goal of 70%, noting that due to both choice and medical conditions, 100% is not the goal; however, many hospitals are at 70%. One Committee member noted that she audits hospitals and is confident in the data, even those reporting at high rates.
- Committee members were interested in the possibility of measures that report on percent still breastfeeding longer-term. Despite many limitations in women's ability to breastfeed long-term, Committee members noted that circumstances are improving and that this measure can be used to improve accommodations that allow more mothers to breastfeed for longer.
- A Committee member summarized the issue as the tension between pressure on mothers whose circumstances do not allow breastfeeding (such as women who have less than four weeks leave or who have jobs where they cannot pump) and keeping the threshold at 70% to move the nation forward.
- This is a population health measure with lifetime benefits. A Committee member stated that pressure on women has to do with a lack of process, and that in Baby-Friendly Hospitals it is easy to opt-out; therefore, pressure is a system issue that can be improved. Other Committee members agreed there are many process issues that can be addressed within the healthcare system.

3. Feasibility: H-18; M-5; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

<u>Rationale</u>:

- The measure is used by Quality Check, The Joint Commission, the Hospital Inpatient Reporting Program; the Committee felt it was quite feasible.

4. Usability and Use: H-14; M-8; L-1; I-0

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

<u>Rationale</u>:

- As the measure is in use, there were no usability concerns.

5. Related and Competing Measures

- No related or competing measures noted.

Standing Committee Recommendation for Endorsement: **Y-21**; **N-2**

<u>Rationale</u>

- The Committee agreed that this measure meets all the NQF criteria for endorsement.

6. Public and Member Comment

-

7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

8. Board of Directors Vote: Y-X; N-X

9. Appeals

0483 Proportion of infants 22 to 29 weeks gestation screened for retinopathy of prematurity.

Submission | Specifications

Description: Proportion of infants born from 22 weeks, 0 days to 29 weeks, 6 days gestational age who were in the reporting hospital at the postnatal age recommended for screening for retinopathy of prematurity (ROP) by the American Academy of Pediatrics (AAP) and who received a retinal examination for ROP prior to discharge.

Numerator Statement: Number of infants born from 22 weeks, 0 days to 29 weeks, 6 days gestational age who were in the reporting hospital at the postnatal age recommended for ROP screening by the AAP and who received a retinal exam for ROP prior to discharge

Denominator Statement: All eligible infants born from 22 weeks, 0 days to 29 weeks, 6 days gestational age who were in the reporting hospital at the postnatal age recommended for ROP screening by the AAP

Exclusions: 1. Infants outside the gestational age range of 22 to 29 weeks

2. Outborn infants admitted to the reporting hospital more than 28 days after birth

3. Outborn infants who have been home prior to admission

4. Infants who die in the delivery room or initial resuscitation area prior to admission to the neonatal intensive care unit

5. Infants not in the reporting hospital at the postnatal age recommended for ROP screening by the AAP

Adjustment/Stratification: Stratification by risk category/subgroup

Level of Analysis: Facility

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data : Registry

Measure Steward: Vermont Oxford Network

STANDING COMMITTEE MEETING [May/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-12**; **M-12**; **L-2**; **I-0**

Rationale:

- This previously endorsed process measure from the Vermont Oxford Network (VON) assesses whether premature infants who are at risk for eye complications due to prematurity have had an eye evaluation prior to hospital discharge in alignment with guidelines from American Academy of Pediatrics.
- For the 916 hospitals in the VON network, average performance on this measure improved slightly, from 90.1% in 2006 to 91.8% in 2014.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-8**; **M-16**; **L-2**; **I-0** 2b. Validity: **Previous Validity Evaluation Accepted**

Rationale:

- The Committee noted that the data collected is a simple yes/no and does not include the date or gestational age.
- The Committee discussed alternative methods for the eye evaluation because of shortages of pediatric ophthalmologists in some areas.
- Reliability testing of the measure scores indicates higher reliability for larger sample sizes.

3. Feasibility: H-4; M-20; L-2; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

Rationale:

- For VON members, this measure requires chart abstraction and submission to VON, but the measure specifications can be used by any hospital to calculate their own performance.

0483 Proportion of infants 22 to 29 weeks gestation screened for retinopathy of prematurity.
4. Usability and Use: H-5; M-15; L-6; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: • The measure is currently used only for internal QI within the membership of VON. • The Committee was concerned that this measure is not publicly reported.
5. Related and Competing Measures • No related or competing measures noted.
Standing Committee Recommendation for Endorsement: **Y-24**; **N-2** Rationale • Due to the importance of preventing eye problems for premature babies, the Committee recommended this measure for continued endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0716 Unexpected Complications in Term Newborns

Submission | **Specifications**

Description: This is a hospital level performance score reported as the percent of infants with Unexpected Newborn Complications among full term newborns with no preexisting conditions, typically calculated per year.

Numerator Statement: Numerator: The numerator is divided into two categories: Severe complications and moderate complications.

Severe complications include neonatal death, transfer to another hospital for higher level of care, extremely low Apgar Scores (=3 at either 5 or 10 minutes of life), severe birth injuries such as intracranial hemorrhage or nerve injury, neurologic damage, severe respiratory and infectious complications such as sepsis. Parents of such babies may often worry about short or long term infant outcomes.

Moderate complications include diagnoses or procedures that raise concern but at a lower level than the list for severe (e.g. use of CPAP or bone fracture). For inclusion in the numerator, most require an infant length of stay that exceeds that of the mother, validating that these are indeed significant complications. Examples include less severe respiratory complications (e.g. Transient Tachypnea of the Newborn), or infections with a longer length of stay not including sepsis. As a "safety net" to capture cases who were under-coded, the numerator also includes infants who have a prolonged length of stay of over 5 days to capture the "seemingly normal" infants with neither any form of jaundice nor a social reason for staying in the hospital (e.g. family disruption or adoption).

Denominator Statement: The denominator is comprised of singleton, live born babies who are at least 37.0 weeks of gestation, and over 2500g in birth weight. The denominator excludes most serious fetal conditions that are "preexisting" (present before labor), including prematurity, multiple gestations, poor fetal growth, congenital malformations, genetic disorders, other specified fetal and maternal conditions and infants exposed to maternal drug use in-utero. The final denominator population consists of babies who are expected to do well following labor and delivery and go home routinely with their mothers.

Exclusions: a) Babies not born in hospitals are excluded as this is a hospital quality performance measure

b) Babies who are part of multiple gestation pregnancies are excluded.

c) Premature infants (babies born before 37 weeks gestational age) are excluded

d) Low birth weight babies (<=2500g) are excluded

e) Babies with congenital malformations and genetic diseases are excluded

f) Babies with pre-existing fetal conditions such as IUGR are excluded

g) Babies who were exposed to maternal drug use in-utero are excluded

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility, Integrated Delivery System, Population : Regional, Population : State

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Administrative claims

Measure Steward: California Maternal Quality Care Collaborative

STANDING COMMITTEE MEETING [May/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-16**; **M-8**; **L-0**; **I-0**

Rationale:

- This maintenance measure was originally endorsed in 2012 as a measure titled Healthy Term Newborn. It has since been inverted to report on the unexpected outcomes for healthy, full-term newborns. The revised measure reports the same information in a different format. The developer noted that performance rates on the previous measure were 94-97% and while this reflects strong performance, they wanted to focus attention on the 3-6% of babies that have unexpected complications, so they reversed the measure.
- Committee members reviewed the 2013 and 2014 data submitted by the developer and noted there is

0716 Unexpected Complications in Term Newborns
still room for improvement, although the rate is not expected to be zero. Committee members discussed some of the reasons for variation, including how neonatal sepsis is handled. It was also noted that African American women have slightly higher rates. • They also noted the need for a measure that looks at healthy pregnancies.
2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u> (2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity) 2a. Reliability: **Previous Reliability Evaluation Accepted** 2b. Validity: **H-18**; **M-7**; **L-0**; **I-0** <u>Rationale</u>: • The Committee had questions about the exclusions and risk adjustment, noting that outcomes can be affected by the patient's health as opposed to provider actions. The developer explained they had reviewed adjusting for hypertension, diabetes, birth weight, and a variety of other factors, but they found that only insulin-requiring, pre-gestational diabetics were at risk. • The developer noted that this measure is most useful as a balancing measure: a measure used for following a hospital over time as they change practices, to ensure that outcomes are not getting worse, rather than comparing a performance of 5% vs. 4% to rank hospitals. • Committee members noted the new reliability testing was useful but requested more information on the number of deliveries cutoff. The developer explained that less than 200 births annually was too small to provide accurate information; that 200-500 births is a "grey zone" in that the reliability is lower, but the measure is still useful for comparing performance over time. The Committee and developer agreed that in hospitals with small numbers the measure is a "case finding tool" and that most deliveries are happening in hospitals with more than 500 births annually, where the measure is reliable. • New empirical validity testing compared the results of this measure to a similar measure from the National Perinatal Information Center (admissions to NICU) and found similar results. Also, in 3 hospital quality improvement projects trying to reduce the Cesarean birth rate, this measure declined thus offering reassurance that there were not unintended consequences for the baby. • The data source is administrative claims linked to Vital Statistics; unlike the underused ICD codes for gestational age, the birth certificate data fields for "Best Obstetric Gestational Age" and "Birthweight" have high degrees of completeness and accuracy.
3. Feasibility: H-16; M-8; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* <u>Rationale</u>: • This measure has complicated numerators and denominators and the Committee had some questions about how it was implemented, especially at small hospitals. The developer explained that it was easier to implement at higher levels of analysis using state data. • Committee members who are currently using the measure in large systems noted that it was feasible to use and not too difficult to set up.
4. Usability and Use: H-21; M-4; L-0; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* <u>Rationale</u>: • The measure is currently in use in several states, including California, Washington, Oregon, Alaska, and Montana. • The Committee noted the addition of birth certificate data makes the measure easier to use. • It was also noted that the reframing makes it a more consumer-friendly measure.
5. Related and Competing Measures • No related or competing measures noted.

0716 Unexpected Complications in Term Newborns
Standing Committee Recommendation for Endorsement: **Y-25**; **N-0** Rationale • The Committee agreed that this measure meets all the NQF criteria for endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

1382 Percentage of low birthweight births

Submission | **Specifications**

Description: The percentage of births with birthweight <2,500 grams

Numerator Statement: The number of babies born weighing <2,500 grams at birth in the study population

Denominator Statement: All births in the study population

Exclusions: None

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Population : County or City, Population : National, Population : Regional

Setting of Care: Hospital/Acute Care Facility, Other

Type of Measure: Outcome

Data Source: Patient Reported Data/Survey

Measure Steward: Centers for Disease Control and Prevention

STANDING COMMITTEE MEETING [May/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-15**; **M-9**; **L-1**; **I-0**

Rationale:

- This is a population-level measure monitored by the National Center for Health Statistics.
- The Committee noted that there is little variability at any moment in time, but that in the US there have been downward trends in the incidence of low birthweight, suggesting that incidence of low birthweight is modifiable, as well as the fact that US levels are very different from those seen in other countries.
- The Committee highlighted that there is substantial opportunity for improvement in this measure since rates have edged down only slightly over the last few years, and there are substantial variations across race and ethnicity.
- The Committee questioned whether the developer considered gestational age since the US ranks very low among industrial countries in terms of infant mortality rate and maternal mortality rate.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **Previous Reliability Evaluation Accepted** 2b. Validity: **Previous Validity Evaluation Accepted**

Rationale:

- The Committee agreed the underlying method and results for the measure had not significantly changed since the last NQF endorsement review. Data element validity was assessed by direct comparison of birth certificate data to medical records. Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were computed.
- Data element validity tested against a "gold standard" such as the medical record also counts for reliability. The Committee accepted the validity testing conducted at the data element level for the last NQF endorsement review.
- The Committee accepted the prior evaluation of the reliability and validity criteria without further discussion.

3. Feasibility: H-24; M-1; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

Rationale:

- The Committee agreed the measure is feasible since the data are collected by law and is universally available.

1382 Percentage of low birthweight births
4. Usability and Use: H-18; M-7; L-1; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: • This measure is publicly reported by the CDC National Vital Statistics System. • The Committee noted that this measure assesses perinatal healthcare in general rather than specific providers, yet it is important to measure and track. For example, from a public health and planning point of view, it is helpful to know how many babies are going to need NICU follow up and potentially, future support services; this measure can assist in predicting that need. • Some Committee members noted that birth certificate data are not very reliable for many of the maternal indicators. However, birthweight and gestational age are quite accurate on the birth certificate.
5. Related and Competing Measures • No related or competing measures noted.
Standing Committee Recommendation for Endorsement: **Y-26**; **N-0** Rationale • The Committee agreed that this measure meets all the NQF criteria for endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns

Submission | **Specifications**

Description: This measure assesses the number of staphylococcal and gram negative septicemias or bacteremias in high-risk 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 Birth, PC-03: Antenatal Steroids, PC-05: Exclusive Breast Milk Feeding).

Numerator Statement: The outcome being measured is: Newborns with septicemia or bacteremia with ICD-10-CM Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Confirmed OR ICD-10-CM Other Diagnosis Codes for sepsis as defined in Appendix A, Table 11.10.1 with a Bloodstream Infection Confirmed available at:
http://manual.jointcommission.org/releases/TJC2015B2/

The only national hospital quality measure currently requiring patient-level risk adjustment is the Health Care-Associated Bloodstream Infections in Newborns (PC-04) outcome measure in the perinatal care measure set.

Denominator Statement: The outcome target population being measured is: Liveborn newborns with ICD-10-CM Other Diagnosis Codes for birth weight between 500 and 1499g as defined in Appendix A, Table 11.12, 11.13 or 11.14 OR Birth Weight between 500 and 1499g OR ICD-10-CM Other Diagnosis Codes for birth weight = > 1500g as defined in Appendix A, Table 11.15 or 11.16 OR Birth Weight = > 1500g who experienced one or more of the following:

o Experienced death

o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for major surgery as defined in Appendix A, Table 11.18

o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for mechanical ventilation as defined in Appendix A, Table 11.19

o Transferred in from another acute care hospital or health care setting within 2 days of birth.

Exclusions: • ICD-10-CM Principal Diagnosis Code for septicemias or bacteremias as defined in Appendix A, Table 11.10.2

• ICD-10-CM Other Diagnosis Codes for septicemias or bacteremias as defined in Appendix A, Table 11.10.2 or ICD-10-CM Principal or Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Present on Admission

• ICD-10-CM Other Diagnosis Codes for birth weight < 500g as defined in Appendix A, Table 11.20 OR Birth Weight < 500g

• Length of Stay < 2 days

• Enrolled in clinical trials

Adjustment/Stratification: Statistical risk model

Level of Analysis: Facility, Population : National

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Paper Medical Records

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [May/03/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-17**; **M-5**; **L-1**; **I-0**

Rationale:

- It was generally agreed there is still a significant opportunity for improvement on performance with this measure. The Committee noted the increase in the gap since 2011, and the developer explained that in 2014 this measure became mandatory for all hospitals with more than 1,100 births annually (as of 2016, it is now all hospitals with more than 300 births). With 1,000 more hospitals reporting, more cases are

identified.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **M-22**; **L-1**; **I-0** 2b. Validity: **H-14**; **M-9**; **L-0**; **I-0**

<u>Rationale</u>:

- The measure has been updated to ICD-10 CM.
- There have been changes to the specifications. The numerator included population now requires a check to confirm that the bloodstream infection was health care-associated after the first 48 hours when infection codes are present on Table 11.10 or 11.10.1 with a new data element Bloodstream Infection Confirmed, since infection codes are also applied for infections resulting from other newborn medical conditions that are not health care–associated, i.e., necrotizing enterocolitis, pneumonia, urosepsis, etc. The exclusion for hospitalization greater than 120 days was removed and another exclusion was added to exclude newborns with bloodstream infection present on admission. The Committee had no concerns with the changes.
- This measure does not correlate with the other measures in the Joint Commission perinatal core set, but the Committee agreed that would not be expected.

3. Feasibility: H-15; M-8; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

<u>Rationale</u>:

- The Committee had no concerns about the feasibility.

4. Usability and Use: H-15; M-8; L-0; I-0

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

<u>Rationale</u>:

- Committee members noted the measure has been improved, with expanded data sources, and some changes to the specifications. The developer noted that the new version of the measure should be more accurate but they could not yet compare the newest data with data from the prior version.

5. Related and Competing Measures

- This measure competes with #0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates and #0478: Neonatal Blood Stream Infection Rate (NQI 03) (AHRQ).
- The Committee had an extensive discussion on the 3 competing measures. NQF provided guidance on the related/competing measure process.
- The Joint Commission (TJC) and AHRQ have done some work on harmonization. TJC compared #1731, which uses partial chart review and administrative data, and #0478, which uses only administrative data. They found the measure using chart review was able to identify more cases that had not been included in the other measure due to coding issues. In addition, #0478 excludes cases diagnosed 7 days or less after birth and #1731 excludes only 2 days or less, which they thought accounted for about 10% of the difference. (#0478 is now three days or less.) The Joint Commission stated that the measures are similar; however, since codes are not uniformly assigned, their measure, which also uses chart review is able to identify more cases. This comparison was done using ICD-9 CM codes, and they think that that there will be less discrepancy between the two measures with the use of ICD-10 CM codes.
- AHRQ noted that they had made changes to #0478 based in part on the analysis done with TJC, that the measure will change with ICD-10 CM, and that the current versions are more aligned. In addition, #0478 looks at all causes and cases of sepsis, while #1731 focuses on those associated with central lines. In addition, the AHRQ measure is not reported at a hospital level.
- A Committee member related some of the history of this measure, noting that the AHRQ measure was originally endorsed and brought into The Joint Commission's core set, and then turned into a clinical data measure. During the previous review and discussion of competing measures, Medicaid program

representatives stated that they could not collect the data unless it was administrative, and that is why there were two endorsed measures.

- Committee members requested more information on the change to ICD-10 CM, in particular questioning if this would now have less chart review burden. The developer stated it was too soon to tell, especially with the learning curve associated with changing coding guidelines. It was also noted that with ICD-10 CM, "suspected" or "probable" is no longer included (cases are yes/no) which should reduce gaming.
- For the chart review, Committee members who are using the measure did not think it was a large burden due to the very small number of charts that have to be reviewed, and that hospitals would be reviewing all of these charts as they work to reduce infection rates. Coding for neonatal sepsis is complicated and the chart review is used to make the measure more accurate. In addition, the developer noted, hospitals like to be able to exclude false positives. It was noted that false negatives are a larger issue.
- After discussion, the Committee felt there is not yet enough data on the performance of either measure under ICD-10 CM and that ICD-10 CM has the potential to reduce burden associated with manual chart review. In addition, many new, smaller facilities (>300 deliveries per year) are just beginning to report on this measure so current performance rates are not yet available (although these very small facilities are unlikely to be caring for these babies, who would be transferred).
- The Committee noted that EHRs are not yet to the point where these data can be automatically pulled out.
- The Committee then discussed the ways in which the VON measure, #0304, differs from the other two. 0304 does not include babies more than 1,500 grams, and does include meningitis; however, it is not clear the size of that group. Currently the measure requires either a positive blood or CSF culture and is not collected separately, although the developer agreed that might be a good idea. The VON measure is risk adjusted, which allows for more even comparisons across facilities. However, the major issue with the VON measure is that it is not publically reported and requires a registration fee.
- The Committee noted they were struggling with the question of whether one was best, especially with the changes to the measures. Committee members using the measures noted they focus on slightly different populations. For example, there are about 40,000 VLBW babies born in each year and bloodstream infections are most prevalent in this population, but larger babies born are also at risk for infection even if the infection rates are smaller. One Committee member stated that to actually move the needle, the VLBW babies are the target population, but only about a quarter of the NICUs in the country treat these babies, with the remaining three-fourths of NICUs treating LBW and premature babies. Another Committee member noted that focusing on the smaller, high-prevalence population misses the opportunity to improve processes and reduce infections in many facilities.
- Ultimately, due to the changes in the AHRQ measure, the update to ICD-10 CM, the expanded number of facilities reporting, and the slightly different populations included, the Committee agreed that for the time being all three measures should remain endorsed, since they are being used for different things. In terms of burden, it was noted that the high-level NICUs are all already reporting to VON; that almost everyone has to report to the Joint Commission; and that there is no burden for hospitals for the AHRQ measure since it comes out of billing data and is reported by the state data organizations.
- The Committee requested that, for the next year, a specific effort be made to get the data from those facilities that collect and report on two or three of the measures in order to allow a more accurate comparison. VON noted that they do a member survey and they will ask members that are collecting on the other measures as well. They also offered to work with The Joint Commission to compare the data.
- Committee members highlighted that while it is easy for them to understand the differences between the measures and rates, it may not be so clear to the public, and they reiterated the need for a single measure.
- The Committee requested that the developers provide more information and new data in 18 months for the Committee to relook at the measures during an off-cycle review. They further requested that the developers work together toward a single measure.

1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns
Standing Committee Recommendation for Endorsement: **Y-23**; **N-0** Rationale • The Committee agreed that this measure meets all the NQF criteria for endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

0469: 2829 PC-01 Elective Delivery

Submission | **Specifications**

Description: This measure assesses patients with elective vaginal deliveries or elective cesarean births 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). PC-01, Elective Delivery is one of two of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.

Numerator Statement: Patients with elective deliveries by either:

- Medical induction of labor while not in labor prior to the procedure
- Cesarean birth while not in labor and with no history of a prior uterine surgery

Denominator Statement: The Denominator is patients who deliver newborns with >= 37 and < 39 weeks of gestation completed.

Exclusions: ICD-9-CM, ICD-10-CM, or SNOMED CT codes for conditions possibly justifying elective delivery prior to 39 weeks gestation.

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility, Population : National

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Pharmacy

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [May/03/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-10**; **M-13**; **L-2**; **I-0**

Rationale:

- This measure is the eMeasure version of NQF#480 and the information for evidence and opportunity for improvement is the same:
  - The developer did not submit new evidence during this review, but Committee members noted that ACOG recently reaffirmed the practice bulletin for timing of elective induction of labor.
  - While the performance is improving, there is still a gap in care in this area, and Committee members noted that as of January 2016, more hospitals are reporting on this measure (now 80% of all birthing hospitals), so they expect more variation to appear. Committee members noted that one of the major drivers of morbidity was repeat elective C-sections at 37 weeks, and that number had dropped significantly.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **M-22**; **L-2**; **I-1** 2b. Validity: **M-23**; **L-1**; **I-1**

Rationale:

- NQF eMeasure technical review found this eMeasure to have appropriate specifications and value sets, and an adequate feasibility assessment that addressed the data elements and measure logic.
- The developer explained that because this measure was tested using BONNIE simulated data set, the testing was looking to confirm that the measure specifications are accurately implemented and that the measure performs as it should.
- Since there is no sampling with the eMeasure and 100% of cases are used, performance should be more reliable.

0469: 2829 PC-01 Elective Delivery
• Actual performance information is not yet available to compare with the paper version of the measure. Thus far, 7 hospitals submitted data on 2015 performance in March 2016, and 69 hospitals will submit 2016 data in 2017. Committee members noted the importance of good training for coders as the measure is implemented.
3. Feasibility: H-2; M-16; L-0; I-7 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • Given the limited use of the measure thus far, the Committee found it difficult to comment on feasibility. The developer noted that some of the major EHR vendors submit feedback on the eMeasures each year and they are using that feedback to improve the measure.
4. Usability and Use: H-21; M-4; L-0; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: • The Committee thought the usability of the eMeasure would be similar to the medical record abstraction measure.
5. Related and Competing Measures • No related or competing measures noted.
Standing Committee Recommendation for Endorsement: **Y-22**; **N-3** Rationale • The Committee agreed that this measure meets all the NQF criteria for endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

480: 2830 PC-05 Exclusive Breast Milk Feeding

Submission | **Specifications**

Description: PC-05 assesses the number of newborns exclusively fed breast milk during the newborn's entire hospitalization. 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-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns). PC-05, Exclusive Breast Milk Feeding, is one of two measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.

Numerator Statement: Newborns that were fed breast milk only since birth

Denominator Statement: Single term newborns discharged from the hospital who did not have a diagnosis of galactosemia, were not subject to parenteral nutrition, and had a length of stay of less than or equal to 120 days

Exclusions: - Newborns who were admitted to the Neonatal Intensive Care Unit (NICU)

- Newborns who were transferred to an acute care facility
- Newborns who expired during the hospitalization

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility, Population : National

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Process

Data Source: Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record

Measure Steward: The Joint Commission

STANDING COMMITTEE MEETING [May/03/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Previous Evidence Evaluation Accepted**; 1b. Performance Gap: **H-0=18**; **M-5**; **L-1**; **I-0**

Rationale:

- As this is the eMeasure version of measure 0480: Exclusive Breast Feeding, the information for evidence and gap are the same:
  - The goal for performance of the measure is 70%, and in over half of The Joint Commission hospitals that reported this measure, rates are less than 50%. In the 10th percentile, hospitals are at 22%.
  - More hospitals are reporting now (1,400, up from 166), so there are more opportunities for improvement.
  - Committee members noted concerns around patient choice, and that one issue with this measure is that it puts pressure on patients to breastfeed when it may not be appropriate due to circumstances outside the control of the hospital (for example, work circumstances that do not allow pumping).
  - Committee members discussed the resources available for hospitals as they work to improve performance on this measure, such as toolkits, and that one key focus is training staff to ensure they are counseling patients appropriately.
  - The Committee discussed the potential for a balancing measure.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **M-17**; **L-1**; **I-1** 2b. Validity: **M-15**; **L-4**; **I-0**

Rationale:

- NQF eMeasure technical review found this eMeasure to have appropriate specifications and value sets, and an adequate feasibility assessment that addressed the data elements and measure logic.
- This eMeasure has been tested through BONNIE and as such, the Committee noted similar concerns as with the other eMeasures. During the BONNIE testing, 528 cases passed at 100%.

480: 2830 PC-05 Exclusive Breast Milk Feeding
• It has HQMF specifications, was vetted through USAC, and is used in meaningful use, so the Committee agreed the quality construct is present and the measure meets the scientific acceptability criteria.
3. Feasibility: H-18; M-5; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c. Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • Given the limited use of the measure thus far, the Committee found it difficult to comment on feasibility. The developer noted that some of the major EHR vendors submit feedback on the eMeasures each year and they are using that feedback to improve the measure.
4. Usability and Use: H-14; M-8; L-1; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: • The Committee thought the usability of the eMeasure would be similar to the medical record abstraction measure.
5. Related and Competing Measures • No related or competing measures noted.
Standing Committee Recommendation for Endorsement: **Y-18**; **N-2** Rationale • The Committee agreed that this measure meets all the NQF criteria for endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

2902 Contraceptive Care – Postpartum

Submission | **Specifications**

Description: Among women ages 15 through 44 who had a live birth, the percentage that is provided:

1) A most effective (i.e., sterilization, implants, intrauterine devices or systems (IUD/IUS)) or moderately (i.e., injectables, oral pills, patch, ring, or diaphragm) effective method of contraception within 3 and 60 days of delivery.

2) A long-acting reversible method of contraception (LARC) within 3 and 60 days of delivery.

Two time periods are proposed (i.e., within 3 and within 60 days of delivery) because each reflects important clinical recommendations from the U.S. Centers for Disease Control and Prevention (CDC) and the American College of Obstetricians and Gynecologists (ACOG). The 60-day period reflects ACOG recommendations that women should receive contraceptive care at the 6-week postpartum visit. The 3-day period reflects CDC and ACOG recommendations that the immediate postpartum period (i.e., at delivery, while the woman is in the hospital) is a safe time to provide contraception, which may offer greater convenience to the client and avoid missed opportunities to provide contraceptive care.

Numerator Statement: Primary measure: Women ages 15 through 44 who had a live birth and were provided a most (sterilization, intrauterine device, implant) or moderately (pill, patch, ring, injectable, diaphragm) effective method of contraception within 3 and 60 days of delivery.

Sub-measure: Women ages 15 through 44 who had a live birth and were provided a long-acting reversible method of contraception (LARC) within 3 and 60 days of delivery.

Denominator Statement: Women ages 15 through 44 who had a live birth in a 12-month measurement year.

Exclusions: The following categories are excluded from the denominator: (1) deliveries that did not end in a live birth (i.e., miscarriage, ectopic, stillbirth or induced abortion); and (2) deliveries that occurred during the last two months of the measurement year.

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Health Plan, Population : Regional

Setting of Care:

Type of Measure: Intermediate Clinical Outcome

Data Source: Administrative claims

Measure Steward: US Office of Population Affairs

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Y-24**; **N-1**; 1b. Performance Gap: **H-21**; **M-6**; **L-0**; **I-0**

Rationale:

- This measure assesses a subpopulation of measures #2903 and #2904: it covers the population of women who have given birth in the last 60 days.
- As with measures #2903 and #2904, the Committee noted a large body of evidence demonstrated a relationship between contraception and reducing unintended pregnancy, which is no different for the postpartum period.
- The Committee highlighted that the provision of most or moderately effective methods does not address patient preference.
- One Committee member questioned if the measure is excluding mothers who gave birth less than 60 days from the end of the year. The developer explained that they excluded women who delivered with only 2 months left in the measurement year as the developer wanted to make sure that providers had enough time after delivery to see the woman while ensuring that the measure aligns with ACOG's recommendations.
- The Committee requested that the developer clarify whether this is 2 different measures (within 3 days and within 60 days) or combined into one result. Conceptually, the developer explained, this is a stratification of a single measure into 2 different timeframes.

2902 Contraceptive Care – Postpartum
• One Committee member requested that the developer harmonize this measure with the HEDIS measure of postpartum visits to widen the timeframe since it is hard to get the timely postpartum visit. The developer stated that they would consider this in the next iteration of the measure. • The Committee noted that the performance gap is actually larger for the postpartum population than the general population and has more room for improvement.
2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u> (2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity) 2a. Reliability: **H-8**; **M-14**; **L-2**; **I-**2b. Validity: **M-17**; **L-6**; **I-1** <u>Rationale</u>: • The Committee agreed that the reliability and validity for this measure was similar to NQF #2903: Contraceptive Care – Most & Moderately Effective Methods and #2904: Access to LARC. However, one Committee member asked that the developer clarify the reliability for this measure. The developer explained that for these measures in particular high numbers (several hundreds) were required to achieve a high reliability of 0.9, or 0.7 for a moderate level of reliability, which is acceptable or widely acceptable level of reliability. • The Committee noted that, similar to the other measures, the same reasoning applies in terms of providers being responsible for their patients' decision-making regardless of the clinic process and counseling.
3. Feasibility: H-20; M-5; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* <u>Rationale</u>: • The Committee acknowledged the measure is feasible.
4. Usability and Use: H-15; M-12; L-0; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* <u>Rationale</u>: • The Committee voiced no concerns regarding usability and use.
5. Related and Competing Measures • This measure directly relates to NQF #2903: Contraceptive Care – Most & Moderately Effective Methods and #2904: Access to LARC. These measures are from the same developer and harmonized.
Standing Committee Recommendation for Endorsement: **Y-24**; **N-3** <u>Rationale</u> • The Committee agreed that this measure meets all the NQF criteria for endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

2903 Contraceptive Care – Most & Moderately Effective Methods

Submission | **Specifications**

Description: The percentage of women aged 15-44 years at risk of unintended pregnancy that is provided a most effective (i.e., sterilization, implants, intrauterine devices or systems (IUD/IUS)) or moderately effective (i.e., injectables, oral pills, patch, ring, or diaphragm) FDA-approved methods of contraception.

The proposed measure is an intermediate outcome measure because it represents a decision that is made at the end of a clinical encounter about the type of contraceptive method a woman will use, and because of the strong association between type of contraceptive method used and risk of unintended pregnancy.

Numerator Statement: Women aged 15-44 years of age at risk of unintended pregnancy who are provided a most (sterilization, intrauterine device, implant) or moderately (pill, patch, ring, injectable, diaphragm) effective method of contraception.

Denominator Statement: Women aged 15-44 years of age who are at risk of unintended pregnancy.

Exclusions: The following categories of women are excluded from the denominator: (1) those who are infecund for non-contraceptive reasons; (2) those who had a live birth in the last 2 months of the measurement year; or (3) those who were still pregnant or their pregnancy outcome was unknown at the end of the year.

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility, Health Plan, Population : Regional, Population : State

Setting of Care:

Type of Measure: Intermediate Clinical Outcome

Data Source: Administrative claims

Measure Steward: US Office of Population Affairs

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Y-24**; **N-1**; 1b. Performance Gap: **H-13**; **M-10**; **L-1**; **I-0**

Rationale:

- The Committee noted that the evidence demonstrated strong support for providing LARCs to demonstrate that clinics are providing greater access to a wide range of contraception options.
- The Committee highlighted that the evidence has shown that the type of counseling can be associated with the choice of method selected but did note that measuring the provision of most or moderately effective methods does not address patient preference. The Committee expressed concerns that this measure is assessing providers based on patients' clinical decision-making, which could lead to unintended consequences such as penalizing providers for patients' choices and preferences. Additionally, there might be resistance against contraception (e.g. Catholic systems or patient religious beliefs), which is not factored into the decision-making. The developer stated that the evidence is very strong that when counseling a woman about the range of options that most women will chose to use those most or moderately effective methods. In addition, the benchmark for this measure is 63%, so that patient preferences are respected.
- The developer also explained that this is a voluntary measure and it is possible that Catholic hospitals will not use this measure. However, 99% of women who identify a religious affiliation, including Catholic, have used birth control; 89% of Catholics report currently using contraception if they are at risk of unintended pregnancy; and 68% of Catholic women are using a highly effective method (i.e., sterilization, pill or other hormonal method, or IUD). Only 3% of Catholic women who are at risk of unintended pregnancy are using natural family planning.
- The Committee questioned why the focus is on actual provision of most or moderately effective methods and LARC versus offering other methods. The developer explained provision is the most reliable data available and can be captured in administrative data.
- The Committee asked the developer to explain the measure's postpartum exclusion, when those women are often the highest risk of repeat pregnancy. The developer explained that they developed NQF #2902:

2903 Contraceptive Care – Most & Moderately Effective Methods
Contraceptive Care - Postpartum specifically for that purpose. Additionally, ACOG's recommendation is to provide contraception at the six-week postpartum visit, so to be fair to providers, the developer excluded postpartum for this measure. • The Committee highlighted that the percentage of women of reproductive age who are at risk of unintended pregnancy is 38 million and 51% of 6.7 million pregnancies each year are unintended. Additionally, there are gaps in unintended pregnancy especially for teens and unmarried women.
2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u> (2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity) 2a. Reliability: **H-8**; **M-14**; **L-2**; **I-0** 2b. Validity: **M-17**; **L-6**; **I-1** <u>Rationale</u>: • One Committee member noted the significant barriers to contraceptive care for adolescents, specifically limited access to birth control for adolescents under the age of 18. Therefore, it is unfair to penalize providers based on these access limitations. The developer explained that adolescents under the age of 18 were included to align with the Medicaid Adult and Child Core Sets, so the measure could be stratified differently to capture this particular subpopulation. • The Committee noted that the definition for "at risk" is unclear and it is missing from the measure specifications, specifically the denominator statements. The developer defined "at risk" as having ever had sex, fecund/able to become pregnant, not pregnant, and seeking pregnancy. • The Committee questioned if condoms for women who want to prevent STIs, vasectomy as a form of birth control, oral contraceptives for menstrual cramps, young people and parents of young people with developmental disabilities using contraceptive method to control menstruation, and same-sex relationships where birth control is not an issue were subpopulations that were excluded from this measure. The developer explained that they are considering a hybrid measure that will be better able to address these issues, but this measure relies on claims data, so they were unable to address those issues in this measure. The developer noted that there were some limitations using this strictly claims-based measure. • The developer reported that the measure was tested with approximately 800,000 clients in Planned Parenthood across 25 affiliates, 3 state Medicaid programs, and Title X programs. • Systematic assessment of face validity by 9 experts agreed that this measure would provide an accurate reflection of quality. • One Committee member asked the developer to explain how the measure handles situations in which patients have access to multiple healthcare systems and would be included in the denominator for both: which provider system or specialty care would be responsible for the prescribing of the contraceptive, and who would be penalized if the other prescribed first. The developer explained that the measure was tested at the Medicaid plan level looking at performance overall but the measure has not been tested at other levels of analysis (e.g., medical groups, clinicians). The Committee stressed that this measure needs to explicitly state that it is not appropriate for hospital level or provider level comparison. • The Committee questioned whether this measure would capture over-the-counter oral contraceptives and pharmacy claims since states like California and Oregon are allowing this. • One Committee member suggested that a pure provision measure would be better, especially since the measure is not accounting for women who were provided LARC in a previous measurement year or discontinuation of other methods. The developer stated that they would consider this in the next iteration of the measure.
3. Feasibility: H-20; M-5; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* <u>Rationale</u>: • The data source is administrative claims data, so the Committee agreed that this measure was feasible.

2903 Contraceptive Care – Most & Moderately Effective Methods
4. Usability and Use: H-10; M-12; L-3; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: • The Committee expressed concern about how consumers and patients might perceive this measure, particularly since over the past 5 years there have been significant examples of coercion in contraception counseling (e.g., forced sterilization in the prison system in California). One Committee member referenced a particular study that demonstrated that contraceptive counseling differed for women of different races and providers were biased towards providing LARC methods to African-American patients. • The developer noted that they are funding a study to develop a patient-reported outcome measure looking at possible coercion as one dimension of the entire client experience related to contraceptive care. Another Committee member stated that it is not always coercion but limitation of contraceptive choices. For example, the provider offers 1 or 2 methods out of the whole range of options, rather than offering comprehensive contraceptive counseling that explains all of the options and allows patients to choose from a full range. • Committee members noted that contraceptive counseling for women is probably one of the most intimate services that providers offer, and unfortunately, many providers are unskilled at doing that well regardless of the available guidelines.
5. Related and Competing Measures • This measure directly relates to NQF #2902: Contraceptive Care – Postpartum and #2904: Access to LARC. These measures are from the same developer and harmonized.
Standing Committee Recommendation for Endorsement: **Y-20**; **N-5** Rationale • The Committee agreed that this measure meets all the NQF criteria for endorsement.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

2904 Contraceptive Care - Access to LARC

Submission | **Specifications**

Description: Percentage of women aged 15-44 years at risk of unintended pregnancy that is provided a long-acting reversible method of contraception (i.e., implants, intrauterine devices or systems (IUD/IUS).

It is an access measure because it is intended to identify situations in which women do not have access to the long-acting reversible methods of contraception (LARC), i.e., contraceptive implants and intrauterine devices.

Numerator Statement: Women aged 15-44 years of age at risk of unintended pregnancy who were provided a long-acting reversible method of contraception (LARC), i.e., intrauterine device or implant.

Denominator Statement: All women aged 15-44 years of age who are at risk of unintended pregnancy.

Exclusions: The following categories of women are excluded from the denominator: (1) those who are infecund for non-contraceptive reasons; (2) women who had a live birth in the last 2 months of the measurement year; or (3) women were still pregnant or their pregnancy outcome was unknown at the end of the year.

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Facility, Health Plan, Population : Regional, Population : State

Setting of Care:

Type of Measure: Structure

Data Source: Administrative claims

Measure Steward: US Office of Population Affairs

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Y-24**; **N-1**; 1b. Performance Gap: **H-18**; **M-7**; **L-0**; **I-0**

Rationale:

- This new measure is a subset of measure #2903, but has a different goal: to assess access to LARC methods of contraception. This measure focuses on the percentage of women at risk for unintended pregnancy that are provided a long-acting reversible method of contraception (i.e., implants, intrauterine devices or systems (IUD/IUS)).
- The Committee agreed that the overarching issues surrounding the evidence were addressed in the discussion of NQF #2903: Contraceptive Care – Most & Moderately Effective Methods. However, the Committee requested that, in the future, the developer include more evidence for adolescent and around issues relating to side effects particular to LARCs, patients' fear of having IUD/IUS, and the non-contraceptive benefits of LARCs.
- The Committee agreed there were gaps in terms of unintended pregnancy rates among women of reproductive age and opportunities for improvement.

2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-8**; **M-1**; **L-0**; **I-0**; 2b. Validity: **M-17**; **L-6**; **I-1**

Rationale:

- This measure is used to identify women who do not have access to LARCs.
- The Committee discussed the use of the population denominator versus the encounters as the denominator. The developer explained that the reason they chose population versus encounter was primarily because attribution could not be made to one encounter or one type of provider.
- The Committee noted that this measure provides a good metric for access, not necessarily quality, since there are many different factors that contribute to quality of care.

2904 Contraceptive Care - Access to LARC
3. Feasibility: H-20; M-5; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • The Committee noted that the data required are routinely generated and/or used during care delivery, therefore data collection is feasible. This measure does not represent an undue burden to collect and can be implemented without much administrative burden.
4. Usability and Use: H-12; M-11; L-2; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: • The Committee noted the potential for coercive practices in which women are not offered a complete choice of methods and are pressured into using a LARC method. The developer stated that they do not think this will be a concern since the measure focus is on ensuring access to these methods by monitoring very low rates (well below the median) and the measure is not intended to be used for benchmarking.
5. Related and Competing Measures • This measure directly relates to NQF #2902: Contraceptive Care – Postpartum and #2903: Contraceptive Care – Most & Moderately Effective Methods. These measures are from the same developer and harmonized.
Standing Committee Recommendation for Endorsement: **Y-20**; **N-5** Rationale • The Committee agreed that this measure is useable as a marker of access to LARC methods.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

Measures Where Consensus Is Not Yet Reached

1517 Prenatal & Postpartum Care (PPC)

Submission | **Specifications**

Description: The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year. For these women, the measure assesses the following facets of prenatal and postpartum care:

Rate 1: Timeliness of Prenatal Care. The percentage of deliveries that received a prenatal care visit as a member of the organization in the first trimester or within 42 days of enrollment in the organization.

Rate 2: Postpartum Care. The percentage of deliveries that had a postpartum visit on or between 21 and 56 days after delivery.

Numerator Statement: This measure assesses whether pregnant women had timely prenatal and postpartum care visits. It has two rates, one assessing the timeliness of prenatal visits, and one assessing the timeliness of postpartum visits.

Denominator Statement: The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year.

Exclusions: Non-live births

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Health Plan, Integrated Delivery System

Setting of Care: Ambulatory Care : Clinician Office/Clinic

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data, Paper Medical Records

Measure Steward: National Committee for Quality Assurance

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **H-0**; **M-3**; **L-2**; **I-21**; Evidence Exception: **Y-16; N-10**

1b. Performance Gap: **H-7**; **M-15**; **L-1**; **I-2;**

Rationale:

- The Committee that previously evaluated this maintenance measure during noted that this measure only assesses visits but not the content of those visits. The current Committee agreed that ACOG guidelines recommend a schedule of prenatal visits based primarily on expert consensus. The Committee acknowledged that data does show that patients who have no prenatal care have worse outcomes.
- The current Committee noted that there was no evidence for the timing of visits; however, the Committee agreed that empirical evidence is not needed to hold providers accountable for the measure. Therefore, the measure moved forward on Insufficient Evidence with Exception.
- The Committee noted the low adherence to the measure and missing care for women, which highlights that there is room for improvement.

2. Scientific Acceptability of Measure Properties: Consensus was not reached on the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **Previous Reliability Votes Accepted** 2b. Validity: **M-14**; **L-10**; **I-2**

Rationale:

- The developer has changed the specifications since the last NQF endorsement review. The use of infant claims to identify deliveries was removed and the developer clarified the tests that must be included to meet criteria for an obstetric panel in the medical record specification. These are as follows: hematocrit, differential WBC count, platelet count, hepatitis B surface antigen, rubella antibody, syphilis test, RBC antibody screen, Rh, and ABO blood typing.
- The Committee agreed the reliability of the measure was demonstrated, with the developer providing

1517 Prenatal & Postpartum Care (PPC)
reliability testing at the measure score level. • The Committee expressed major concerns about validity, specifically the limited number of codes and lack of information about the content of the visits.
3. Feasibility: H-4; M-14; L-7; I-1 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: • The developer states that, "To allow for widespread reporting across health plans and healthcare practices, this measure is collected through multiple data sources (administrative data, electronic clinical data, paper records)." • The Committee noted that collecting this measure using administrative claims was feasible and the burden of paper medical record review is considerable.
4. Usability and Use: H-2; M-14; L-8; I-2 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale • The measure is actively used in programs for both health plan and state reporting. • The Committee noted that early prenatal care is important for peri-partum depression screening, contraception, and life planning. • The Committee agreed that this measure is problematic because it discourages earlier care and it is unclear whether quality is improving.
5. Related and Competing Measures • This measure was identified as related to: o NQF #1391: Frequency of Ongoing Prenatal Care (FPC). The percentage of Medicaid deliveries that had the following number of expected prenatal visits: ▪ less than 21 percent of expected visits. ▪ 21 percent–40 percent of expected visits. ▪ 41 percent–60 percent of expected visits. ▪ 61 percent–80 percent of expected visits. ▪ greater than or equal to 81 percent of expected visits. • The developer noted that both measures are harmonized for use together.
Standing Committee Recommendation for Endorsement: **Y-12**; **N-14 CONSENSUS NOT REACHED** Rationale • Overall, the Committee did not reach consensus on this measure. Despite the various problems raised with the measure, several Committee members were reluctant to remove endorsement until better measures are available.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

Measures Not Recommended

1391 Frequency of Ongoing Prenatal Care (FPC)

Submission |

Description: The percentage of Medicaid deliveries that had the following number of expected prenatal visits:

• less than 21 percent of expected visits.

• 21 percent–40 percent of expected visits.

• 41 percent–60 percent of expected visits.

• 61 percent–80 percent of expected visits.

• greater than or equal to 81 percent of expected visits.

Numerator Statement: Women who had the appropriate number of expected prenatal visits

Denominator Statement: The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year.

Exclusions: Exclude non-live births

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Health Plan, Integrated Delivery System

Setting of Care: Ambulatory Care : Clinician Office/Clinic

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data, Paper Medical Records

Measure Steward: National Committee for Quality Assurance

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: The measure does not meet the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **H-1**; **M-1**; **L-9**; **I-15**; 1b. Performance Gap: **H-0**; **M-0**; **L-0**; **I-0**

Rationale:

- The Committee that previously evaluated this maintenance measure noted that this measure only assesses the number of visits but not the content of those visits. The Committee agreed that ACOG guidelines recommend a schedule of prenatal visits that are based primarily on expert consensus. The prior Committee questioned the relationship of the visit groups defined in this measure to patient outcomes. The current Committee acknowledged that data does show that patients who have no prenatal care have worse outcomes.
- The current Committee noted the deficiency of the evidence, specifically the frequency of visits being based on expert consensus and not empiric evidence. The Committee noted that there is no empiric evidence in terms of the visit schedule or the number of visits being associated with improvement in outcomes for mothers and babies.
- This measure is considered a proxy for access to care; however, the measure does not assess the capacity of a plan to provide prenatal care. The measure reflects the challenges women face in accessing care, such as taking time off work, transportation, and childcare.
- The Committee noted that frequency does not equal quality and that this measure inhibits innovative strategies and new models of care.
- The measure did not pass Evidence.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-0**; **M-0**; **L-0**; **I-0** 2b. Validity: **H-0**; **M-0**; **L-0**; **I-0**

Rationale:

-

1391 Frequency of Ongoing Prenatal Care (FPC)
3. Feasibility: H-0; M-0; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: •
4. Usability and Use: H-0; M-0; L-0; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: •
5. Related and Competing Measures • This measure directly competes with [NQF # and Title] [Description]. [Summarize the related/competing measure issue here, and the disposition of it] OR • No related or competing measures noted.
Standing Committee Recommendation for Endorsement: **Y-0**; **N-0 DID NOT PASS IMPORTANCE** Rationale • The Committee did not recommend this measure because the number/frequency of visits was not demonstrated to equal quality or improve outcomes.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

2892 Birthrisk Cesarean Birth Measure
Submission **|**
Description: This is a measure of the effect that obstetrical care provider´s labor management strategies have on their laboring patient´s risk for cesarean birth. The target population is limited to women who attempt labor with a singleton vertex pregnancy without a history of a prior cesarean birth and give birth between 37 and 42 weeks of gestation. **Numerator Statement**: Number of cesarean births. **Denominator Statement**: Women without a history of a prior cesarean birth who attempted labor and gave birth to a single baby in vertex presentation between 37 and 42 weeks of gestation. **Exclusions**: The denominator excludes women with any of the following: 1. Gestational age at birth of less than 37 weeks or greater than 42 weeks. 2. History of a prior cesarean birth. 3. Multiple gestation. 4. Not in vertex presentation. 5. Did not attempt to have a vaginal birth by attempting labor. **Adjustment/Stratification**: Cohort comparison **Level of Analysis:** Facility, Clinician : Individual **Setting of Care:** Hospital/Acute Care Facility

2892 Birthrisk Cesarean Birth Measure

Type of Measure: Outcome

Data Source: Other

Measure Steward: Birthrisk.com, LLC.

STANDING COMMITTEE MEETING [May/03/2016]

1. Importance to Measure and Report: <u>The measure does not meet the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Y-26**; **N-1**; 1b. Performance Gap: **H-2**; **M-7**; **L-13**; **I-5**

<u>Rationale</u>:

- This new measure uses a novel approach to measuring Cesarean birth rates (as opposed to the currently endorsed measure, #0470) as this measure includes all mothers undergoing labor and is not limited to first time mothers.
- The Committee had no reference data to evaluate the results calculated by the developer, which was completed using birth certificate data from New York State in 2005-2007. This hospital and clinician-level measure also uses a fee-based, proprietary method of risk adjustment using cohort comparisons.
- The data presented was from 2005-2007 – now 10 years old.
- The developer notes that efforts to have the method published have not been successful.
- The measure did not pass Performance Gap.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-0**; **M-0**; **L-0**; **I-0** 2b. Validity: **H-0**; **M-0**; **L-0**; **I-0**

<u>Rationale</u>:

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3. Feasibility: H-0; M-0; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

<u>Rationale</u>:

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4. Usability and Use: H-0; M-0; L-0; I-0

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

<u>Rationale</u>:

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5. Related and Competing Measures

-

Standing Committee Recommendation for Endorsement: **DID NOT PASS IMPORTANCE**

<u>Rationale</u>

- The Committee did not recommend this proprietary measure in which the only data presented was a decade old.

6. Public and Member Comment

-

7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

8. Board of Directors Vote: Y-X; N-X

9. Appeals

2893 Neonatal Intensive Care All-Condition Readmissions

Submission |

Description: The NICU Readmissions metric assess the hospital- or state-level readmission rate at 30 days after a stay in the Neonatal Intensive Care Unit.

Numerator Statement: Number of infants with a gestational age between 23-34 weeks who were readmitted to the hospital within 30 days of discharge. These time periods are assessed cumulatively, such that readmissions occurring within prior time periods are included. Reliability is strongest if each health care unit has at least 50 discharges per time unit studied.

Denominator Statement: Number of newborns with a gestational age between 23-34 weeks discharged from the NICU, based on gestational age field contained in the birth certificate record (best obstetrical estimate).

Exclusions: Infants with a specified congenital anomaly are excluded from the target population.

Infants with a missing gestational age are excluded from the primary analysis. Information about multiple imputation methods to allow for their inclusion are presented in the testing attachment, section 2b7.

Infants who expired during the neonatal intensive care period are not eligible for a hospital readmission and excluded.

The smallest level of measurement (i.e. hospital, state, etc.) must have a minimum of 50 patients eligible for readmission in a single calendar year.

Adjustment/Stratification: Statistical risk model

Level of Analysis: Facility, Population : State

Setting of Care: Hospital/Acute Care Facility

Type of Measure: Outcome

Data Source: Administrative claims, Electronic Clinical Data : Electronic Health Record, Other

Measure Steward: The Children's Hospital of Philadelphia

STANDING COMMITTEE MEETING [05/03/2016]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Y-26**; **N-1**; 1b. Performance Gap: **H-14**; **M-11**; **L-1**; **I-0**

Rationale:

- The Committee agreed that transitions of care are important; that discharge planning and outpatient care coordination can influence the outcome; and there is significant variation in care.
- There are racial/ethnic disparities, particularly for African Americans.

2. Scientific Acceptability of Measure Properties: The measure does not meet the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-1**; **M-7**; **L-17**; **I-2** 2b. Validity: **H-0**; **M-0**; **L-0**; **I-0**

Rationale:

- The Committee noted that there are numerous readmission measures for adults and children, however, newborns may be cared for in 2 types of NICUs: a maternity/birth hospital that does not readmit neonates and a general acute care facility that does readmit neonates (though the infants are typically readmitted to the general pediatrics floor rather than the NICU).
- This measure is specified for facilities/hospitals, and not all of these may be able to track readmissions to other facilities. Though health information exchanges may improve the ability to capture and share data in the future, the Committee noted that insurers, managed care organizations and Medicaid may be better able to track readmissions across facilities than the facilities themselves.
- The measure relies on hospital data linked to vital statistics, which may not be available in all locations. The Committee was concerned that the measure does not account for planned readmissions or planned transfers and does not differentiate between a hospitalization and an observation stay since both are included as readmissions.

2893 Neonatal Intensive Care All-Condition Readmissions
• The developer indicated that "accurate implementation of this metric will require new data collection linkage with birth certificates or more widespread and standardized use of the EHR for publicly reported measures." • The measure did not pass Reliability.
3. Feasibility: H-0; M-0; L-0; I-0 *(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)* Rationale: •
4. Usability and Use: H-0; M-0; L-0; I-0 *(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)* Rationale: •
5. Related and Competing Measures • No related or competing measures noted.
Standing Committee Recommendation for Endorsement: **DID NOT PASS RELIABILITY** Rationale • The Committee did not recommend the measure because of the questions around reliability of data capture and recommends further development of this important measure. The Committee also suggested including larger babies, that may not have been in the NICU, but who experience a significant number of readmissions.
6. Public and Member Comment •
7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X
8. Board of Directors Vote: Y-X; N-X
9. Appeals

2895 Thermal Condition of Low Birthweight Neonates Admitted to Level 2 or Higher Nurseries in the First 24 Hours of Life: A PQMP Measure
Submission |
Description: This measure describes in terms of admission temperature the status of live-born neonates less than 2,500 grams that are admitted to a Level 2 or higher nursery. This measure reports on the temperature at admission. Temperatures are reported both in categorical terms and as a distribution. The distribution should be presented as a cumulative incidence curve with a chart to present key moments in the distribution. The categorization data may be presented in chart or graphical form, such as a pie chart, with parents. Each admission is categorized into one of five strata on the basis of their admission temperature. The strata, which were defined by our expert panel, are cold (<34.5), very cool (34.51-35.50), cool (35.51-36.50), about right (36.51-37.50) and overly warm (>37.5). All temperatures are analyzed using degrees Celsius and reported to one decimal place. The FIRST temperature taken in the nursery is to be recorded and used. To avoid the potential for gaming the measure by delaying a recorded temperature after arrival, the results are stratified in three ways: - Main Stratum: Time between arrival at Level 2 or higher nursery is between 0 and 15 minutes.

2895 Thermal Condition of Low Birthweight Neonates Admitted to Level 2 or Higher Nurseries in the First 24 Hours of Life: A PQMP Measure

- Delayed stratum: Time between arrival at Level 2 or higher nursery is more than 15 minutes.

- Other: Inadequate documentation to determine timing of temperature

Numerator Statement: The metric of interest is the temperature upon arrival to the Level 2 or higher nursery that is being assessed. This measure does not have the form of numerator and denominator. It is a distribution. We ask for reporting of the distribution in terms of five categories across the distribution, in terms of key moments in the distribution, and as a graphical presentation of the distribution. This is an information rich measure. Accountability entities may choose to use any of various components for their emphasis (alone or in combination), including percent "about right," mean or median temperatures, or value of the 10th or 25th percentiles, and the inter-percentile range.

There is an eligible population of newborns, which could be considered the denominator.

In lieu of a numerator, this measure reports the distribution of temperatures, using both numbers and a graph. In order to allow for reporting of key factors of interest to the accountability entity, this measure is specified to report that distribution in a variety of ways. This measure offers users (the accountability entity) the option to focus on one or more key substantive aspects of thermal outcomes in the defined population.

Data Elements:

-- Temperature to first decimal place

-- Units of temperature (Celsius, Fahrenheit). Those measured in Fahrenheit should be converted to Celsius. Celsius=(Fahrenheit less 32) times 5 divided by 9.

-- Time that temperature was measured

-- Time of arrival to the nursery (not time that admission was done)

State and County of residence OR zip code of mother

-- Optional: Method of temperature measurement (axillary, rectal, skin, tympanic)

Denominator Statement: All newborn infants born in a medical facility with birthweights less than 2,500 grams and admitted to a level 2 or higher nursery within 24 hours of life, other than those excluded.

Exclusions: Neonates with anencephaly, who receive only comfort care in the Level 2 or higher nursery, or those who die or are placed intentionally on a pre-existing hypothermia protocol prior to the 15 minute after arrival specification time.

Adjustment/Stratification: Stratification by risk category/subgroup

Level of Analysis: Population : Community, Population : County or City, Facility, Health Plan, Integrated Delivery System, Population : Regional, Population : State

Setting of Care: Hospital/Acute Care Facility, Other

Type of Measure: Outcome

Data Source: Administrative claims, Electronic Clinical Data : Electronic Health Record, Other, Paper Medical Records

Measure Steward: University Hospitals Cleveland Medical Center

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: <u>The measure meets the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Y-25**; **N-0**; 1b. Performance Gap: **H-14**; **M-10**; **L-2**; **I-0**

<u>Rationale</u>:

- This new, intermediate outcome measure for newborn temperature management reports the distribution of temperatures on arrival to the NICU for babies weighing less than 2,500 grams.
- Strong evidence has shown that low birthweight babies who are allowed to lose body heat are at increased risk for morbidity and mortality.
- Data from the test population in New York provided by the developer demonstrated variation in performance.

2895 Thermal Condition of Low Birthweight Neonates Admitted to Level 2 or Higher Nurseries in the First 24 Hours of Life: A PQMP Measure

2. Scientific Acceptability of Measure Properties: <u>The measure did not reach consensus for the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **M-13**; **L-8**; **I-4** 2b. Validity: **H-3**; **M-8**; **L-4**; **I-10**

<u>Rationale</u>:

- The Committee did not reach consensus on the reliability and validity of the measure due to multiple concerns:
  - the temperature strata were determined by expert consensus rather than empirical evidence;
  - difficulty in interpreting the measure results that are intended to be displayed as a distribution - in a table and cumulative distribution curve rather than a single numerical result;
  - the validity testing was performed on a variant of the measure; and
  - confusion as to how to interpret the measure results for accountability purposes.

3. Feasibility: H-3; M-15; L-5; I-2

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

<u>Rationale</u>:

- The Committee agreed that temperature data are readily collected in the medical record, however, extracting that data would be challenging for this measure. The developer reported that they are creating a web portal to submit data.

4. Usability and Use: H-2; M-13; L-9; I-1

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

<u>Rationale</u>:

- Committee members were not clear as to how a distribution result recommended by the developer could be used for making comparisons and accountability.

5. Related and Competing Measures

- No related or competing measures noted.

Standing Committee Recommendation for Endorsement: **Y-7**; **N-18**

<u>Rationale</u>

- The Committee agreed that neonatal temperature management is an important topic but did not recommend this measure, as constructed, for endorsement.

6. Public and Member Comment

-

7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

8. Board of Directors Vote: Y-X; N-X

9. Appeals

2896 Structural Attributes of Facility in which High Risk Women Deliver Newborns: A PQMP Measure

Submission |

Description: This measure characterizes the facility that is the site of delivery of newborn infants born to high risk women by four key structural characteristics. These four characteristics were identified as critical structures by a national expert panel who served CAPQuaM's 360 degree process for measure development. This work was undertaken in the context of developing innovative measures of the availability of High Risk Obstetrical (HROB) care as assigned by AHRQ and CMS.

2896 Structural Attributes of Facility in which High Risk Women Deliver Newborns: A PQMP Measure

The four key structures are:

(a) Level 3 or higher NICU services on campus. Level 3 NICU is defined as meeting either the American Academy of Pediatrics (AAP) criteria or a locally used set of explicit criteria recognized by that state's Department of Health.

(b) 24/7 on-site blood banking services/transfusion services that are always available for obstetrical patients. By 24/7 blood banking/transfusion services we mean that the following are always available to obstetrical patients: testing of blood group and Rh Type; cross matching; antibody testing; transfusion with on-site and available blood, either ABO specified or O-Rh-negative; transfusion with fresh frozen plasma; and transfusion with cryoprecipitate.

(c) 24/7 in - house physician dedicated to labor and delivery who is capable of safely managing labor and delivery, and of performing a cesarean section, including an emergent cesarean section.

(d) 24/7 in - house physician coverage dedicated to the obstetrical service by an anesthesiologist who is qualified to provide obstetrical anesthesia.

Numerator Statement: Number of eligible newborn deliveries that occur in facilities with:

(a) Level 3 or higher NICU services on campus. Level 3 NICU is defined as meeting either the American Academy of Pediatrics (AAP) criteria or a locally used set of explicit criteria recognized by that state's Department of Health.

(b) 24/7 on-site blood banking services/transfusion services that are always available for obstetrical patients. By 24/7 blood banking/transfusion services we mean that the following are always available to obstetrical patients: testing of blood group and Rh Type; cross matching; antibody testing; transfusion with on-site and available blood, either ABO specified or O-Rh-negative; transfusion with fresh frozen plasma; and transfusion with cryoprecipitate.

(c) 24/7 in - house physician dedicated to labor and delivery who is capable of safely managing labor and delivery, and of performing a cesarean section, including an emergent cesarean section.

(d) 24/7 in - house physician coverage dedicated to the obstetrical service by an anesthesiologist who is qualified to provide obstetrical anesthesia.

Measure: Meets all four criteria.

Stratifications:

a. Meets none

b. Includes a

c. Includes b

d. includes c

e. includes d

Numerator Elements:

Number of eligible deliveries

Maternal and infant ICD-9 codes

Response to survey question identified on technical specifications or Other valid self-report of structural characteristics as specified

No Numerator Exclusions

Denominator Statement: Overall number of newborn deliveries in health care facilities that are born to women whose pregnancy meets the criteria for high risk. While qualification for the denominator requires that the birth occur in a health care facility this measure is not specified to assess performance of individual facilities.

Exclusions: None

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Population : Community, Population : County or City, Health Plan, Integrated Delivery System, Population : National, Population : Regional, Population : State

Setting of Care: Hospital/Acute Care Facility, Other

2896 Structural Attributes of Facility in which High Risk Women Deliver Newborns: A PQMP Measure

Type of Measure: Composite

Data Source: Administrative claims, Healthcare Provider Survey

Measure Steward: University Hospitals Cleveland Medical Center

STANDING COMMITTEE MEETING [05/02/2016]

1. Importance to Measure and Report: <u>The measure did not meet the Importance criteria</u>

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **H-1**; **M-6**; **L-3**; **I-15**; 1b. Performance Gap: **H-0**; **M-0**; **L-0**; **I-0; ;** Evidence Exception: **Y-11; N-14**

<u>Rationale</u>:

- This new composite measure includes 4 structural components of care delivery for high-risk mothers.
- The Committee did not agree that this is a measure of quality or accountability for providers. The Committee noted that the information may be important as a designation of care provision.
- The evidence provided for the 4 components is expert opinion, not empirical evidence.
- The developers stated that this is a "population measure de-linked from individual patient care" and "the measure does not make a distinction between good care and bad care."
- The Committee noted that the measure includes mothers with birth complications that are mostly unpredictable and care cannot be redirected to a different facility after birth.
- No measure results for any plans/systems were presented by the developer. The Committee agreed that directing high-risk mothers and high-risk babies to the facilities most capable of caring for them may impact outcomes but this measure needs further development to become an accountability measure.

2. Scientific Acceptability of Measure Properties:

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity)

2a. Reliability: **H-0**; **M-0**; **L-0**; **I-0** 2b. Validity: **H-0**; **M-0**; **L-0**; **I-0**

<u>Rationale</u>:

-

3. Feasibility: H-0; M-0; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

<u>Rationale</u>:

-

4. Usability and Use: H-0; M-0; L-0; I-0

(Used and useful to the intended audiences for 4a. Accountability and Transparency; 4b. Improvement; and 4c. Benefits outweigh evidence of unintended consequences)

<u>Rationale</u>:

-

5. Related and Competing Measures

- No related or competing measures noted.

Standing Committee Recommendation for Endorsement: **DID NOT PASS IMPORTANCE**

<u>Rationale</u>

- The Committee agreed that directing high-risk mothers and high-risk babies to the facilities most capable of caring for them may impact outcomes, but this measure needs further development to become an accountability measure.

6. Public and Member Comment

-

7. Consensus Standards Approval Committee (CSAC) Vote: Y-X; N-X

8. Board of Directors Vote: Y-X; N-X

2896 Structural Attributes of Facility in which High Risk Women Deliver Newborns: A PQMP Measure
9. Appeals

Appendix B: NQF Perinatal and Reproductive Health Portfolio

Newly submitted measures are shaded. Starred measures (*) were not submitted for maintenance and will lose endorsement at the end of this project.

Reproductive Health

Measure Number	Measure Title	Measure Steward
0033	Chlamydia Screening in Women (CHL)	National Committee for Quality Assurance
0567*	Appropriate Work Up Prior to Endometrial Ablation Procedure	Health Benchmarks-IMS Health
1395*	Chlamydia Screening and Follow Up	National Committee for Quality Assurance
2902	Contraceptive Care - Postpartum	US Office of Population Affairs
2903	Contraceptive Care – Most & Moderately Effective Methods	US Office of Population Affairs
2904	Contraceptive Care - Access to LARC	US Office of Population Affairs

Pregnancy and Prenatal Care

Measure Number	Measure Title	Measure Steward
0651*	Ultrasound determination of pregnancy location for pregnant patients with abdominal pain	American College of Emergency Physicians
1391	Frequency of Ongoing Prenatal Care (FPC)	National Committee for Quality Assurance
1517	Prenatal & Postpartum Care (PPC)	National Committee for Quality Assurance

Labor and Delivery

Measure Number	Measure Title	Measure Steward
0469	PC-01 Elective Delivery	The Joint Commission
0469:2829	PC-01 Elective Delivery [eMeasure]	The Joint Commission
0470	Incidence of Episiotomy	National Perinatal Information Center
0471	PC-02 Cesarean Birth	The Joint Commission
2892	Birthrisk Cesarean Birth Measure	Birthrisk, LLC
1746*	Intrapartum Antibiotic Prophylaxis for Group B Streptococcus (GBS)	Massachusetts General Hospital
0472*	Appropriate Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision –	Massachusetts General Hospital/Partners Health Care

Measure Number	Measure Title	Measure Steward
	Cesarean section	System
0473	Appropriate DVT prophylaxis in women undergoing cesarean delivery	Hospital Corporation of America
0477*	Under 1500g infant Not Delivered at Appropriate Level of Care	California Maternal Quality Care Collaborative

Labor and Delivery: High-risk Pregnancy

Measure Number	Measure Title	Measure Steward
0476	PC-03 Antenatal Steroids	The Joint Commission
2896	Structural Attributes of Facility in which High Risk Women Deliver Newborns: A PQMP Measure	Collaboration for Pediatric Quality Measures (CAPQuaM)

Newborn

Measure Number	Measure Title	Measure Steward
0716	Unexpected Complications in Term Newborns	California Maternal Quality Care Collaborative
0475	Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge	Centers for Disease Control and Prevention

Newborn: Premature/ Low birthweight

Measure Number	Measure Title	Measure Steward
1382	Percentage of low birthweight births	Centers for Disease Control and Prevention
0483	Proportion of infants 22 to 29 weeks gestation screened for retinopathy of prematurity	Vermont Oxford Network
0304	Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	Vermont Oxford Network
1731	PC-04 Health Care-Associated Bloodstream Infections in Newborns	The Joint Commission
0478	Neonatal Blood Stream Infection Rate (NQI #3)	Agency for Healthcare Research and Quality
2895	Thermal Condition of Low Birthweight Neonates Admitted to Level 2 or Higher Nurseries in the First 24 Hours of Life: A PQMP Measure	Collaboration for Pediatric Quality Measures (CAPQuaM)
2983	Neonatal Intensive Care All-Condition Readmissions	The Children's Hospital of Philadelphia

Postpartum

Measure Number	Measure Title	Measure Steward
0480	PC-05 Exclusive Breast Milk Feeding	The Joint Commission
0480:2830	PC-05 Exclusive Breast Milk Feeding [eMeasure]	The Joint Commission
1517	Prenatal & Postpartum Care (PPC)	National Committee for Quality Assurance

Appendix C: Perinatal and Reproductive Health Portfolio—Use in Federal Programs

NQF #	Title	Federal Programs: Finalized as of May 11, 2016
0033	Chlamydia Screening for Women	Children's Health Insurance Program Reauthorization Act Quality Reporting; Initial Core Set of Health Care Quality Measures for Medicaid-Eligible Adults; Meaningful Use (EHR Incentive Program) - Eligible Professionals;#Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0469	PC-01 Elective Delivery	Hospital Inpatient Quality Reporting; Initial Core Set of Health Care Quality Measures for Medicaid-Eligible Adults; Meaningful Use (EHR Incentive Program) - Hospitals, CAHs
0471	PC-02 Cesarean Section	Children's Health Insurance Program Reauthorization Act Quality Reporting
0476	PC-03 Antenatal Steroids	Initial Core Set of Health Care Quality Measures for Medicaid-Eligible Adults
0480	PC-05 Exclusive Breast Milk Feeding and the subset measure PC-05a Exclusive Breast Milk Feeding Considering Mother´s Choice	Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) - Hospitals, CAHs
0651	Ultrasound determination of pregnancy location for pregnant patients with abdominal pain	Physician Feedback;#Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0716	Healthy Term Newborn	Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) - Hospitals, CAHs
1382	Percentage of low birthweight births	Children's Health Insurance Program Reauthorization Act Quality Reporting
1391	Frequency of Ongoing Prenatal Care (FPC)	Children's Health Insurance Program Reauthorization Act Quality Reporting
1517	Prenatal & Postpartum Care (PPC)	Children's Health Insurance Program Reauthorization Act Quality Reporting; Initial Core Set of Health Care Quality Measures for Medicaid-Eligible Adults

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Appendix E: Measure Specifications

	0033 Chlamydia Screening in Women (CHL)
Status	Submitted
Steward	National Committee for Quality Assurance
Description	The percentage of women 16–24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year.
Type	Process
Data Source	Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy This measure is based on administrative claims collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from Health Management Organizations and Preferred Provider Organizations via NCQA's online data submission system. No data collection instrument provided Attachment 0033_CHL_Value_Sets.xlsx
Level	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic
Numerator Statement	Females who were tested for chlamydia during the measurement year.
Numerator Details	Females who had at least one test for chlamydia (see attached: Chlamydia Tests Value Set) during the measurement year.
Denominator Statement	Females 16-24 years who had a claim or encounter indicating sexual activity.
Denominator Details	All female patients 16-24 years as of December 31 of the measurement year and who were identified as sexually active during the measurement year. Sexually active: Two methods are used to identify sexually active women: pharmacy data (see CHL-A: Prescriptions to Identify Contraceptives) and claim/encounter data (see attached: Pregnancy Value Set, Sexual Activity Value Set, and Pregnancy Tests Value Set). Both methods are used to identify the eligible population; however, a patient only needs to be identified in one method to be eligible for the measure. Table CHL-A: Prescriptions to Identify Contraceptives --Contraceptives: Desogestrel-ethinyl estradiol; Dienogest-estradiol multiphasic; Drospirenone-ethinyl estradiol; Drospirenone-ethinyl estradiol-levomefolate biphasic; Ethinyl estradiol-ethynodiol; Ethinyl estradiol-etonogestrel; Ethinyl estradiol-levonorgestrel; Ethinyl estradiol-norelgestromin; Ethinyl estradiol-norethindrone; Ethinyl estradiol-norgestimate; Ethinyl estradiol-norgestrel; Etonogestrel; Levonorgestrel; Medroxyprogesterone; Mestranol-norethindrone; Norethindrone --Diaphragm --Spermicide: Nonxynol 9
Exclusions	Females who received a pregnancy test to determine contraindications for medication (isotretinoin) or x-ray.
Exclusion details	Exclude members from the denominator who were identified as sexually active based on a pregnancy test alone (see attached: Pregnancy Tests Value Set) AND who meet either of the following: 1) A pregnancy test (see attached: Pregnancy Test Exclusion Value Set) during the measurement year AND a prescription for isotretinoin (see Table CHL-E: Medications to Identify Exclusions) on the date of the pregnancy test or the 6 days after the pregnancy test. 2) A pregnancy test (see attached: Pregnancy Test Exclusion Value Set) during the

	0033 Chlamydia Screening in Women (CHL)
	measurement year AND a x-ray (see attached: Diagnostic Radiology Value Set) on the date of the pregnancy test or the 6 days after the pregnancy test. Table CHL-E: Medications to Identify Exclusions Retinoid: Isotretinoin
Risk Adjustment	No risk adjustment or risk stratification NA
Stratification	The measure includes two age stratifications and a total rate: 1) 16-20 years. 2) 21-24 years. 3) Total
Type Score	Rate/proportion better quality = higher score
Algorithm	Refer to items S.9 (Denominator details) and S.2b (Data Dictionary) for tables. Step 1 Determine the eligible population. To do so, identify all female patients in the specified age range who had a claim/encounter indicating sexual activity (Pregnancy Value Set, Sexual Activity Value Set, Pregnancy Tests Value Set) and/or were dispensed prescription contraceptives (Table CHL-A) during the measurement year. Step 2 Exclude patients who qualified for the eligible population based on a pregnancy test (Pregnancy Tests Value Set) alone AND who meet either of the following: (1) A pregnancy test (Pregnancy Test Exclusion Value Set) during the measurement year AND a prescription for isotretinoin (Table CHL-E) on the date of the pregnancy test or the 6 days after the pregnancy test, (2) A pregnancy test (Pregnancy Test Exclusion Value Set) during the measurement year AND an x-ray (Diagnostic Radiology Value Set) on the date of the pregnancy test or the 6 days after the pregnancy test. Step 3 Determine the numerator. Determine the number of patients in the remaining eligible population who had at least one chlamydia test (Chlamydia Tests Value Set) during the measurement year. Step 4 Report two age stratifications (16-20 years and 21-24 years), and a total rate. The total is the sum of the age stratifications. No diagram provided
Copyright / Disclaimer	5.1 Identified measures: 0409 : HIV/AIDS: Sexually Transmitted Diseases – Screening for Chlamydia, Gonorrhea, and Syphilis 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: NQF #0409 both address chlamydia screening. However, the measures differ in the target patient populations. NQF #0409 looks for chlamydia screenings among males and females aged 13 and older with a diagnosis of HIV/AIDS. This measures focuses on women aged 16-24 with an indication of sexual activity, which aligns with the U.S. Preventive Services Task Force guideline for chlamydia screening in a general population. The measures are aligned in how they define chlamydia screening. 5b.1 If competing, why superior or rationale for additive value: NA

	0304 Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)
Steward	Vermont Oxford Network
Description	Standardized morbidity ratio and observed minus expected measure for nosocomial bacterial infection after day 3 of life in very low birth weight infants
Type	Outcome
Data Source	Electronic Clinical Data : Registry Vermont Oxford Network Database No data collection instrument provided Attachment 0304_ICD_Code_Tables.xlsx
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Eligible infants with one or more of the following criteria: Criterion 1: Bacterial Pathogen. A bacterial pathogen is recovered from a blood and/or cerebral spinal fluid culture obtained after Day 3 of life. OR Criterion 2: Coagulase Negative Staphylococcus. The infant has all 3 of the following: 1. Coagulase negative staphylococcus is recovered from a blood culture obtained from either a central line, or peripheral blood sample and/or is recovered from cerebrospinal fluid obtained by lumbar puncture, ventricular tap or ventricular drain. 2. One or more signs of generalized infection (such as apnea, temperature instability, feeding intolerance, worsening respiratory distress or hemodynamic instability). 3. Teatment with 5 or more days of intravenous antibiotics after the above cultures were obtained. If the infant died, was discharged, or transferred prior to the completion of 5 days of intravenous antibiotics, this condition would still be met if the intention were to treat for 5 or more days.
Numerator Details	Infants whose birth weight is between 401 and 1500 grams or whose gestational age is between 22 weeks 0 days and 29 weeks 6 days are included if they have coagulase negative staphylococcus or one of the bacterial pathogens listed below after day 3 of life, provided they meet one of the following criteria: 1. They are born at the reporting hospital. OR 2. They are admitted to any location in the reporting hospital within 28 days of birth, without first having gone home. Bacterial Pathogens List: 1. Achromobacter species [including Achromobacter xylosoxidans (also known as Alcaligenes xylosoxidans) and others] 2. Acinetobacter species 3. Aeromonas species 4. Alcaligenes species [Alcaligenes xylosoxidans and others] 5. Bacteroides species 6. Burkholderia species [Burkholderia capecia and others] 7. Campylobacter species [Campylobacter fetus, C. jejuni and others] 8. Chryseobacterium species

	0304 Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)
	9. Citrobacter species [Citrobacter diversus, C. freundii, C. koseri and others] 10. Clostridium species 11. Enterobacter species [Enterobacter aerogenes, E. cloacae, and others] 12. Enterococcus species [Enterococcus faecalis (also known as Streptococcus faecalis), E.faecium, and other Enterococcus species] 13. Escherichia coli 14. Flavobacterium species 15. Haemophilus species [Haemophilus influenzae and others] 16. Klebsiella species [Klebsiella oxytoca, K. pneumoniae and others] 17. Listeria monocytogenes 18. Moraxella species [Moraxella catarrhalis (also known as Branhamella catarrhalis) and others] 19. Neisseria species [Neisseria meningitidis, N. gonorrhoeae and others] 20. Pasteurella species 21. Prevotella species 22. Proteus species [Proteus mirabilis, P. vulgaris and others] 23. Providencia species [Providencia rettgeri, and others] 24. Pseudomonas species [Pseudomonas aeruginosa and others] 25. Ralstonia species 26. Salmonella species 27. Serratia species [Serratia liquefaciens, S. marcescens and others] 28. Staphylococcus coagulase positive [aureus] 29. Stenotrophomonas maltophilia 30. Streptococcus species [including Streptococcus Group A, Streptococcus Group B, Streptococcus Group D, Streptococcus pneumoniae, Strep milleri and others]
Denominator Statement	Eligible infants who are in the reporting hospital after day 3 of life.
Denominator Details	Infants whose birth weights are between 401 and 1500 grams or whose gestational ages are between 22 weeks 0 days and 29 weeks 6 days are included if they are in the reporting hospital after day 3 of life, provided they meet one of the following criteria: 1. They are born at the reporting hospital. OR 2. They are admitted to any location in the reporting hospital within 28 days of birth, without first having gone home.
Exclusions	Infants who do not meet eligibility criteria for birth weight, gestational age or hospital admission, or if the infant is discharged home, is transferred or dies prior to day 3 of life.
Exclusion details	1. Any infant who meets neither of the following conditions is excluded: - Birth weight between 401 and 1500 grams - Gestational age between 22 and 29 weeks. 2. Outborn infants who are admitted to the reporting hospital more than 28 days after birth are excluded. 3. Outborn infants who have been home prior to admission to the reporting hospital are excluded.

	0304 Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)
	4. Infants discharged home on or before day 3 of life are excluded. 5. Infants who die on or before day 3 of life are excluded. 6. Infants who transfer to another hospital on or before day 3 of life and who are not readmitted to the reporting hospital. 7. Infants who transfer more than once prior to day 3 of life.
Risk Adjustment	Statistical risk model Logistic regression with shrinkage estimate - see S. 15a Provided in response box S.15a
Stratification	N/A
Type Score	Other Standardized morbidity ratio and observed minus expected values with confidence bounds better quality = lower score
Algorithm	1.Determine the number of infants for a reporting period who meet the population criteria described above. This number is termed N. 2.Using the definitions in the Network Manual of Operations, determine the number of infants who had nosocomial bacterial infection after day 3 of life and prior to discharge home for each of the N infants. This is the number of eligible infants who were diagnosed as having either coagulase negative staphylococcus and/or a late bacterial pathogen after day 3 of life. The number identified as having nosocomial bacterial infection is termed the "observed number with infection" or O for short. 3.For each of the N infants, calculate the expected value of infection by multiplying the coefficient times its covariate value for each covariate (coefficients provided on request). The covariates include: Gestational Age in completed weeks (GA) GA squared Small for Gestational Age (data table provided on request) Major birth defect (0=No, 1=Yes) APGAR score at 1 minute (0 to 10) Birth location (0=Inborn, 1=Outborn) Multiple gestation (0=No, 1=Yes) Infant gender (0=Female, 1=Male) Mode of delivery (0=C-Section, 1=Vaginal) 4. Add the expected values for each of the N infants to calculate the number of expected cases of nosocomial bacterial infection. This number is termed the "expected number with infection" or E for short. 5. Calculate the standardized morbidity ratio (SMRshrnk) for nosocomial bacterial infection using the values for O and E and applying the estimate for systematic variation (v2), determined from Vermont Oxford Network analyses (provided on request). SMRshrnk = (O + v2) / (E + v2) with standard error SESMRshrnk=sqrt(1/(E+(1/v2))); 6. Calculate the shrunken, adjusted nosocomial bacterial infection rate (Rateshrnk) and its 95% confidence interval. Rateshrnk = (SMRshrnk x E) / N with standard error (SERateshrnk) equal to SESMRshrnk x E) / N . and 95% confidence interval for Rateshrnk equal to

	0304 Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)
	Rateshrnk ± 1.96 × SERateshrnk. 7. Calculate the number of observed minus expected cases of nosocomial bacterial infection, adjusting for case mix and systematic variation (O–Eshrnk), and calculate the 95% control limits for O–Eshrnk. O–Eshrnk = E / SMRshrnk with 95% control limits equal to O–Eshrnk ± 1.96 × SESMRshrnk x E. URL
Copyright / Disclaimer	5.1 Identified measures: 0478 : Neonatal Blood Stream Infection Rate (NQI 03) 1731 : PC-04 Health Care-Associated Bloodstream Infections in Newborns 5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: The target populations are different, as are the item definitions and risk adjustment methodology. 5b.1 If competing, why superior or rationale for additive value: N/A

	0469 PC-01 Elective Delivery
Steward	The Joint Commission
Description	This measure assesses patients with elective vaginal deliveries or elective cesarean births 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 Birth, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding)
Type	Process
Data Source	Electronic Clinical Data, Paper Medical Records 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 has been passed. No data collection instrument provided Attachment PC01_ICD_Code_Tables.xlsx
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	Patients with elective deliveries with ICD-10-PCS Principal Procedure Code or ICD-10-PCS 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/releases/TJC2015B2/ while not in Labor prior to the procedure • Cesarean birth as defined in Appendix A, Table 11.06 and all of the following: not in Labor no history of a Prior Uterine Surgery available at: http://manual.jointcommission.org/releases/TJC2015B2/
Numerator Details	Four data elements are used to calculate the numerator: 1. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 2. ICD-10-PCS Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System 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. 3. Labor- Documentation that the patient was in labor prior to induction and/or cesarean birth. Allowable values: Yes or No/UTD. 4. Prior Uterine Surgery- Documentation that the patient had undergone prior uterine surgery which includes: a prior classical cesarean birth defined as a vertical incision into the upper uterine segment, a prior myomectomy, a prior uterine surgery resulting in a perforation of the uterus due to an accidental injury, a history of a uterine window or thinning of the uterine wall noted during prior uterine surgery or during ultrasound, a history of uterine rupture requiring surgical repair, a history of a cornual ectopic pregnancy or history of a transabdominal cerclage. Allowable Values: Yes or No/UTD Patients are eligible for the numerator population with ICD-10-PCS Other Procedure

	0469 PC-01 Elective Delivery
	Codes or ICD-10-PCS Principal Procedure Code for medical induction or with ICD-10-PCS Other Procedure Codes or ICD-10-PCS Principal Procedure Code for cesarean birth when the allowable value equals "no" for the data elements Labor and Prior Uterine Surgery. Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Statement	Patients delivering newborns with >= 37 and < 39 weeks of gestation completed with ICD-10-PCS Principal or Other Procedure Codes for delivery as defined in Appendix A, Table 11.01.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/ and with ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for planned cesarean birth in labor as defined in Appendix A, Table 11.06.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Details	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-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 7. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Exclusions	• ICD-10-CM Principal Diagnosis Code or ICD-10-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 • Gestational Age < 37 or >= 39 weeks or UTD
Exclusion details	• Patients with ICD-10-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. • Patients with a Gestational Age less than 37 weeks or equal to or greater than 39 weeks or UTD are excluded from the measure.

	0469 PC-01 Elective Delivery
Risk Adjustment	No risk adjustment or risk stratification Not Applicable
Stratification	Not Applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	1. Start processing. Run cases that are included in the PC-Mother Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Check ICD-10-CM Principal or Other Diagnosis Codes a. If at least one of the ICD-10-CM Principal or Other Diagnosis Codes 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-10-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 or equal to a Not Unable to Determine Value, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop Processing. c. If Gestational Age is greater than or equal to 37 and less than 39, continue processing and proceed to recheck ICD-10-CM Principal Procedure or Other Diagnosis Codes. 5. Recheck ICD-10-CM Principal or Other Diagnosis Codes a. If at least one of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.06.1, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. b. If none of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.06.1, continue processing and proceed to ICD-10-CM Principal or Other Procedure Codes. 6. Check ICD-10-PCS Principal or Other Procedure Codes a. If all of the ICD-10-PCS Principal or Other Procedure Codes are missing, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop Processing. b. If at least one of the ICD-10-PCS Principal or Other Procedure Codes is on Table 11.05, continue processing and proceed to Labor i. If Labor is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop Processing. ii. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop Processing. iii. If Labor equals No, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop Processing.

	0469 PC-01 Elective Delivery
	c. If none of the ICD-9-CM Principal Procedure Codes is on Table 11.05, continue processing and proceed to recheck ICD-10-PCS Principal or Other Procedure Codes. 7. Recheck ICD-10-PCS Principal or Other Procedure Codes a. If none of the ICD-10-PCS Principal or Other Procedure Code is on Table 11.06, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop Processing. b. If at least one of the ICD-10-PCS Principal or Other Procedure Code is on Table 11.06, continue processing and proceed to Labor. 8. Check Labor a. If Labor is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop Processing. b. If 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 Labor equals No, continue processing and proceed to Spontaneous Rupture of Membranes. 9. Check Prior Uterine Surgery a. If Prior Uterine Surgery is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop Processing. b. If Prior Uterine Surgery equals Yes, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. c. If Prior Uterine Surgery equals No, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop Processing. Available at measure-specific web page URL identified in S.1
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: Not Applicable 5b.1 If competing, why superior or rationale for additive value: Not Applicable

	0470 Incidence of Episiotomy
Steward	Christiana Care Health System
Description	Percentage of vaginal deliveries (excluding those coded with shoulder dystocia) during which an episiotomy is performed.
Type	Process
Data Source	Administrative claims, Paper Medical Records UB04 claims data. No data collection instrument provided Attachment ICD-10_Codes_NQF_Episiotomy_FINAL_NQF_Submission.xlsx
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Number of episiotomy procedures (ICD-9 code 72.1, 72.21, 72.31, 72.71, 73.6; ICD-10 PCS:0W8NXZZ performed on women undergoing a vaginal delivery (excluding those with shoulder dystocia ICD-10; O66.0) during the analytic period- monthly,quarterly, yearly etc.
Numerator Details	Any vaginal delivery with one of the ICD-9 codes for episiotomy- 72.1, 72.21, 72.31, 72.71, 73.6 (ICD-10 PCS:0W8NXZZ)
Denominator Statement	All vaginal deliveries during the analytic period- monthly, quarterly, yearly etc. excluding those coded with a shoulder dystocia ICD-1: O66.0).
Denominator Details	Any woman with a vaginal delivery calculated by either MS DRG 774,775,767,768
Exclusions	Women who have a coded complication of shoulder dystocia. In the case of shoulder dystocia, an episiotomy is performed to free the shoulder and prevent/mitigate birth injury to the infant.
Exclusion details	Vaginal deliveries coded with shoulder dystocia, ICD-9 code 660.41, 660.42(ICD-10 CM : O66.0)
Risk Adjustment	No risk adjustment or risk stratification NA URL
Stratification	NA
Type Score	Rate/proportion better quality = lower score
Algorithm	A. Identify all vaginal deliveries for time period in question B. Exclude those coded with shoulder dystocia to obtain denominator cases C. Of the denominator cases, identify those coded with an episiotomy D Divide numerator by denominator and calculate the rate or convert a percent No diagram provided
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value:

	0471 PC-02 Cesarean Birth
Steward	The Joint Commission
Description	This measure assesses the number of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth. This measure is part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding).
Type	Outcome
Data Source	Paper Medical Records 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 has been passed. No data collection instrument provided Attachment PC02_ICD_and_CS_Direct_Standardization_Template_Nulliparous_Births.xlsx
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	The outcome being measured is: Patients with cesarean births with ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for cesarean birth as defined in Appendix A, Table 11.06 available at: http://manual.jointcommission.org/releases/TJC2015B2/
Numerator Details	Two data elements are used for the observed outcome and to calculate the numerator: 1. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 2. ICD-10-PCS Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
Denominator Statement	The outcome target population being measured is: Nulliparous patients delivered of a live term singleton newborn in vertex presentation ICD-10-PCS Principal or Other Diagnosis Codes for delivery as defined in Appendix A, Tables 11.01.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Details	Eight data elements are used to identify the outcome target population and to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care.

	0471 PC-02 Cesarean Birth
	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-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 7. ICD-9-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 8. Number of Previous Live Births - The number of live deliveries the patient experienced prior to current hospitalization. Allowable Values: 0-50 or UTD. Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Exclusions	• ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for multiple gestations and other presentations as defined in Appendix A, Table 11.09 • Less than 8 years of age • Greater than or equal to 65 years of age • Length of Stay >120 days • Enrolled in clinical trials • Gestational Age < 37 weeks or UTD
Exclusion details	• Patients with ICD-10-CM Principal Diagnosis Code or Other Diagnosis Codes for multiple gestations and other presentations 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. • Patients with a Gestational Age less than 37 weeks or UTD are excluded from the measure.
Risk Adjustment	Other Direct rate standardization to the distribution of the 2006 US population of nulliparous births. See attached spreadsheet for age bands used in the direct standardization. Not Applicable Available in attached Excel or csv file at S.2b
Stratification	The Stratification Table used for direct standardization includes the Set Number, Stratified By, and the Age Stratum (Allowable Value). The Age Stratum refers to

	0471 PC-02 Cesarean Birth
	Patient Age which is calculated by the data element Admission Date minus the data element Bir
Type Score	Rate/proportion better quality = lower score
Algorithm	1. Start processing. Run cases that are included in the PC-Mother Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Check ICD-10-CM Principal or Other Diagnosis Codes a. If at least one of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.09, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If none of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.09, continue processing and proceed to recheck ICD-10-CM Principal or Other Diagnosis Codes. 3. Recheck ICD-10-CM Principal or Other Diagnosis Codes a. If none of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.08, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If at least one of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.08, continue processing and proceed to Clinical Trial. 4. 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. 5. Check Gestational Age a. If Gestational Age is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Gestational Age is less than 37 or equal to a Not Unable to Determine Value, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Gestational Age is greater than or equal to 37, continue processing and proceed to Parity. 6. Check Number of Previous Live Births a. If Number of Previous Live Births is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Number of Previous Live Births is greater than 0, the case will proceed to a Measure Category Assignment of B for and will not be in the measure population. Stop processing. c. If Number of Previous Live Births equals a Non Unable to Determine Value, the case will proceed to a Measure Category Assignment of E and will be in the Numerator

	0471 PC-02 Cesarean Birth
	Population. Stop processing. d. If Parity equals 0, continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Codes. 7. Check ICD-10-PCS Principal or Other Procedure Codes a. If all of the ICD-10-PCS Principal or Other Procedure Codes are missing or none of the ICD-10-PCS Principal or Other Procedure Codes is on Table 11.06, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing. b. If at least one of the ICD-10-PCS Principal or Other Procedure Code is on Table 11.06, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. Available at measure-specific web page URL identified in S.1
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: Not Applicable 5b.1 If competing, why superior or rationale for additive value: Not Applicable

	0475 Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge
Steward	Centers for Disease Control and Prevention
Description	Percent of live newborn infants that receive Hepatitis B vaccination before discharge (or within 1 month of life, if the infant had an extended hospital stay) at each single hospital/birthing facility during given time period (one year).
Type	Process
Data Source	Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Other, Paper Medical Records, Electronic Clinical Data : Pharmacy, Electronic Clinical Data : Registry N/A No data collection instrument provided Attachment ICD_9_and_10_code_tables-635320538568917230-635627868862357763-635787044982869948.pdf
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	The number of live newborn infants administered Hepatitis B vaccine prior to discharge (or within 1 month of life, if the infant had an extended hospital stay)from the hospital/birthing facility ("birth dose" of Hepatitis B vaccine).
Numerator Details	Per hospital/birthing facility, the number of live newborn infants, during a calendar year, who received a dose of Hepatitis B vaccine prior to hospital/birthing facility discharge (or within 1 month of life, if the infant had an extended hospital stay). Acceptable data sources include: pharmacy records, vaccine consent forms, medication administration records, claims data, nurses notes, electronic medical records, or other available records. a. Suggested ICD-9 code V05.3 converts to ICD-10 code z23 (type of immunization given will be identified by the procedure code—effective October 1, 2013. Procedure code for viral hepatitis unknown. Suggest the use of ICD-10 code z23.9955 described as “prophylactic administration of vaccine against other diseases” or ICD-10 code z23.9959 described as “other vaccination or inoculation”): http://www.icd10data.com/ICD10CM/Codes/Z00-Z99/Z20-Z28/Z23-/Z23 b. CPT administration codes: 90744 (Hepatitis B vaccine) and 90471 (immunization administration code)
Denominator Statement	The number of live newborn infants born at the hospital/birthing facility during the reporting window (one calendar year).
Denominator Details	a. The number of live births at the hospital/birthing facility during one calendar year can be determined from a variety of sources, including the paper or electronic patient records, nursery birth records, or other available records. ICD-10 codes can be used. Stillborn deliveries are not included in the definition of the measure. i. ICD-10 codes to be used (link: http://www.icd10data.com/ICD10CM/Codes/Z00-Z99/Z30-Z39/Z37-/#Z37 and http://www.icd10data.com/ICD10CM/Codes/Z00-Z99/Z30-Z39/Z38-/#Z38): 1. Z37.0 Single live birth 2. Z37.2 Twins, both live born

	0475 Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge
	3. Z37.3 Twins, one live born and one stillborn 4. Z37.50 Multiple births, unspecified, all live born 5. Z37.51 Triplets, all live born 6. Z37.52 Quadruplets, all live born 7. Z37.53 Quintuplets, all live born 8. Z37.54 Sextuplets, all live born 9. Z37.59 Other multiple births, all live born 10. Z37.60 Multiple births, unspecified, some live born 11. Z37.61 Triplets, some live born 12. Z37.62 Quadruplets, some live born 13. Z37.63 Quintuplets, some live born 14. Z37.64 Sextuplets, some live born 15. Z37.69 Other multiple births, some live born 16. Z38.00 Single live born infant, delivered vaginally 17. Z38.01 Single live born infant, delivered by cesarean 18. Z38.1 Single live born infant, born outside hospital 19. Z38.2 Single live born infant, unspecified as to place of birth 20. Z38.30 Twin live born infant, delivered vaginally 21. Z38.31 Twin live born infant, delivered by cesarean 22. Z38.4 Twin live born infant, born outside hospital 23. Z38.5 Twin live born infant, unspecified as to place of birth 24. Z38.61 Triplet live born infant, delivered vaginally 25. Z38.62 Triplet live born infant, delivered by cesarean 26. Z38.63 Quadruplet live born infant, delivered vaginally 27. Z38.64 Quadruplet live born infant, delivered by cesarean 28. Z38.65 Quintuplet live born infant, delivered vaginally 29. Z38.66 Quintuplet live born infant, delivered by cesarean 30. Z38.68 Other multiple live born infant, delivered vaginally 31. Z38.69 Other multiple live born infant, delivered by cesarean 32. Z38.7 Other multiple live born infant, born outside hospital 33. Z38.8 Other multiple live born infant, unspecified as to place of birth The results of this measure will identify that the coverage excludes infants whose parent/guardian refused Hepatitis B vaccine for their infant before hospital or facility discharge (or by 1 month of age if during a prolonged stay).
Exclusions	a. Determine number of live newborn infants born at the hospital/birthing facility whose parent/guardian refused Hepatitis B birth dose and exclude from the denominator. ICD-10 code for this information will include the following (link: http://www.icd10data.com/ICD10CM/Codes/Z00-Z99/Z20-Z28/Z28-/#Z28): i. Z28.82 Immunization not carried out because of caregiver refusal
Exclusion	Subtract from the number of infants discharged from the hospital/birthing facility, the

	0475 Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge
details	number of infants born at the facility during one calendar year whose parent/guardian refused administration of a birth dose of Hepatitis B vaccine before discharge (or by 1 month of age if during a prolonged stay) from the hospital/birthing facility. Information on exclusions might come from a variety of sources, including vaccine consent forms, clinical notes, and medication administration records. No billing codes exist for vaccine refusal; therefore ICD-10 code Z28.82 should be used to document vaccine refusal.
Risk Adjustment	No risk adjustment or risk stratification N/A
Stratification	N/A
Type Score	Rate/proportion better quality = higher score
Algorithm	a. Determine the number of live newborn infants at each hospital/birthing facility during one calendar year b. Determine the number of live newborn infants born at the same hospital/birthing facility during the same calendar year who received a dose of Hepatitis B vaccine before hospital discharge (or by 1 month of age if during a prolonged stay) c. Determine the number of parental/guardian refusals of Hepatitis B birth dose d. Divide the number of live newborn infants born at the same hospital/birthing facility during the same time period who received a dose of Hepatitis B vaccine before hospital discharge (or by 1 month of age if during a prolonged stay)(b), by the number of live newborns at the same hospital/birthing facility during the same time period(a) minus those who were not vaccinated because of parent/guardian refusal of Hepatitis B birth dose(c)[b/(a-c)]. No diagram provided
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: N/A 5b.1 If competing, why superior or rationale for additive value: N/A

	0476 PC-03 Antenatal Steroids
Description	This measure assesses patients at risk of preterm delivery at >=24 and <34 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 Birth, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding).
Type	Process
Data Source	Paper Medical Records 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 has been passed. No data collection instrument provided Attachment PC03_ICD_Code_Tables.xlsx
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	Patients with antenatal steroids initiated prior to delivering preterm newborns (refer to Appendix C, Table 11.0, antenatal steroid medications available at: http://manual.jointcommission.org/releases/TJC2015B2/)
Numerator Details	One data element is used to calculate the numerator: 1. Antenatal Steroids Initiated- Documentation that antenatal steroids were initiated before delivery. Initial antenatal steroid therapy is 12mg betamethasone IM or 6mg dexamethasone IM. Allowable values: Yes or No/UTD. Cases are eligible for the numerator population when allowable value = Yes is selected. Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Statement	Patients delivering live preterm newborns with >=24 and <34 weeks gestation completed with ICD-10-PCS Principal or Other Procedure Codes for delivery as defined in Appendix A, Table 11.01.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Details	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-10-CM Other Diagnosis Codes - The International Classification of Diseases,

	0476 PC-03 Antenatal Steroids
	Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 7. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification 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 Initiating Antenatal Steroids - Reasons for not initiating antenatal steroids before delivery are clearly documented in the medical record. Reasons for not initiating antenatal steroids may include fetal distress, imminent delivery or other reasons documented by physician/APN/PA/CNM. Allowable Values: Yes or No/UTD Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Exclusions	• 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 Initiating Antenatal Steroids • ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for fetal demise as defined in Appendix A, Table 11.09.1 available at: http://manual.jointcommission.org • Gestational Age < 24 or >= 34 weeks or UTD
Exclusion details	• 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 Initiating Antenatal Steroids is used to determine if the patient had a documented reason for not receiving antenatal steroids. • Patients with ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for fetal demise are excluded. • Patients with a Gestational Age less than 24 weeks or equal to or greater than 34 weeks or UTD are excluded from the measure.
Risk Adjustment	No risk adjustment or risk stratification Not Applicable
Stratification	Not applicable, the measure is not stratified.
Type Score	Rate/proportion better quality = higher score
Algorithm	1. Start processing. Run cases that are included in the PC-Mother Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Check ICD-10-CM Principal or Other Diagnosis Codes a. If at least one of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.09.1, the case will proceed to a Measure Category Assignment of B and will not be

	0476 PC-03 Antenatal Steroids
	in the measure population. Stop processing. b. If none of the ICD-10-CM Principal or Other Diagnosis Codes 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 or equal to 34 or equal to a Not Unable to Determine Value, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Gestational Age is greater than or equal to 24 and less than 34, continue processing and proceed to Antenatal Steroids Initiated. 5. Check Antenatal Steroids Initiated a. If Antenatal Steroids Initiated is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Antenatal Steroids Initiated 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 Steroids Initiated equals No, continue processing and proceed to Reason for Not Initiating Antenatal Steroids. 6. Check Reason for Not Initiating Antenatal Steroids a. If Reason for Not Initiating Antenatal Steroids is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Reason for Initiating Antenatal Steroids 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 Reason for Not Initiating Antenatal Steroids equals No, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing. Available at measure-specific web page URL identified in S.1
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: Not Applicable 5b.1 If competing, why superior or rationale for additive value: Not Applicable

	0478 Neonatal Blood Stream Infection Rate (NQI 03)
Steward	Agency for Healthcare Research and Quality
Description	Discharges with healthcare-associated blood stream infection per 1,000 discharges for newborns and outborns with birth weight of 500 grams or more but less than 1,500 grams; with gestational age between 24 and 30 weeks; or with birth weight of 1,500 grams or more and death, an operating room procedure, mechanical ventilation, or transferring from another hospital within two days of birth. Excludes discharges with a length of stay less than 3 days and discharges with a principal diagnosis of sepsis, sepsis or bacteremia, or newborn bacteremia.
Type	Outcome
Data Source	Administrative claims While the measure is tested and specified using data from the Healthcare Cost and Utilization Project (HCUP) (see section 1.1 and 1.2 of the measure testing form), the measure specifications and software are specified to be used with any ICD-9-CM- or ICD-10-CM/PCS coded administrative billing/claims/discharge dataset. Available at measure-specific web page URL identified in S.1 Attachment NQI03_Tech_Specs_v6.1alpha_160211xlsx.xlsx
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either: • any secondary ICD-9-CM or ICD-10 CM diagnosis codes for other septicemia; or • any secondary ICD-9-CM or ICD-10 CM diagnosis codes for newborn septicemia or bacteremia and • any secondary ICD-9-CM or ICD-10 CM diagnosis codes for staphylococcal or Gram-negative bacterial infection
Numerator Details	Please see attached excel file in S.2b. for version 6.1 alpha specifications.
Denominator Statement	All newborns and outborns with either: • a birth weight of 500 to 1,499 grams (Birth Weight Categories 2, 3, 4 and 5); or • any-listed ICD-9-CM or ICD-10 CM diagnosis codes for gestational age between 24 and 30 weeks; or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and death (DISP=20); or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM or ICD-10 PCS procedure codes for operating room procedure; or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6,

	0478 Neonatal Blood Stream Infection Rate (NQI 03)
	7, 8, or 9) and any-listed ICD-9-CM or ICD-10 PCS procedure codes for mechanical ventilation; or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and transferring from another health care facility within two days of birth See Pediatric Quality Indicators Appendices: • Appendix A – Operating Room Procedure Codes • Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn • Appendix L – Low Birth Weight Categories
Denominator Details	Please see attached excel file in S.2b. for version 6.1 alpha specifications.
Exclusions	Exclude cases: • with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis • with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis or bacteremia • with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for staphylococcal or Gram-negative bacterial infection • with birth weight less than 500 grams (Birth Weight Category 1) • with length of stay less than 3 days • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing) † Only for cases that otherwise qualify for the numerator.
Exclusion details	Please see attached excel file in S.2b. for version 6.1 alpha specifications.
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, birthweight (in 500g groups), modified CMS DRG, congenital anomolies, transfer in status and Major Diagno Available in attached Excel or csv file at S.2b
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharge records where the patient experienced the QI adverse event divided by the number of discharge records at risk for the event. The expected rate is a comparative rate that incorporates information about a reference population that is not part of the user's input dataset – what rate would be observed if the expected level of care observed in the reference population and estimated with risk adjustment regression models, were applied to the mix of patients with demographic and comorbidity distributions observed in the user's

	0478 Neonatal Blood Stream Infection Rate (NQI 03)
	dataset? The expected rate is calculated only for risk-adjusted indicators. The expected rate is estimated for each person using a generalized estimating equations (GEE) approach to account for correlation at the hospital or provider level. The risk-adjusted rate is a comparative rate that also incorporates information about a reference population that is not part of the input dataset – what rate would be observed if the level of care observed in the user's dataset were applied to a mix of patients with demographics and comorbidities distributed like the reference population? The risk adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The smoothed rate is the weighted average of the risk-adjusted rate from the user's input dataset and the rate observed in the reference population; the smoothed rate is calculated with a shrinkage estimator to result in a rate near that from the user's dataset if the provider's rate is estimated in a stable fashion with minimal noise, or to result in a rate near that of the reference population if the variance of the estimated rate from the input dataset is large compared with the hospital-to-hospital variance estimated from the reference population. Thus, the smoothed rate is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. In practice, the smoothed rate brings rates toward the mean, and tends to do this more so for outliers (such as rural hospitals). For additional information, please see the supplemental files for the Empirical Methods. No diagram provided
Copyright / Disclaimer	5.1 Identified measures: 1731 : PC-04 Health Care-Associated Bloodstream Infections in Newborns 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value: Our understanding is that The Joint Commission (TJC) intents to submit "Health Care-Associated Bloodstream Infections in Newborns (PC-04)" under the call for measures. In anticipation of this, AHRQ and TJC have agreed to harmonize our measures to the extent feasible given alternative data sources. (The AHRQ QI is an existing NQF endorsed measure; the TJC measure is a newly submitted measure). There are three specification differences related to data availability in the TJC measure specification. First, hospitals report to TJC the actual birth weight from the medical record (rather than coded birth weight using ICD-9-CM); Second, hospitals report whether the patient has a signed consent form for participation in a clinical trial. Therefore, the TJC specification does not include an inclusion criteria related to gestational age as in the AHRQ QI (rather, actual birthweight is used as an alternative to coded birth weight). The TJC also includes an exclusion for enrollment in a clinical

	0478 Neonatal Blood Stream Infection Rate (NQI 03)
	trial. The AHRQ QI contains no such exclusion. Finally, TJC excludes stays of more than 120 days for technical reasons related to the measure reporting period. This rationale does not apply to the AHRQ QI, and therefore the AHRQ QI has no such exclusion.

	0480 PC-05 Exclusive Breast Milk Feeding
Steward	The Joint Commission
Description	PC-05 assesses the number of newborns exclusively fed breast milk during the newborn's entire hospitalization. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-02: Cesarean Birth, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns).
Type	Process
Data Source	Electronic Clinical Data, Paper Medical Records 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 has been passed. No data collection instrument provided Attachment PC05_ICD_Code_Tables.xlsx
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	Newborns that were fed breast milk only since birth
Numerator Details	One data element is used to calculate the numerator: 1. Exclusive Breast Milk Feeding - Documentation that the newborn was exclusively fed breast milk during the entire hospitalization. Allowable Values: Yes or No/UTD. Cases are eligible for the numerator when allowable value = yes. Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Statement	Single term liveborn newborns discharged alive from the hospital with ICD-10-CM Principal Diagnosis Code for single liveborn newborn as defined in Appendix A, Table 11.20.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Details	Eleven data elements are used to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Admission to NICU - Documentation that the newborn was admitted to the Neonatal Intensive Care Unit (NICU) at this hospital any time during the hospitalization. Allowable values: Yes or No/UTD 3. Birthdate - The month, day and year the patient was born. 4. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients who are newborns were being studied. Allowable values: Yes or No/UTD 5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay. 6. Discharge Disposition - The place or setting to which the patient was discharged. 7. ICD-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses

	0480 PC-05 Exclusive Breast Milk Feeding
	for this hospitalization. 8. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 9. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 10. ICD-10-CM Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System 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. 11. Term Newborn - Documentation that the newborn was at term or >= 37 completed weeks of gestation at the time of birth. Allowable values: Yes or No/UTD Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Exclusions	• Admitted to the Neonatal Intensive Care Unit (NICU) at this hospital during the hospitalization • ICD-10-CM Other Diagnosis Codes for galactosemia as defined in Appendix A, Table 11.21 • ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for parenteral infusion as defined in Appendix A, Table 11.22 • Experienced death • Length of Stay >120 days • Enrolled in clinical trials • Patients transferred to another hospital • Patients who are not term or with < 37 weeks gestation completed
Exclusion details	• The data element Admission to NICU is used to determine if the patient was admitted to the NICU. • Patients with ICD-10-CM Other Diagnosis Codes for galactosemia are excluded. • Patients with ICD-10-PCS Principal Procedure Code or ICD-10-PMS Other Procedure Codes for parenteral infusion 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 Discharge Disposition is used to determine if the patient was transferred to another hospital or expired. • The data element Term Newborn is used to determine if the patient was not term or < 37 completed weeks of gestation.
Risk Adjustment	No risk adjustment or risk stratification Not Applicable

	0480 PC-05 Exclusive Breast Milk Feeding
Stratification	Not Applicable
Type Score	Rate/proportion better quality = higher score
Algorithm	1. Start processing. Run cases that are included in the PC-Newborn Initial Patient Newborns with Breast Feeding and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Check Discharge Disposition a. If Discharge Status equals 4, 6, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If Discharge Status equals 1, 2, 3, 5, 7, 8, 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 Term Newborn. 4. Check Term Newborn a. If Term Newborn is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Term Newborn 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 Term Newborn equals No, continue processing and proceed to Admission to NICU. 5. Check Admission to NICU a. If Admission to NICU is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Admission to NICU 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 Admission to NICU equals No, continue processing and proceed to Exclusive Breast Milk Feeding. 6. Check Exclusive Breast Milk Feeding a. If Exclusive Breast Milk Feeding is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Exclusive Breast Milk Feeding equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. c. If Exclusive Breast Milk Feeding equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized?

	0480 PC-05 Exclusive Breast Milk Feeding
	5a.2 If not completely harmonized, identify difference, rationale, impact: Not Applicable 5b.1 If competing, why superior or rationale for additive value: Not Applicable

	0483 Proportion of infants 22 to 29 weeks gestation screened for retinopathy of prematurity.
Steward	Vermont Oxford Network
Description	Proportion of infants born from 22 weeks, 0 days to 29 weeks, 6 days gestational age who were in the reporting hospital at the postnatal age recommended for screening for retinopathy of prematurity (ROP) by the American Academy of Pediatrics (AAP) and who received a retinal examination for ROP prior to discharge.
Type	Process
Data Source	Electronic Clinical Data : Registry Vermont Oxford Network Database No data collection instrument provided Attachment 0483_ICD.xlsx
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Number of infants born from 22 weeks, 0 days to 29 weeks, 6 days gestational age who were in the reporting hospital at the postnatal age recommended for ROP screening by the AAP and who received a retinal exam for ROP prior to discharge
Numerator Details	Number of infants born from 22 weeks, 0 days to 29 weeks, 6 days gestational age who were in the reporting hospital at the postnatal age recommended for ROP screening by the AAP and who received a retinal exam for ROP prior to discharge
Denominator Statement	All eligible infants born from 22 weeks, 0 days to 29 weeks, 6 days gestational age who were in the reporting hospital at the postnatal age recommended for ROP screening by the AAP
Denominator Details	Any infant who is born at the reporting hospital and whose gestational age at birth is from 22 weeks, 0 days to 29 weeks, 6 days should be included if they are in the reporting hospital at the postnatal age recommended for ROP screening by the AAP. Any outborn infant who is admitted to any location in the reporting hospital within 28 days of birth, without first having gone home, and whose gestational age is from 22 weeks, 0 days to 29 weeks, 6 days should be included if they are in the reporting hospital at the postnatal age recommended for ROP screening by the AAP.
Exclusions	1. Infants outside the gestational age range of 22 to 29 weeks 2. Outborn infants admitted to the reporting hospital more than 28 days after birth 3. Outborn infants who have been home prior to admission 4. Infants who die in the delivery room or initial resuscitation area prior to admission to the neonatal intensive care unit 5. Infants not in the reporting hospital at the postnatal age recommended for ROP screening by the AAP
Exclusion details	See S.10. above.
Risk Adjustment	Stratification by risk category/subgroup N/A
Stratification	Reports are stratified by gestational age, birth location and birth weight category.
Type Score	Rate/proportion better quality = higher score
Algorithm	1. Identify the population of eligible infants: all infants whose gestational age at birth

	0483 Proportion of infants 22 to 29 weeks gestation screened for retinopathy of prematurity.
	is from 22 weeks, 0 days, to 29 weeks, 6 days, who are born at or admitted to the hospital within 28 days of birth without having been discharged home and who are still hospitalized at the postnatal age at which the first retinal screening exam is recommended by the AAP guidelines. a. Determine the infant's postnatal age at discharge. This is calculated in days as date of discharge minus date of admission +1. Divide by 7 to determine the postnatal age at discharge in weeks. b. Compare each infant's postnatal age at discharge to the appropriate row in the following table adapted from: American Academy of Pediatrics, Section on Ophthalmology, American Academy of Ophthalmology, American Association for Pediatric Ophthalmology and Strabismus. Screening examination of premature infants for retinopathy of prematurity. Pediatrics. 2013;131:189. Timing of First Eye Examination Based on Gestational Age at Birth --- Gestational age at birth (completed weeks) — Postnatal Age (weeks) at initial ROP screening exam 22 — 9 23 — 8 24 — 7 25 — 6 26 — 5 27 — 4 28 — 4 29 — 4 c. If the infant's postnatal age at discharge is greater than or equal to the postnatal age for initial ROP screening from the table, the infant is classified as "still hospitalized at the time of recommended initial ROP screening". 2. Among the population of eligible infants: a. Count the number of infants in the population of eligible infants. This number is the denominator for the measure: DENOM. b. Count the number of infants who had a retinal examination prior to discharge. This number is the numerator for the measure: NUM. c. The measure is calculated as: NUM / DENOM This measure represents the proportion of infants 22 to 29 weeks gestation who were hospitalized at the age when ROP screening is recommended who were screened prior to discharge.

	0483 Proportion of infants 22 to 29 weeks gestation screened for retinopathy of prematurity.
	d. To stratify by gestational age, limit the counts and calculation to infants in the gestational age for the range 22-29 weeks. No diagram provided
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value: N/A

	0716 Unexpected Complications in Term Newborns
Description	This is a hospital level performance score reported as the percent of infants with Unexpected Newborn Complications among full term newborns with no preexisting conditions, typically calculated per year.
Type	Outcome
Data Source	Administrative claims This measure utilizes a linked dataset obtained from two separate data sources, patient discharge data and birth certificate files. Patient Discharge Data: Obtained from the Office of Statewide Planning and Discharge (OSHPD). This dataset does not include data on births from military/naval hospitals as they do not submit data to OSHPD. Linked to: Birth Certificate Files: Obtained from the Center for Health Statistics Attachment Unexpected_Newborn_Complications_Appendices-635908840574237076.xlsx
Level	Facility, Integrated Delivery System, Population : Regional, Population : State
Setting	Hospital/Acute Care Facility
Numerator Statement	Numerator: The numerator is divided into two categories: Severe complications and moderate complications. Severe complications include neonatal death, transfer to another hospital for higher level of care, extremely low Apgar Scores (=3 at either 5 or 10 minutes of life), severe birth injuries such as intracranial hemorrhage or nerve injury, neurologic damage, severe respiratory and infectious complications such as sepsis. Parents of such babies may often worry about short or long term infant outcomes. Moderate complications include diagnoses or procedures that raise concern but at a lower level than the list for severe (e.g. use of CPAP or bone fracture). For inclusion in the numerator, most require an infant length of stay that exceeds that of the mother, validating that these are indeed significant complications. Examples include less severe respiratory complications (e.g. Transient Tachypnea of the Newborn), or infections with a longer length of stay not including sepsis. As a "safety net" to capture cases who were under-coded, the numerator also includes infants who have a prolonged length of stay of over 5 days to capture the "seemingly normal" infants with neither any form of jaundice nor a social reason for staying in the hospital (e.g. family disruption or adoption).
Numerator Details	In the full term neonatal population that excluded premature infants, low birth weight babies, infants with congenital malformations, fetuses with pre-existing conditions such as IUGR and babies exposed to maternal drug use, babies were selected for inclusion in the numerator in a hierarchical manner as follows: PART A: Severe Complications: Identify and include the following in a hierarchical

	0716 Unexpected Complications in Term Newborns
	manner: a) Neonatal Deaths (Use patient discharge diagnosis data, specifically the disposition code for death) b) Neonatal Transfers (Use patient discharge diagnosis data, specifically the disposition code for transfer to a higher level of care) c) Low Apgar Scores at 5 minutes or 10 minutes of <=3 out of a possible 10 (Use Birth certificate to obtain Apgar scores) d) Severe Morbidities: (Use patient discharge diagnosis data, examining both primary and other diagnosis and procedure fields for ICD-9 Codes defining an array of specific severe complications. Please refer to Appendix 3, Groups 3A through 3I as the codes are too numerous to include here) e) Sepsis with a neonatal Length of Stay that exceeds 4 days (Use patient discharge diagnosis data, examining both primary and other diagnosis fields for the specific ICD-9 code defining sepsis. Note that neonatal stay is defined as the date of discharge minus the date of birth). The neonates identified in Part A make up the "Severe Complications" component of the numerator. In the remaining infants (those without severe morbidities), identify and include the following PART B: Moderate Complications: Identify and include the following in a hierarchical manner: a) Moderate complications not requiring a specific length of stay: Identify babies with moderate complications that do not require a specific length of stay for inclusion (Use Patient discharge Diagnosis data, examining both primary and other diagnosis and procedure fields for ICD-9 codes identifying specific moderate complications (see Appendix 4, Groups A though C as the codes are too numerous to include here) b) Specific Prolonged neonatal length of Stay stratified by method of delivery. Among babies who were delivered vaginally, identify those who have a length of stay of over 2 days. Among babies delivered via Cesarean Section, identify those who have a length of stay of over 4 days. (Use V-code 30.00 to identify vaginal births, and V30.01 to identify Cesarean births. V-codes are found in patient discharge data. Neonatal length of stay is defined as the date of discharge minus the date of birth). c) Moderate complications requiring a prolonged length of stay: Among the infants identified in step b, identify those with moderate complications (Use Patient discharge Diagnosis data, examining both primary and other diagnosis and procedure fields for ICD-9 codes identifying specific moderate complications that require a prolonged length of stay for inclusion in the numerator. See Appendix 4, Groups D through H) d) Prolonged neonatal Length of Stay that Exceeds 5 days: In the remaining population, identify babies who have a prolonged length of stay that exceeds 5 days. (Use Patient Discharge Diagnosis Data to determine Length of Stay. Neonatal length

	0716 Unexpected Complications in Term Newborns
	of stay is defined as the date of discharge minus the date of birth). e) Exclude infants with jaundice or social indications: Among babies identified as having a length of stay that exceeds 5 days, exclude those who have jaundice or are in hospital for social indications such as adoption or foster care. (See Appendix 5 on our web-page for jaundice and social exclusion codes)
Denominator Statement	The denominator is comprised of singleton, live born babies who are at least 37.0 weeks of gestation, and over 2500g in birth weight. The denominator excludes most serious fetal conditions that are "preexisting" (present before labor), including prematurity, multiple gestations, poor fetal growth, congenital malformations, genetic disorders, other specified fetal and maternal conditions and infants exposed to maternal drug use in-utero. The final denominator population consists of babies who are expected to do well following labor and delivery and go home routinely with their mothers.
Denominator Details	Step 1: Identify and include singleton, inborn, live births (Use Patient discharge Diagnosis data, specifically diagnosis Codes V30.00 or V30.01). Step 2: Identify and include babies with birth weight >= 2500g. (Use birth certificate or Patient Discharge data). Step 3: Identify and include full term babies, >=37 weeks gestation (Use birth certificate variable called best obstetric estimate of gestational age). Step 4: In less than 1% of cases, the best obstetric estimate of gestation age is missing. In these cases, use LMP-based gestational age to identify full term infants. (Use birth certificate or Patient Discharge data). Step 5: If both sources of gestational age are missing, include only infants who are over 3000g, as they are more likely to be full term. Step 6: In the singleton, full term, population obtained in steps 1 through 5, identify and exclude babies with all congenital malformations and genetic disorders (See Appendix 2, Group A for the list of congenital malformation and genetic disorder exclusions) Step 7: After congenital malformations and genetic disorders are excluded, further exclude babies with fetal conditions such as IUGR (see Appendix 2, Group B for the list of preexisting fetal conditions to be excluded) Step 8: After babies with congenital malformations, genetic disorders and fetal conditions are excluded, further exclude infants who were exposed to maternal drug use in-utero. (see Appendix 2, Group C for the list of maternal drug use exposures to be excluded) **Note: List of ICD-9 codes with individual descriptors is available in the Appendices on our web-page
Exclusions	a) Babies not born in hospitals are excluded as this is a hospital quality performance measure b) Babies who are part of multiple gestation pregnancies are excluded. c) Premature infants (babies born before 37 weeks gestational age) are excluded

	0716 Unexpected Complications in Term Newborns
	d) Low birth weight babies (<=2500g) are excluded e) Babies with congenital malformations and genetic diseases are excluded f) Babies with pre-existing fetal conditions such as IUGR are excluded g) Babies who were exposed to maternal drug use in-utero are excluded
Exclusion details	a)Babies not born in hospitals are excluded as this is a hospital quality performance measure (Exclude all other live birth codes other than V30.00 and V30.01) b)Babies who are part of multiple gestation pregnancies are excluded. (Exclude all other live birth codes other than V30.00 and V30.01) c)Premature infants (babies born before 37 weeks gestational age) are excluded (use best obstetric estimate of gestational age found in the birth certificate to exclude all infants born before 37 weeks. If best obstetric of gestational age is missing, use the LMP gestational age variable instead to identify infants under 37 weeks) d)Low birth weight babies (<=2500g) are excluded (Use birth certificate birth weight variable to identify infants under 2500g) e)Babies with congenital malformations and genetic diseases are excluded (Use ICD-9 codes listed in Appendix 2, Group A to exclude infants with these conditions) f)Babies with pre-existing fetal conditions such as IUGR are excluded (Use ICD-9 codes listed in Appendix 2, Group B to exclude infants with these conditions) g)Babies who were exposed to maternal drug use in-utero are excluded (Use ICD-9 codes listed in Appendix 2, Group C to exclude infants with these conditions)
Risk Adjustment	No risk adjustment or risk stratification None
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	STEP 1: Calculate Denominator Inclusions a)Identify and include singleton, inborn, live births (Use Patient discharge Diagnosis data, specifically diagnosis Codes V30.00 or V30.01 listed in Appendix 1). b)Next, identify and include babies with birth weight >= 2500g. (Use birth certificate or Patient Discharge data). c)Next, identify and include full term babies, >=37 weeks gestation (Use birth certificate variable called best obstetric estimate of gestational age). In less than 1% of cases, the best obstetric estimate of gestation age is missing. In these cases, use LMP-based gestational age to identify full term infants. (Use birth certificate or Patient Discharge data). d)If both sources of gestational age are missing, include only infants who are over 3000g, as they are more likely to be full term. (Use the birth certificate variable for birth weight). STEP 2: Calculate Denominator Exclusions a)In the singleton, full term, population of neonates obtained in Step 1, identify and exclude babies with all congenital malformations and genetic disorders (Use codes listed in Appendix 2, Group A to exclude infants)

	0716 Unexpected Complications in Term Newborns
	b)After congenital malformations and genetic disorders are excluded, further exclude babies with fetal conditions such as IUGR (Use codes listed in Appendix 2, Group B to exclude infants) c)After babies with congenital malformations, genetic disorders and fetal conditions are excluded, further exclude infants who were exposed to maternal drug use in-utero. (Use codes listed in Appendix 2, Group C to exclude infants). d)This is the measure's final denominator population Step 3: Numerator Inclusions: PART A: SEVERE COMPLICATIONS a)Identify and include Neonatal Deaths (Using patient discharge diagnosis data, specifically the disposition code for death) b)Identify and include neonatal transfers (Using patient discharge diagnosis data, specifically the disposition code for transfer to a higher level of care) c)Identify and include babies with "Apgar at 5 minutes" OR "Apgar at 10 minutes" scores of less than 4 (Use Birth certificate or medical record to obtain Apgar scores) d)Identify and include babies with Severe Morbidities (Use patient discharge diagnosis data, examining both primary and other diagnosis and procedure fields for specific ICD-9 Codes defining an array of specific severe complications. Please refer to Appendix 3, Groups 3A through 3I as the codes are too numerous to include here) e)Identify and include babies with a Sepsis code and a length of stay that exceeds 4 days (Use patient discharge diagnosis data, examining both primary and other diagnosis fields for the specific ICD-9 code defining sepsis but also requiring a neonatal length of stay of over 4 days. Note that neonatal stay is defined as the date of discharge minus the date of birth). The neonates identified in Step 3 comprise the "Severe Complications" component of the numerator. Step 4: Numerator Inclusions: PART B: MODERATE COMPLICATIONS In the remaining infants (those without severe morbidities), identify and include the following a)Identify babies with moderate complications that do not require a specific length of stay for inclusion (Use Patient discharge Diagnosis data, examining both primary and other diagnosis and procedure fields for specific ICD-9 codes identifying specific moderate complications (see Appendix 4, Groups A though C) b)Identify babies with a specified prolonged length of stay stratified by method of delivery. In the population of babies who were delivered vaginally, identify those who have a length of stay of over 2 days. Among babies delivered via Cesarean Section, identify those who have a length of stay of over 4 days. c)Among babies identified as having a prolonged length of stay (stratified by method of delivery), identify and include those who have moderate complications (Use Patient discharge Diagnosis data, examining both primary and other diagnosis and procedure fields for specific ICD-9 codes identifying specific moderate complications. See Appendix 4, Groups D through H)

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	d)In the remaining population, identify babies who have a prolonged length of stay that exceeds 5 days. Use Patient Discharge Diagnosis Data to determine Length of Stay e)Among babies identified as having a length of stay that exceeds 5 days, exclude those who have jaundice or are in hospital for social indications such as adoption or foster care (See Appendix 5 for jaundice and social exclusion codes) Step 5: Calculation of Unexpected Complications in Term Newborns measure: Unexpected Newborn Complications (Total): Rate per 100 live births. (Severe Complications + Moderate Complications/ Final Denominator) x100 Available in attached appendix at A.1
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: There is no other currently endorsed measure in this topic area. A formerly endorsed NQF measure (NQF # 0474 Birth Trauma -Injury to the Neonate) would have been considered a "competing measure" as it conceptually addressed the same measure focus and target population. It suffered from over coding issues with several ICD codes dominating the measure that were ambiguous (e.g. "Other birth injuries NOS"). This remains an issue for ICD-10. For that and other reasons, that measure was "un-endorsed". Furthermore that measure was focused only on physical birth injuries while our measure identifies a much broader range of neonatal morbidities that are a consequence of labor and delivery. 5b.1 If competing, why superior or rationale for additive value: NQF 0474 provides a very limited window into term morbidities from the single perspective of birth trauma. There are many other morbidities in term infants that are much more common and important to quantify as several of them are severe and can have long lasting implications well into childhood and beyond. We feel our measure is superior to NQF 0474 for the following reasons: • We examine a much broader range of adverse events including deaths, transfers, low Apgar scores and a wide range of severe and moderate conditions. Including hypoxic encephalopathy, very low Apgar scores, and respiratory distress in term infants. • After consulting neonatologists, pediatricians and obstetricians about the severity of certain conditions and how to quantify and group conditions appropriately, we are confident that our measure differentiates between severe and moderate morbidity. • Our measure factors in neonatal length of stay, which is an important indicator in assessing whether an infant is truly severely ill or not. For example, an infant may have a diagnosis code for neonatal sepsis (a very serious newborn complication) but if

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	the neonatal LOS was only 2 days (and no death or transfer) se We also include method of delivery and its impact on length of stay, as infants delivered via Cesarean section generally stay in hospital for four days and infants born vaginally stay for two days or less. We exclude conditions like jaundice and social factors that cause infants to have longer neonatal lengths of stay. • Our exclusions ensure that our denominator (target) population truly does consist of healthy term newborns by excluding preterm infants, low birth weight babies, congenital malformations, babies subjected to maternal drug use and other preexisting conditions. • Our measure allows hospitals to drill down into sub-measures of morbidity such as respiratory complications, neurological complications and infections to determine what is driving their unexpected newborn complication rate. •The larger incidence of conditions in our measure compared to the NQF birth injury measure allows for much better statistical analysis and discrimination. Furthermore, our measure is currently used to evaluate over 1 million births in multiple states and hospitals across the US (corresponding to approximately 25% of all US births).

	1382 Percentage of low birthweight births
Status	Submitted
Steward	Centers for Disease Control and Prevention
Description	The percentage of births with birthweight <2,500 grams
Type	Outcome
Data Source	Patient Reported Data/Survey National Center for Health Statistics, Natality Detail file. These publicly available data files contain individual record data for the 4.2 million births in the United States each year. Data are from birth certificates. URL URL
Level	Population : County or City, Population : National, Population : Regional
Setting	Hospital/Acute Care Facility, Other United States, states, counties
Numerator Statement	The number of babies born weighing <2,500 grams at birth in the study population
Numerator Details	Data are directly available from public-use data files of national birth certificate data produced by the National Center for Health Statistics.
Denominator Statement	All births in the study population
Denominator Details	Data are directly available from public-use data files of national birth certificate data produced by the National Center for Health Statistics.
Exclusions	None
Exclusion details	None
Risk Adjustment	No risk adjustment or risk stratification N/A
Stratification	- Stratify the measure by single vs. multiple births - Stratify the measure by birthweight of less thant 1,500 grams (i.e. very low birthweight) vs. 1,500-2,499 grams (i.e. moderately low birthweight).
Type Score	Other Percentage better quality = lower score
Algorithm	The number of births weighing <2,500 grams/Total births at any birthweight * 100
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value:

	1517 Prenatal & Postpartum Care (PPC)
Status	Submitted
Steward	National Committee for Quality Assurance
Description	The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year. For these women, the measure assesses the following facets of prenatal and postpartum care: Rate 1: Timeliness of Prenatal Care. The percentage of deliveries that received a prenatal care visit as a member of the organization in the first trimester or within 42 days of enrollment in the organization. Rate 2: Postpartum Care. The percentage of deliveries that had a postpartum visit on or between 21 and 56 days after delivery.
Type	Process
Data Source	Administrative claims, Electronic Clinical Data, Paper Medical Records This measure is based on administrative claims and medical record documentation collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from Health Management Organizations and Preferred Provider Organizations via NCQA's online data submission system. No data collection instrument provided Attachment 1517_PPC_Value_Sets.xlsx
Level	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic
Numerator Statement	This measure assesses whether pregnant women had timely prenatal and postpartum care visits. It has two rates, one assessing the timeliness of prenatal visits, and one assessing the timeliness of postpartum visits.
Numerator Details	Administrative Specifications Timeliness of Prenatal Care A prenatal visit in the first trimester or within 42 days of enrollment, depending on the date of enrollment in the organization and the gaps in enrollment during the pregnancy. Include only visits that occur while the member was enrolled. Follow the steps below to identify the numerator. Step 1: Determine enrollment status during the first trimester. For all women in the eligible population, identify those who were enrolled on or before 280 days prior to delivery (or estimated date of delivery [EDD]). For these women, proceed to step 2. For women not enrolled on or before 280 days prior to delivery (or EDD), who were therefore pregnant at the time of enrollment, proceed to step 3. Step 2: Determine continuous enrollment for the first trimester. Identify women from step 1 who were continuously enrolled during the first trimester (176–280 days prior to delivery [or EDD]), with no gaps in enrollment. For these women, determine numerator compliance using the decision rules for Identifying Prenatal Care For Women Continuously Enrolled During the First Trimester. For women who were not continuously enrolled during the first trimester (e.g., had a gap between 176 and 280 days before delivery), proceed to step 3.

	1517 Prenatal & Postpartum Care (PPC)
	Step 3: Determine the start date of the last enrollment segment (i.e., the enrollment segment during the pregnancy with the start date that is closest to the delivery date). For women whose last enrollment started on or between 219 and 279 days before delivery, proceed to step 4. For women whose last enrollment started less than 219 days before delivery, proceed to step 5. Step 4: Determine numerator compliance. If the last enrollment segment started on or between 219 and 279 days before delivery, determine numerator compliance using the instructions for Identifying Prenatal Care for Women Not Continuously Enrolled During the First Trimester and find a visit between the last enrollment start date and 176 days before delivery. Step 5: Determine numerator compliance. If the last enrollment segment started less than 219 days before delivery (i.e., between 219 days before delivery and the day of delivery), determine numerator compliance using the instructions for Identifying Prenatal Care for Women Not Continuously Enrolled During the First Trimester and find a visit within 42 days after enrollment. Identifying Prenatal Care for Women Continuously Enrolled During the First Trimester Decision Rule 1 Either of the following during the first trimester, where the practitioner type is an OB/GYN or other prenatal care practitioner or PCP meets criteria: • A bundled service (Prenatal Bundled Services Value Set) where the organization can identify the date when prenatal care was initiated (because bundled service codes are used on the date of delivery, these codes may be used only if the claim form indicates when prenatal care was initiated). • A visit for prenatal care (Stand Alone Prenatal Visits Value Set). Decision Rule 2 Any of the following during the first trimester, where the practitioner type for the prenatal visit is an OB/GYN or other prenatal care practitioner, meet criteria: • A prenatal visit (Prenatal Visits Value Set) with an obstetric panel (Obstetric Panel Value Set). • A prenatal visit (Prenatal Visits Value Set) with an ultrasound (echocardiography) of the pregnant uterus (Prenatal Ultrasound Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set). • A prenatal visit (Prenatal Visits Value Set) with all of the following: – Toxoplasma (Toxoplasma Antibody Value Set). – Rubella (Rubella Antibody Value Set). – Cytomegalovirus (Cytomegalovirus Antibody Value Set). – Herpes simplex (Herpes Simplex Antibody Value Set). • A prenatal visit (Prenatal Visits Value Set) with rubella (Rubella Antibody Value Set) and ABO (ABO Value Set).

	1517 Prenatal & Postpartum Care (PPC)
	• A prenatal visit (Prenatal Visits Value Set) with rubella (Rubella Antibody Value Set) and Rh (Rh Value Set). • A prenatal visit (Prenatal Visits Value Set) with rubella (Rubella Antibody Value Set) and ABO/Rh (ABO and Rh Value Set). Decision Rule 3 Any of the following during the first trimester, where the practitioner type is a PCP, meet criteria: • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and an obstetric panel (Obstetric Panel Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and an ultrasound (echocardiography) of the pregnant uterus (Prenatal Ultrasound Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and all of the following: – Toxoplasma (Toxoplasma Antibody Value Set). – Rubella (Rubella Antibody Value Set). – Cytomegalovirus (Cytomegalovirus Antibody Value Set). – Herpes simplex (Herpes Simplex Antibody Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and rubella (Rubella Antibody Value Set) and ABO (ABO Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and rubella (Rubella Antibody Value Set) and Rh (Rh Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and rubella (Rubella Antibody Value Set) and ABO/Rh (ABO and Rh Value Set). • A prenatal visit (Prenatal Visits Value Set) with any internal organization code for LMP or EDD with an obstetrical history. • A prenatal visit (Prenatal Visits Value Set) with any internal organization code for LMP or EDD with risk assessment and counseling/education. Note: For Decision Rule 3 criteria that require a prenatal visit code (Prenatal Visits Value Set) and a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set), codes must be on the same claim. Identifying Prenatal Care for Women Not Continuously Enrolled During the First Trimester Any of the following, where the practitioner type is an OB/GYN or other prenatal care practitioner or PCP, meet criteria: • A bundled service (Prenatal Bundled Services Value Set) where the organization can identify the date when prenatal care was initiated (because bundled service codes are used on the date of delivery, these codes may be used only if the claim form indicates

when prenatal care was initiated).
• A visit for prenatal care (Stand Alone Prenatal Visits Value Set).
• A prenatal visit (Prenatal Visits Value Set) with an ultrasound (echocardiography) of the pregnant uterus (Prenatal Ultrasound Value Set).
• A prenatal visit (Prenatal Visits Value Set) with a principal pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set).
Note: For criteria that require a prenatal visit code (Prenatal Visits Value Set) and a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set), codes must be on the same claim. Criteria for identifying prenatal care for women who were not continuously enrolled during the first trimester allow more flexibility than criteria for women who were continuously enrolled.
Postpartum Care
A postpartum visit for a pelvic exam or postpartum care on or between 21 and 56 days after delivery. Any of the following meet criteria:
• A postpartum visit (Postpartum Visits Value Set).
• Cervical cytology (Cervical Cytology Value Set).
• A bundled service (Postpartum Bundled Services Value Set) where the organization can identify the date when postpartum care was rendered (because bundled service codes are used on the date of delivery, not on the date of the postpartum visit, these codes may be used only if the claim form indicates when postpartum care was rendered).
Note: The practitioner requirement only applies to the Hybrid Specification. The organization is not required to identify practitioner type in administrative data.
Medical Record Specification
Timeliness of Prenatal Care
A prenatal visit in the first trimester or within 42 days of enrollment, depending on the date of enrollment in the organization and gaps in enrollment during the pregnancy. Include only visits that occurred while the member was enrolled.
Prenatal care visit to an OB/GYN or other prenatal care practitioner or PCP. For visits to a PCP, a diagnosis of pregnancy must be present. Documentation in the medical record must include a note indicating the date when the prenatal care visit occurred, and evidence of one of the following.
• A basic physical obstetrical examination that includes auscultation for fetal heart tone, or pelvic exam with obstetric observations, or measurement of fundus height (a standardized prenatal flow sheet may be used).
• Evidence that a prenatal care procedure was performed, such as:
– Screening test in the form of an obstetric panel (must include all of the following: hematocrit, differential WBC count, platelet count, hepatitis B surface antigen, rubella antibody, syphilis test, RBC antibody screen, Rh and ABO blood typing), or
– TORCH antibody panel alone, or

	1517 Prenatal & Postpartum Care (PPC)
	– A rubella antibody test/titer with an Rh incompatibility (ABO/Rh) blood typing, or – Echography of a pregnant uterus. • Documentation of LMP or EDD in conjunction with either of the following. – Prenatal risk assessment and counseling/education. – Complete obstetrical history. Note: For women whose last enrollment segment was after 219 days prior to delivery (i.e., between 219 days prior to delivery and the day of delivery) and women who had a gap during the first trimester, count documentation of a visit to an OB/GYN, family practitioner or other PCP with a principal diagnosis of pregnancy. Postpartum Care A postpartum visit for a pelvic exam or postpartum care on or between 21 and 56 days after delivery, as documented through either administrative data or medical record review. Postpartum visit to an OB/GYN practitioner or midwife, family practitioner or other PCP on or between 21 and 56 days after delivery. Documentation in the medical record must include a note indicating the date when a postpartum visit occurred and one of the following. • Pelvic exam. • Evaluation of weight, BP, breasts and abdomen. – Notation of "breastfeeding" is acceptable for the "evaluation of breasts" component. • Notation of postpartum care, including, but not limited to: – Notation of "postpartum care," "PP care," "PP check," "6-week check." – A preprinted "Postpartum Care" form in which information was documented during the visit. For both rates: • Services that occur over multiple visits count toward this measure if all services are within the time frame established in the measure. Ultrasound and lab results alone are not considered a visit; they must be linked to an office visit with an appropriate practitioner in order to count for this measure. • NCQA defines a PCP and OB/GYN and other prenatal practitioners as including: • Physicians certified as obstetricians or gynecologists by the American Medical Specialties Board of Obstetrics or Gynecology or the American Osteopathic Association; or, if not certified, who successfully completed an accredited program of graduate medical or osteopathic education in obstetrics and gynecology. • Certified nurse midwives and nurse practitioners who deliver prenatal care services in a specialty setting (under the direction of an OB/GYN certified or accredited provider).
Denominator	The percentage of deliveries of live births between November 6 of the year prior to

	1517 Prenatal & Postpartum Care (PPC)
Statement	the measurement year and November 5 of the measurement year.
Denominator Details	Product Lines: Commercial, Medicaid (report each product line separately). Continuous enrollment: 43 days prior to delivery through 56 days after delivery. Allowable gap: No allowable gap during the continuous enrollment period. Anchor date: Date of delivery. Benefit: Medical. Event/ diagnosis: Delivered a live birth on or between November 6 of the year prior to the measurement year and November 5 of the measurement year. Include women who delivered in any setting. Multiple births. Women who had two separate deliveries (different dates of service) between November 6 of the year prior to the measurement year and November 5 of the measurement year count twice. Women who had multiple live births during one pregnancy count once. Follow the steps below to identify the eligible population, which is the denominator for both rates. Step 1: Identify deliveries. Identify all women with a delivery (Deliveries Value Set) between November 6 of the year prior to the measurement year and November 5 of the measurement year. Step 2: Exclude non-live births (Non-live Births Value Set). Step 3: Identify continuous enrollment. Determine if enrollment was continuous between 43 days prior to delivery and 56 days after delivery, with no gaps.
Exclusions	Non-live births
Exclusion details	See corresponding Excel document for the Non-live Births Value Set.
Risk Adjustment	No risk adjustment or risk stratification N/A
Stratification	N/A
Type Score	Rate/proportion better quality = higher score
Algorithm	Step 1: Calculate the eligible population following the instructions in the denominator details listed in section S.9. Step 2: Remove the exclusions identified in section S.10. Step 3: Calculate the numerator for Rate 1 following the instructions in the numerator details listed in section S.6. Step 4: Divide the numerator from Step 3 by the denominator from Step 2 to determine Rate 1. Step 5: Calculate the numerator for Rate 2 following the instructions in the numerator details listed in section S.6. Step 6: Divide the numerator from Step 5 by the denominator from Step 2 to determine Rate 2. No diagram provided
Copyright / Disclaimer	5.1 Identified measures: 1391 : Frequency of Ongoing Prenatal Care (FPC)

	1517 Prenatal & Postpartum Care (PPC)
	5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value:

	1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns
Status	Submitted
Steward	The Joint Commission
Description	This measure assesses the number of staphylococcal and gram negative septicemias or bacteremias in high-risk 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 Birth, PC-03: Antenatal Steroids, PC-05: Exclusive Breast Milk Feeding).
Type	Outcome
Data Source	Paper Medical Records 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 has been passed. No data collection instrument provided Attachment PC04_ICD_Code_Tables.xlsx
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	The outcome being measured is: Newborns with septicemia or bacteremia with ICD-10-CM Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Confirmed OR ICD-10-CM Other Diagnosis Codes for sepsis as defined in Appendix A, Table 11.10.1 with a Bloodstream Infection Confirmed available at: http://manual.jointcommission.org/releases/TJC2015B2/ The only national hospital quality measure currently requiring patient-level risk adjustment is the Health Care-Associated Bloodstream Infections in Newborns (PC-04) outcome measure in the perinatal care measure set.
Numerator Details	Two data elements are used for the observed outcome and to calculate the numerator: 1. Bloodstream Infection Confirmed- Confirmation that a health care-associated bloodstream infection occurred after the first 48 hours after admission. 2. ICD-10-CM Other Diagnosis Codes- The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. Cases are eligible for the numerator population with ICD-10-CM Other Diagnosis Code for newborn septicemia or bacteremia with the presence of a health care-associated bloodstream infection confirmed OR an ICD-10-CM Other Diagnosis Codes for sepsis with the presence of a health care-associated bloodstream infection confirmed. Updates available at: https://manual.jointcommission.org/releases/TJC2015B2/.
Denominator Statement	The outcome target population being measured is: Liveborn newborns with ICD-10-CM Other Diagnosis Codes for birth weight between 500 and 1499g as defined in Appendix A, Table 11.12, 11.13 or 11.14 OR Birth Weight between 500 and 1499g OR

	1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns
	ICD-10-CM Other Diagnosis Codes for birth weight = > 1500g as defined in Appendix A, Table 11.15 or 11.16 OR Birth Weight = > 1500g who experienced one or more of the following: o Experienced death o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for major surgery as defined in Appendix A, Table 11.18 o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for mechanical ventilation as defined in Appendix A, Table 11.19 o Transferred in from another acute care hospital or health care setting within 2 days of birth.
Denominator Details	Eleven data elements are used to identify the target population and to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Birth Weight- The weight (in grams) of a newborn at the time of delivery. 3. Birthdate - The month, day and year the patient was born. 4. Bloodstream Infection Present on Admission- Documentation in the medical record that the patient had a bloodstream infection present on admission. This includes both patients with positive blood cultures or inconclusive blood cultures when the patient is suspected of having a bloodstream infection or septicemia and is being treated for the condition. Allowable values: Yes or No/UTD 5. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients who are newborns were being studied. Allowable values: Yes or No/UTD 6. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay. 7. Discharge Disposition - The place or setting to which the patient was discharged. 8. ICD-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 9. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 10. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 11. ICD-10-PCS Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System 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.

	1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns
	Updates available at: https://manual.jointcommission.org/releases/TJC2015B2/.
Exclusions	• ICD-10-CM Principal Diagnosis Code for septicemias or bacteremias as defined in Appendix A, Table 11.10.2 • ICD-10-CM Other Diagnosis Codes for septicemias or bacteremias as defined in Appendix A, Table 11.10.2 or ICD-10-CM Principal or Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Present on Admission • ICD-10-CM Other Diagnosis Codes for birth weight < 500g as defined in Appendix A, Table 11.20 OR Birth Weight < 500g • Length of Stay < 2 days • Enrolled in clinical trials
Exclusion details	• Patients with ICD-10-CM Principal Diagnosis Code for septicemias or bacteremias are excluded. • Patients with ICD-10-CM Other Diagnosis Codes for septicemias or bacteremias with a Bloodstream Infection Present on Admission are excluded. • Patients with ICD-10-CM Principal or Other Diagnosis Codes for newborn septicemia or bacteremia with a Bloodstream Infection Present on Admission are excluded. • Patients with ICD-10-CM Other Diagnosis Codes for birth weight <500 grams OR a birth weight <500 grams are excluded. • Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is less than 2 days, the patient is excluded. • Patients are excluded if “Yes” is selected for Clinical Trial.
Risk Adjustment	Statistical risk model Logistic regression Model Risk Factors Considered: Intercept Intercept Birth Weight 1250g to 2499g Birth Weight 1000 to 1249g Birth Weight 500 to 749g Birth Weight 750 to 750g Modified DRG Newborn Transfers Out or Died Congenital Anomaly Gastrointestin Available in attached Excel or csv file at S.2b
Stratification	Not applicable, the measure is not stratified.
Type Score	Rate/proportion better quality = lower score
Algorithm	1. Start processing. Run cases that are included in the PC-Newborn Initial Patient Newborns with BSI and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Calculate Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date. 3. Check Length of Stay

	1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns
	a. If Length of Stay is less than 2 days, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If Length of Stay is greater than or equal to 2 days, continue processing and proceed to Clinical Trial. 4. 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 ICD-10-CM Principal or Other Diagnosis Codes. 5. Check ICD-10-CM Principal or Other Diagnosis Codes a. If none of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.10, continue processing and proceed to ICD-10-CM Other Diagnosis Codes 1. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on Table 11.10.2, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 7). 2. If at least one of the ICD-10-CM Other Diagnosis Codes is on Table 11.10.2, continue processing and proceed to Bloodstream Infection Present on Admission. b. If at least one of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.10, continue processing and proceed to Bloodstream Infection Present on Admission. 6. Check Bloodstream Infection Present on Admission a. If Bloodstream Infection Present on Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Bloodstream Infection Present on Admission 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 Bloodstream Infection Present on Admission equals No, continue processing and proceed to check ICD-10-CM Other Diagnosis Codes. 7. Check ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on Table 11.12, 11.13, 11.14, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 13). b. If all of the ICD-10-CM Other Diagnosis Codes are missing, continue processing and proceed to Birth Weight. c. If none of the ICD-10-CM Other Diagnosis Codes is on Table 11.12, 11.13, 11.14, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 8). 8. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes on table 11.15, 11.16,

	1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns
	continue processing and proceed to ICD-10-CM Principal or Other Procedure Codes. b. If none of the ICD-10-CM Other Diagnosis Codes on table 11.15, 11.16, continue processing and proceed to Birth Weight. 9. Check Birth Weight a. If Birth Weight is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Birth Weight 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. c. If Birth Weight is less than 500, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. d. If Birth Weight is between 500 and 1499, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step13). e. If Birth Weight is greater than or equal to 1500, continue processing and proceed to ICD-10-PCS Principal or Other Procedure Codes. 10. Check ICD-10-PCS Principal or Other Procedure Codes a. If at least one of the ICD-10-PCS Principal or Other Procedure Codes is on table 11.18 or 11.19, continue processing and proceed to recheck ICD-10-PCS Other Diagnosis Codes (Step 13). b. If all of the ICD-10-PCS Principal or Other Procedure Codes are missing or none of the ICD-10-PCS Principal or Other Procedure Codes is on table 11.18 or 11.19, continue processing and proceed to ICD-10-CM Principal Diagnosis Code. 11. Check ICD-10-CM Principal Diagnosis Code a. If ICD-10-CM Principal Diagnosis Code is not on table 11.10.3, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 13). b. If ICD-10-CM Principal Diagnosis Code is on table 11.10.3, continue processing and proceed to Discharge Disposition. 12. Check Discharge Disposition a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Discharge Disposition equals 1, 2, 3, 4, 5, 7, 8, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Discharge Disposition equals 6, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step13). 13. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on table 11.10, continue processing and proceed to Bloodstream Infection Confirmed. b. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on table 11.10, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step14). 14. Recheck ICD-10-CM Other Diagnosis Codes

	1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns
	a. If at least one of the ICD-10-CM Other Diagnosis Codes is on table 11.10.1, continue processing and proceed to Bloodstream Infection Confirmed. b. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on table 11.10.1, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. 15. Check Bloodstream Infection Confirmed a. If Bloodstream Infection Confirmed is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Bloodstream Infection Confirmed equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. c. If Bloodstream Infection Confirmed equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Calculation of adjusted outcome: Step 1 -- Identify the measure population through Measure Category Assignments. Risk adjusted rate-based measure: Identify the numerator (Measure Category Assignment = E) and the denominator (Measure Category Assignment = D) cases using the information provided in the Measure Information Form (MIF). Risk adjusted continuous variable measure: Identify the number of cases in the measure population (Measure Category Assignment = D). At this time, there are no risk adjusted continuous outcome measures in any of the national hospital quality measure sets. Note: Do not calculate a Predicted Value for a case if it is rejected by front-end edits or is rejected because one or more measures in the measure set evaluates to a Measure Category Assignment = X. Step 2 -- Create risk factors for the measure. Using the Risk Model Information File provided by the Joint Commission, identify all applicable EOC record data elements and the associated risk factor values for each of the EOC records identified instep 1. Risk factors include patient demographic and/or clinical factors, which can influence outcomes of care. Some examples of risk factors include age, sex, and comorbidities – such as diabetes or a history of hypertension. As an example, Figure 1 lists the data elements required for risk adjustment of generic measure 'ABC'. Using the data for measure 'ABC', the performance measurement system must identify the risk factors at the EOC record-level, and create data subsets for each participating hospital. Available at measure-specific web page URL identified in S.1
Copyright / Disclaimer	5.1 Identified measures: 0304 : Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted) 0478 : Neonatal Blood Stream Infection Rate (NQI 03) 5a.1 Are specs completely harmonized? No

	1731 PC-04 Health Care-Associated Bloodstream Infections in Newborns
	5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0304 addresses infections in the newborn. Measure 0304 evaluates very low birth weight newborns for both late sepsis and meningitis with birth weights between 401 and 1500 Gms and a gestational age between 22 weeks 0 days and 28 weeks six days. Measure 0304 also evaluates all newborns who are in the hospital after 3 days of birth. Numerator inclusions for measure 0304 are a bacterial pathogen recovered from a blood culture and/or cerebrospinal fluid culture obtained after Day 3 of life OR all 3 of the following: 1.) Coagulase Negative Staphylococcus recovered from a blood culture from either a central line or peripheral blood sample and/or is recovered from cerebrospinal fluid by lumbar puncture, ventricular tap or ventricular drain 2.) One or more signs of generalized infection (i.e., apnea, temperature instability, feeding intolerance, worsening respiratory distress or hemodynamic instability) and 3.) Treatment with 5 or more days of intravenous antibiotics. The major differences between measure 0304 and measure 1731 are: • Measure 1731 does not include cases with meningitis based on results from cerebrospinal fluid cultures • Measure 1731 includes birth weights which are 500 Gms or more rather than 400 Gms or more, and measure 1731 also includes newborns 1500 gms or more with one or more specific medical indication: major surgery, mechanical ventilation, expired or transferred-in. • Measure 1731 excludes newborns born with infections within the first 48 hours of admission and newborns with bloodstream infections occurring after the first 48 hours after birth that are due to causes that are not health care-associated, i.e., necrotizing enterocolitis, urosepsis, etc. 5b.1 If competing, why superior or rationale for additive value: Measure 0478 is similar to this measure. The fundamental differences are that measure 0478 has been developed to collect all data elements using administrative data. Such an approach has led in some cases to loss of specificity available through review of the medical record. The two measures have been harmonized to the extent possible; however, there are intrinsic differences which are addressed in a comparison table in the attachment found in Section A.1 Supplemental Materials.

	2829 PC-01 Elective Delivery
Status	Submitted
Steward	The Joint Commission
Description	This measure assesses patients with elective vaginal deliveries or elective cesarean births 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). PC-01, Elective Delivery is one of two of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.
Type	Process
Data Source	Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Pharmacy Hospitals report EHR data using Certified Electronic Health Record Technology (CEHRT), and by submitting Quality Reporting Document Architecture Category 1 (QRDA-1). No data collection instrument provided Attachment ElectiveDelivery_v4_Wed_Apr_01_14.49.44_CDT_2015-635908096518042002.xls
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	Patients with elective deliveries by either: - Medical induction of labor while not in labor prior to the procedure - Cesarean birth while not in labor and with no history of a prior uterine surgery
Numerator Details	- Medical Induction of Labor is represented as a code from one of the following value sets and associated QDM datatype: o Procedure, Performed: Medical Induction of Labor (OID 2.16.840.1.113883.3.117.1.7.1.288) o Procedure, Performed: Artificial Rupture of Membranes (OID 2.16.840.1.113762.1.4.1045.57) o Medication, Administered: Oxytocin (OID 2.16.840.1.113762.1.4.1045.55) o Medication, Administered: Dinoprostone (OID 2.16.840.1.113762.1.4.1045.56) - Labor is represented with the QDM datatype and value set of “Physical Exam, Performed: Labor (OID 2.16.840.1.113883.3.117.1.7.1.281) - Cesarean Birth is represented with the QDM data type and value set of “Procedure, Performed: Cesarean Birth (OID: 2.16.840.1.113883.3.117.1.7.1.282) - Prior Uterine Surgery is represented as a code from one of the following value sets and associated QDM datatype: o Diagnosis, Resolved: Perforation of Uterus (OID 2.16.840.1.113883.3.117.1.7.1.136) o Diagnosis, Resolved: Uterine Window (OID 2.16.840.1.113883.3.117.1.7.1.137)

	2829 PC-01 Elective Delivery
	o Diagnosis, Resolved: Uterine Rupture (OID 2.16.840.1.113883.3.117.1.7.1.138) o Diagnosis, Inactive: Cornual Ectopic Pregnancy (OID 2.16.840.1.113762.1.4.1045.27) o Procedure, Performed: Classical Cesarean Birth (OID 2.16.840.1.113883.3.117.1.7.1.421) o Procedure, Performed: Myomectomy (OID 2.16.840.1.113883.3.117.1.7.1.422) o Procedure, Performed: Transabdominal Cerclage (OID 2.16.840.1.113762.1.4.1110.2) To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/.
Denominator Statement	The Denominator is patients who deliver newborns with >= 37 and < 39 weeks of gestation completed.
Denominator Details	- Estimated Gestational Age is represented with the QDM datatype and value set of Physical Exam, Performed: Estimated Gestational Age at Delivery (OID: 2.16.840.1.113762.1.4.1045.26) - Time of Delivery is represented with the QDM datatype and value set of Physical Exam, Performed: Time of Delivery (OID: 2.16.840.1.113762.1.4.1045.28)
Exclusions	ICD-9-CM, ICD-10-CM, or SNOMED CT codes for conditions possibly justifying elective delivery prior to 39 weeks gestation.
Exclusion details	- Conditions possibly justifying elective delivery are represented with the QDM datatype and value set Diagnosis, Active: Conditional Possibly Justifying Elective Delivery Prior to 39 Weeks Gestation (OID: 2.16.840.1.113883.3.117.1.7.1.286)
Risk Adjustment	No risk adjustment or risk stratification Not Applicable
Stratification	Not Applicable, the measure is not stratified
Type Score	Rate/proportion better quality = lower score
Algorithm	See attached HQMF file. Available at measure-specific web page URL identified in S.1
Copyright / Disclaimer	5.1 Identified measures: 0469 : PC-01 Elective Delivery 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: The measures are completely harmonized to the extent possible, given the fact that the data source for #0469 is the paper medical record, and the data source for #2829 is the electronic health record. 5b.1 If competing, why superior or rationale for additive value: Not Applicable.

	2830 PC-05 Exclusive Breast Milk Feeding
Steward	The Joint Commission
Description	PC-05 assesses the number of newborns exclusively fed breast milk during the newborn's entire hospitalization. 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-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns). PC-05, Exclusive Breast Milk Feeding, is one of two measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.
Type	Process
Data Source	Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record Hospitals report EHR data using Certified Electronic Health Record Technology (CEHRT), and by submitting Quality Reporting Document Architecture Category 1 (QRDA-1). No data collection instrument provided Attachment ExclusiveBreastMilkFeeding_v4_Fri_Nov_13_10.29.14_CST_2015.xls
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	Newborns that were fed breast milk only since birth
Numerator Details	- Administration of breast milk is represented with the QDM datatype and value set of Substance, Administered: Breast Milk (OID: 2.16.840.1.113883.3.117.1.7.1.30) - Administration of other dietary intake is represented with Substance, Administered: Dietary Intake Other than Breast Milk (OID: 2.16.840.1.113883.3.117.1.7.1.27) To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/
Denominator Statement	Single term newborns discharged from the hospital who did not have a diagnosis of galactosemia, were not subject to parenteral nutrition, and had a length of stay of less than or equal to 120 days
Denominator Details	Inpatient Encounters are represented using the QDM datatype and value set of Encounter, Performed: Encounter Inpatient (OID: 2.16.840.1.113883.3.117.1.7.1.25). Length of stay is calculated within the measure based on encounter start and end dates. Single term newborns are represented by the following QDM datatypes and value sets: o Physical Exam, Performed: Estimated Gestational Age at Birth (Result>=37 weeks) using Estimated Gestational Age at Birth SNOMEDCT Value Set (OID: 2.16.840.1.113762.1.4.1045.47) o Diagnosis, Active: Single Live Birth using Single Live Birth SNOMEDCT Value Set (2.16.840.1.113883.3.117.1.7.1.25)

	2830 PC-05 Exclusive Breast Milk Feeding
	o Diagnosis, Active Single Live Born Newborn Born in Hospital using Single Live Born Newborn Born in Hospital Grouping Value Set (2.16.840.1.113883.3.117.1.7.1.26) - Galactosemia is represented using the QDM datatype and value set of Diagnosis, Active: Galactosemia (OID: 2.16.840.1.113883.3.117.1.7.1.35) - Parenteral Nutrition is represented using the QDM datatype and value set of Procedure, Performed: Parenteral Nutrition (OID: 2.16.840.1.113883.3.117.1.7.1.38)
Exclusions	- Newborns who were admitted to the Neonatal Intensive Care Unit (NICU) - Newborns who were transferred to an acute care facility - Newborns who expired during the hospitalization
Exclusion details	NICU admissions, transfers to another facility, and patient expiration are all represented in QDM as attributes of the inpatient encounter. o facility location: Neonatal Intensive Care Unit (NICU) (OID: 2.16.840.1.113883.3.117.1.7.1.75) o discharge status: Patient Expired (OID: 2.16.840.1.113883.3.117.1.7.1.309) o discharge status: Discharge to Acute Care Facility (OID: 2.16.840.1.113883.3.117.1.7.1.87)
Risk Adjustment	No risk adjustment or risk stratification Not Applicable
Stratification	Not Applicable
Type Score	Rate/proportion better quality = higher score
Algorithm	See attached HQMF file Available at measure-specific web page URL identified in S.1
Copyright / Disclaimer	5.1 Identified measures: 0480 : PC-05 Exclusive Breast Milk Feeding 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: #0480: Exclusive Breast Milk Feeding: The measures are completely harmonized to the extent possible, given the fact that the data source for #0480 is the paper medical record, and the data source for #2830 is the electronic health record. 5b.1 If competing, why superior or rationale for additive value: Not Applicable

	2902 Contraceptive Care - Postpartum
Status	Submitted
Steward	US Office of Population Affairs
Description	Among women ages 15 through 44 who had a live birth, the percentage that is provided: 1) A most effective (i.e., sterilization, implants, intrauterine devices or systems (IUD/IUS)) or moderately (i.e., injectables, oral pills, patch, ring, or diaphragm) effective method of contraception within 3 and 60 days of delivery. 2) A long-acting reversible method of contraception (LARC) within 3 and 60 days of delivery. Two time periods are proposed (i.e., within 3 and within 60 days of delivery) because each reflects important clinical recommendations from the U.S. Centers for Disease Control and Prevention (CDC) and the American College of Obstetricians and Gynecologists (ACOG). The 60-day period reflects ACOG recommendations that women should receive contraceptive care at the 6-week postpartum visit. The 3-day period reflects CDC and ACOG recommendations that the immediate postpartum period (i.e., at delivery, while the woman is in the hospital) is a safe time to provide contraception, which may offer greater convenience to the client and avoid missed opportunities to provide contraceptive care.
Type	Intermediate Clinical Outcome
Data Source	Administrative claims Adminisrative claims data are used to calculate the measure. The data request should include an eligibility file, paid and denied claims with diagnosis codes and procedures codes (HCPCS, CPT, and ICD-9-PCS/ICD-10-PCS), as well as NDC codes. Attachment Codes_2014_and_2015_Postpartum_Contraception.xlsx
Level	Health Plan, Population : Regional
Setting	
Numerator Statement	Primary measure: Women ages 15 through 44 who had a live birth and were provided a most (sterilization, intrauterine device, implant) or moderately (pill, patch, ring, injectable, diaphragm) effective method of contraception within 3 and 60 days of delivery. Sub-measure: Women ages 15 through 44 who had a live birth and were provided a long-acting reversible method of contraception (LARC) within 3 and 60 days of delivery.
Numerator Details	The target population is women ages 15- 44 who had a live birth and were provided a most or moderately effective method (primary measure) or a LARC method (sub-measure) of contraception. All claims codes are found in the attached Excel files. To identify the numerator, follow these steps: Step 1 Use the codes in Table PCU-C to identify women who were provided a most (sterilization, IUD, implant) or moderately (injection, oral pills, patch, ring, or diaphragm) effective method of contraception in the measurement year. Use the codes in PCU-E to identify women who were provided a LARC method.

	2902 Contraceptive Care - Postpartum
	Step 2 The long-acting reversible contraceptive (LARC) methods of intrauterine devices (IUD) and implants can be removed at the woman's request so adjustments must be made to reflect this. Use the codes in Table PCU -D to identify women who had their IUD or implant removed at any point during the measurement year. Check to see if they had an IUD or implant reinserted on the same or a subsequent date. [For the primary measure] If there is no code indicating reinsertion, use the codes in Table PCU -E to determine whether a woman was provided another most or moderately effective method. Do so by looking back over the 30 days prior to the removal (since a woman may receive a prescription for another method prior to the removal) as well as the period after the LARC removal. If there is no code for reinsertion or provision of another most or moderately effective method, consider them as a non-user. Step 3 Subtract the number of women identified as non-users of contraception in step 2 from those identified in step 1 to determine the numerator. Calculate the numerator separately for the two age groups: adolescents and adults.
Denominator Statement	Women ages 15 through 44 who had a live birth in a 12-month measurement year.
Denominator Details	The target population is women ages 15 through 44 who had a live birth in a 12-month measurement year. In a Medicaid population, this includes women who were enrolled from the date of delivery to 60 days postpartum.
Exclusions	The following categories are excluded from the denominator: (1) deliveries that did not end in a live birth (i.e., miscarriage, ectopic, stillbirth or induced abortion); and (2) deliveries that occurred during the last two months of the measurement year.
Exclusion details	Women are excluded from the denominator if they did not have an opportunity to receive contraception in the postpartum period (defined as within 60 days of delivery). All claims codes are found in the attached Excel files. Follow the steps below to identify the eligible population: Step 1 Identify live births and deliveries by using codes in Table PCU-A (we used the codes developed for the HEDIS measure of Prenatal and Postnatal care). Some women may have more than one delivery in the measurement year; the measure is designed to identify unique live births (defined as those that occur >180 days apart) rather than women who had a live birth. Step 2 Exclude deliveries that did not end in a live birth (i.e., miscarriage, ectopic, stillbirth, or pregnancy termination) by using the codes in Table PCU-B . We used the codes developed to identify live births for the HEDIS measure of Prenatal and Postnatal Care. Step 3 Exclude deliveries that occurred during the last 2 months of the measurement year. These deliveries should be excluded from the denominator because there may not have been an opportunity to provide the mother with contraception during the postpartum period. A two-month period was selected because the American College of Obstetricians and Gynecologists (ACOG) recommends having a postpartum visit by

	2902 Contraceptive Care - Postpartum
	6 weeks, and an additional 2 weeks was added to allow for reasonable delays in attending the postpartum visit.
Risk Adjustment	No risk adjustment or risk stratification We do not believe that risk adjustment is justified. Although there are possible variations in contraceptive provision by socio-demographic characteristics, the reason for those patterns is based on modifiable clinical and programmatic considerations ra
Stratification	The primary stratification variable is age, so that adolescents can be examined separately from adult women. We propose this stratification for purposes of QI but not as a method of risk adjustment. Teen pregnancy is worthy of a separate focus becaus
Type Score	Rate/proportion better quality = score within a defined interval
Algorithm	Step 1 Identify live births that occurred in the measurement year. Some women may have more than one delivery in the measurement year; the measure is designed to identify unique live births (defined as those that occur >180 days apart) rather than women who had a live birth. Step 2 Exclude the following deliveries: • Those that did not end in a live birth (i.e., miscarriage, ectopic, stillbirth, or pregnancy termination). • Those that occurred during the last 2 months of the measurement year. These deliveries should be excluded from the denominator because there may not have been an opportunity to provide the mother with contraception during the postpartum period. Step 3 Define the numerator by identifying women who were provided a most (sterilization, IUD, implant) or moderately (injection, oral pills, patch, ring, or diaphragm) effective method of contraception in the measurement year (primary measure). For the sub-measure, identify women who were provided a LARC method. Step 4 Determine the date that the contraceptive method was provided, to identify women who were rovided it: (a) within 3 day sof delivery, and (b) within 60 days of delivery. Step 5 Divide the number of women using a most or moderately effective method [or LARC, for the sub-measure] by the number of eligible women in the denominator. Calculate the rates separately for the two age groups: adolescents and adults. Available in attached appendix at A.1
Copyright / Disclaimer	5.1 Identified measures: 1517 : Prenatal & Postpartum Care (PPC) 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value: The proposed measure considers contraceptive care for the same population addressed in the

	2902 Contraceptive Care - Postpartum
	NCQA measure on prenatal and postpartum care (PPC) (NQF#1517), although the measures address different types of services. We have aligned the contraceptive measure with the PCC measure to the extent possible, with regard to identifying the population of women with live births.

	2903 Contraceptive Care – Most & Moderately Effective Methods
Status	Submitted
Steward	US Office of Population Affairs
Description	The percentage of women aged 15-44 years at risk of unintended pregnancy that is provided a most effective (i.e., sterilization, implants, intrauterine devices or systems (IUD/IUS)) or moderately effective (i.e., injectables, oral pills, patch, ring, or diaphragm) FDA-approved methods of contraception. The proposed measure is an intermediate outcome measure because it represents a decision that is made at the end of a clinical encounter about the type of contraceptive method a woman will use, and because of the strong association between type of contraceptive method used and risk of unintended pregnancy.
Type	Intermediate Clinical Outcome
Data Source	Administrative claims Adminisrative claims data are used to calculate the measure. The data request should include an eligibility file, paid and denied claims with diagnosis codes and procedures codes (HCPCS, CPT, and ICD-9-PCS/ICD-10-PCS), as well as NDC codes. Available in attached appendix at A.1 Attachment Codes_2014_and_2015_MOST_MOD.xlsx
Level	Facility, Health Plan, Population : Regional, Population : State
Setting	
Numerator Statement	Women aged 15-44 years of age at risk of unintended pregnancy who are provided a most (sterilization, intrauterine device, implant) or moderately (pill, patch, ring, injectable, diaphragm) effective method of contraception.
Numerator Details	The target population is eligible women 15-44 years of age who are provided a most or moderately effective method of contraception. To identify the numerator, follow these steps: Step 1 Define the numerator by identifying women who used a most (sterilization, IUD, implant) or moderately (injection, oral pills, patch, ring, or diaphragm) effective method of contraception in the measurement year. To do this, use the codes in Table UCM-E. Step 2 Adjust for LARC removals and re-insertions. The LARC methods can be removed at the woman's request so adjustments must be made to reflect this. Use the codes in Table UCM-F to identify women who had their IUD or implant removed at any point during the measurement year. Check to see if they had an IUD or implant reinserted on the same or a subsequent date. If there is no code indicating reinsertion, use the codes in Table UCM-E to determine whether a woman was provided another most or moderately effective method. Do so by looking back over the 30 days prior to the removal (since a woman may receive a prescription for another method prior to the removal) as well as the period after the LARC removal (i.e., through the end of the measurement year). If there is no code for reinsertion or provision of another most or moderately effective method, consider them as a non-user.

	2903 Contraceptive Care – Most & Moderately Effective Methods
	Step 3 Calculate the rates by dividing the number of women who used a most or moderately effective method of contraception by the number of women in the denominator. Calculate the rates separately for adolescents and adults.
Denominator Statement	Women aged 15-44 years of age who are at risk of unintended pregnancy.
Denominator Details	The target population is women of reproductive age (i.e., ages 15–44 years). In a Medicaid population, this includes: • Women in the general Medicaid program who were continuously enrolled during the measurement year, i.e., had no more than one gap in enrollment of up to 45 days. To determine continuous enrollment for a Medicaid enrollee for whom enrollment is verified monthly, the enrollee may not have more than a 1-month gap in coverage (i.e., an enrollee whose coverage lapses for 2 months is not considered continuously enrolled) • All women participating in a state-sponsored family planning-specific Section 1115 waiver or in a family–planning specific state plan amendment (SPA) program, even if they were not continuously enrolled. This is because the primary intent of these waiver and/or SPA programs is to provide family planning services, including contraception.
Exclusions	The following categories of women are excluded from the denominator: (1) those who are infecund for non-contraceptive reasons; (2) those who had a live birth in the last 2 months of the measurement year; or (3) those who were still pregnant or their pregnancy outcome was unknown at the end of the year.
Exclusion details	Follow the steps below to identify the denominator. The tables that are referenced are found in the attached Excel files (one file is for 2014 and the second is for 2015). Step 1 Identify and exclude women who were infecund due to non-contraceptive reasons such as natural menopause or oophorectomy. To do this, use the codes listed in Table UCM-A. Step 2 Identify women who were pregnant at any point in the measurement year by using the codes listed in Table UCM-B. We obtained this list of codes by reviewing the following documents, and including all pregnancy-related codes: • CMS & NCHS (2011). ICD-9-CM Official Guidelines for Coding and Reporting, effective October 1, 2011. Available online at: http://www.cdc.gov/nchs/icd/icd9cm_addenda_guidelines.htm. • CMS & NCHS (2016). ICD-10-CM Official Guidelines for Coding and Reporting FY 2016 Available online at: http://www.cdc.gov/nchs/icd/icd10cm.htm. Step 3 Among women who were pregnant at any point in the measurement year, exclude those who: • Had a live birth in the last 2 months of the measurement year because there may not have been an opportunity to provide them with contraception. A two-month period was selected because the American College of Obstetricians and Gynecologists (ACOG) recommends having a postpartum visit by 6 weeks, and an additional 2 weeks

	2903 Contraceptive Care – Most & Moderately Effective Methods
	was added to allow for reasonable delays in attending the postpartum visit. To identify live births, use the codes listed in Table UCM-D. This list of codes is drawn from the HEDIS measure of Prenatal and Postnatal care. • Were still pregnant at the end of the year because they did not have a pregnancy outcome code indicating a non-live birth (Table UCM-C) or a live birth (Table UCM-D). Codes for non-live births were also drawn from the HEDIS measure of Prenatal and Postnatal Care. Once the exclusions are applied, the denominator includes women who: • Were not pregnant at any point in the measurement year, • Were pregnant during the measurement year but whose pregnancy ended in the first 10 months of the measurement year, since there was adequate time to provide contraception in the postpartum period. • Were pregnant during the measurement year but whose pregnancy ended in an ectopic pregnancy, stillbirth, miscarriage, or induced abortion.
Risk Adjustment	No risk adjustment or risk stratification We do not believe that risk adjustment is justified. Although there are some variations in contraceptive use by socio-demographic characteristics, the reason for those patterns is based on modifiable clinical and programmatic considerations rather than
Stratification	The primary stratification variable is age, so that adolescents can be examined separately from adult women. We recommend this for purposes of QI, rather than for purposes of risk stratification. Teen pregnancy is worthy of a separate focus because of t
Type Score	Rate/proportion better quality = higher score
Algorithm	Step 1 Identify all women aged 15-44 years of age who were enrolled in the health plan or program. In the case of general Medicaid, include women who were continuously enrolled (i.e., had no more than one gap in enrollment of up to 45 days). In the case of women enrolled in a family planning-specific expansion program (1115 waiver or state plan amendment), include all women even if they do not meet the continuous enrollment criteria because the reason for their visit is related to pregnancy prevention. Step 2 Define the denominator by excluding women who: (a) are infecund for non-contraceptive reasons; (b) had a live birth in the last 2 months of the measurement year; or (c) were still pregnant or their pregnancy outcome was unknown at the end of the year. Once exclusions are applied, the following groups of women will be included in the denominator: (a) those who were were not pregnant at any point in the measurement year; (b) those who had a live birth in the first 10 months of the measurement year; and (c) those who had a known miscarriage, stillbirth, ectopic pregnancy, or induced abortion during the measurement year. Step 3 Define the numerator by using claims codes to identify women who

	2903 Contraceptive Care – Most & Moderately Effective Methods
	adopted or continued use of one of the following methods of contraception in the measurement year: sterilization, IUD, implant, contraceptive injection, contraceptive pills, patch, ring, or diaphragm. Adjust for LARC removals, in the manner specified above. Step 4 Calculate the rates by dividing the number who used a most or moderately effective method of contraception by the number of women in the denominator. Calculate the rates separately for adolescents and adults. Available in attached appendix at A.1
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value: NOTE: OPA is submitting two other applications for NQF endorsement, which are complementary to this measure application. One of the applications focuses on use of most and moderately effective contraceptive methods in a key sub-population of women at risk of unintended pregnancy, i.e., postpartum women. The other application focuses on use of a sub-set of contraceptive methods, i.e., use of long-acting reversible contraception (LARC); the goal of this measure to monitor whether women have access to LARC methods as determined by whether any units report very low levels of LARC use (e.g., less than 1-2 percent) or at a level that is substantially below the mean when compared to other reporting units.

	2904 Contraceptive Care - Access to LARC
Status	Submitted
Steward	US Office of Population Affairs
Description	Percentage of women aged 15-44 years at risk of unintended pregnancy that is provided a long-acting reversible method of contraception (i.e., implants, intrauterine devices or systems (IUD/IUS). It is an access measure because it is intended to identify situations in which women do not have access to the long-acting reversible methods of contraception (LARC), i.e., contraceptive implants and intrauterine devices.
Type	Structure
Data Source	Administrative claims Administrative claims data are used to calculate the measure. The data request should include an eligibility file, paid and denied claims with diagnosis codes and procedures codes (HCPCS, CPT, and ICD-9-PCS/ICD-10-PCS), as well as NDC codes. Available in attached appendix at A.1 Attachment Codes_2014_and_2015_LARC.xlsx
Level	Facility, Health Plan, Population : Regional, Population : State
Setting	
Numerator Statement	Women aged 15-44 years of age at risk of unintended pregnancy who were provided a long-acting reversible method of contraception (LARC), i.e., intrauterine device or implant.
Numerator Details	The target population is eligible women 15-44 years of age who were provided a long-acting reversible method of contraception (LARC). To identify the numerator, follow these steps: Step 1 Define the numerator by identifying women who used a a long-acting reversible method of contraception (LARC) in the measurement year. To do this, use the codes in Table UCM-E. Step 2 Adjust for LARC removals and re-insertions. The LARC methods can be removed at the woman's request so adjustments must be made to reflect this. Use the codes in Table UCM-F to identify women who had their IUD or implant removed at any point during the measurement year. Check to see if they had an IUD or implant reinserted on the same or a subsequent date through the end of the measurement year. If there is no code for reinsertion or provision of another most or moderately effective method, consider them as a non-user of LARC. Step 3 Calculate the rates by dividing the number of women who used a most or moderately effective method of contraception by the number of women in the denominator. Calculate the rates separately for adolescents and adults.
Denominator Statement	All women aged 15-44 years of age who are at risk of unintended pregnancy.
Denominator Details	The target population is women of reproductive age (i.e., ages 15–44 years). In a Medicaid population, this includes: • Women in the general Medicaid program who were continuously enrolled during the measurement year, i.e., had no more than one gap in enrollment of up to

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	45 days. To determine continuous enrollment for a Medicaid enrollee for whom enrollment is verified monthly, the enrollee may not have more than a 1-month gap in coverage (i.e., an enrollee whose coverage lapses for 2 months is not considered continuously enrolled) • All women participating in a state-sponsored family planning-specific Section 1115 waiver or in a family–planning specific state plan amendment (SPA) program, even if they were not continuously enrolled. This is because the primary intent of these waiver and/or SPA programs is to provide family planning services, including contraception.
Exclusions	The following categories of women are excluded from the denominator: (1) those who are infecund for non-contraceptive reasons; (2) women who had a live birth in the last 2 months of the measurement year; or (3) women were still pregnant or their pregnancy outcome was unknown at the end of the year.
Exclusion details	Follow the steps below to identify the denominator. The tables that are referenced are found in the attached Excel files (one file is for 2014 and the second is for 2015). Step 1 Identify and exclude women who were infecund due to non-contraceptive reasons such as natural menopause or oophorectomy. To do this, use the codes listed in Table UCM-A. Step 2 Identify women who were pregnant at any point in the measurement year by using the codes listed in Table UCM-B. We obtained this list of codes by reviewing the following documents, and including all pregnancy-related codes: • CMS & NCHS (2011). ICD-9-CM Official Guidelines for Coding and Reporting, effective October 1, 2011. Available online at: http://www.cdc.gov/nchs/icd/icd9cm_addenda_guidelines.htm. • CMS & NCHS (2016). ICD-10-CM Official Guidelines for Coding and Reporting FY 2016 Available online at: http://www.cdc.gov/nchs/icd/icd10cm.htm. Step 3 Among women who were pregnant at any point in the measurement year, exclude those who: • Had a live birth in the last 2 months of the measurement year because there may not have been an opportunity to provide them with contraception. A two-month period was selected because the American College of Obstetricians and Gynecologists (ACOG) recommends having a postpartum visit by 6 weeks, and an additional 2 weeks was added to allow for reasonable delays in attending the postpartum visit. To identify live births, use the codes listed in Table UCM-D. This list of codes is drawn from the HEDIS measure of Prenatal and Postnatal care. • Were still pregnant at the end of the year because they did not have a pregnancy outcome code indicating a non-live birth (Table UCM-C) or a live birth (Table UCM-D). Codes for non-live births were also drawn from the HEDIS measure of Prenatal and Postnatal Care. Once the exclusions are applied, the denominator includes women who: were not pregnant at any point in the measurement year; were pregnant during the

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	measurement year but whose pregnancy ended in the first 10 months of the measurement year, since there was adequate time to provide contraception in the postpartum period; or were pregnant during the measurement year but whose pregnancy ended in an ectopic pregnancy, stillbirth, miscarriage, or induced abortion.
Risk Adjustment	No risk adjustment or risk stratification We do not believe that risk adjustment is justified. Although there are some variations in LARC use by socio-demographic characteristics, the reason for those patterns is based on modifiable clinical and programmatic considerations rather than differing
Stratification	The primary stratification variable is age, so that adolescents can be examined separately from adult women. The is for purposes of quality improvement, and not risk adjustment. Teen pregnancy is worthy of a separate focus because of the largepotentia
Type Score	Rate/proportion better quality = score within a defined interval
Algorithm	Step 1 Identify all women aged 15-44 years of age who were enrolled in the health plan or program. In the case of general Medicaid, include women who were continuously enrolled (i.e., had no more than one gap in enrollment of up to 45 days). In the case of women enrolled in a family planning-specific expansion program (1115 waiver or state plan amendment), include all women even if they do not meet the continuous enrollment criteria because the reason for their visit is related to pregnancy prevention. Step 2 Define the denominator by excluding women who: (a) are infecund for non-contraceptive reasons; (b) had a live birth in the last 2 months of the measurement year; or (c) were still pregnant or their pregnancy outcome was unknown at the end of the year. Once exclusions are applied, the following groups of women will be included in the denominator: (a) those who were were not pregnant at any point in the measurement year; (b) those who had a live birth in the first 10 months of the measurement year; and (c) those who had a known miscarriage, stillbirth, ectopic pregnancy, or induced abortion during the measurement year. Step 3 Define the numerator by using claims codes to identify women who adopted or continued use of a long-acting reversible method of contraception (LARC), i.e., IUD or implant. Adjust for LARC removals, in the manner specified above. Step 4 Calculate the rates by dividing the number who used a long-acting reversible method of contraception (LARC) by the number of women in the denominator. Calculate the rates separately for adolescents and adults. Available in attached appendix at A.1
Copyright / Disclaimer	5.1 Identified measures: 5a.1 Are specs completely harmonized?

	2904 Contraceptive Care - Access to LARC
	5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value: NOTE: OPA is submitting two other applications for NQF endorsement, which are complementary to this measure application. One of the applications focuses on use of most and moderately effective contraceptive methods in a key sub-population of women at risk of unintended pregnancy, i.e., postpartum women. The other application focuses on use of most (sterilization, IUD, implant) and moderately (shot, pill, patch, ring, diaphragm) effective methods of contraception, of which LARC methods are a subset.

Appendix F: Related and Competing Measures

Comparison of NQF 0033 and NQF 0409

	0033: Chlamydia Screening in Women (CHL)	0409: HIV/AIDS: Sexually Transmitted Diseases – Screening for Chlamydia, Gonorrhea, and Syphilis
Steward	National Committee for Quality Assurance	National Committee for Quality Assurance
Description	The percentage of women 16–24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year.	Percentage of patients aged 13 years and older with a diagnosis of HIV/AIDS, who have received chlamydia, gonorrhea, and syphilis screenings at least once since the diagnosis of HIV infection
Type	Process	Process
Data Source	Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy This measure is based on administrative claims collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from Health Management Organizations and Preferred Provider Organizations via NCQA's online data submission system. No data collection instrument provided Attachment 0033_CHL_Value_Sets.xlsx	Electronic Clinical Data : Electronic Health Record N/A No data dictionary
Level	Health Plan, Integrated Delivery System	Clinician : Group/Practice, Clinician : Individual
Setting	Ambulatory Care : Clinician Office/Clinic	Ambulatory Care : Clinician Office/Clinic
Numerator Statement	Females who were tested for chlamydia during the measurement year.	Patients who have received chlamydia, gonorrhea, and syphilis screenings at least once since the diagnosis of HIV infection
Numerator Details	Females who had at least one test for chlamydia (see attached: Chlamydia Tests Value Set) during the measurement year.	
Denominator Statement	Females 16-24 years who had a claim or encounter indicating sexual activity.	All patients aged 13 years and older with a diagnosis of HIV/AIDS, who had at least two visits during the measurement year, with at least 90 days between visits
Denominator	All female patients 16-24 years as of December 31 of the	Definition of "Medical Visit" - any visit with a health care professional

	0033: Chlamydia Screening in Women (CHL)	0409: HIV/AIDS: Sexually Transmitted Diseases – Screening for Chlamydia, Gonorrhea, and Syphilis
Details	measurement year and who were identified as sexually active during the measurement year. Sexually active: Two methods are used to identify sexually active women: pharmacy data (see CHL-A: Prescriptions to Identify Contraceptives) and claim/encounter data (see attached: Pregnancy Value Set, Sexual Activity Value Set, and Pregnancy Tests Value Set). Both methods are used to identify the eligible population; however, a patient only needs to be identified in one method to be eligible for the measure. Table CHL-A: Prescriptions to Identify Contraceptives --Contraceptives: Desogestrel-ethinyl estradiol; Dienogest-estradiol multiphasic; Drospirenone-ethinyl estradiol; Drospirenone-ethinyl estradiol-levomefolate biphasic; Ethinyl estradiol-ethynodiol; Ethinyl estradiol-etonogestrel; Ethinyl estradiol-levonorgestrel; Ethinyl estradiol-norelgestromin; Ethinyl estradiol-norethindrone; Ethinyl estradiol-norgestimate; Ethinyl estradiol-norgestrel; Etonogestrel; Levonorgestrel; Medroxyprogesterone; Mestranol-norethindrone; Norethindrone --Diaphragm --Spermicide: Nonxynol 9	who provides routine primary care for the patient with HIV/AIDS (may be a primary care physician, ob/gyn, pediatrician or infectious diseases specialist)
Exclusions	Females who received a pregnancy test to determine contraindications for medication (isotretinoin) or x-ray.	None
Exclusion Details	Exclude members from the denominator who were identified as sexually active based on a pregnancy test alone (see attached: Pregnancy Tests Value Set) AND who meet either of the following: 1) A pregnancy test (see attached: Pregnancy Test Exclusion Value Set) during the measurement year AND a prescription for isotretinoin (see Table CHL-E: Medications to Identify Exclusions) on the date of the pregnancy test or the 6 days after the pregnancy	N/A

	0033: Chlamydia Screening in Women (CHL)	0409: HIV/AIDS: Sexually Transmitted Diseases – Screening for Chlamydia, Gonorrhea, and Syphilis
	test. 2) A pregnancy test (see attached: Pregnancy Test Exclusion Value Set) during the measurement year AND a x-ray (see attached: Diagnostic Radiology Value Set) on the date of the pregnancy test or the 6 days after the pregnancy test. Table CHL-E: Medications to Identify Exclusions Retinoid: Isotretinoin	
Risk Adjustment	No risk adjustment or risk stratification NA	No risk adjustment or risk stratification N/A
Stratification	The measure includes two age stratifications and a total rate: 1) 16-20 years. 2) 21-24 years. 3) Total	N/A
Type Score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score
Algorithm	Refer to items S.9 (Denominator details) and S.2b (Data Dictionary) for tables. Step 1 Determine the eligible population. To do so, identify all female patients in the specified age range who had a claim/encounter indicating sexual activity (Pregnancy Value Set, Sexual Activity Value Set, Pregnancy Tests Value Set) and/or were dispensed prescription contraceptives (Table CHL-A) during the measurement year. Step 2 Exclude patients who qualified for the eligible population based on a pregnancy test (Pregnancy Tests Value Set) alone AND who meet either of the following: (1) A pregnancy test (Pregnancy Test Exclusion Value Set) during the measurement year AND a prescription for isotretinoin (Table CHL-E) on the date of the pregnancy test or the 6 days after the pregnancy test, (2) A	Measure Calculation For performance purposes, this measure is calculated by creating a fraction with the following components: Denominator, Numerator. Step 1: Determine the eligible population. The eligible population is all the patients, aged 13 years and older, with a diagnosis of HIV/AIDS. Step 2: Determine number of patients meeting the denominator criteria as specified in Section S.7 above. Step 3: Determine the number of patients who meet the numerator criteria as specified in section S.4 above. The numerator includes all patients in the denominator population who have received chlamydia, gonorrhea, and syphilis screenings at least once since the diagnosis of HIV/AIDS. Step 4: Calculate the rate by dividing the total from Step 3 by the total from Step 2.

	0033: Chlamydia Screening in Women (CHL)	0409: HIV/AIDS: Sexually Transmitted Diseases – Screening for Chlamydia, Gonorrhea, and Syphilis
	pregnancy test (Pregnancy Test Exclusion Value Set) during the measurement year AND an x-ray (Diagnostic Radiology Value Set) on the date of the pregnancy test or the 6 days after the pregnancy test. Step 3 Determine the numerator. Determine the number of patients in the remaining eligible population who had at least one chlamydia test (Chlamydia Tests Value Set) during the measurement year. Step 4 Report two age stratifications (16-20 years and 21-24 years), and a total rate. The total is the sum of the age stratifications. No diagram provided	
Submission items	5.1 Identified measures: 0409 : HIV/AIDS: Sexually Transmitted Diseases – Screening for Chlamydia, Gonorrhea, and Syphilis 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: NQF #0409 both address chlamydia screening. However, the measures differ in the target patient populations. NQF #0409 looks for chlamydia screenings among males and females aged 13 and older with a diagnosis of HIV/AIDS. This measures focuses on women aged 16-24 with an indication of sexual activity, which aligns with the U.S. Preventive Services Task Force guideline for chlamydia screening in a general population. The measures are aligned in how they define chlamydia screening. 5b.1 If competing, why superior or rationale for additive value: NA	5.1 Identified measures: 0033 : Chlamydia Screening in Women (CHL) 1395 : Chlamydia Screening and Follow Up 5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: Measures 0033 and 1395 focus on sexually active female adolescents and young adults, while the HIV measure focuses on patients with HIV (both male and female) because patients with HIV are at higher risk for having a comorbid sexually transmitted infection. The frequency of screening also differs – because 0033 focuses on sexually active individuals, the screening frequency is yearly, whereas this measure measures screenings at least once since the diagnosis of HIV. 5b.1 If competing, why superior or rationale for additive value:

Comparison of NQF 0304, 0478, and NQF 1731

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
Steward	Vermont Oxford Network	Agency for Healthcare Research and Quality	The Joint Commission
Description	Standardized morbidity ratio and observed minus expected measure for nosocomial bacterial infection after day 3 of life in very low birth weight infants	Discharges with healthcare-associated blood stream infection per 1,000 discharges for newborns and outborns with birth weight of 500 grams or more but less than 1,500 grams; with gestational age between 24 and 30 weeks; or with birth weight of 1,500 grams or more and death, an operating room procedure, mechanical ventilation, or transferring from another hospital within two days of birth. Excludes discharges with a length of stay less than 3 days and discharges with a principal diagnosis of sepsis, sepsis or bacteremia, or newborn bacteremia.	This measure assesses the number of staphylococcal and gram negative septicemias or bacteremias in high-risk 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 Birth, PC-03: Antenatal Steroids, PC-05: Exclusive Breast Milk Feeding).
Type	Outcome	Outcome	Outcome
Data Source	Electronic Clinical Data : Registry Vermont Oxford Network Database No data collection instrument provided Attachment 0304_ICD_Code_Tables.xlsx	Administrative claims While the measure is tested and specified using data from the Healthcare Cost and Utilization Project (HCUP) (see section 1.1 and 1.2 of the measure testing form), the measure specifications and software are specified to be used with any ICD-9-CM- or ICD-10-CM/PCS coded administrative billing/claims/discharge dataset. Available at measure-specific web page URL identified in S.1 Attachment	Paper Medical Records 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

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		NQI03_Tech_Specs_v6.1alpha_160211xlsx.xlsx	measure set to hospitals until verification has been passed. No data collection instrument provided Attachment PC04_ICD_Code_Tables.xlsx
Level	Facility	Facility	Facility, Population : National
Setting	Hospital/Acute Care Facility	Hospital/Acute Care Facility	Hospital/Acute Care Facility
Numerator Statement	Eligible infants with one or more of the following criteria: Criterion 1: Bacterial Pathogen. A bacterial pathogen is recovered from a blood and/or cerebral spinal fluid culture obtained after Day 3 of life. OR Criterion 2: Coagulase Negative Staphylococcus. The infant has all 3 of the following: 1. Coagulase negative staphylococcus is recovered from a blood culture obtained from either a central line, or peripheral blood sample and/or is recovered from cerebrospinal fluid obtained by lumbar puncture, ventricular tap or ventricular drain. 2. One or more signs of generalized infection (such as apnea, temperature instability, feeding intolerance, worsening respiratory distress or	Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either: • any secondary ICD-9-CM or ICD-10 CM diagnosis codes for other septicemia; or • any secondary ICD-9-CM or ICD-10 CM diagnosis codes for newborn septicemia or bacteremia and • any secondary ICD-9-CM or ICD-10 CM diagnosis codes for staphylococcal or Gram-negative bacterial infection	The outcome being measured is: Newborns with septicemia or bacteremia with ICD-10-CM Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Confirmed OR ICD-10-CM Other Diagnosis Codes for sepsis as defined in Appendix A, Table 11.10.1 with a Bloodstream Infection Confirmed available at: http://manual.jointcommission.org/releases/TJC2015B2/ The only national hospital quality measure currently requiring patient-level risk adjustment is the Health Care-Associated Bloodstream Infections in Newborns (PC-04) outcome measure in the perinatal care measure set.

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	hemodynamic instability). 3. Teatment with 5 or more days of intravenous antibiotics after the above cultures were obtained. If the infant died, was discharged, or transferred prior to the completion of 5 days of intravenous antibiotics, this condition would still be met if the intention were to treat for 5 or more days.		
Numerator Details	Infants whose birth weight is between 401 and 1500 grams or whose gestational age is between 22 weeks 0 days and 29 weeks 6 days are included if they have coagulase negative staphylococcus or one of the bacterial pathogens listed below after day 3 of life, provided they meet one of the following criteria: 1. They are born at the reporting hospital. OR 2. They are admitted to any location in the reporting hospital within 28 days of birth, without first having gone home. Bacterial Pathogens List: 1. Achromobacter species [including Achromobacter xylosoxidans (also known as Alcaligenes xylosoxidans) and others] 2. Acinetobacter species	Please see attached excel file in S.2b. for version 6.1 alpha specifications.	Two data elements are used for the observed outcome and to calculate the numerator: 1. Bloodstream Infection Confirmed-Confirmation that a health care-associated bloodstream infection occurred after the first 48 hours after admission. 2. ICD-10-CM Other Diagnosis Codes- The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. Cases are eligible for the numerator population with ICD-10-CM Other Diagnosis Code for newborn septicemia or bacteremia with the presence of a health care-associated bloodstream infection confirmed OR an ICD-10-CM Other Diagnosis Codes for sepsis with the presence of a health care-associated

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	3. Aeromonas species 4. Alcaligenes species [Alcaligenes xylosoxidans and others] 5. Bacteroides species 6. Burkholderia species [Burkholderia capecia and others] 7. Campylobacter species [Campylobacter fetus, C. jejuni and others] 8. Chryseobacterium species 9. Citrobacter species [Citrobacter diversus, C. freundii, C. koseri and others] 10. Clostridium species 11. Enterobacter species [Enterobacter aerogenes, E. cloacae, and others] 12. Enterococcus species [Enterococcus faecalis (also known as Streptococcus faecalis), E.faecium, and other Enterococcus species] 13. Escherichia coli 14. Flavobacterium species 15. Haemophilus species [Haemophilus influenzae and others] 16. Klebsiella species [Klebsiella oxytoca, K. pneumoniae and others] 17. Listeria monocytogenes 18. Moraxella species [Moraxella catarrhalis (also known as Branhamella catarrhalis) and others]		bloodstream infection confirmed. Updates available at: https://manual.jointcommission.org/releases/TJC2015B2/.

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	19. Neisseria species [Neisseria meningitidis, N. gonorrhoeae and others] 20. Pasteurella species 21. Prevotella species 22. Proteus species [Proteus mirabilis, P. vulgaris and others] 23. Providencia species [Providencia rettgeri, and others] 24. Pseudomonas species [Pseudomonas aeruginosa and others] 25. Ralstonia species 26. Salmonella species 27. Serratia species [Serratia liquefaciens, S. marcescens and others] 28. Staphylococcus coagulase positive [aureus] 29. Stenotrophomonas maltophilia 30. Streptococcus species [including Streptococcus Group A, Streptococcus Group B, Streptococcus Group D, Streptococcus pneumoniae, Strep milleri and others]		
Denominator Statement	Eligible infants who are in the reporting hospital after day 3 of life.	All newborns and outborns with either: • a birth weight of 500 to 1,499 grams (Birth Weight Categories 2, 3, 4 and 5); or • any-listed ICD-9-CM or ICD-10 CM diagnosis codes for gestational age between	The outcome target population being measured is: Liveborn newborns with ICD-10-CM Other Diagnosis Codes for birth weight between 500 and 1499g as defined in Appendix A, Table 11.12, 11.13 or 11.14 OR

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		24 and 30 weeks; or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and death (DISP=20); or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM or ICD-10 PCS procedure codes for operating room procedure; or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM or ICD-10 PCS procedure codes for mechanical ventilation; or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and transferring from another health care facility within two days of birth See Pediatric Quality Indicators Appendices: • Appendix A – Operating Room Procedure Codes • Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn • Appendix L – Low Birth Weight Categories	Birth Weight between 500 and 1499g OR ICD-10-CM Other Diagnosis Codes for birth weight = > 1500g as defined in Appendix A, Table 11.15 or 11.16 OR Birth Weight = > 1500g who experienced one or more of the following: o Experienced death o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for major surgery as defined in Appendix A, Table 11.18 o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for mechanical ventilation as defined in Appendix A, Table 11.19 o Transferred in from another acute care hospital or health care setting within 2 days of birth.
Denominator Details	Infants whose birth weights are between 401 and 1500 grams or whose gestational ages are between 22 weeks 0 days and 29	Please see attached excel file in S.2b. for version 6.1 alpha specifications.	Eleven data elements are used to identify the target population and to calculate the denominator:

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	weeks 6 days are included if they are in the reporting hospital after day 3 of life, provided they meet one of the following criteria: 1. They are born at the reporting hospital. OR 2. They are admitted to any location in the reporting hospital within 28 days of birth, without first having gone home.		1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Birth Weight- The weight (in grams) of a newborn at the time of delivery. 3. Birthdate - The month, day and year the patient was born. 4. Bloodstream Infection Present on Admission- Documentation in the medical record that the patient had a bloodstream infection present on admission. This includes both patients with positive blood cultures or inconclusive blood cultures when the patient is suspected of having a bloodstream infection or septicemia and is being treated for the condition. Allowable values: Yes or No/UTD 5. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients who are newborns were being studied. Allowable values: Yes or No/UTD 6. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay. 7. Discharge Disposition - The place or setting to which the patient was discharged. 8. ICD-10-CM Other Diagnosis Codes - The

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
			International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 9. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 10. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 11. ICD-10-PCS Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System 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. Updates available at:

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
			https://manual.jointcommission.org/releases/TJC2015B2/.
Exclusions	Infants who do not meet eligibility criteria for birth weight, gestational age or hospital admission, or if the infant is discharged home, is transferred or dies prior to day 3 of life.	Exclude cases: • with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis • with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis or bacteremia • with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for staphylococcal or Gram-negative bacterial infection • with birth weight less than 500 grams (Birth Weight Category 1) • with length of stay less than 3 days • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing) † Only for cases that otherwise qualify for the numerator.	• ICD-10-CM Principal Diagnosis Code for septicemias or bacteremias as defined in Appendix A, Table 11.10.2 • ICD-10-CM Other Diagnosis Codes for septicemias or bacteremias as defined in Appendix A, Table 11.10.2 or ICD-10-CM Principal or Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Present on Admission • ICD-10-CM Other Diagnosis Codes for birth weight < 500g as defined in Appendix A, Table 11.20 OR Birth Weight < 500g • Length of Stay < 2 days • Enrolled in clinical trials
Exclusion Details	1. Any infant who meets neither of the following conditions is excluded: - Birth weight between 401 and 1500 grams - Gestational age between 22 and 29	Please see attached excel file in S.2b. for version 6.1 alpha specifications.	• Patients with ICD-10-CM Principal Diagnosis Code for septicemias or bacteremias are excluded. • Patients with ICD-10-CM Other Diagnosis Codes for septicemias or bacteremias with a

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	weeks. 2. Outborn infants who are admitted to the reporting hospital more than 28 days after birth are excluded. 3. Outborn infants who have been home prior to admission to the reporting hospital are excluded. 4. Infants discharged home on or before day 3 of life are excluded. 5. Infants who die on or before day 3 of life are excluded. 6. Infants who transfer to another hospital on or before day 3 of life and who are not readmitted to the reporting hospital. 7. Infants who transfer more than once prior to day 3 of life.		Bloodstream Infection Present on Admission are excluded. • Patients with ICD-10-CM Principal or Other Diagnosis Codes for newborn septicemia or bacteremia with a Bloodstream Infection Present on Admission are excluded. • Patients with ICD-10-CM Other Diagnosis Codes for birth weight <500 grams OR a birth weight <500 grams are excluded. • Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is less than 2 days, the patient is excluded. • Patients are excluded if "Yes" is selected for Clinical Trial.
Risk Adjustment	Statistical risk model Logistic regression with shrinkage estimate - see S. 15a Provided in response box S.15a	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, birthweight (in 500g groups), modified CMS DRG, congenital anomolies, transfer in status and Major Diagno Available in attached Excel or csv file at S.2b	Statistical risk model Logistic regression Model Risk Factors Considered: Intercept Intercept Birth Weight 1250g to 2499g Birth Weight 1000 to 1249g Birth Weight 500 to 749g Birth Weight 750 to 750g Modified DRG Newborn Transfers Out or Died Congenital Anomaly Gastrointestin

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
			Available in attached Excel or csv file at S.2b
Stratification	N/A	Not applicable	Not applicable, the measure is not stratified.
Type Score	Other Standardized morbidity ratio and observed minus expected values with confidence bounds better quality = lower score	Rate/proportion better quality = lower score	Rate/proportion better quality = lower score
Algorithm	1.Determine the number of infants for a reporting period who meet the population criteria described above. This number is termed N. 2.Using the definitions in the Network Manual of Operations, determine the number of infants who had nosocomial bacterial infection after day 3 of life and prior to discharge home for each of the N infants. This is the number of eligible infants who were diagnosed as having either coagulase negative staphylococcus and/or a late bacterial pathogen after day 3 of life. The number identified as having nosocomial bacterial infection is termed the "observed number with infection" or O for short. 3.For each of the N infants, calculate the expected value of infection by multiplying the coefficient times its covariate value for each covariate (coefficients provided on request). The covariates include: Gestational Age in completed weeks (GA)	The observed rate is the number of discharge records where the patient experienced the QI adverse event divided by the number of discharge records at risk for the event. The expected rate is a comparative rate that incorporates information about a reference population that is not part of the user's input dataset – what rate would be observed if the expected level of care observed in the reference population and estimated with risk adjustment regression models, were applied to the mix of patients with demographic and comorbidity distributions observed in the user's dataset? The expected rate is calculated only for risk-adjusted indicators. The expected rate is estimated for each person using a generalized estimating equations (GEE) approach to account for correlation at the hospital or provider level. The risk-adjusted rate is a comparative rate that also incorporates information about a reference population that is not part of the	1. Start processing. Run cases that are included in the PC-Newborn Initial Patient Newborns with BSI and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Calculate Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date. 3. Check Length of Stay a. If Length of Stay is less than 2 days, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If Length of Stay is greater than or equal to 2 days, continue processing and proceed to Clinical Trial. 4. 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

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	GA squared Small for Gestational Age (data table provided on request) Major birth defect (0=No, 1=Yes) APGAR score at 1 minute (0 to 10) Birth location (0=Inborn, 1=Outborn) Multiple gestation (0=No, 1=Yes) Infant gender (0=Female, 1=Male) Mode of delivery (0=C-Section, 1=Vaginal) 4. Add the expected values for each of the N infants to calculate the number of expected cases of nosocomial bacterial infection. This number is termed the "expected number with infection" or E for short. 5. Calculate the standardized morbidity ratio (SMRshrnk) for nosocomial bacterial infection using the values for O and E and applying the estimate for systematic variation (v2), determined from Vermont Oxford Network analyses (provided on request). SMRshrnk = (O + v2) / (E + v2) with standard error SESMRshrnk=sqrt(1/(E+(1/v2))); 6. Calculate the shrunken, adjusted nosocomial bacterial infection rate (Rateshrnk) and its 95% confidence interval.	input dataset – what rate would be observed if the level of care observed in the user's dataset were applied to a mix of patients with demographics and comorbidities distributed like the reference population? The risk adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The smoothed rate is the weighted average of the risk-adjusted rate from the user's input dataset and the rate observed in the reference population; the smoothed rate is calculated with a shrinkage estimator to result in a rate near that from the user's dataset if the provider's rate is estimated in a stable fashion with minimal noise, or to result in a rate near that of the reference population if the variance of the estimated rate from the input dataset is large compared with the hospital-to-hospital variance estimated from the reference population. Thus, the smoothed rate is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. In practice, the smoothed rate brings rates toward the mean, and tends to do this more so for outliers (such as rural hospitals).	of B and will not be in the measure population. Stop processing. c. If Clinical Trial equals No, continue processing and proceed to ICD-10-CM Principal or Other Diagnosis Codes. 5. Check ICD-10-CM Principal or Other Diagnosis Codes a. If none of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.10, continue processing and proceed to ICD-10-CM Other Diagnosis Codes 1. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on Table 11.10.2, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 7). 2. If at least one of the ICD-10-CM Other Diagnosis Codes is on Table 11.10.2, continue processing and proceed to Bloodstream Infection Present on Admission. b. If at least one of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.10, continue processing and proceed to Bloodstream Infection Present on Admission. 6. Check Bloodstream Infection Present on Admission a. If Bloodstream Infection Present on Admission is missing, the case will proceed to

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	Rateshrnk = (SMRshrnk x E) / N with standard error (SERateshrnk) equal to SESMRshrnk x E) / N . and 95% confidence interval for Rateshrnk equal to Rateshrnk ± 1.96 × SERateshrnk. 7. Calculate the number of observed minus expected cases of nosocomial bacterial infection, adjusting for case mix and systematic variation (O–Eshrnk), and calculate the 95% control limits for O–Eshrnk. O–Eshrnk = E / SMRshrnk with 95% control limits equal to O–Eshrnk ± 1.96 × SESMRshrnk x E. URL	For additional information, please see the supplemental files for the Empirical Methods. No diagram provided	a Measure Category Assignment of X and will be rejected. Stop processing. b. If Bloodstream Infection Present on Admission 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 Bloodstream Infection Present on Admission equals No, continue processing and proceed to check ICD-10-CM Other Diagnosis Codes. 7. Check ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on Table 11.12, 11.13, 11.14, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 13). b. If all of the ICD-10-CM Other Diagnosis Codes are missing, continue processing and proceed to Birth Weight. c. If none of the ICD-10-CM Other Diagnosis Codes is on Table 11.12, 11.13, 11.14, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 8). 8. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes on table 11.15, 11.16, continue processing and proceed to ICD-10-

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			CM Principal or Other Procedure Codes. b. If none of the ICD-10-CM Other Diagnosis Codes on table 11.15, 11.16, continue processing and proceed to Birth Weight. 9. Check Birth Weight a. If Birth Weight is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Birth Weight 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. c. If Birth Weight is less than 500, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. d. If Birth Weight is between 500 and 1499, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step13). e. If Birth Weight is greater than or equal to 1500, continue processing and proceed to ICD-10-PCS Principal or Other Procedure Codes. 10. Check ICD-10-PCS Principal or Other Procedure Codes a. If at least one of the ICD-10-PCS Principal or Other Procedure Codes is on table 11.18

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
			or 11.19, continue processing and proceed to recheck ICD-10-PCS Other Diagnosis Codes (Step 13). b. If all of the ICD-10-PCS Principal or Other Procedure Codes are missing or none of the ICD-10-PCS Principal or Other Procedure Codes is on table 11.18 or 11.19, continue processing and proceed to ICD-10-CM Principal Diagnosis Code. 11. Check ICD-10-CM Principal Diagnosis Code a. If ICD-10-CM Principal Diagnosis Code is not on table 11.10.3, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 13). b. If ICD-10-CM Principal Diagnosis Code is on table 11.10.3, continue processing and proceed to Discharge Disposition. 12. Check Discharge Disposition a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Discharge Disposition equals 1, 2, 3, 4, 5, 7, 8, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Discharge Disposition equals 6, continue

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			processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step13). 13. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on table 11.10, continue processing and proceed to Bloodstream Infection Confirmed. b. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on table 11.10, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step14). 14. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on table 11.10.1, continue processing and proceed to Bloodstream Infection Confirmed. b. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on table 11.10.1, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. 15. Check Bloodstream Infection Confirmed a. If Bloodstream Infection Confirmed is missing, the case will proceed to a Measure

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
			Category Assignment of X and will be rejected. Stop processing. b. If Bloodstream Infection Confirmed equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. c. If Bloodstream Infection Confirmed equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Calculation of adjusted outcome: Step 1 -- Identify the measure population through Measure Category Assignments. Risk adjusted rate-based measure: Identify the numerator (Measure Category Assignment = E) and the denominator (Measure Category Assignment = D) cases using the information provided in the Measure Information Form (MIF). Risk adjusted continuous variable measure: Identify the number of cases in the measure population (Measure Category Assignment = D). At this time, there are no risk adjusted continuous outcome measures in any of the national hospital quality measure sets. Note: Do not calculate a Predicted Value for a case if it is rejected by front-end edits or is rejected because one or more measures in

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
			the measure set evaluates to a Measure Category Assignment = X. Step 2 -- Create risk factors for the measure. Using the Risk Model Information File provided by the Joint Commission, identify all applicable EOC record data elements and the associated risk factor values for each of the EOC records identified instep 1. Risk factors include patient demographic and/or clinical factors, which can influence outcomes of care. Some examples of risk factors include age, sex, and comorbidities – such as diabetes or a history of hypertension. As an example, Figure 1 lists the data elements required for risk adjustment of generic measure 'ABC'. Using the data for measure 'ABC', the performance measurement system must identify the risk factors at the EOC record-level, and create data subsets for each participating hospital. Available at measure-specific web page URL identified in S.1
Submission items	5.1 Identified measures: 0478 : Neonatal Blood Stream Infection Rate (NQI 03) 1731 : PC-04 Health Care-Associated Bloodstream Infections in Newborns 5a.1 Are specs completely harmonized? No	5.1 Identified measures: 1731 : PC-04 Health Care-Associated Bloodstream Infections in Newborns 5a.1 Are specs completely harmonized?	5.1 Identified measures: 0304 : Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted) 0478 : Neonatal Blood Stream Infection Rate (NQI 03)

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	5a.2 If not completely harmonized, identify difference, rationale, impact: The target populations are different, as are the item definitions and risk adjustment methodology. 5b.1 If competing, why superior or rationale for additive value: N/A	5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value: Our understanding is that The Joint Commission (TJC) intents to submit "Health Care-Associated Bloodstream Infections in Newborns (PC-04)" under the call for measures. In anticipation of this, AHRQ and TJC have agreed to harmonize our measures to the extent feasible given alternative data sources. (The AHRQ QI is an existing NQF endorsed measure; the TJC measure is a newly submitted measure). There are three specification differences related to data availability in the TJC measure specification. First, hospitals report to TJC the actual birth weight from the medical record (rather than coded birth weight using ICD-9-CM); Second, hospitals report whether the patient has a signed consent form for participation in a clinical trial. Therefore, the TJC specification does not include an inclusion criteria related to gestational age as in the AHRQ QI (rather, actual birthweight is used as an alternative to coded birth weight). The TJC also includes an exclusion for enrollment in a clinical trial. The AHRQ QI	5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0304 addresses infections in the newborn. Measure 0304 evaluates very low birth weight newborns for both late sepsis and meningitis with birth weights between 401 and 1500 Gms and a gestational age between 22 weeks 0 days and 28 weeks six days. Measure 0304 also evaluates all newborns who are in the hospital after 3 days of birth. Numerator inclusions for measure 0304 are a bacterial pathogen recovered from a blood culture and/or cerebrospinal fluid culture obtained after Day 3 of life OR all 3 of the following: 1.) Coagulase Negative Staphylococcus recovered from a blood culture from either a central line or peripheral blood sample and/or is recovered from cerebrospinal fluid by lumbar puncture, ventricular tap or ventricular drain 2.) One or more signs of generalized infection (i.e., apnea, temperature instability, feeding intolerance, worsening respiratory distress or hemodynamic instability) and 3.) Treatment with 5 or more days of intravenous antibiotics. The major differences between

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		contains no such exclusion. Finally, TJC excludes stays of more than 120 days for technical reasons related to the measure reporting period. This rationale does not apply to the AHRQ QI, and therefore the AHRQ QI has no such exclusion.	measure 0304 and measure 1731 are: • Measure 1731 does not include cases with meningitis based on results from cerebrospinal fluid cultures • Measure 1731 includes birth weights which are 500 Gms or more rather than 400 Gms or more, and measure 1731 also includes newborns 1500 gms or more with one or more specific medical indication: major surgery, mechanical ventilation, expired or transferred-in. • Measure 1731 excludes newborns born with infections within the first 48 hours of admission and newborns with bloodstream infections occurring after the first 48 hours after birth that are due to causes that are not health care-associated, i.e., necrotizing enterocolitis, urosepsis, etc. 5b.1 If competing, why superior or rationale for additive value: Measure 0478 is similar to this measure. The fundamental differences are that measure 0478 has been developed to collect all data elements using administrative data. Such an approach has led in some cases to loss of specificity available through review of the medical record. The two measures have been

	0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
			harmonized to the extent possible; however, there are intrinsic differences which are addressed in a comparison table in the attachment found in Section A.1 Supplemental Materials.

Comparison of NQF 0478 and NQF 1731

	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
Steward	Agency for Healthcare Research and Quality	The Joint Commission
Description	Discharges with healthcare-associated blood stream infection per 1,000 discharges for newborns and outborns with birth weight of 500 grams or more but less than 1,500 grams; with gestational age between 24 and 30 weeks; or with birth weight of 1,500 grams or more and death, an operating room procedure, mechanical ventilation, or transferring from another hospital within two days of birth. Excludes discharges with a length of stay less than 3 days and discharges with a principal diagnosis of sepsis, sepsis or bacteremia, or newborn bacteremia.	This measure assesses the number of staphylococcal and gram negative septicemias or bacteremias in high-risk 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 Birth, PC-03: Antenatal Steroids, PC-05: Exclusive Breast Milk Feeding).
Type	Outcome	Outcome
Data Source	Administrative claims While the measure is tested and specified using data from the Healthcare Cost and Utilization Project (HCUP) (see section 1.1 and 1.2 of the measure testing form), the measure specifications and software are specified to be used with any ICD-9-CM- or ICD-10-CM/PCS coded administrative billing/claims/discharge dataset.	Paper Medical Records 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

	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	Available at measure-specific web page URL identified in S.1 Attachment NQI03_Tech_Specs_v6.1alpha_160211xlsx.xlsx	specifications. The vendor may not offer the measure set to hospitals until verification has been passed. No data collection instrument provided Attachment PC04_ICD_Code_Tables.xlsx
Level	Facility	Facility, Population : National
Setting	Hospital/Acute Care Facility	Hospital/Acute Care Facility
Numerator Statement	Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either: • any secondary ICD-9-CM or ICD-10 CM diagnosis codes for other septicemia; or • any secondary ICD-9-CM or ICD-10 CM diagnosis codes for newborn septicemia or bacteremia and • any secondary ICD-9-CM or ICD-10 CM diagnosis codes for staphylococcal or Gram-negative bacterial infection	The outcome being measured is: Newborns with septicemia or bacteremia with ICD-10-CM Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Confirmed OR ICD-10-CM Other Diagnosis Codes for sepsis as defined in Appendix A, Table 11.10.1 with a Bloodstream Infection Confirmed available at: http://manual.jointcommission.org/releases/TJC2015B2/ The only national hospital quality measure currently requiring patient-level risk adjustment is the Health Care-Associated Bloodstream Infections in Newborns (PC-04) outcome measure in the perinatal care measure set.
Numerator Details	Please see attached excel file in S.2b. for version 6.1 alpha specifications.	Two data elements are used for the observed outcome and to calculate the numerator: 1. Bloodstream Infection Confirmed- Confirmation that a health care-associated bloodstream infection occurred after the first 48 hours after admission. 2. ICD-10-CM Other Diagnosis Codes- The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. Cases are eligible for the numerator population with ICD-10-CM Other Diagnosis Code for newborn septicemia or bacteremia with the presence of a health care-associated bloodstream infection confirmed

	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		OR an ICD-10-CM Other Diagnosis Codes for sepsis with the presence of a health care-associated bloodstream infection confirmed. Updates available at: https://manual.jointcommission.org/releases/TJC2015B2/.
Denominator Statement	All newborns and outborns with either: • a birth weight of 500 to 1,499 grams (Birth Weight Categories 2, 3, 4 and 5); or • any-listed ICD-9-CM or ICD-10 CM diagnosis codes for gestational age between 24 and 30 weeks; or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and death (DISP=20); or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM or ICD-10 PCS procedure codes for operating room procedure; or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM or ICD-10 PCS procedure codes for mechanical ventilation; or • a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and transferring from another health care facility within two days of birth See Pediatric Quality Indicators Appendices: • Appendix A – Operating Room Procedure Codes • Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn • Appendix L – Low Birth Weight Categories	The outcome target population being measured is: Liveborn newborns with ICD-10-CM Other Diagnosis Codes for birth weight between 500 and 1499g as defined in Appendix A, Table 11.12, 11.13 or 11.14 OR Birth Weight between 500 and 1499g OR ICD-10-CM Other Diagnosis Codes for birth weight = > 1500g as defined in Appendix A, Table 11.15 or 11.16 OR Birth Weight = > 1500g who experienced one or more of the following: o Experienced death o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for major surgery as defined in Appendix A, Table 11.18 o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for mechanical ventilation as defined in Appendix A, Table 11.19 o Transferred in from another acute care hospital or health care setting within 2 days of birth.
Denominator Details	Please see attached excel file in S.2b. for version 6.1 alpha specifications.	Eleven data elements are used to identify the target population and to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care.

	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		2. Birth Weight- The weight (in grams) of a newborn at the time of delivery. 3. Birthdate - The month, day and year the patient was born. 4. Bloodstream Infection Present on Admission- Documentation in the medical record that the patient had a bloodstream infection present on admission. This includes both patients with positive blood cultures or inconclusive blood cultures when the patient is suspected of having a bloodstream infection or septicemia and is being treated for the condition. Allowable values: Yes or No/UTD 5. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients who are newborns were being studied. Allowable values: Yes or No/UTD 6. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay. 7. Discharge Disposition - The place or setting to which the patient was discharged. 8. ICD-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 9. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 10. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 11. ICD-10-PCS Principal Procedure Code - The International

	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		Classification of Diseases, Tenth Revision, Procedure Coding System 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. Updates available at: https://manual.jointcommission.org/releases/TJC2015B2/.
Exclusions	Exclude cases: • with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis • with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis or bacteremia • with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for staphylococcal or Gram-negative bacterial infection • with birth weight less than 500 grams (Birth Weight Category 1) • with length of stay less than 3 days • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing) † Only for cases that otherwise qualify for the numerator.	• ICD-10-CM Principal Diagnosis Code for septicemias or bacteremias as defined in Appendix A, Table 11.10.2 • ICD-10-CM Other Diagnosis Codes for septicemias or bacteremias as defined in Appendix A, Table 11.10.2 or ICD-10-CM Principal or Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Present on Admission • ICD-10-CM Other Diagnosis Codes for birth weight < 500g as defined in Appendix A, Table 11.20 OR Birth Weight < 500g • Length of Stay < 2 days • Enrolled in clinical trials
Exclusion Details	Please see attached excel file in S.2b. for version 6.1 alpha specifications.	• Patients with ICD-10-CM Principal Diagnosis Code for septicemias or bacteremias are excluded. • Patients with ICD-10-CM Other Diagnosis Codes for septicemias or bacteremias with a Bloodstream Infection Present on Admission are excluded. • Patients with ICD-10-CM Principal or Other Diagnosis Codes for newborn septicemia or bacteremia with a Bloodstream Infection

	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		Present on Admission are excluded. • Patients with ICD-10-CM Other Diagnosis Codes for birth weight <500 grams OR a birth weight <500 grams are excluded. • Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is less than 2 days, the patient is excluded. • Patients are excluded if "Yes" is selected for Clinical Trial.
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, birthweight (in 500g groups), modified CMS DRG, congenital anomolies, transfer in status and Major Diagno Available in attached Excel or csv file at S.2b	Statistical risk model Logistic regression Model Risk Factors Considered: Intercept Intercept Birth Weight 1250g to 2499g Birth Weight 1000 to 1249g Birth Weight 500 to 749g Birth Weight 750 to 750g Modified DRG Newborn Transfers Out or Died Congenital Anomaly Gastrointestin Available in attached Excel or csv file at S.2b
Stratification	Not applicable	Not applicable, the measure is not stratified.
Type Score	Rate/proportion better quality = lower score	Rate/proportion better quality = lower score
Algorithm	The observed rate is the number of discharge records where the patient experienced the QI adverse event divided by the number of discharge records at risk for the event. The expected rate is a comparative rate that incorporates information about a reference population that is not part of the user's input dataset – what rate would be observed if the expected level of care observed in the reference population and estimated with risk adjustment regression models, were applied to the mix of patients with demographic and	1. Start processing. Run cases that are included in the PC-Newborn Initial Patient Newborns with BSI and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Calculate Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date. 3. Check Length of Stay a. If Length of Stay is less than 2 days, the case will proceed to a Measure Category Assignment of B and will not be in the measure

	0478: Neonatal Blood Stream Infection Rate (NQI 03)	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
	comorbidity distributions observed in the user's dataset? The expected rate is calculated only for risk-adjusted indicators. The expected rate is estimated for each person using a generalized estimating equations (GEE) approach to account for correlation at the hospital or provider level. The risk-adjusted rate is a comparative rate that also incorporates information about a reference population that is not part of the input dataset – what rate would be observed if the level of care observed in the user's dataset were applied to a mix of patients with demographics and comorbidities distributed like the reference population? The risk adjusted rate is calculated using the indirect method as observed rate divided by expected rate multiplied by the reference population rate. The smoothed rate is the weighted average of the risk-adjusted rate from the user's input dataset and the rate observed in the reference population; the smoothed rate is calculated with a shrinkage estimator to result in a rate near that from the user's dataset if the provider's rate is estimated in a stable fashion with minimal noise, or to result in a rate near that of the reference population if the variance of the estimated rate from the input dataset is large compared with the hospital-to-hospital variance estimated from the reference population. Thus, the smoothed rate is a weighted average of the risk-adjusted rate and the reference population rate, where the weight is the signal-to-noise ratio. In practice, the smoothed rate brings rates toward the mean, and tends to do this more so for outliers (such as rural hospitals). For additional information, please see the supplemental files for the Empirical Methods. No diagram provided	population. Stop processing. b. If Length of Stay is greater than or equal to 2 days, continue processing and proceed to Clinical Trial. 4. 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 ICD-10-CM Principal or Other Diagnosis Codes. 5. Check ICD-10-CM Principal or Other Diagnosis Codes a. If none of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.10, continue processing and proceed to ICD-10-CM Other Diagnosis Codes 1. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on Table 11.10.2, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 7). 2. If at least one of the ICD-10-CM Other Diagnosis Codes is on Table 11.10.2, continue processing and proceed to Bloodstream Infection Present on Admission. b. If at least one of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.10, continue processing and proceed to Bloodstream Infection Present on Admission. 6. Check Bloodstream Infection Present on Admission a. If Bloodstream Infection Present on Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

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		b. If Bloodstream Infection Present on Admission 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 Bloodstream Infection Present on Admission equals No, continue processing and proceed to check ICD-10-CM Other Diagnosis Codes. 7. Check ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on Table 11.12, 11.13, 11.14, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 13). b. If all of the ICD-10-CM Other Diagnosis Codes are missing, continue processing and proceed to Birth Weight. c. If none of the ICD-10-CM Other Diagnosis Codes is on Table 11.12, 11.13, 11.14, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 8). 8. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes on table 11.15, 11.16, continue processing and proceed to ICD-10-CM Principal or Other Procedure Codes. b. If none of the ICD-10-CM Other Diagnosis Codes on table 11.15, 11.16, continue processing and proceed to Birth Weight. 9. Check Birth Weight a. If Birth Weight is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Birth Weight 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. c. If Birth Weight is less than 500, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.

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		d. If Birth Weight is between 500 and 1499, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step13). e. If Birth Weight is greater than or equal to 1500, continue processing and proceed to ICD-10-PCS Principal or Other Procedure Codes. 10. Check ICD-10-PCS Principal or Other Procedure Codes a. If at least one of the ICD-10-PCS Principal or Other Procedure Codes is on table 11.18 or 11.19, continue processing and proceed to recheck ICD-10-PCS Other Diagnosis Codes (Step 13). b. If all of the ICD-10-PCS Principal or Other Procedure Codes are missing or none of the ICD-10-PCS Principal or Other Procedure Codes is on table 11.18 or 11.19, continue processing and proceed to ICD-10-CM Principal Diagnosis Code. 11. Check ICD-10-CM Principal Diagnosis Code a. If ICD-10-CM Principal Diagnosis Code is not on table 11.10.3, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 13). b. If ICD-10-CM Principal Diagnosis Code is on table 11.10.3, continue processing and proceed to Discharge Disposition. 12. Check Discharge Disposition a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Discharge Disposition equals 1, 2, 3, 4, 5, 7, 8, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Discharge Disposition equals 6, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step13). 13. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on table

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		11.10, continue processing and proceed to Bloodstream Infection Confirmed. b. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on table 11.10, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step14). 14. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on table 11.10.1, continue processing and proceed to Bloodstream Infection Confirmed. b. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on table 11.10.1, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. 15. Check Bloodstream Infection Confirmed a. If Bloodstream Infection Confirmed is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Bloodstream Infection Confirmed equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. c. If Bloodstream Infection Confirmed equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Calculation of adjusted outcome: Step 1 -- Identify the measure population through Measure Category Assignments. Risk adjusted rate-based measure: Identify the numerator (Measure Category Assignment = E) and the denominator (Measure Category

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		Assignment = D) cases using the information provided in the Measure Information Form (MIF). Risk adjusted continuous variable measure: Identify the number of cases in the measure population (Measure Category Assignment = D). At this time, there are no risk adjusted continuous outcome measures in any of the national hospital quality measure sets. Note: Do not calculate a Predicted Value for a case if it is rejected by front-end edits or is rejected because one or more measures in the measure set evaluates to a Measure Category Assignment = X. Step 2 -- Create risk factors for the measure. Using the Risk Model Information File provided by the Joint Commission, identify all applicable EOC record data elements and the associated risk factor values for each of the EOC records identified instep 1. Risk factors include patient demographic and/or clinical factors, which can influence outcomes of care. Some examples of risk factors include age, sex, and comorbidities – such as diabetes or a history of hypertension. As an example, Figure 1 lists the data elements required for risk adjustment of generic measure 'ABC'. Using the data for measure 'ABC', the performance measurement system must identify the risk factors at the EOC record-level, and create data subsets for each participating hospital. Available at measure-specific web page URL identified in S.1
Submission items	5.1 Identified measures: 1731 : PC-04 Health Care-Associated Bloodstream Infections in Newborns 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale,	5.1 Identified measures: 0304 : Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted) 0478 : Neonatal Blood Stream Infection Rate (NQI 03) 5a.1 Are specs completely harmonized? No

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	impact: 5b.1 If competing, why superior or rationale for additive value: Our understanding is that The Joint Commission (TJC) intents to submit "Health Care-Associated Bloodstream Infections in Newborns (PC-04)" under the call for measures. In anticipation of this, AHRQ and TJC have agreed to harmonize our measures to the extent feasible given alternative data sources. (The AHRQ QI is an existing NQF endorsed measure; the TJC measure is a newly submitted measure). There are three specification differences related to data availability in the TJC measure specification. First, hospitals report to TJC the actual birth weight from the medical record (rather than coded birth weight using ICD-9-CM); Second, hospitals report whether the patient has a signed consent form for participation in a clinical trial. Therefore, the TJC specification does not include an inclusion criteria related to gestational age as in the AHRQ QI (rather, actual birthweight is used as an alternative to coded birth weight). The TJC also includes an exclusion for enrollment in a clinical trial. The AHRQ QI contains no such exclusion. Finally, TJC excludes stays of more than 120 days for technical reasons related to the measure reporting period. This rationale does not apply to the AHRQ QI, and therefore the AHRQ QI has no such exclusion.	5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0304 addresses infections in the newborn. Measure 0304 evaluates very low birth weight newborns for both late sepsis and meningitis with birth weights between 401 and 1500 Gms and a gestational age between 22 weeks 0 days and 28 weeks six days. Measure 0304 also evaluates all newborns who are in the hospital after 3 days of birth. Numerator inclusions for measure 0304 are a bacterial pathogen recovered from a blood culture and/or cerebrospinal fluid culture obtained after Day 3 of life OR all 3 of the following: 1.) Coagulase Negative Staphylococcus recovered from a blood culture from either a central line or peripheral blood sample and/or is recovered from cerebrospinal fluid by lumbar puncture, ventricular tap or ventricular drain 2.) One or more signs of generalized infection (i.e., apnea, temperature instability, feeding intolerance, worsening respiratory distress or hemodynamic instability) and 3.) Treatment with 5 or more days of intravenous antibiotics. The major differences between measure 0304 and measure 1731 are: • Measure 1731 does not include cases with meningitis based on results from cerebrospinal fluid cultures • Measure 1731 includes birth weights which are 500 Gms or more rather than 400 Gms or more, and measure 1731 also includes newborns 1500 gms or more with one or more specific medical indication: major surgery, mechanical ventilation, expired or transferred-in. • Measure 1731 excludes newborns born with infections within the first 48 hours of admission and newborns with bloodstream infections occurring after the first 48 hours after birth that are due to causes that are not health care-associated, i.e., necrotizing enterocolitis, urosepsis, etc. 5b.1 If competing, why superior or rationale for additive value:

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		Measure 0478 is similar to this measure. The fundamental differences are that measure 0478 has been developed to collect all data elements using administrative data. Such an approach has led in some cases to loss of specificity available through review of the medical record. The two measures have been harmonized to the extent possible; however, there are intrinsic differences which are addressed in a comparison table in the attachment found in Section A.1 Supplemental Materials.

Comparison of NQF 0480 and NQF 1731

	0480: PC-05 Exclusive Breast Milk Feeding	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
Steward	The Joint Commission	The Joint Commission
Description	PC-05 assesses the number of newborns exclusively fed breast milk during the newborn's entire hospitalization. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-02: Cesarean Birth, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns).	This measure assesses the number of staphylococcal and gram negative septicemias or bacteremias in high-risk 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 Birth, PC-03: Antenatal Steroids, PC-05: Exclusive Breast Milk Feeding).
Type	Process	Outcome
Data Source	Electronic Clinical Data, Paper Medical Records 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 has	Paper Medical Records 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 has been passed.

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	been passed. No data collection instrument provided Attachment PC05_ICD_Code_Tables.xlsx	No data collection instrument provided Attachment PC04_ICD_Code_Tables.xlsx
Level	Facility, Population : National	Facility, Population : National
Setting	Hospital/Acute Care Facility	Hospital/Acute Care Facility
Numerator Statement	Newborns that were fed breast milk only since birth	The outcome being measured is: Newborns with septicemia or bacteremia with ICD-10-CM Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Confirmed OR ICD-10-CM Other Diagnosis Codes for sepsis as defined in Appendix A, Table 11.10.1 with a Bloodstream Infection Confirmed available at: http://manual.jointcommission.org/releases/TJC2015B2/ The only national hospital quality measure currently requiring patient-level risk adjustment is the Health Care-Associated Bloodstream Infections in Newborns (PC-04) outcome measure in the perinatal care measure set.
Numerator Details	One data element is used to calculate the numerator: 1. Exclusive Breast Milk Feeding - Documentation that the newborn was exclusively fed breast milk during the entire hospitalization. Allowable Values: Yes or No/UTD. Cases are eligible for the numerator when allowable value = yes. Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/	Two data elements are used for the observed outcome and to calculate the numerator: 1. Bloodstream Infection Confirmed- Confirmation that a health care-associated bloodstream infection occurred after the first 48 hours after admission. 2. ICD-10-CM Other Diagnosis Codes- The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. Cases are eligible for the numerator population with ICD-10-CM Other Diagnosis Code for newborn septicemia or bacteremia with the presence of a health care-associated bloodstream infection confirmed OR an ICD-10-CM Other Diagnosis Codes for sepsis with the presence of a health care-associated bloodstream infection confirmed.

	0480: PC-05 Exclusive Breast Milk Feeding	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		Updates available at: https://manual.jointcommission.org/releases/TJC2015B2/.
Denominator Statement	Single term liveborn newborns discharged alive from the hospital with ICD-10-CM Principal Diagnosis Code for single liveborn newborn as defined in Appendix A, Table 11.20.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/	The outcome target population being measured is: Liveborn newborns with ICD-10-CM Other Diagnosis Codes for birth weight between 500 and 1499g as defined in Appendix A, Table 11.12, 11.13 or 11.14 OR Birth Weight between 500 and 1499g OR ICD-10-CM Other Diagnosis Codes for birth weight = > 1500g as defined in Appendix A, Table 11.15 or 11.16 OR Birth Weight = > 1500g who experienced one or more of the following: o Experienced death o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for major surgery as defined in Appendix A, Table 11.18 o ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for mechanical ventilation as defined in Appendix A, Table 11.19 o Transferred in from another acute care hospital or health care setting within 2 days of birth.
Denominator Details	Eleven data elements are used to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Admission to NICU - Documentation that the newborn was admitted to the Neonatal Intensive Care Unit (NICU) at this hospital any time during the hospitalization. Allowable values: Yes or No/UTD 3. Birthdate - The month, day and year the patient was born. 4. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients who are newborns were being studied. Allowable values: Yes or No/UTD 5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay.	Eleven data elements are used to identify the target population and to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Birth Weight- The weight (in grams) of a newborn at the time of delivery. 3. Birthdate - The month, day and year the patient was born. 4. Bloodstream Infection Present on Admission- Documentation in the medical record that the patient had a bloodstream infection present on admission. This includes both patients with positive blood cultures or inconclusive blood cultures when the patient is suspected of having a bloodstream infection or septicemia and is being treated for the condition. Allowable values: Yes or No/UTD 5. Clinical Trial - Documentation that during this hospital stay the patient

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	6. Discharge Disposition - The place or setting to which the patient was discharged. 7. ICD-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 8. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 9. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 10. ICD-10-CM Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System 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. 11. Term Newborn - Documentation that the newborn was at term or >= 37 completed weeks of gestation at the time of birth. Allowable values: Yes or No/UTD Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/	was enrolled in a clinical trial in which patients who are newborns were being studied. Allowable values: Yes or No/UTD 6. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay. 7. Discharge Disposition - The place or setting to which the patient was discharged. 8. ICD-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 9. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 10. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 11. ICD-10-PCS Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System 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. Updates available at: https://manual.jointcommission.org/releases/TJC2015B2/.
Exclusions	• Admitted to the Neonatal Intensive Care Unit (NICU) at this hospital during the hospitalization	• ICD-10-CM Principal Diagnosis Code for septicemias or bacteremias as defined in Appendix A, Table 11.10.2

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	• ICD-10-CM Other Diagnosis Codes for galactosemia as defined in Appendix A, Table 11.21 • ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for parenteral infusion as defined in Appendix A, Table 11.22 • Experienced death • Length of Stay >120 days • Enrolled in clinical trials • Patients transferred to another hospital • Patients who are not term or with < 37 weeks gestation completed	• ICD-10-CM Other Diagnosis Codes for septicemias or bacteremias as defined in Appendix A, Table 11.10.2 or ICD-10-CM Principal or Other Diagnosis Codes for newborn septicemia or bacteremia as defined in Appendix A, Table 11.10 with a Bloodstream Infection Present on Admission • ICD-10-CM Other Diagnosis Codes for birth weight < 500g as defined in Appendix A, Table 11.20 OR Birth Weight < 500g • Length of Stay < 2 days • Enrolled in clinical trials
Exclusion Details	• The data element Admission to NICU is used to determine if the patient was admitted to the NICU. • Patients with ICD-10-CM Other Diagnosis Codes for galactosemia are excluded. • Patients with ICD-10-PCS Principal Procedure Code or ICD-10-PMS Other Procedure Codes for parenteral infusion 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 Discharge Disposition is used to determine if the patient was transferred to another hospital or expired. • The data element Term Newborn is used to determine if the patient was not term or < 37 completed weeks of gestation.	• Patients with ICD-10-CM Principal Diagnosis Code for septicemias or bacteremias are excluded. • Patients with ICD-10-CM Other Diagnosis Codes for septicemias or bacteremias with a Bloodstream Infection Present on Admission are excluded. • Patients with ICD-10-CM Principal or Other Diagnosis Codes for newborn septicemia or bacteremia with a Bloodstream Infection Present on Admission are excluded. • Patients with ICD-10-CM Other Diagnosis Codes for birth weight <500 grams OR a birth weight <500 grams are excluded. • Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is less than 2 days, the patient is excluded. • Patients are excluded if "Yes" is selected for Clinical Trial.
Risk Adjustment	No risk adjustment or risk stratification Not Applicable	Statistical risk model Logistic regression Model Risk Factors Considered: Intercept Intercept

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		Birth Weight 1250g to 2499g Birth Weight 1000 to 1249g Birth Weight 500 to 749g Birth Weight 750 to 750g Modified DRG Newborn Transfers Out or Died Congenital Anomaly Gastrointestin Available in attached Excel or csv file at S.2b
Stratification	Not Applicable	Not applicable, the measure is not stratified.
Type Score	Rate/proportion better quality = higher score	Rate/proportion better quality = lower score
Algorithm	1. Start processing. Run cases that are included in the PC-Newborn Initial Patient Newborns with Breast Feeding and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Check Discharge Disposition a. If Discharge Status equals 4, 6, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If Discharge Status equals 1, 2, 3, 5, 7, 8, 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 Term Newborn. 4. Check Term Newborn	1. Start processing. Run cases that are included in the PC-Newborn Initial Patient Newborns with BSI and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Calculate Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date. 3. Check Length of Stay a. If Length of Stay is less than 2 days, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If Length of Stay is greater than or equal to 2 days, continue processing and proceed to Clinical Trial. 4. 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 ICD-10-CM Principal or Other Diagnosis Codes.

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	a. If Term Newborn is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Term Newborn 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 Term Newborn equals No, continue processing and proceed to Admission to NICU. 5. Check Admission to NICU a. If Admission to NICU is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Admission to NICU 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 Admission to NICU equals No, continue processing and proceed to Exclusive Breast Milk Feeding. 6. Check Exclusive Breast Milk Feeding a. If Exclusive Breast Milk Feeding is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Exclusive Breast Milk Feeding equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. c. If Exclusive Breast Milk Feeding equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1	5. Check ICD-10-CM Principal or Other Diagnosis Codes a. If none of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.10, continue processing and proceed to ICD-10-CM Other Diagnosis Codes 1. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on Table 11.10.2, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 7). 2. If at least one of the ICD-10-CM Other Diagnosis Codes is on Table 11.10.2, continue processing and proceed to Bloodstream Infection Present on Admission. b. If at least one of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.10, continue processing and proceed to Bloodstream Infection Present on Admission. 6. Check Bloodstream Infection Present on Admission a. If Bloodstream Infection Present on Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Bloodstream Infection Present on Admission 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 Bloodstream Infection Present on Admission equals No, continue processing and proceed to check ICD-10-CM Other Diagnosis Codes. 7. Check ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on Table 11.12, 11.13, 11.14, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 13). b. If all of the ICD-10-CM Other Diagnosis Codes are missing, continue processing and proceed to Birth Weight.

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		c. If none of the ICD-10-CM Other Diagnosis Codes is on Table 11.12, 11.13, 11.14, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 8). 8. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes on table 11.15, 11.16, continue processing and proceed to ICD-10-CM Principal or Other Procedure Codes. b. If none of the ICD-10-CM Other Diagnosis Codes on table 11.15, 11.16, continue processing and proceed to Birth Weight. 9. Check Birth Weight a. If Birth Weight is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Birth Weight 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. c. If Birth Weight is less than 500, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. d. If Birth Weight is between 500 and 1499, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step13). e. If Birth Weight is greater than or equal to 1500, continue processing and proceed to ICD-10-PCS Principal or Other Procedure Codes. 10. Check ICD-10-PCS Principal or Other Procedure Codes a. If at least one of the ICD-10-PCS Principal or Other Procedure Codes is on table 11.18 or 11.19, continue processing and proceed to recheck ICD-10-PCS Other Diagnosis Codes (Step 13). b. If all of the ICD-10-PCS Principal or Other Procedure Codes are missing or none of the ICD-10-PCS Principal or Other Procedure Codes is on table 11.18 or 11.19, continue processing and proceed to ICD-10-CM Principal

	0480: PC-05 Exclusive Breast Milk Feeding	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		Diagnosis Code. 11. Check ICD-10-CM Principal Diagnosis Code a. If ICD-10-CM Principal Diagnosis Code is not on table 11.10.3, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step 13). b. If ICD-10-CM Principal Diagnosis Code is on table 11.10.3, continue processing and proceed to Discharge Disposition. 12. Check Discharge Disposition a. If Discharge Disposition is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Discharge Disposition equals 1, 2, 3, 4, 5, 7, 8, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Discharge Disposition equals 6, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step13). 13. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on table 11.10, continue processing and proceed to Bloodstream Infection Confirmed. b. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on table 11.10, continue processing and proceed to recheck ICD-10-CM Other Diagnosis Codes (Step14). 14. Recheck ICD-10-CM Other Diagnosis Codes a. If at least one of the ICD-10-CM Other Diagnosis Codes is on table 11.10.1, continue processing and proceed to Bloodstream Infection Confirmed. b. If all of the ICD-10-CM Other Diagnosis Codes are missing or none of the ICD-10-CM Other Diagnosis Codes is on table 11.10.1, the case will

	0480: PC-05 Exclusive Breast Milk Feeding	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. 15. Check Bloodstream Infection Confirmed a. If Bloodstream Infection Confirmed is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Bloodstream Infection Confirmed equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. c. If Bloodstream Infection Confirmed equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Calculation of adjusted outcome: Step 1 -- Identify the measure population through Measure Category Assignments. Risk adjusted rate-based measure: Identify the numerator (Measure Category Assignment = E) and the denominator (Measure Category Assignment = D) cases using the information provided in the Measure Information Form (MIF). Risk adjusted continuous variable measure: Identify the number of cases in the measure population (Measure Category Assignment = D). At this time, there are no risk adjusted continuous outcome measures in any of the national hospital quality measure sets. Note: Do not calculate a Predicted Value for a case if it is rejected by front-end edits or is rejected because one or more measures in the measure set evaluates to a Measure Category Assignment = X. Step 2 -- Create risk factors for the measure. Using the Risk Model Information File provided by the Joint Commission,

	0480: PC-05 Exclusive Breast Milk Feeding	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		identify all applicable EOC record data elements and the associated risk factor values for each of the EOC records identified instep 1. Risk factors include patient demographic and/or clinical factors, which can influence outcomes of care. Some examples of risk factors include age, sex, and comorbidities – such as diabetes or a history of hypertension. As an example, Figure 1 lists the data elements required for risk adjustment of generic measure 'ABC'. Using the data for measure 'ABC', the performance measurement system must identify the risk factors at the EOC record-level, and create data subsets for each participating hospital. Available at measure-specific web page URL identified in S.1
Submission items	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: Not Applicable 5b.1 If competing, why superior or rationale for additive value: Not Applicable	5.1 Identified measures: 0304 : Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted) 0478 : Neonatal Blood Stream Infection Rate (NQI 03) 5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: Measure 0304 addresses infections in the newborn. Measure 0304 evaluates very low birth weight newborns for both late sepsis and meningitis with birth weights between 401 and 1500 Gms and a gestational age between 22 weeks 0 days and 28 weeks six days. Measure 0304 also evaluates all newborns who are in the hospital after 3 days of birth. Numerator inclusions for measure 0304 are a bacterial pathogen recovered from a blood culture and/or cerebrospinal fluid culture obtained after Day 3 of life OR all 3 of the following: 1.) Coagulase Negative Staphylococcus recovered from a blood culture from either a central line or peripheral blood sample and/or is recovered from cerebrospinal fluid by lumbar puncture, ventricular tap or ventricular drain 2.) One or more signs of generalized infection (i.e., apnea,

	0480: PC-05 Exclusive Breast Milk Feeding	1731: PC-04 Health Care-Associated Bloodstream Infections in Newborns
		temperature instability, feeding intolerance, worsening respiratory distress or hemodynamic instability) and 3.) Treatment with 5 or more days of intravenous antibiotics. The major differences between measure 0304 and measure 1731 are: • Measure 1731 does not include cases with meningitis based on results from cerebrospinal fluid cultures • Measure 1731 includes birth weights which are 500 Gms or more rather than 400 Gms or more, and measure 1731 also includes newborns 1500 gms or more with one or more specific medical indication: major surgery, mechanical ventilation, expired or transferred-in. • Measure 1731 excludes newborns born with infections within the first 48 hours of admission and newborns with bloodstream infections occurring after the first 48 hours after birth that are due to causes that are not health care-associated, i.e., necrotizing enterocolitis, urosepsis, etc. 5b.1 If competing, why superior or rationale for additive value: Measure 0478 is similar to this measure. The fundamental differences are that measure 0478 has been developed to collect all data elements using administrative data. Such an approach has led in some cases to loss of specificity available through review of the medical record. The two measures have been harmonized to the extent possible; however, there are intrinsic differences which are addressed in a comparison table in the attachment found in Section A.1 Supplemental Materials.

Comparison of NQF 1391 and NQF 1517

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
Steward	National Committee for Quality Assurance	National Committee for Quality Assurance
Description	The percentage of Medicaid deliveries that had the following number of expected prenatal visits: • less than 21 percent of expected visits. • 21 percent–40 percent of expected visits. • 41 percent–60 percent of expected visits. • 61 percent–80 percent of expected visits. • greater than or equal to 81 percent of expected visits.	The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year. For these women, the measure assesses the following facets of prenatal and postpartum care: Rate 1: Timeliness of Prenatal Care. The percentage of deliveries that received a prenatal care visit as a member of the organization in the first trimester or within 42 days of enrollment in the organization. Rate 2: Postpartum Care. The percentage of deliveries that had a postpartum visit on or between 21 and 56 days after delivery.
Type	Process	Process
Data Source	Administrative claims, Electronic Clinical Data, Paper Medical Records This measure is based on administrative claims and medical record documentation collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from Health Management Organizations and Preferred Provider Organizations via NCQA's online data submission system. No data collection instrument provided Attachment 1391_FPC_Value_Sets.xlsx	Administrative claims, Electronic Clinical Data, Paper Medical Records This measure is based on administrative claims and medical record documentation collected in the course of providing care to health plan members. NCQA collects the Healthcare Effectiveness Data and Information Set (HEDIS) data for this measure directly from Health Management Organizations and Preferred Provider Organizations via NCQA's online data submission system. No data collection instrument provided Attachment 1517_PPC_Value_Sets.xlsx
Level	Health Plan, Integrated Delivery System	Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office/Clinic	Ambulatory Care : Clinician Office/Clinic
Numerator Statement	Women who had the appropriate number of expected prenatal visits	This measure assesses whether pregnant women had timely prenatal and postpartum care visits. It has two rates, one assessing the timeliness of prenatal visits, and one assessing the timeliness of postpartum visits.
Numerator	Administrative Specifications	Administrative Specifications

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
Details	Women who had an unduplicated count of less than 21 percent, 21 percent–40 percent, 41 percent–60 percent, 61 percent–80 percent or greater than or equal to 81 percent of the number of expected visits, adjusted for the month of pregnancy at time of enrollment and gestational age. For each delivery, follow the steps below to calculate each woman's ratio of observed-to-expected prenatal care visits. Step 1: Identify the delivery date using hospital discharge data. Step 2: Identify the date when the member enrolled in the organization and determine the stage of pregnancy at time of enrollment. If the member has gaps in enrollment during pregnancy, use the last enrollment segment to determine continuous enrollment in the organization. For members with a gap in enrollment any time during pregnancy (including a gap in the first trimester), the last enrollment segment is the enrollment start date during the pregnancy that is closest to the delivery date. Use the following approach (or an equivalent method) to calculate the stage of pregnancy at time of enrollment. If gestational age is not available, assume a gestational age of 280 days (40 weeks). • Convert gestational age into days. • Subtract gestational age (in days) from the date of delivery (step 1). • Subtract the date obtained above from the date when the member enrolled in the organization to determine the stage of pregnancy at time of enrollment. • Divide the numbers of days the member was pregnant at enrollment (step 3) by 30. Round the resulting number according to the .5 rule to a whole number. For example, delivery date is August 8, 2015; gestational age is 33	Timeliness of Prenatal Care A prenatal visit in the first trimester or within 42 days of enrollment, depending on the date of enrollment in the organization and the gaps in enrollment during the pregnancy. Include only visits that occur while the member was enrolled. Follow the steps below to identify the numerator. Step 1: Determine enrollment status during the first trimester. For all women in the eligible population, identify those who were enrolled on or before 280 days prior to delivery (or estimated date of delivery [EDD]). For these women, proceed to step 2. For women not enrolled on or before 280 days prior to delivery (or EDD), who were therefore pregnant at the time of enrollment, proceed to step 3. Step 2: Determine continuous enrollment for the first trimester. Identify women from step 1 who were continuously enrolled during the first trimester (176–280 days prior to delivery [or EDD]), with no gaps in enrollment. For these women, determine numerator compliance using the decision rules for Identifying Prenatal Care For Women Continuously Enrolled During the First Trimester. For women who were not continuously enrolled during the first trimester (e.g., had a gap between 176 and 280 days before delivery), proceed to step 3. Step 3: Determine the start date of the last enrollment segment (i.e., the enrollment segment during the pregnancy with the start date that is closest to the delivery date). For women whose last enrollment started on or between 219 and 279 days before delivery, proceed to step 4. For women whose last enrollment started less than 219 days before delivery, proceed to step 5.

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
	weeks; date of enrollment is May 6, 2015. Given these variables, the process is: – Gestational age in days is 231 days (33 weeks ´ 7 days/week). – Date of delivery – gestational age (in days) is December 20, 2014 (August 8, 2015 – 231 days). – Date when the member enrolled in the organization – date obtained in step 2 is 137 days (May 6, 2015 – December 20, 2014). – Month in which prenatal care began is 4.56 months (137 days/30 days) and then round up to 5 months using the 0.5 rule. This member's stage of pregnancy at time of enrollment is 5 months. Step 3: Use Table FPC-A to find the number of recommended prenatal visits by gestational age and stage of pregnancy at time of enrollment per the American College of Obstetricians and Gynecologists (ACOG). The chart subtracts the number of missed visits prior to the date the member enrolled from the number of recommended visits for a given gestational age. ACOG recommends that women with an uncomplicated pregnancy receive visits every 4 weeks for the first 28 weeks of pregnancy, every 2–3 weeks until 36 weeks of pregnancy, and weekly thereafter. For example, ACOG recommends 14 visits for a 40-week pregnancy. If the member enrolled during her fourth month (3 missed visits prior to enrollment in the organization), the expected number of visits is 14 – 3 = 11. For deliveries with a gestational age less than 28 weeks or >43 weeks, calculate the expected number of prenatal care visits using the date when the member enrolled and ACOG's recommended schedule of visits. For example, if gestational age is 26 weeks and	Step 4: Determine numerator compliance. If the last enrollment segment started on or between 219 and 279 days before delivery, determine numerator compliance using the instructions for Identifying Prenatal Care for Women Not Continuously Enrolled During the First Trimester and find a visit between the last enrollment start date and 176 days before delivery. Step 5: Determine numerator compliance. If the last enrollment segment started less than 219 days before delivery (i.e., between 219 days before delivery and the day of delivery), determine numerator compliance using the instructions for Identifying Prenatal Care for Women Not Continuously Enrolled During the First Trimester and find a visit within 42 days after enrollment. Identifying Prenatal Care for Women Continuously Enrolled During the First Trimester Decision Rule 1 Either of the following during the first trimester, where the practitioner type is an OB/GYN or other prenatal care practitioner or PCP meets criteria: • A bundled service (Prenatal Bundled Services Value Set) where the organization can identify the date when prenatal care was initiated (because bundled service codes are used on the date of delivery, these codes may be used only if the claim form indicates when prenatal care was initiated). • A visit for prenatal care (Stand Alone Prenatal Visits Value Set). Decision Rule 2 Any of the following during the first trimester, where the practitioner type for the prenatal visit is an OB/GYN or other prenatal care practitioner, meet criteria: • A prenatal visit (Prenatal Visits Value Set) with an obstetric panel

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
	the member enrolled during her second month of pregnancy, the expected number of prenatal care visits is 5 (6 expected visits [1 visit every 4 weeks or 6 visits in 24 weeks], less 1 visit missed in the first month). If gestational age is 44 weeks and the member enrolled during her third month of pregnancy, the expected number of prenatal care visits is 16 (14 expected visits for a 40-week gestation plus 1 visit each additional week [18 total expected prenatal care visits], less 2 visits missed in the first and second months). Step 4: Identify the number of discrete prenatal care visits the member received during the course of her pregnancy and while enrolled in the organization using claims and encounter data. To identify prenatal visits that occurred during the first trimester, refer to the Prenatal and Postpartum Care measure decisions rules for Identifying Prenatal Care For Women Continuously Enrolled During the First Trimester. To identify prenatal visits that occurred during the second and third trimester, refer to the prenatal and postpartum care measure instructions for Identifying Prenatal Care For Women Not Continuously Enrolled During the First Trimester. Visits that occur on the date of delivery and meet the prenatal visit criteria count toward the measure. All criteria must be met for encounters to be counted as a discrete prenatal care visit. For example, Decision Rules 2 and 3 require multiple components (typically a visit combined with a diagnosis code or another prenatal service such as a lab test or an ultrasound). Ultrasound and lab results alone are not considered a discrete prenatal care visit unless they are combined with other criteria.	(Obstetric Panel Value Set). • A prenatal visit (Prenatal Visits Value Set) with an ultrasound (echocardiography) of the pregnant uterus (Prenatal Ultrasound Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set). • A prenatal visit (Prenatal Visits Value Set) with all of the following: – Toxoplasma (Toxoplasma Antibody Value Set). – Rubella (Rubella Antibody Value Set). – Cytomegalovirus (Cytomegalovirus Antibody Value Set). – Herpes simplex (Herpes Simplex Antibody Value Set). • A prenatal visit (Prenatal Visits Value Set) with rubella (Rubella Antibody Value Set) and ABO (ABO Value Set). • A prenatal visit (Prenatal Visits Value Set) with rubella (Rubella Antibody Value Set) and Rh (Rh Value Set). • A prenatal visit (Prenatal Visits Value Set) with rubella (Rubella Antibody Value Set) and ABO/Rh (ABO and Rh Value Set). Decision Rule 3 Any of the following during the first trimester, where the practitioner type is a PCP, meet criteria: • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and an obstetric panel (Obstetric Panel Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and an ultrasound (echocardiography) of the pregnant uterus (Prenatal Ultrasound Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and all of the following:

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
	Services that occur over multiple visits can be combined to create a discrete prenatal care visit if all services occur within the time frame established in the measure and services are not double counted. Organizations must develop systems to avoid double counting. For example, a code from the Stand Alone Prenatal Visits Value Set on the same date of service as a code from the Prenatal Visits Value Set is interpreted to represent a single visit/encounter and may not be counted twice. If the member had a gap in enrollment, count only the visits received during the last enrollment segment. Step 5: Calculate the ratio of observed visits (step 4) to expected visits (step 3). Step 6: Report each woman in the appropriate category: • less than 21 percent. • 21 percent–40 percent. • 41 percent–60 percent. • 61 percent–80 percent. • greater than or equal to 81 percent of expected visits. Medical Record Specification Women who had an unduplicated count of the number of expected visits that was less than 21 percent, 21 percent–40 percent, 41 percent–60 percent, 61 percent–80 percent or greater than or equal to 81 percent of the number of expected visits, adjusted for the month of pregnancy at time of enrollment and gestational age. The visits may be identified through either administrative data or medical record review. The numerator is calculated retroactively from date of delivery or EDD. Use the medical record documentation requirements in the	– Toxoplasma (Toxoplasma Antibody Value Set). – Rubella (Rubella Antibody Value Set). – Cytomegalovirus (Cytomegalovirus Antibody Value Set). – Herpes simplex (Herpes Simplex Antibody Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and rubella (Rubella Antibody Value Set) and ABO (ABO Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and rubella (Rubella Antibody Value Set) and Rh (Rh Value Set). • A prenatal visit (Prenatal Visits Value Set) with a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) and rubella (Rubella Antibody Value Set) and ABO/Rh (ABO and Rh Value Set). • A prenatal visit (Prenatal Visits Value Set) with any internal organization code for LMP or EDD with an obstetrical history. • A prenatal visit (Prenatal Visits Value Set) with any internal organization code for LMP or EDD with risk assessment and counseling/education. Note: For Decision Rule 3 criteria that require a prenatal visit code (Prenatal Visits Value Set) and a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set), codes must be on the same claim. Identifying Prenatal Care for Women Not Continuously Enrolled During the First Trimester Any of the following, where the practitioner type is an OB/GYN or other prenatal care practitioner or PCP, meet criteria: • A bundled service (Prenatal Bundled Services Value Set) where the organization can identify the date when prenatal care was initiated (because bundled service codes are used on the date of delivery, these codes may be used only if the claim form indicates when prenatal care

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
	Prenatal and Postpartum Care measure to identify prenatal visits that occur during the first, second and third trimesters. Identify gestational age at birth from the hospital record (e.g., admission write-ups, histories and physicals, discharge summaries or labor and delivery records) or birth certificate. Gestational age is the number of completed weeks that elapsed between the first day of the last normal menstrual period and the date of delivery. If gestational age is not available, assume a gestational age of 280 days (40 weeks). Methods recommended to determine gestational age are: Physician ascertainment using ultrasound or Dubowitz assessment. Last menstrual period (LMP) calculation (date of LMP – date of delivery) divided by 7. If gestational age is recorded or calculated in fractions of a week, round down to the lower whole number.	was initiated). • A visit for prenatal care (Stand Alone Prenatal Visits Value Set). • A prenatal visit (Prenatal Visits Value Set) with an ultrasound (echocardiography) of the pregnant uterus (Prenatal Ultrasound Value Set). • A prenatal visit (Prenatal Visits Value Set) with a principal pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set). Note: For criteria that require a prenatal visit code (Prenatal Visits Value Set) and a pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set), codes must be on the same claim. Criteria for identifying prenatal care for women who were not continuously enrolled during the first trimester allow more flexibility than criteria for women who were continuously enrolled. Postpartum Care A postpartum visit for a pelvic exam or postpartum care on or between 21 and 56 days after delivery. Any of the following meet criteria: • A postpartum visit (Postpartum Visits Value Set). • Cervical cytology (Cervical Cytology Value Set). • A bundled service (Postpartum Bundled Services Value Set) where the organization can identify the date when postpartum care was rendered (because bundled service codes are used on the date of delivery, not on the date of the postpartum visit, these codes may be used only if the claim form indicates when postpartum care was rendered). Note: The practitioner requirement only applies to the Hybrid Specification. The organization is not required to identify practitioner type in administrative data. Medical Record Specification Timeliness of Prenatal Care A prenatal visit in the first trimester or within 42 days of enrollment,

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
		depending on the date of enrollment in the organization and gaps in enrollment during the pregnancy. Include only visits that occurred while the member was enrolled. Prenatal care visit to an OB/GYN or other prenatal care practitioner or PCP. For visits to a PCP, a diagnosis of pregnancy must be present. Documentation in the medical record must include a note indicating the date when the prenatal care visit occurred, and evidence of one of the following. • A basic physical obstetrical examination that includes auscultation for fetal heart tone, or pelvic exam with obstetric observations, or measurement of fundus height (a standardized prenatal flow sheet may be used). • Evidence that a prenatal care procedure was performed, such as: – Screening test in the form of an obstetric panel (must include all of the following: hematocrit, differential WBC count, platelet count, hepatitis B surface antigen, rubella antibody, syphilis test, RBC antibody screen, Rh and ABO blood typing), or – TORCH antibody panel alone, or – A rubella antibody test/titer with an Rh incompatibility (ABO/Rh) blood typing, or – Echography of a pregnant uterus. • Documentation of LMP or EDD in conjunction with either of the following. – Prenatal risk assessment and counseling/education. – Complete obstetrical history. Note: For women whose last enrollment segment was after 219 days prior to delivery (i.e., between 219 days prior to delivery and the day of delivery) and women who had a gap during the first trimester, count documentation of a visit to an OB/GYN, family practitioner or other PCP

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
		with a principal diagnosis of pregnancy. Postpartum Care A postpartum visit for a pelvic exam or postpartum care on or between 21 and 56 days after delivery, as documented through either administrative data or medical record review. Postpartum visit to an OB/GYN practitioner or midwife, family practitioner or other PCP on or between 21 and 56 days after delivery. Documentation in the medical record must include a note indicating the date when a postpartum visit occurred and one of the following. • Pelvic exam. • Evaluation of weight, BP, breasts and abdomen. – Notation of "breastfeeding" is acceptable for the "evaluation of breasts" component. • Notation of postpartum care, including, but not limited to: – Notation of "postpartum care," "PP care," "PP check," "6-week check." – A preprinted "Postpartum Care" form in which information was documented during the visit. For both rates: • Services that occur over multiple visits count toward this measure if all services are within the time frame established in the measure. Ultrasound and lab results alone are not considered a visit; they must be linked to an office visit with an appropriate practitioner in order to count for this measure. • NCQA defines a PCP and OB/GYN and other prenatal practitioners as including: • Physicians certified as obstetricians or gynecologists by the American Medical Specialties Board of Obstetrics or Gynecology or the American

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
		Osteopathic Association; or, if not certified, who successfully completed an accredited program of graduate medical or osteopathic education in obstetrics and gynecology. • Certified nurse midwives and nurse practitioners who deliver prenatal care services in a specialty setting (under the direction of an OB/GYN certified or accredited provider).
Denominator Statement	The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year.	The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year.
Denominator Details	Product Line: Medicaid. Continuous enrollment: 43 days prior to delivery through 56 days after delivery. Allowable gap: No allowable gap during the continuous enrollment period. Anchor date: Date of delivery. Benefit: Medical. Event/ diagnosis: Delivered a live birth on or between November 6 of the year prior to the measurement year and November 5 of the measurement year. Include women who delivered in any setting. Multiple births. Women who had two separate deliveries (different dates of service) between November 6 of the year prior to the measurement year and November 5 of the measurement year are counted twice. Women who had multiple live births during one pregnancy are counted once. Follow the steps below to identify the eligible population, which is the denominator for both rates. Step 1: Identify deliveries. Identify all women with a delivery (Deliveries Value Set) between November 6 of the year prior to the measurement year and November 5 of the measurement year.	Product Lines: Commercial, Medicaid (report each product line separately). Continuous enrollment: 43 days prior to delivery through 56 days after delivery. Allowable gap: No allowable gap during the continuous enrollment period. Anchor date: Date of delivery. Benefit: Medical. Event/ diagnosis: Delivered a live birth on or between November 6 of the year prior to the measurement year and November 5 of the measurement year. Include women who delivered in any setting. Multiple births. Women who had two separate deliveries (different dates of service) between November 6 of the year prior to the measurement year and November 5 of the measurement year count twice. Women who had multiple live births during one pregnancy count once. Follow the steps below to identify the eligible population, which is the denominator for both rates. Step 1: Identify deliveries. Identify all women with a delivery (Deliveries Value Set) between November 6 of the year prior to the measurement year and November 5 of the measurement year.

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
	Step 2: Exclude non-live births (Non-live Births Value Set). Step 3: Identify continuous enrollment. Determine if enrollment was continuous between 43 days prior to delivery and 56 days after delivery, with no gaps.	Step 2: Exclude non-live births (Non-live Births Value Set). Step 3: Identify continuous enrollment. Determine if enrollment was continuous between 43 days prior to delivery and 56 days after delivery, with no gaps.
Exclusions	Exclude non-live births	Non-live births
Exclusion Details	See corresponding Excel document for the Non-live Births Value Set	See corresponding Excel document for the Non-live Births Value Set.
Risk Adjustment	No risk adjustment or risk stratification NA	No risk adjustment or risk stratification N/A
Stratification	None	N/A
Type Score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score
Algorithm	Step 1: Calculate the eligible population following the instructions in the denominator details listed in section S.9. Step 2: Remove the exclusions identified in section S.10. Step 3: Calculate the numerator following the instructions in the numerator details listed in section S.6. Step 4: Divide the numerator from Step 3 by the denominator from Step 2 to determine the rate. No diagram provided	Step 1: Calculate the eligible population following the instructions in the denominator details listed in section S.9. Step 2: Remove the exclusions identified in section S.10. Step 3: Calculate the numerator for Rate 1 following the instructions in the numerator details listed in section S.6. Step 4: Divide the numerator from Step 3 by the denominator from Step 2 to determine Rate 1. Step 5: Calculate the numerator for Rate 2 following the instructions in the numerator details listed in section S.6. Step 6: Divide the numerator from Step 5 by the denominator from Step 2 to determine Rate 2. No diagram provided
Submission items	5.1 Identified measures: 1517 : Prenatal & Postpartum Care (PPC) 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact:	5.1 Identified measures: 1391 : Frequency of Ongoing Prenatal Care (FPC) 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact:

	1391: Frequency of Ongoing Prenatal Care (FPC)	1517: Prenatal & Postpartum Care (PPC)
	5b.1 If competing, why superior or rationale for additive value:	5b.1 If competing, why superior or rationale for additive value:

Comparison of NQF 2829 and 0469

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
Steward	The Joint Commission	The Joint Commission
Description	This measure assesses patients with elective vaginal deliveries or elective cesarean births 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). PC-01, Elective Delivery is one of two of the measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.	This measure assesses patients with elective vaginal deliveries or elective cesarean births 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 Birth, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding)
Type	Process	Process
Data Source	Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Pharmacy Hospitals report EHR data using Certified Electronic Health Record Technology (CEHRT), and by submitting Quality Reporting Document Architecture Category 1 (QRDA-1). No data collection instrument provided Attachment ElectiveDelivery_v4_Wed_Apr_01_14.49.44_CDT_2015-	Electronic Clinical Data, Paper Medical Records 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

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
	635908096518042002.xls	until verification has been passed. No data collection instrument provided Attachment PC01_ICD_Code_Tables.xlsx
Level	Facility, Population : National	Facility, Population : National
Setting	Hospital/Acute Care Facility	Hospital/Acute Care Facility
Numerator Statement	Patients with elective deliveries by either: - Medical induction of labor while not in labor prior to the procedure - Cesarean birth while not in labor and with no history of a prior uterine surgery	Patients with elective deliveries with ICD-10-PCS Principal Procedure Code or ICD-10-PCS 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/releases/TJC2015B2/ while not in Labor prior to the procedure • Cesarean birth as defined in Appendix A, Table 11.06 and all of the following: not in Labor no history of a Prior Uterine Surgery available at: http://manual.jointcommission.org/releases/TJC2015B2/
Numerator Details	- Medical Induction of Labor is represented as a code from one of the following value sets and associated QDM datatype: o Procedure, Performed: Medical Induction of Labor (OID 2.16.840.1.113883.3.117.1.7.1.288)	Four data elements are used to calculate the numerator: 1. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
	o Procedure, Performed: Artificial Rupture of Membranes (OID 2.16.840.1.113762.1.4.1045.57) o Medication, Administered: Oxytocin (OID 2.16.840.1.113762.1.4.1045.55) o Medication, Administered: Dinoprostone (OID 2.16.840.1.113762.1.4.1045.56) - Labor is represented with the QDM datatype and value set of "Physical Exam, Performed: Labor (OID 2.16.840.1.113883.3.117.1.7.1.281) - Cesarean Birth is represented with the QDM data type and value set of "Procedure, Performed: Cesarean Birth (OID: 2.16.840.1.113883.3.117.1.7.1.282) - Prior Uterine Surgery is represented as a code from one of the following value sets and associated QDM datatype: o Diagnosis, Resolved: Perforation of Uterus (OID 2.16.840.1.113883.3.117.1.7.1.136) o Diagnosis, Resolved: Uterine Window (OID 2.16.840.1.113883.3.117.1.7.1.137) o Diagnosis, Resolved: Uterine Rupture (OID 2.16.840.1.113883.3.117.1.7.1.138) o Diagnosis, Inactive: Cornual Ectopic Pregnancy (OID	during this hospitalization. 2. ICD-10-PCS Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System 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. 3. Labor- Documentation that the patient was in labor prior to induction and/or cesarean birth. Allowable values: Yes or No/UTD. 4. Prior Uterine Surgery- Documentation that the patient had undergone prior uterine surgery which includes: a prior classical cesarean birth defined as a vertical incision into the upper uterine segment, a prior myomectomy, a prior uterine surgery resulting in a perforation of the uterus due to an accidental injury, a history of a uterine window or thinning of the uterine wall noted during prior uterine surgery or during ultrasound, a history of uterine rupture requiring surgical repair, a history of a cornual ectopic pregnancy or history of a transabdominal cerclage. Allowable Values: Yes or No/UTD Patients are eligible for the numerator population with ICD-10-PCS Other Procedure Codes or ICD-10-PCS Principal Procedure Code for medical induction or with ICD-10-PCS Other Procedure Codes or ICD-10-PCS Principal Procedure Code for cesarean birth when the allowable value equals "no" for the data elements Labor and Prior Uterine Surgery. Updates available at:

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
	2.16.840.1.113762.1.4.1045.27) o Procedure, Performed: Classical Cesarean Birth (OID 2.16.840.1.113883.3.117.1.7.1.421) o Procedure, Performed: Myomectomy (OID 2.16.840.1.113883.3.117.1.7.1.422) o Procedure, Performed: Transabdominal Cerclage (OID 2.16.840.1.113762.1.4.1110.2) To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/.	http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Statement	The Denominator is patients who deliver newborns with >= 37 and < 39 weeks of gestation completed.	Patients delivering newborns with >= 37 and < 39 weeks of gestation completed with ICD-10-PCS Principal or Other Procedure Codes for delivery as defined in Appendix A, Table 11.01.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/ and with ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for planned cesarean birth in labor as defined in Appendix A, Table 11.06.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Details	- Estimated Gestational Age is represented with the QDM datatype and value set of Physical Exam, Performed: Estimated Gestational Age at Delivery (OID: 2.16.840.1.113762.1.4.1045.26) - Time of Delivery is represented with the QDM datatype and value set of Physical Exam, Performed: Time of Delivery (OID:	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

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
	2.16.840.1.113762.1.4.1045.28)	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-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 7. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Exclusions	ICD-9-CM, ICD-10-CM, or SNOMED CT codes for conditions possibly justifying elective delivery prior to 39 weeks gestation.	• ICD-10-CM Principal Diagnosis Code or ICD-10-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

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
		• Enrolled in clinical trials • Gestational Age < 37 or >= 39 weeks or UTD
Exclusion Details	- Conditions possibly justifying elective delivery are represented with the QDM datatype and value set Diagnosis, Active: Conditional Possibly Justifying Elective Delivery Prior to 39 Weeks Gestation (OID: 2.16.840.1.113883.3.117.1.7.1.286)	• Patients with ICD-10-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. • Patients with a Gestational Age less than 37 weeks or equal to or greater than 39 weeks or UTD are excluded from the measure.
Risk Adjustment	No risk adjustment or risk stratification Not Applicable	No risk adjustment or risk stratification Not Applicable
Stratification	Not Applicable, the measure is not stratified	Not Applicable
Type Score	Rate/proportion better quality = lower score	Rate/proportion better quality = lower score
Algorithm	See attached HQMF file. Available at measure-specific web page	1. Start processing. Run cases that are included in the PC-Mother Initial Patient Population and pass the edits defined in the Transmission Data

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
	URL identified in S.1	Processing Flow: Clinical through this measure. 2. Check ICD-10-CM Principal or Other Diagnosis Codes a. If at least one of the ICD-10-CM Principal or Other Diagnosis Codes 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-10-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 or equal to a Not Unable to Determine Value, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
		Processing. c. If Gestational Age is greater than or equal to 37 and less than 39, continue processing and proceed to recheck ICD-10-CM Principal Procedure or Other Diagnosis Codes. 5. Recheck ICD-10-CM Principal or Other Diagnosis Codes a. If at least one of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.06.1, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. b. If none of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.06.1, continue processing and proceed to ICD-10-CM Principal or Other Procedure Codes. 6. Check ICD-10-PCS Principal or Other Procedure Codes a. If all of the ICD-10-PCS Principal or Other Procedure Codes are missing, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop Processing. b. If at least one of the ICD-10-PCS Principal or Other Procedure Codes is on Table 11.05, continue processing and proceed to Labor i. If Labor is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop Processing. ii. If Clinical Trial equals Yes, the case will proceed to a Measure

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
		Category Assignment of D and will be in the Measure Population. Stop Processing. iii. If Labor equals No, 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 Codes is on Table 11.05, continue processing and proceed to recheck ICD-10-PCS Principal or Other Procedure Codes. 7. Recheck ICD-10-PCS Principal or Other Procedure Codes a. If none of the ICD-10-PCS Principal or Other Procedure Code is on Table 11.06, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop Processing. b. If at least one of the ICD-10-PCS Principal or Other Procedure Code is on Table 11.06, continue processing and proceed to Labor. 8. Check Labor a. If Labor is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop Processing. b. If 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 Labor equals No, continue processing and proceed to Spontaneous Rupture of Membranes.

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
		9. Check Prior Uterine Surgery a. If Prior Uterine Surgery is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop Processing. b. If Prior Uterine Surgery equals Yes, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. c. If Prior Uterine Surgery equals No, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop Processing. Available at measure-specific web page URL identified in S.1
Submission items	5.1 Identified measures: 0469 : PC-01 Elective Delivery 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: The measures are completely harmonized to the extent possible, given the fact that the data source for #0469 is the paper medical record, and the data source for #2829 is the electronic health record. 5b.1 If competing, why superior or rationale for additive value: Not	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: Not Applicable 5b.1 If competing, why superior or rationale for additive value: Not Applicable

	2829: PC-01 Elective Delivery	0469: PC-01 Elective Delivery
	Applicable.	

Comparison of NQF 2830 and 0480

	2830: PC-05 Exclusive Breast Milk Feeding	0480: PC-05 Exclusive Breast Milk Feeding
Steward	The Joint Commission	The Joint Commission
Description	PC-05 assesses the number of newborns exclusively fed breast milk during the newborn's entire hospitalization. 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-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns). PC-05, Exclusive Breast Milk Feeding, is one of two measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.	PC-05 assesses the number of newborns exclusively fed breast milk during the newborn's entire hospitalization. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-02: Cesarean Birth, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns).
Type	Process	Process
Data Source	Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record Hospitals report EHR data using Certified Electronic Health Record Technology (CEHRT), and by submitting Quality Reporting Document Architecture Category 1 (QRDA-1). No data collection instrument provided Attachment ExclusiveBreastMilkFeeding_v4_Fri_Nov_13_10.29.14_CST_2015.xls	Electronic Clinical Data, Paper Medical Records 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 has been passed. No data collection instrument provided Attachment PC05_ICD_Code_Tables.xlsx
Level	Facility, Population : National	Facility, Population : National

	2830: PC-05 Exclusive Breast Milk Feeding	0480: PC-05 Exclusive Breast Milk Feeding
Setting	Hospital/Acute Care Facility	Hospital/Acute Care Facility
Numerator Statement	Newborns that were fed breast milk only since birth	Newborns that were fed breast milk only since birth
Numerator Details	- Administration of breast milk is represented with the QDM datatype and value set of Substance, Administered: Breast Milk (OID: 2.16.840.1.113883.3.117.1.7.1.30) - Administration of other dietary intake is represented with Substance, Administered: Dietary Intake Other than Breast Milk (OID: 2.16.840.1.113883.3.117.1.7.1.27) To access the value sets for the measure, please visit the Value Set Authority Center (VSAC), sponsored by the National Library of Medicine, at this link: https://vsac.nlm.nih.gov/	One data element is used to calculate the numerator: 1. Exclusive Breast Milk Feeding - Documentation that the newborn was exclusively fed breast milk during the entire hospitalization. Allowable Values: Yes or No/UTD. Cases are eligible for the numerator when allowable value = yes. Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Statement	Single term newborns discharged from the hospital who did not have a diagnosis of galactosemia, were not subject to parenteral nutrition, and had a length of stay of less than or equal to 120 days	Single term liveborn newborns discharged alive from the hospital with ICD-10-CM Principal Diagnosis Code for single liveborn newborn as defined in Appendix A, Table 11.20.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Details	Inpatient Encounters are represented using the QDM datatype and value set of Encounter, Performed: Encounter Inpatient (OID: 2.16.840.1.113883.3.117.1.7.1.25). Length of stay is calculated within the measure based on encounter start and end dates. Single term newborns are represented by the following QDM datatypes and value sets: o Physical Exam, Performed: Estimated Gestational Age at Birth (Result>=37 weeks) using Estimated Gestational Age at Birth SNOMEDCT Value Set (OID: 2.16.840.1.113762.1.4.1045.47) o Diagnosis, Active: Single Live Birth using Single Live Birth SNOMEDCT Value Set (2.16.840.1.113883.3.117.1.7.1.25) o Diagnosis, Active Single Live Born Newborn Born in Hospital using Single Live Born Newborn Born in Hospital Grouping Value Set	Eleven data elements are used to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Admission to NICU - Documentation that the newborn was admitted to the Neonatal Intensive Care Unit (NICU) at this hospital any time during the hospitalization. Allowable values: Yes or No/UTD 3. Birthdate - The month, day and year the patient was born. 4. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients who are newborns were being studied. Allowable values: Yes or No/UTD 5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay. 6. Discharge Disposition - The place or setting to which the patient was

	2830: PC-05 Exclusive Breast Milk Feeding	0480: PC-05 Exclusive Breast Milk Feeding
	(2.16.840.1.113883.3.117.1.7.1.26) - Galactosemia is represented using the QDM datatype and value set of Diagnosis, Active: Galactosemia (OID: 2.16.840.1.113883.3.117.1.7.1.35) - Parenteral Nutrition is represented using the QDM datatype and value set of Procedure, Performed: Parenteral Nutrition (OID: 2.16.840.1.113883.3.117.1.7.1.38)	discharged. 7. ICD-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 8. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 9. ICD-10-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 10. ICD-10-CM Principal Procedure Code - The International Classification of Diseases, Tenth Revision, Procedure Coding System 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. 11. Term Newborn - Documentation that the newborn was at term or >= 37 completed weeks of gestation at the time of birth. Allowable values: Yes or No/UTD Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Exclusions	- Newborns who were admitted to the Neonatal Intensive Care Unit (NICU) - Newborns who were transferred to an acute care facility - Newborns who expired during the hospitalization	• Admitted to the Neonatal Intensive Care Unit (NICU) at this hospital during the hospitalization • ICD-10-CM Other Diagnosis Codes for galactosemia as defined in Appendix A, Table 11.21 • ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for parenteral infusion as defined in Appendix A, Table 11.22

	2830: PC-05 Exclusive Breast Milk Feeding	0480: PC-05 Exclusive Breast Milk Feeding
		• Experienced death • Length of Stay >120 days • Enrolled in clinical trials • Patients transferred to another hospital • Patients who are not term or with < 37 weeks gestation completed
Exclusion Details	NICU admissions, transfers to another facility, and patient expiration are all represented in QDM as attributes of the inpatient encounter. o facility location: Neonatal Intensive Care Unit (NICU) (OID: 2.16.840.1.113883.3.117.1.7.1.75) o discharge status: Patient Expired (OID: 2.16.840.1.113883.3.117.1.7.1.309) o discharge status: Discharge to Acute Care Facility (OID: 2.16.840.1.113883.3.117.1.7.1.87)	• The data element Admission to NICU is used to determine if the patient was admitted to the NICU. • Patients with ICD-10-CM Other Diagnosis Codes for galactosemia are excluded. • Patients with ICD-10-PCS Principal Procedure Code or ICD-10-PMS Other Procedure Codes for parenteral infusion 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 Discharge Disposition is used to determine if the patient was transferred to another hospital or expired. • The data element Term Newborn is used to determine if the patient was not term or < 37 completed weeks of gestation.
Risk Adjustment	No risk adjustment or risk stratification Not Applicable	No risk adjustment or risk stratification Not Applicable
Stratification	Not Applicable	Not Applicable
Type Score	Rate/proportion better quality = higher score	Rate/proportion better quality = higher score
Algorithm	See attached HQMF file Available at measure-specific web page URL identified in S.1	1. Start processing. Run cases that are included in the PC-Newborn Initial Patient Newborns with Breast Feeding and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Check Discharge Disposition a. If Discharge Status equals 4, 6, the case will proceed to a Measure

	2830: PC-05 Exclusive Breast Milk Feeding	0480: PC-05 Exclusive Breast Milk Feeding
		Category Assignment of B and will not be in the measure population. Stop processing. b. If Discharge Status equals 1, 2, 3, 5, 7, 8, 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 Term Newborn. 4. Check Term Newborn a. If Term Newborn is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Term Newborn 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 Term Newborn equals No, continue processing and proceed to Admission to NICU. 5. Check Admission to NICU a. If Admission to NICU is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Admission to NICU 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 Admission to NICU equals No, continue processing and proceed to Exclusive Breast Milk Feeding. 6. Check Exclusive Breast Milk Feeding

	2830: PC-05 Exclusive Breast Milk Feeding	0480: PC-05 Exclusive Breast Milk Feeding
		a. If Exclusive Breast Milk Feeding is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Exclusive Breast Milk Feeding equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. c. If Exclusive Breast Milk Feeding equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Available at measure-specific web page URL identified in S.1
Submission items	5.1 Identified measures: 0480 : PC-05 Exclusive Breast Milk Feeding 5a.1 Are specs completely harmonized? Yes 5a.2 If not completely harmonized, identify difference, rationale, impact: #0480: Exclusive Breast Milk Feeding: The measures are completely harmonized to the extent possible, given the fact that the data source for #0480 is the paper medical record, and the data source for #2830 is the electronic health record. 5b.1 If competing, why superior or rationale for additive value: Not Applicable	5.1 Identified measures: 5a.1 Are specs completely harmonized? 5a.2 If not completely harmonized, identify difference, rationale, impact: Not Applicable 5b.1 If competing, why superior or rationale for additive value: Not Applicable

Comparison of NQF 2892 and 0471

	2892: Birthrisk Cesarean Birth Measure	0471: PC-02 Cesarean Birth
Steward	Birthrisk.com, LLC.	The Joint Commission
Description	This is a measure of the effect that obstetrical care provider´s labor management strategies have on their laboring patient´s risk for	This measure assesses the number of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth. This

	2892: Birthrisk Cesarean Birth Measure	0471: PC-02 Cesarean Birth
	cesarean birth. The target population is limited to women who attempt labor with a singleton vertex pregnancy without a history of a prior cesarean birth and give birth between 37 and 42 weeks of gestation.	measure is part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding).
Type	Outcome	Outcome
Data Source	Other Birth Certificate Records. No data collection instrument provided No data dictionary	Paper Medical Records 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 has been passed. No data collection instrument provided Attachment PC02_ICD_and_CS_Direct_Standardization_Template_Nulliparous_Births.xlsx
Level	Facility, Clinician : Individual	Facility, Population : National
Setting	Hospital/Acute Care Facility	Hospital/Acute Care Facility
Numerator Statement	Number of cesarean births.	The outcome being measured is: Patients with cesarean births with ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for cesarean birth as defined in Appendix A, Table 11.06 available at: http://manual.jointcommission.org/releases/TJC2015B2/
Numerator Details	The number of births with Method of Delivery reported as Cesarean. U.S. Standard Certificate of Birth item number 46 (METHOD OF DELIVERY), processing variable: ROUT=4.	Two data elements are used for the observed outcome and to calculate the numerator: 1. ICD-10-PCS Other Procedure Codes - The International Classification of Diseases, Tenth Revision, Procedure Coding System code that identifies significant procedures performed other than the principal procedure during this hospitalization. 2. ICD-10-PCS Principal Procedure Code - The International Classification

	2892: Birthrisk Cesarean Birth Measure	0471: PC-02 Cesarean Birth
		of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication.
Denominator Statement	Women without a history of a prior cesarean birth who attempted labor and gave birth to a single baby in vertex presentation between 37 and 42 weeks of gestation.	The outcome target population being measured is: Nulliparous patients delivered of a live term singleton newborn in vertex presentation ICD-10-PCS Principal or Other Diagnosis Codes for delivery as defined in Appendix A, Tables 11.01.1 available at: http://manual.jointcommission.org/releases/TJC2015B2/
Denominator Details	The denominator is all of the women who gave birth during the specified time period as determined by an existing Certificate of Birth. Data collection items from the U.S. Standard Certificate of Birth are listed by Item Number, Description and (Processing Variable(s)): Item 2 TIME OF BIRTH (TB) Item 4 DATE OF BIRTH - infant (IDOB_YR, IDOB_MO, IDOB_DY) Item 5 FACILITY NAME (FNAME) Item 6 CITY, TOWN OR LOCATION OF BIRTH (FLOC) Item 7 COUNTY OF BIRTH (CNAME) Item 8b DATE OF BIRTH - mother (MDOB_YR, MDOB_MO, MDOB_DY) Item 27 ATTENDANT'S NAME, TITLE, AND NPI (ATTENDN, NPI) Item 28 MOTHER TRANSFERRED FOR MATERNAL MEDICAL OR FETAL INDICATIONS FOR DELIVERY? (TRAN, NFACL) Item 31 MOTHER'S HEIGHT (HFT, HIN) Item 32 MOTHER'S PREPREGNANCY WEIGHT (PWGT) Item 33 MOTHER'S WEIGHT AT DELIVERY (DWGT) Item 35a NUMBER OF PREVIOUS LIVE BIRTHS - NOW LIVING (PLBL)	Eight data elements are used to identify the outcome target population and to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Birthdate - The month, day and year the patient was born. 3. 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-10-CM Other Diagnosis Codes - The International Classification of Diseases, Tenth Revision, Clinical Modification codes associated with the secondary diagnoses for this hospitalization. 7. ICD-9-CM Principal Diagnosis Code - The International Classification of Diseases, Tenth Revision, Clinical Modification code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization.

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	Item 35b NUMBER OF PREVIOUS LIVE BIRTHS - NOW DEAD (PLBD) Items 41 RISK FACTORS IN THIS PREGNANCY - Mother had a previous cesarean delivery (PCES) Item 44 ONSET OF LABOR - Precipitous labor, Prolonged Labor (PRIC, PROL) Item 45 CHARACTERISTICS OF LABOR AND DELIVERY – Induction of labor, Augmentation of labor, Non-vertex presentation (INDL, AUGL, NVPR) Item 46 METHOD OF DELIVERY- Fetal presentation at birth, Final route and method of delivery, If cesarean, was a trial of labor attempted? (PRES, ROUT, TLAB) Item 49 BIRTHWEIGHT (BWG) Item 50 OBSTETRIC ESTIMATION OF GESTATION (OWGEST) Item 52 PLURALITY (PLUR)	8. Number of Previous Live Births - The number of live deliveries the patient experienced prior to current hospitalization. Allowable Values: 0-50 or UTD. Updates available at: http://manual.jointcommission.org/releases/TJC2015B2/
Exclusions	The denominator excludes women with any of the following: 1. Gestational age at birth of less than 37 weeks or greater than 42 weeks. 2. History of a prior cesarean birth. 3. Multiple gestation. 4. Not in vertex presentation. 5. Did not attempt to have a vaginal birth by attempting labor.	• ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for multiple gestations and other presentations as defined in Appendix A, Table 11.09 • Less than 8 years of age • Greater than or equal to 65 years of age • Length of Stay >120 days • Enrolled in clinical trials • Gestational Age < 37 weeks or UTD
Exclusion Details	1. Gestational age at birth of less than 37 weeks or greater than 42 weeks: Exclude women whose birth certificate item number 50 (OBSTETRIC ESTIMATION OF GESTATION), processing variable: OWGEST<37. Exclude women whose birth certificate item number 50 (OBSTETRIC ESTIMATION OF GESTATION), processing variable: OWGEST>42.	• Patients with ICD-10-CM Principal Diagnosis Code or Other Diagnosis Codes for multiple gestations and other presentations 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

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	2. History of a prior cesarean birth: Exclude women whose birth certificate item number 41 (RISK FACTORS IN THIS PREGNANCY), processing variable: PCES=Y. 3. Multiple gestation: Exclude women whose birth certificate item number 52 (PLURALITY), processing variable: PLUR>1. 4. Not in vertex presentation: Exclude women whose birth certificate item number 45 (CHARACTERISTICS OF LABOR AND DELIVERY), processing variable: NVPR=Y. Exclude women whose birth certificate item number 46 (METHOD OF DELIVERY), processing variable: PRES>1. 5. Did not attempt to have a vaginal birth by attempting labor: Exclude women whose birth certificate item number 46 (METHOD OF DELIVERY), processing variable: ROUT=4 AND TLAB=N UNLESS birth certificate item number 44 (ONSET OF LABOR), processing variable: PRIC=Y OR birth certificate item number 44 (ONSET OF LABOR), processing variable: PROL=Y OR birth certificate item number 45 (CHARACTERISTICS OF LABOR AND DELIVERY), processing variable: INDL=Y OR birth certificate item number 45 (CHARACTERISTICS OF LABOR AND DELIVERY), processing variable: AUGL=Y.	Admission Date. If the LOS is greater than 120 days, the patient is excluded. • Patients are excluded if "Yes" is selected for Clinical Trial. • Patients with a Gestational Age less than 37 weeks or UTD are excluded from the measure.
Risk Adjustment	Other Cohort comparison The statistical risk model uses a cohort comparison method derived from the concept behind logistic regression methodology. Logistic regression methodology creates an equation based on prior outcomes which is then used to predict the number of expected c Provided in response box S.15a	Other Direct rate standardization to the distribution of the 2006 US population of nulliparous births. See attached spreadsheet for age bands used in the direct standardization. Not Applicable Available in attached Excel or csv file at S.2b
Stratification	N/A	The Stratification Table used for direct standardization includes the Set Number, Stratified By, and the Age Stratum (Allowable Value). The Age Stratum refers to Patient Age which is calculated by the data element

	2892: Birthrisk Cesarean Birth Measure	0471: PC-02 Cesarean Birth
		Admission Date minus the data element Bir
Type Score	Rate/proportion better quality = lower score	Rate/proportion better quality = lower score
Algorithm	1. The target population is created from women who gave birth during the specified time period as determined by an existing Birth Certificate. Required data collection from each birth is obtained according to the U.S. Standard Certificate of Birth Item Number, Description and (Processing Variable(s)) as previously listed in the denominator details. 2. Women are excluded from the denominator if they gave birth prior to 37 weeks or after 42 weeks, had a history of a prior cesarean birth, had a multiple gestation, did not have a vertex presentation or did not attempt to have a vaginal birth by attempting labor as previously illustrated in the denominator exclusion details. 3. Each birth record is assigned a predicted risk of cesarean birth (inherent risk) by finding a cohort of 100 similar births in our existing database and using the number of cesarean births in the cohort as the assigned risk. Similar has been previously defined in the detailed risk model specifications. 4. The actual cesarean birth rate is determined by dividing the number of cesarean births by the number of births in the target population. The actual cesarean birth rate is determined for each obstetrical care provider and facility in the target population. 5. The expected cesarean birth rate is determined by calculating the average of the inherent risk assigned to each birth in the target population. The expected cesarean birth rate is determined for each obstetrical care provider and facility in the target population. 6. The risk adjustment is created by taking the actual cesarean	1. Start processing. Run cases that are included in the PC-Mother Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Check ICD-10-CM Principal or Other Diagnosis Codes a. If at least one of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.09, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If none of the ICD-10-CM Principal or Other Diagnosis Code is on Table 11.09, continue processing and proceed to recheck ICD-10-CM Principal or Other Diagnosis Codes. 3. Recheck ICD-10-CM Principal or Other Diagnosis Codes a. If none of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.08, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If at least one of the ICD-10-CM Principal or Other Diagnosis Codes is on Table 11.08, continue processing and proceed to Clinical Trial. 4. 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. 5. 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.

	2892: Birthrisk Cesarean Birth Measure	0471: PC-02 Cesarean Birth
	birth rate and dividing it by the expected cesarean birth rate. The risk adjustment is determined for each obstetrical care provider and facility in the target population. 7. The Birthrisk Cesarean Birth Measure is created by multiplying the risk adjustment by a constant. That constant is the average inherent risk for all births occurring in the same time frame in the database as the target population and in the same state regardless of the provider or facility. The Birthrisk Cesarean Birth Measure is created for each obstetrical care provider and facility in the target population. Available at measure-specific web page URL identified in S.1	b. If Gestational Age is less than 37 or equal to a Not Unable to Determine Value, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Gestational Age is greater than or equal to 37, continue processing and proceed to Parity. 6. Check Number of Previous Live Births a. If Number of Previous Live Births is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Number of Previous Live Births is greater than 0, the case will proceed to a Measure Category Assignment of B for and will not be in the measure population. Stop processing. c. If Number of Previous Live Births 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 Parity equals 0, continue processing and proceed to check ICD-10-PCS Principal or Other Procedure Codes. 7. Check ICD-10-PCS Principal or Other Procedure Codes a. If all of the ICD-10-PCS Principal or Other Procedure Codes are missing or none of the ICD-10-PCS Principal or Other Procedure Codes is on Table 11.06, the case will proceed to a Measure Category Assignment of D and will be in the measure population. Stop processing. b. If at least one of the ICD-10-PCS Principal or Other Procedure Code is on Table 11.06, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. Available at measure-specific web page URL identified in S.1
Submission items	5.1 Identified measures: 0471 : PC-02 Cesarean Birth 5a.1 Are specs completely harmonized?	5.1 Identified measures: 5a.1 Are specs completely harmonized?

	2892: Birthrisk Cesarean Birth Measure	0471: PC-02 Cesarean Birth
	5a.2 If not completely harmonized, identify difference, rationale, impact: 5b.1 If competing, why superior or rationale for additive value: The Birthrisk Cesarean Birth Measure is superior to measure #0471 for several reasons. The case mix used by the Birthrisk Cesarean Birth Measure includes approximately two thirds of pregnant women whereas the case mix for measure #0471 only includes about one third. Measure #0471 uses a case mix suggested by the American College of Obstetricians and Gynecologists (ACOG) in their Evaluation of Cesarean Delivery from 2000. However, ACOG also stated that "The highest variation occurs among nulliparous patients with term singleton fetuses with vertex presentations (NTSV) without other complications." and "Differences in patient characteristics probably account for some of the variations in cesarean delivery rates and explain some of the differences between practitioners and hospitals." in their Evaluation of Cesarean Delivery. Measure #0471 ignores ACOG's statements concerning patients with "other complications" as well as the significant effect on the risk for cesarean birth due to differences in patient characteristics. The Birthrisk Cesarean Birth Measure includes the NTSV pregnancies that are without other complications and accounts for differences in patient characteristics. Additionally, the Birthrisk Cesarean Birth Measure includes women who have already had a prior vaginal birth. The case mix used by the Birthrisk Cesarean Birth Measure better reflects the statements made by ACOG in 2000 as to NTSV pregnancies and will allow for the improvement of care to not only nulliparous women but also to women who have had a prior	5a.2 If not completely harmonized, identify difference, rationale, impact: Not Applicable 5b.1 If competing, why superior or rationale for additive value: Not Applicable

	2892: Birthrisk Cesarean Birth Measure	0471: PC-02 Cesarean Birth
	vaginal birth. Including patients with “other complications” in the case mix for measure #0471 results in including women who have contraindications for vaginal birth such as placenta previa, fetal distress prior to labor, medical contraindications for labor, fetal contraindications for labor, women with an un-inducible cervix and women who have requested an elective cesarean birth. An increase or decrease in women with these diagnoses can significantly affect the outcome of the measure resulting in an inaccurate measure of the effect that the obstetrical care provider has on a woman’s risk for a cesarean birth. Even one or two additional cesarean births due to these diagnoses can significantly affect the measure as is illustrated in the most important concern below. Measure #0471 assumes that all nulliparous women with a term single fetus in the vertex position (NTSV) have the same risk for cesarean birth after adjusting for age. However, in addition to maternal age, there are other physical characteristics of the mother and her baby that have been previously proven to significantly affect the risk for a cesarean birth. These include newborn weight, maternal prepregnancy body mass index, maternal height, gestational age and maternal weight gain. In addition, induction of labor has also been previously proven to significantly increase the risk for a cesarean birth. Failure to provide any risk adjustment for all of these previously proven risk factors will result in a misleading measure for obstetrical care providers. For example, analysis of data from millions of women who attempted labor reveals that inducing labor in a five foot two inch 36 year old nulliparous woman with a starting weight of 175 lbs. who has gained 42 lbs.	

	2892: Birthrisk Cesarean Birth Measure	0471: PC-02 Cesarean Birth
	and is carrying a 4,000 gram baby has a cesarean birth rate of approximately 70%. Whereas a five foot four inch 18 year old nulliparous woman with a starting weight of 115 lbs. who has gained 30 lbs. carrying a 3,500 gram baby who arrives in spontaneous labor has a cesarean birth rate of approximately 7%. This tenfold difference in the rate of cesarean birth due to the physical characteristics of the mother and her baby reveals that using an unadjusted or only age adjusted NTSV cesarean birth rate as a cesarean birth measure may result in simply a measure of the physical characteristics of the woman who are giving birth and not a measure of the effect of the obstetrical care provider's labor management strategies. The most important concern is a major flaw found in the direct standardization technique being used to create the risk adjustment for age. The direct standardization technique used in measure #0471 is based on the work of Main et al. from 2006. The flaw in the direct standardization technique is illustrated by the sample hospital in their study. The sample hospital in their study had approximately 18,000 births over a three year period in order to create a target population of 7,068 nulliparous term singleton vertex (NTSV) births of which only 68 were in the 15 to 19 year old age group. This age group is assigned a weight of 21% in the direct standardization. This means that even though the sample hospital only had 1% of their births in the 15 to 19 year old age group this age group will be used to assign 21% of their cesarean birth measure. A small change in the number of cesarean births within that age group will result in a large change in their cesarean birth measure. Even with 6,000 total births each year the sample hospital	

	2892: Birthrisk Cesarean Birth Measure	0471: PC-02 Cesarean Birth
	will only have two patients per month and six patients per quarter accounting for 21% of their cesarean birth measure. This will make it very difficult for the sample hospital to obtain consistent results and this problem would only be magnified if the hospital had fewer than 6,000 births per year. If a hospital has the same age distribution of NTSV patients as the sample hospital in the study, critical analysis reveals that one additional cesarean birth in the 15 to 19 year old age group per 1,000 total births will increase their measure #0471 by five percentage points. This flaw makes measure #0471 meaningless not only for hospitals that have an age distribution that is similar to the sample hospital but also for hospitals whose age distribution is not similar to the national average. Lastly, the goal of a cesarean birth measure is to measure the effect applied by the labor management strategies used by the obstetrical care provider. The accuracy of a cesarean birth measure is best validated by proving its ability to use the measure to predict future outcomes. Despite the fact that measure #0471 was developed many years ago this measure has never been validated by using it to accurately predict future outcomes. In fact, measure #0471 relies only on face validity. A cesarean birth measure that cannot accurately predict future outcomes is merely an educated guess of the risk applied by the obstetrical care provider and not truly a measure of the effect of the obstetrical care provider's labor management strategies.	

Comparison of NQF 2893 and 2393

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
Steward	The Children's Hospital of Philadelphia	Center of Excellence for Pediatric Quality Measurement
Description	The NICU Readmissions metric assess the hospital- or state-level readmission rate at 30 days after a stay in the Neonatal Intensive Care Unit.	This measure calculates case-mix-adjusted readmission rates, defined as the percentage of admissions followed by 1 or more readmissions within 30 days, for patients less than 18 years old. The measure covers patients discharged from general acute care hospitals, including children's hospitals.
Type	Outcome	Outcome
Data Source	Administrative claims, Electronic Clinical Data : Electronic Health Record, Other N/A No data collection instrument provided Attachment Data_Dictionary-635948697097724496.xlsx	Administrative claims The measure could be used with state Medicaid or all-payer databases. There are several options for calculating rates that could be compared nationally. CMS could analyze Medicaid claims from multiple states. A private payer with data from multiple states could compare hospitals from across state lines. Multiple states with all-payer databases could combine them to enable cross-state comparisons. Individual states could calculate nationally comparable rates using a method we have developed by which readmission rates can be estimated for Medicaid-insured patients and standardized using a MAX reference dataset. Please see the Detailed Measure Specifications (provided in the Appendix) for instructions on implementing this method. No data collection instrument provided Attachment Pediatric_All-Condition_Readmission_Measure_-NQF-_2393-_ICD-9_Data_Dictionary-635821585337686047.xlsx
Level	Facility, Population : State	Facility
Setting	Hospital/Acute Care Facility	Hospital/Acute Care Facility
Numerator Statement	Number of infants with a gestational age between 23-34 weeks who were readmitted to the hospital within 30 days of discharge. These time periods are assessed cumulatively, such that	The numerator consists of hospitalizations at general acute care hospitals for patients less than 18 years old that are followed by 1 or more readmissions to general acute care hospitals within 30 days.

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
	readmissions occurring within prior time periods are included. Reliability is strongest if each health care unit has at least 50 discharges per time unit studied.	Readmissions are excluded from the numerator if the readmission was for a planned procedure or for chemotherapy. The measure outcome is a readmission rate, defined as the percentage of index admissions with 1 or more readmissions within 30 days. The readmission rate, unadjusted for case-mix, is calculated as follows: number of index admissions with 1 or more readmissions within 30 days/ total number of index admissions
Numerator Details	Number of eligible newborns with an inpatient readmission within 30 days of discharge, who survive to time of hospital discharge. The optimal measure is risk-adjusted using gestational age, race, gender, education, insurance status, and complications (bronchopulmnary dysplasia (BPD), necrotizing enterocolitis (NEC), retinopathy of prematurity (ROP), and intraventricular hemorrhage (IVH)).	A readmission is operationalized as the first unplanned admission to any acute care hospital within 30 days of discharge from a prior hospitalization at an acute care hospital. This prior admission, which serves as the reference point for enumerating 30-day readmissions, is the index admission. Additional admissions within 30 days from discharge from an index admission are not counted as index admissions. An admission more than 30 days from discharge from an index admission is counted as a new index admission. We chose 30 days as the follow-up period during which to evaluate readmissions for multiple reasons. Readmissions within 30 days seem likely to reflect the quality of care provided both in the hospital and following discharge, which is consistent with the measure's intended purpose of assessing quality not just for a hospital but also for its wider health system. A follow-up period of 30 days is consistent with many readmission measures already in use, including the CMS readmission measures for adults. In addition, when we used a time-to-event curve to evaluate the proportion of readmissions within 1 year that occur within timeframes from 1 day up to 365 days, we observed a smooth curve with no obvious break to suggest an alternative follow-up period. Readmissions are excluded if they are for a planned procedure or for chemotherapy. Readmissions for planned procedures and for chemotherapy are part of a patient’s intended course of care and thus

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
		unlikely to be related to health system quality. This measure therefore focuses on unplanned readmissions because they are more likely to be related to a defect in quality of care during the index admission or during the interval between the index admission and readmission. In adult and pediatric medicine, most planned readmissions are for planned procedures or chemotherapy; therefore, these exclusions are intended to capture the majority of planned readmissions. We identify planned procedures using an algorithm based on primary procedure codes. Expert pediatric clinicians in 15 different procedure-oriented specialties reviewed procedures typically performed by their specialty. The reviewers indicated which procedures (1) are usually planned (defined as planned in more than 80% of cases) and (2) could require hospitalization. Admissions for which the primary International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) procedure code or the principal International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) procedure code for a planned procedure coded was 1 of these procedures are excluded from readmissions. ICD-9-CM codes will henceforth be referred to as ICD-9 codes. ICD-10-CM diagnosis codes and ICD-10 Procedure Coding System (PCS) codes will be referred to as ICD-10 diagnosis and ICD-10 procedure codes, respectively. EXCLUSIONS FROM THE NUMERATOR (READMISSIONS): • Hospitalizations with a primary ICD-9 code or a principal ICD-10 code for a planned procedure (i.e., planned = 1). • Hospitalizations with a primary ICD-9 or a principal ICD-10 diagnosis or procedure code for chemotherapy (i.e., chemo = 1). These exclusions are applied without deleting the records from the dataset as these hospitalizations may still meet criteria for index

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
		admissions, detailed in Section S.10. Variable definitions and ICD-9 or ICD-10 codes for identifying readmissions for planned procedures and for chemotherapy are provided in the Data Dictionary. If a planned readmission occurs within 30 days of an index admission, it does not count as a readmission against the index admission, and no subsequent admissions occurring within 30 days of discharge from the index admission count as readmissions against the index admission. After 30 days from discharge from the index admission, a new index admission can be counted.
Denominator Statement	Number of newborns with a gestational age between 23-34 weeks discharged from the NICU, based on gestational age field contained in the birth certificate record (best obstetrical estimate).	Hospitalizations at general acute care hospitals for patients less than 18 years old.
Denominator Details	Gestational age between 23 and 34 weeks as defined by the gestational age field in the vital statistics data.	All index hospitalizations are included in the denominator unless excluded based on 1 of the criteria in Sections S.10 and S.11 below.
Exclusions	Infants with a specified congenital anomaly are excluded from the target population. Infants with a missing gestational age are excluded from the primary analysis. Information about multiple imputation methods to allow for their inclusion are presented in the testing attachment, section 2b7. Infants who expired during the neonatal intensive care period are not eligible for a hospital readmission and excluded. The smallest level of measurement (i.e. hospital, state, etc.) must have a minimum of 50 patients eligible for readmission in a single calendar year.	EXCLUSIONS FROM THE NUMERATOR (READMISSIONS) AND DENOMINATOR (INDEX HOSPITALIZATIONS) We exclude certain hospitalizations from the measure entirely (i.e., from the numerator and denominator) based on clinical criteria or for issues of data completeness or quality that could prevent assessment of eligibility for the measure cohort or compromise the accuracy of readmission rates. Hospitalizations are excluded from the measure if they meet any of the following criteria: 1. The hospitalization was at a specialty or non-acute care hospital. Rationale: The focus of the measure is admissions to hospitals that provide general pediatric acute care. Records for admissions to specialty and non-acute care hospitals are therefore omitted from the dataset. Because hospital type cannot be determined for records with missing data in the hospital type variable, these records are also removed from

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
		the dataset. 2. Records for the hospitalization contain incomplete data for variables needed to assess eligibility for the measure or calculate readmission rates, including hospital type, patient identifier, admission date, discharge date, disposition status, date of birth, primary ICD-9 or principal ICD-10 diagnosis codes, or gender. Rationale: Complete and valid information for the variables listed above is needed to define the measure cohort and calculate case-mix-adjusted readmission rates. Identifying readmissions within 30 days requires information on dates of admission and end-of-service dates and the ability to link unique patient identifiers across inpatient claims records. Hospital identifiers are needed to determine the hospital at which index admissions occurred. The disposition status is needed to determine whether a patient was discharged or experienced some other outcome (e.g., was transferred to another acute care hospital, left against medical advice, died). Establishing a patient's eligibility for membership in the pediatric cohort and performing case-mix adjustment requires an accurate date of birth and end-of-service date. Because gender is 1 of the variables used for case-mix adjustment, episodes of care with missing or inconsistent gender cannot be evaluated in the measure. 3. Records for the hospitalization contain data of questionable quality for calculating readmission rates, including a. Inconsistent date of birth across records for a patient. b. Discharge date prior to admission date. c. Admission or discharge date prior to date of birth. d. Admission date after a disposition status of death during a prior hospitalization. Rationale: Complete and valid information for the variables listed above is needed to define the measure cohort and calculate case-mix-adjusted

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
		readmission rates. Identifying readmissions within 30 days requires information on dates of admission and end-of-service. A valid disposition status is needed to determine whether a patient was discharged or experienced some other outcome (e.g., was transferred to another acute care hospital, left against medical advice, died). Establishing a patient's eligibility for membership in the pediatric cohort and performing case-mix adjustment requires an accurate date of birth and end-of-service date. 4. Codes other than ICD-9 or ICD-10 codes are used for the primary procedure. Rationale: ICD-9 or ICD-10 procedure codes are necessary for applying clinical exclusions. 5. The patient was older than 18 years, 29 days at the time of admission. Rationale: This age exclusion limits the population to pediatric patients and prevents inclusion of records that overlap with adult readmission measures. Age eligibility for inclusion in the measure is based on age at the time of discharge from the index admission. Because the focus of the measure is pediatric patients, a patient's hospitalization is ineligible for inclusion in the measure as an index admission if the patient was 18 years old or greater at the time of discharge. Because the subsequent observation period for readmissions is 30 days, a patient's hospitalization is ineligible for inclusion in the measure as a readmission if the patient was older than 18 years, 29 days at the start of the readmission. 6. The hospitalization was for obstetric care, including labor and delivery. Rationale: Hospitalizations for obstetric conditions are excluded because care related to pregnancy does not generally fall within the purview of pediatric providers. 7. The primary ICD-9 or principal ICD-10 diagnosis code was for a mental health condition.

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
		Rationale: Hospitalizations for mental health conditions are excluded because we found that hospitals with high readmission rates for mental health hospitalizations tend to have low readmission rates for hospitalizations for other conditions, and vice versa. We describe this analysis in detail in Section 2b.3 of the Measure Testing Submission Form. 8. The hospitalization was for birth of a healthy newborn. Rationale: Hospitalizations for birth of healthy newborns are excluded because these hospitalizations, unlike all others, are not for evaluation and management of disease. EXCLUSIONS FROM THE DENOMINATOR ONLY (INDEX HOSPITALIZATIONS ONLY) We also apply further exclusions to the denominator only (i.e., these hospitalizations are excluded from index hospitalizations but could still meet criteria for readmissions). Hospitalizations are excluded from the denominator only if they meet any of the following criteria: 9. The patient was 18 years old or older at the time of discharge. Rationale: Age eligibility for inclusion in the measure is based on age at the time of discharge from the index admission. Because the measure covers pediatric patients, a patient's hospitalization is ineligible for inclusion in the measure as an index admission if the patient was 18 years old or greater at the time of discharge. 10. The discharge disposition was death. Rationale: A patient must be discharged alive from an index admission in order to be readmitted. Therefore, any record with a discharge disposition of death cannot serve as an index admission. 11. The discharge disposition was leaving the hospital against medical advice. Rationale: A discharge disposition of leaving against medical advice

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
		indicates that a patient left care before the hospital determined that the patient was ready to leave. 12. The hospital has less than 80% of records with complete patient identifier, admission date, and discharge date or less than 80% of records with complete primary ICD-9 or principal ICD-10 diagnosis codes. (Records for these hospitals are still assessed as possible readmissions, but readmission rates are not calculated for these hospitals due to their lack of complete data.) Rationale: Readmission rates are not calculated for hospitals missing large amounts of data for the above variables because these hospitals have limited data to accurately apply measure cohort exclusions and calculate case-mix-adjusted readmission rates. Assessing eligibility for the measure cohort and performing case-mix adjustment requires information on admission dates, end-of-service dates, and diagnosis codes. Identifying readmissions requires information on admission dates and end-of-service dates and the ability to link unique patient identifiers across inpatient claims records. 13. The hospital is in a state not being analyzed. Rationale: A claims database used for readmission analysis may contain records for hospitals located in states that are not included in the database (because covered patients may sometimes be admitted to out-of-state hospitals). Records for these out-of-state hospital admissions are not excluded from the measure dataset because these records may meet criteria for being counted as readmissions as part of an in-state hospital's readmission rate. However, readmission rates are not calculated for out-of-state hospitals due to the lack of complete data for these hospitals. 14. Thirty days of follow-up data are not available for assessing readmissions.

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
		Rationale: Identifying readmissions within 30 days requires a full 30 days of follow-up data.
Exclusion Details	Infants with a specified congenital anomaly are identified using the excel file in S.2b. Infants with a missing gestational age are excluded from the primary analysis, based on the gestational age field (best obstetrical estimate) from the birth certificate. Information about multiple imputation methods to allow for their inclusion are presented in the testing attachment, section 2b7. Infants who expired will be identified using the outcome of the neonatal intensive care hospitalization. The smallest level of measurement (i.e. hospital, state, etc.) must have a minimum of 50 patients eligible for readmission in a single calendar year.	DATA PREPARATION AND APPLICATION OF EXCLUSIONS TO THE MEASURE COHORT (NUMERATOR AND DENOMINATOR) AND TO THE DENOMINATOR ONLY Steps 1 through 8, below, describe the data preparation steps to implement and the exclusions to apply to the measure cohort (numerator and denominator) and to the denominator only before fitting the pediatric all-condition readmission model to inpatient claims data. STEP 1: IDENTIFY HOSPITALS ELIGIBLE FOR INCLUSION IN THE MEASURE This measure focuses on calculating pediatric readmission rates for general acute care hospitalizations. Criteria for retaining only hospitals identified as general acute care facilities are specified below. Exclusions at the Hospital Level: • Drop records for specialty and non-acute care hospitals: For the list of American Hospital Association (AHA) hospital codes and Centers for Medicare & Medicaid Services (CMS) taxonomy codes for general acute care hospitals eligible for inclusion in the measure, see the Data Dictionary submitted in Section S.2b. Drop records for a hospital if the records contain only an AHA code or only a CMS code and the code is NOT for a general acute care hospital. If a hospital's records include both an AHA and a CMS code, drop the records for the hospital if either code is NOT for a general acute care hospital. • Drop records for which hospital type is missing. STEP 2: IDENTIFY HOSPITALS FOR WHICH READMISSION RATES SHOULD NOT BE CALCULATED Hospitals with very incomplete data may lack adequate information to calculate accurate readmission rates. Readmission rates should therefore not be evaluated for these hospitals (i.e., their admissions should not be

	2893: Neonatal Intensive Care All-Condition Readmissions	2393: Pediatric All-Condition Readmission Measure
		included in the measure as index admissions). To provide an accurate assessment based on the full dataset, data completeness at the hospital level should be assessed before excluding individual records for data quality or clinical criteria. Criteria for identifying hospitals for which readmission rates should not be calculated are listed below. Exclusions at the Hospital Level for Calculating Readmission Rates: • Hospitals with less than 80% of records with complete unique patient identifier, admission date, and end-of-service date • Hospitals with less than 80% of records with complete primary ICD-9 or principal ICD-10 diagnosis code • Out-of-state hospitals Create a dichotomous variable named "hosp_noindex," coded 1 for hospitals meeting the above exclusion criteria (this variable will be used to exclude these hospitals' admissions from being evaluated as index admissions) and 0 for all other hospitals. Although readmission rates should not be calculated for these hospitals, these hospitals' records should remain in the dataset so that their admissions can be evaluated as potential readmissions for other hospitals. STEP 3: EXCLUDE PATIENTS WHO HAVE MISSING OR INVALID DATA FOR ANALYZING READMISSIONS Exclusions at the Patient Level: • Drop all records for a patient if ANY record is missing patient identifier, hospital identifier, admission date, end-of-service date, or disposition status. • Drop all records for a patient if date of birth is missing in ALL records. • Drop all records for a patient if date of birth is not consistent across records. • Drop all records for a patient if ANY record has an end-of-service

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		date prior to the admission date. • Drop all records for a patient if ANY record has an admission date or end-of-service date prior to the date of birth. • Drop all records for a patient if ANY record uses codes other than ICD-9 or ICD-10 codes for the primary procedure. • Drop all records for a patient if gender is missing in ALL records. • Drop all records for a patient if gender is not consistent across records. STEP 4: SPECIFY VARIABLES DEFINED AT THE RECORD LEVEL The variables listed in the Data Dictionary provided in Section S.2b are used to construct the measure cohort and/or to calculate readmission rates. These variables must be named and coded as specified in the Data Dictionary and should be created prior to identifying episodes of care and applying further exclusions to the data. STEP 5: DEFINE EPISODES OF CARE Data for a single period of inpatient care may be contained in more than 1 claims record. It therefore may be necessary to collapse instances of multiple claims for the same hospitalization into a single episode of care prior to applying some exclusion criteria and evaluating readmissions. This allows all data relevant to a given hospitalization to be appropriately evaluated for measure cohort exclusion. The process for defining episodes of care is detailed below. 1. IDENTIFY TRUE DUPLICATES AND DROP ALL BUT 1. • True duplicates are records that have identical values for all key variables needed to assess cohort eligibility and calculate case-mix-adjusted readmission rates, where these key variables include all variables listed in the Data Dictionary (provided in Section S.2b) except hasprimary. Combine true duplicates, using the MAXIMUM value of hasprimary.

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		2. IDENTIFY AND COMBINE MULTIPLE VALID RECORDS FROM THE SAME HOSPITAL FOR THE SAME HOSPITALIZATION. • Sort records by the following variables, in the specified order: patientid, hospitalid, admit_dt, end_service_dt, and disp_status. • Define records to be part of the same hospitalization at the same hospital if (a) patientid and hospitalid are equal to those in the previous record and (b) admission dates and end-of-service dates indicate consecutive time periods or nesting of 1 time period within another in that any of the following is true: o admission date is before the previous record's end-of-service date o admission date is equal to the previous record's end-of-service date AND the previous record's disposition status is other (i.e., disp_status = 0) or transfer to an acute care hospital (i.e., disp_status = 2) o admission date is 1 day after the previous record's end-of-service date AND the previous record's disposition status is other (i.e., disp_status = 0) or transfer to an acute care hospital (i.e., disp_status = 2) o admission and end-of-service dates are both the same as those of the previous record, and admission date is equal to end-of-service date (i.e., the records are for a same-day discharge) If the above criteria for multiple valid records from the same hospital for the same hospitalization are met, combine all of the records. Retain the variables patientid, dob, hospitalid, male, and hosp_noindex, which will be the same across records by this step. Use the MINIMUM value for admit_dt. Use the MAXIMUM value for end_service_dt, hasprimary, cci1-cci10 and cci12-cci18, planned, chemo, mh, obstetric, and newborn. Use the value of disp_status and ins_end (this variable is only used in single-payer analyses) from the record with the maximum end-of-service date.

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		If multiple records have the same maximum end-of-service date but inconsistent values for disp_status, use the MAXIMUM value of disp_status within those records. Using the maximum value for end_service_dt captures the discharge date that serves as the starting point for the 30-day follow-up period for evaluating readmissions. Using the maximum value for chronic condition indicator and clinical exclusion variables across records captures the presence of a chronic condition or clinical exclusion for the entire episode of care. For example, if 1 record contains a primary ICD-9 or principal ICD-10 mental health diagnosis, this diagnosis will be applied to the entire episode of care, and the entire episode of care will be excluded. 3. IDENTIFY AND COMBINE MULTIPLE VALID RECORDS FROM MULTIPLE HOSPITALS FOR HOSPITALIZATIONS THAT INCLUDED TRANSFERS. • Sort records by the following variables, in the specified order: patientid, admit_dt, end_service_dt, and disp_status. • Define records to be in the same episode of care if (a) patientid is equal to patientid in the previous record, (b) the previous record's disposition status is transfer to an acute care hospital (i.e., disp_status = 2), and (c) the admission date is equal to or is 1 day after the previous record's end-of-service date. If the above criteria for connected hospitalizations are met, combine all of the records. Retain the variables patientid, dob, and male, which will be the same across records by this step. Use the MINIMUM value for admit_dt. Use the MAXIMUM value for end_service_dt, hasprimary, cci1-cci10 and cci12-cci18, planned, chemo, mh, obstetric, and newborn. Use the value of hospitalid, disp_status, ins_end, and hosp_noindex from the last record. 4. IDENTIFY AND EXCLUDE INVALID EPISODES OF CARE

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		There may be episodes of care that are temporally overlapping (i.e., in which it appears that a patient was in 2 different hospitals at the same time). These episodes should be dropped. • Drop all episodes of care that share the same patient identifier, admission date, and end-of-service date but have different hospital identifiers. • For each patient identifier, drop all temporally adjacent episodes of care if there are overlapping dates (i.e., admission date is before the end-of-service date for the preceding episode of care) but different hospital identifiers. STEP 6: SPECIFY VARIABLES DEFINED AT THE EPISODE-OF-CARE LEVEL Because multiple records may be combined to create an episode of care, some variables used for measure cohort exclusions and readmission analysis should be defined only after defining valid episodes of care. This sequencing assures that the variable values accurately represent information for the entire hospitalization, rather than capturing only a subset of information for the hospitalization. These variables should be created as specified in the Data Dictionary provided in Section S.2b, prior to applying further exclusion criteria to the data. STEP 7: DEFINE EPISODES OF CARE ELIGIBLE FOR INCLUSION IN MEASURE COHORT The exclusions listed below are applied only after defining episodes of care (in Step 5) and defining variables at the episode-of-care level (in Step 6). Exclusions at the Patient Level Based on Data Completeness Criteria: • Drop all episodes of care for a patient if the primary ICD-9 or principal ICD-10 diagnosis code is missing (i.e., hasprimary = 0) for ANY episode of care for that patient. Exclusions at the Episode-of-Care Level Based on Data Quality Criteria:

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		• Drop episodes of care with admission dates that occur after a discharge status of death during a prior episode of care. Exclusions at the Episode-of-Care Level Based on Clinical Criteria: • Drop episodes of care for patients greater than 18 years, 29 days old at the time of admission. • Drop episodes of care for birth of healthy newborns (i.e., newborn = 1). • Drop episodes of care with a primary ICD-9 or principal ICD-10 non-delivery obstetric diagnosis or any labor and delivery diagnosis or procedure (i.e., obstetric = 1). • Drop episodes of care with a primary ICD-9 or principal ICD-10 mental health diagnosis (i.e., mh = 1). STEP 8: DEFINE INDEX ADMISSIONS AND READMISSIONS A clean dataset containing only eligible admissions must be prepared before defining index admissions and readmissions. This dataset should consist of all admissions that are eligible for inclusion in the measure cohort based on the criteria detailed in data preparation steps 1 through 7, above. Exclusions at the Episode-of-Care Level for Defining Index Admissions: • Episodes of care for patients 18 years, 0 days old or greater at the time of discharge • Episodes of care with a discharge disposition of death • Episodes of care with a discharge disposition of leaving the hospital against medical advice • Episodes of care for which 30 days of follow-up data are unavailable, either (a) because the dataset's time range for claims does not include the full 30 days, or (b) because, for single-payer analyses, the patient was not enrolled with the payer for the full 30 days (i.e., the difference between ins_end and end_service_dt is less than 30 days)

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		The above exclusions are applied without deleting the records from the dataset as these episodes of care may still meet criteria for readmissions. Exclusions at the Hospital Level for Defining Index Admissions: • Hospitals with less than 80% of records with complete unique patient identifier, admission date, and end-of-service date • Hospitals with less than 80% of records with complete primary ICD-9 or principal ICD-10 diagnosis code • Out-of-state hospitals Hospitals meeting the above exclusion criteria were identified in Step 2, above. The dichotomous variable hosp_noindex was created in Step 2 and coded 1 for hospitals meeting the above criteria and 0 for all other hospitals. Episodes of care for hospitals with hosp_noindex = 1 are therefore excluded from index admissions. Although these hospitals' episodes of care should not be evaluated as index admissions (i.e., readmission rates should not be calculated for these hospitals), their episodes of care should remain in the dataset so they can be evaluated as potential readmissions for other hospitals.
Risk Adjustment	Statistical risk model The optimal model uses logistic regression is used to adjust for the risk factor variables, which are: adjusted for gestational age, race, gender, education, insurance status, and complications (bronchopulmonary dysplasia (BPD), necrotizing enterocolitis Provided in response box S.15a	Statistical risk model CASE-MIX ADJUSTMENT MODEL The case-mix adjustment model consists of a 2-level logistic regression model with fixed effect variables for patient case-mix at the first level and random intercepts for hospitals at the second level. The model estimates 3 types of parameters. First, the coefficients of patient demographic and clinical characteristics represent the influence of these characteristics on predicted probabilities of readmission for an individual patient. Second, hospital-level random intercept estimates (evaluated for each hospital) represent the greater or lesser adjusted probability of readmission, not explained by patient-level fixed effects, for patients discharged from each hospital. Finally, variance estimates of

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		the hospital random effects summarize the amount of variation among the intercepts for different hospitals and hence summarize the amount of variation in adjusted readmission rates across hospitals, at least some of which may be due to variation in health system quality. See the Data Dictionary submitted in Section S.2b. The following case-mix variables, defined from the index admission, are included in the model: • Age group • Gender • Presence of chronic conditions in each of 17 body systems (organ systems, disease categories, or other categories) • Number of body systems affected by chronic conditions After the case-mix-adjusted coefficients and hospital-level random intercept for each record are calculated, the hospital-specific case-mix-adjusted readmission rate is estimated through direct standardization using a case-mix representative of all hospitals in the entire dataset. The resulting estimates represent the readmission rate that each hospital would have if it served the same representative case-mix and are therefore conducive to comparisons among hospitals. DIRECT STANDARDIZATION Hospital populations in the dataset have differing case-mix compositions, making meaningful interpretations of comparisons of readmission rates across hospitals challenging. The hospital estimate from the fitted equation above is an estimate of the random effects intercept which is not a readily interpretable quantity. We therefore use direct standardization to generate readmission rates that have a meaningful interpretation across hospitals. The interpretation that can be posited from this methodology is that the predicted readmission rate estimated for each hospital represents the readmission rate it would have if the

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		hospital treated a patient cohort with the case-mix composition of all eligible index admissions within the entire dataset. We first fit a 2-level hierarchical logistic regression model to the observed data to obtain hospital-specific random intercepts that are adjusted for each hospital's case-mix. In order to implement direct standardization, we apply the estimates from the model to a hypothetical dataset in which (a) all admissions are re-coded as if they are from the hospital for which a readmission rate is being estimated and (b) the readmission outcome has been set to missing. Otherwise, the dataset is identical to the actual observed data from all hospitals in the cohort. This methodology uses the hospital's own random intercept, which is case-mix adjusted by its own specific index admission population, to determine the probability that a record in the dataset will generate a readmission. Each hospital's predicted probabilities for all records are summed by hospital and divided by the total number of index admissions in the dataset to produce the hospital-specific standardized readmission rate. The upper confidence bound for this estimate is calculated as the mean of the upper confidence bound for each index admission's probability of leading to a readmission. The corresponding procedure is followed to estimate the lower confidence bound. Finally, the point estimate and bound values are multiplied by a factor that corrects for estimation error produced by transformations used during estimation. The bias correction factor is a constant value specified as the observed number of readmissions across all hospitals in the dataset divided by the predicted number of readmissions across all hospitals in the dataset. After calculating the point estimates and confidence intervals of hospital-specific readmission rates for each hospital using this methodology, hospitals are identified as outliers if the

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		confidence bounds around their predicted readmission rates do not overlap with the overall observed readmission rate across the entire dataset. ESTIMATION OF NATIONALLY COMPARABLE HOSPITAL- OR STATE-LEVEL READMISSION RATES There are several options for calculating rates that could be compared nationally. CMS could analyze Medicaid claims from multiple states. A private payer with data from multiple states could compare hospitals from across state lines. Multiple states with all-payer databases could combine them to enable cross-state comparisons. Individual states could calculate nationally comparable rates using a method we have developed by which readmission rates can be estimated for Medicaid-insured patients and standardized using a MAX reference dataset. Please see the Detailed Measure Specifications (provided in the Appendix) for instructions on implementing this method. Readmission rates are standardized using a dataset consisting of MAX claims for 26 states (Alabama, Arizona, Connecticut, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Montana, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Vermont, Virginia, Wisconsin, and Wyoming). The states, which are diverse in size and represent each geographic region (Northeast, Midwest, South, West), were chosen based on quality and completeness of their data for readmission analyses; to our knowledge, the combined data for these states comprise the most nationally representative dataset available to standardize readmission rates for Medicaid-insured children. Available in attached Excel or csv file at S.2b
Stratification	N/A	Not applicable.
Type Score	Rate/proportion better quality = lower score	Rate/proportion better quality = lower score

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Algorithm	First, patients are identified as having a gestational age of 23-34 weeks using the best obstetrical estimate of gestational age included in the birth certificate data. Variables for adjustment are then determined: race, gender, education, insurance status, and complications (bronchopulmonary dysplasia (BPD), necrotizing enterocolitis (NEC), retinopathy of prematurity (ROP), and intraventricular hemorrhage (IVH)). For these patients, readmissions are identified within the specified time period of 30 days. We next calculate the observed number of readmissions divided by the expected number of readmissions at the given level of the health care provider (hospital, outpatient facility, state) where the expected number of readmissions is based on the risk adjustment model using the above variables. The final ratio, (observed number of readmissions)/(expected number of readmissions), is then multiplied by the mean percentage of admissions in the cohort to calculate a risk-adjusted readmission rate. A similar method is performed if complications are excluded from the risk adjustment model. However, as we note, in testing of the various risk adjustment models the risk-adjusted readmission rates for each time period changed minimally when these complication measures were included or excluded from the model. The smallest level of measurement (i.e. hospital, state, etc.) must have a minimum of 50 patients eligible for readmission in a single calendar year. No diagram provided	PREPARATION OF DATA AND IDENTIFICATION OF MEASURE COHORT Identify Hospitals Eligible for Inclusion in the Measure 1. Starting with the complete set of claims from the time period being analyzed, exclude hospitalizations that occurred at specialty or non-acute care hospitals or at hospitals for which hospital type is missing. Identify Hospitals for which Readmission Rates Should Not Be Calculated 2. Identify and flag out-of-state hospitals and hospitals with incomplete data for key variables for more than 20% of records. Exclude Patients Who Have Missing or Invalid Data for Analyzing Readmissions 3. Exclude patients whose records use procedure codes other than ICD-9 or ICD-10 codes or have missing or invalid data for 1 or more of the following variables: patient identifier, hospital identifier, admission date, end-of-service date, disposition status, date of birth, and gender. Specify Variables Defined at the Record Level 4. Define variables for measure cohort exclusions and readmission analysis that should be created at the record level. Define Episodes of Care 5. For hospitalizations with data contained in more than 1 claim, combine the multiple claims into a single record for each hospitalization. Specify Variables Defined at the Episode of Care Level 6. Define variables for measure cohort exclusions and readmission analysis that should be created at the episode of care level. Define Episodes of Care Eligible for Inclusion in Measure Cohort 7. Exclude hospitalizations with a missing primary ICD-9 or principal ICD-10 diagnosis code. 8. Exclude hospitalizations with an admission date occurring after a previous hospitalization with a disposition status of death.

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		9. Exclude hospitalizations for patients older than 18 years, 29 days at the time of admission. 10. Exclude hospitalizations for obstetric conditions, mental health conditions, and birth of healthy newborns. DEFINE INDEX HOSPITALIZATIONS 11. Exclude hospitalizations for patients 18 years, 0 days old or older at the time of discharge. 12. Exclude hospitalizations with a discharge disposition of death. 13. Exclude hospitalizations with a discharge disposition of leaving against medical advice. 14. Exclude hospitalizations for which 30 days of follow-up data are not available for assessing readmissions. 15. Exclude hospitalizations that occurred at hospitals that (a) have less than 80% of records with complete patient identifier, admission date, and end-of-service date; (b) have less than 80% of records with complete primary ICD-9 or principal ICD-10 diagnosis codes; or (c) are located in a state not being analyzed. DEFINE READMISSIONS 16. Identify index hospitalizations followed by one or more readmissions within 30 days. 17. When identifying readmissions, exclude hospitalizations with (a) a primary ICD-9 or principal ICD-10 procedure code for a planned procedure or (b) a primary ICD-9 or principal ICD-10 diagnosis code or procedure code for chemotherapy. CASE-MIX ADJUSTMENT MODEL FITTING AND DIRECT STANDARDIZATION 18. Fit the case-mix adjustment model to the prepared dataset to estimate coefficients for the case-mix variables (age, gender, presence of chronic conditions in each of 17 body systems, and number of body systems affected by chronic conditions) and a hospital random intercept

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		for each hospital. 19. Perform direct standardization by fitting the model again for each hospital. Use the hospital's random intercept, adjusted for its own case-mix, from Step 18, but instead of using the hospital's own case-mix data, use a hypothetical dataset in which (a) all admissions are re-coded as if they are from the hospital for which a readmission rate is being estimated and (b) the readmission outcome has been set to missing. Each hospital's predicted probabilities for all records are summed by hospital and divided by the total number of index admissions in the dataset to produce the hospital-specific standardized readmission rate. 20. The upper confidence bound for this estimate is calculated as the mean of the upper confidence bound for each index admission's probability of leading to a readmission. The corresponding procedure is followed to estimate the lower confidence bound. 21. Finally, the point estimate and bound values are multiplied by a factor that corrects for estimation error produced by transformations used during estimation. The bias correction factor is a constant value specified as the observed number of readmissions across all hospitals in the dataset divided by the predicted number of readmissions across all hospitals in the dataset. 22. The resulting hospital-specific standardized readmission rate can be interpreted as the readmission rate the hospital would have if it treated a patient cohort with the case-mix composition of all eligible index admissions within the entire dataset. Detailed Methods for Implementing Direct Standardization in SAS One method to implement direct standardization in SAS involves obtaining the predicted values of every patient in the dataset in each hospital using the steps listed below. This is the method used in the SAS program we have prepared for the measure.

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		1. For each hospital being standardized, create a duplicate copy of the original dataset. The duplicate dataset should contain exactly the same variables and records as in the original dataset for all hospitals. 2. Set the outcome (readmission) in the duplicate dataset to missing. This prevents these duplicate records from being used in model estimation. 3. For ALL records in the duplicate dataset, set the hospital identifier to the hospital identifier of the hospital being standardized. Add a variable to the dataset that indicates that these records contain hypothetical data. 4. Concatenate the duplicate datasets to the original dataset. If the concatenated dataset is too large to handle, the same procedure may be conducted for subgroups of hospitals, or for 1 hospital at a time, and the results combined afterward. 5. Fit the case-mix adjustment model to the dataset created in the previous step. In SAS, the model will be fitted only on the original data since the outcome is missing for the duplicate data. This process will produce a case-mix-adjusted random intercept for each hospital. However, the procedure will also produce predicted probabilities for both original and duplicate records (SAS calculates predicted probabilities for any record in which the predictors are not missing, regardless of whether the outcome is missing). 6. Calculate the mean predicted probability and lower and upper bounds for only the duplicate records (those flagged as containing hypothetical data) in order to obtain the predicted readmission rate for the hospital being standardized. This rate represents the readmission rate for this hospital if it were to treat the entire dataset's population mix. No diagram provided
Submission items	5.1 Identified measures: 2393 : Pediatric All-Condition Readmission Measure	5.1 Identified measures: 0695 : Hospital 30-Day Risk-Standardized Readmission Rates following Percutaneous Coronary Intervention (PCI)

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	5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: This measure is specific to the Neonatal population. 5b.1 If competing, why superior or rationale for additive value: This measure provides the additive value of being specific to the unique patient population seen in the NICU.	0329 : Risk-Adjusted 30-Day All-Cause Readmission Rate 0330 : Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following heart failure (HF) hospitalization 0505 : Hospital 30-day all-cause risk-standardized readmission rate (RSRR) following acute myocardial infarction (AMI) hospitalization. 1551 : Hospital-level 30-day all-cause risk-standardized readmission rate (RSRR) following elective primary total hip arthroplasty (THA) and total knee arthroplasty (TKA) 1768 : Plan All-Cause Readmissions (PCR) 1891 : Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization 5a.1 Are specs completely harmonized? No 5a.2 If not completely harmonized, identify difference, rationale, impact: Our candidate measure fills a gap in pediatric quality measurement by addressing the current dearth of measures that assess inpatient care. The measure also addresses the need for readmission measures developed for use in children. We have harmonized our measure with the CMS Hospital-Wide All-Cause Unplanned Readmission Measure (NQF #1789) for adults. Like the adult measure, our measure calculates unplanned readmissions following hospitalization for almost all conditions, where a readmission is defined as the first unplanned admission to any acute care hospital within 30 days of discharge from a prior hospitalization at an acute care hospital. However, the adult measure allows each hospitalization to potentially count as both an index admission and a readmission and permits multiple index admissions per patient within a 30-day period. For our measure, in

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		contrast, additional admissions within 30 days from discharge from an index admission are not counted as index admissions. An admission more than 30 days from discharge from an index admission is counted as a new index admission. We chose this approach to increase the independence of observations and thus avoid having readmission rates dominated by the relatively few children with multiple readmissions within short time periods. Our measure covers the pediatric population, with an age eligibility criterion (less than 18 years old) that is complementary to that of the adult measure (18 years or older). Like the adult measure, our measure also uses a statistical model to case-mix adjust readmission rates, but our model was specifically developed for pediatric patients. Our measure also uses an algorithm for identifying hospitalizations for planned procedures and excluding them from readmissions. However, we developed the algorithm specifically for pediatric patients through a process in which pediatric expert clinicians reviewed ICD-9-CM procedure codes and indicated whether each procedure is typically planned in advance for children. We do not anticipate that differences between our measure and the adult measure would affect the interpretability or data collection burden of our measure. 5b.1 If competing, why superior or rationale for additive value: Not applicable. This measure does not conceptually address the same focus and target population as NQF-endorsed measure(s).

Appendix G: Pre-Evaluation Comments

Comments received as of April, 5 2016.

Topic	Commenter	Comment
0033: Chlamydia Screening in Women (CHL)	Submitted by Dr. Nat James	This measure permits an exclusion if an x-ray procedure is performed within 7 days of a pregnancy test. The allowed x-ray procedures are defined in CMS eCQM 153 as a test contained in the grouper: Diagnostic Study, Order: X-Ray Study (all inclusive)" using "X-Ray Study (all inclusive) Grouping Value Set (2.16.840.1.113883.3.464.1003.198.12.1034). This is a LOINC code grouper. Our EHR (Epic) and the procedure database (AMA) only link CPT codes to our x-ray procedures, not LOINC. Is there a procedure grouper based on CPT codes instead of LOINC that can be used for this measure? If not, what are recommended next steps for setting up this measure for MU reporting?
0033: Chlamydia Screening in Women (CHL)	Submitted by Dr. Maria Jorina, PhD	The measure seems very reasonable. The denominator exclusions could be defined to account for the patients who may be taking birth control pills for health-related reasons but who are not sexually active. Please at least remove all patients with pregnancy tests due to surgery within a week as well as those receiving X-rays and Accutane. Consider removing some menstrual diagnoses such as PCOS, ovarian failure, amenorrhea, etc. from the denominator. A number of these need hormonal treatment and are not suggestive of sexual activity. We also recommend adding screenings at behavioral health clinics in order to capture populations at the highest risk for chlamydia. (comment submitted by Boston Children's Hospital)
0471: PC-02 Cesarean Birth	Submitted by Gustavo San Roman, MD, FACOG	I have concerns about measure #0471 as well as the recent actions of the measure steward. My concerns stem from the fact that the Joint Commission (JC) has failed to disclose that they are aware of a fatal error in measure #0471: PC-02 Cesarean Birth. I have been attempting to inform the JC since April 2010 that the direct standardization age risk adjustment used in measure PC-02 contains a fatal flaw [1]. This error was not immediately obvious to others including the authors, the editors, the JC and the National Quality Forum (NQF). I was finally able to get the JC to understand the fatal flaw in July 2015 which they acknowledged in an email this past September. They informed me that instead of recalling the flawed measure that they would just be dropping the risk adjustment. I was horrified by their decision since dropping the risk adjustment

Topic	Commenter	Comment
		from measure PC-02 creates a new and significantly more flawed cesarean birth measure which has never been tested, validated or endorsed. The JC's website indeed confirms that they have dropped the risk adjustment from measure PC-02 v2016A [2]. Surprisingly, their website clearly indicates that this new cesarean birth measure is "NQF-ENDORSED". The actions of the JC are especially concerning because these actions make it very confusing as to which cesarean birth measure was vetted by the NQF and recently adopted by The Core Quality Measure Collaborative. I understand the significant problem that I have created by exposing a fatal flaw in the widely distributed measure #0471. However, the decision by the JC to conceal the flaw from the NQF will only make the problem worse. The longer it takes to recall a fatally flawed measure the more significant the problem will become. It was clear to me six years ago that the fatal flaw in PC-02 would eventually require a recall of the measure but unfortunately my concerns were ignored by the JC. Ignoring my concerns in 2010 has resulted in six wasted years in the effort to accurately measure cesarean birth utilization. Therefore, it would be extremely irresponsible of me if I didn't alert everyone involved of the current actions of the JC before they waste another six years and potentially adversely affect not only the millions of women who are giving birth each year but also the hard working healthcare personnel that care for them. I understand the extremely serious nature of my concerns and stand ready to provide any and all evidence required in support of my concerns. My motives are clear and my conviction is unwavering. Women who give birth deserve better. – Gustavo San Román, MD References: 1. https://www.birthrisk.com/Public/FatalFlaw.pdf 2. https://manual.jointcommission.org/releases/TJC2016A/MIF0167.html
0480: PC-05 Exclusive Breast Milk Feeding	Submitted by Alison Mann Stuebe, MD	I am writing to express my strong support for continued endorsement of PC-05, Exclusive Breast Milk Feeding. Seminal research from the California Maternity Care Quality Collaborative demonstrated substantial variation in supplementation of breastfed infants among maternity centers. Moreover, national data confirm that there is wide variation in the use of formula among breastfed infants in the first 2 days of life[1], ranging from 6.1% in Montana to 34.9% in New Jersey.

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		This variation among states suggests that overutilization of formula occurs in many maternity hospitals. However, just as some infants require delivery via cesarean, some breastfeeding dyads require formula supplementation. It is therefore essential that implementation of PC05 occurs within a context that provides appropriate support for family-centered decision-making and transitions to outpatient support. The AAP recommends that all breastfeeding newborns be seen within 48 to 72h of discharge from the maternity center[2]. Because some families may initiate breastfeeding after leaving the hospital, it may be prudent to schedule all newborns for a 48 to 72h visit to establish care with a pediatric provider. It may be useful to consider a quality measure for the proportion of infants seen by a health professional, either in the office or for a home visit, within 48 to 72h of discharge. Of note, the Baby Friendly Hospital Initiative includes a metric for exclusive breast milk feeding as one of its metrics for certification. Differences exist between PC-05 and the BFHI measure, increasing reporting burden for maternity centers. It would be helpful if BFHI and NQF could work together to develop a common metric for measuring exclusive breast milk feeding. Evidence continues to accrue that there is no replacement for mother's milk[3]. We can enable families to achieve optimal infant feeding by reducing iatrogenic formula supplementation during the maternity stay, and by ensuring careful follow-up for all families in the early days of life. 1. Centers for Disease Control and Prevention. 2012: Percent of breastfed infants who were supplemented with infant formula within 2 days of life. 2015 [cited 2016 April 4]; Available from: https://nccd.cdc.gov/NPAO_DTM/IndicatorSummary.aspx?category=8&indicator=41. 2. American Academy of Pediatrics, Breastfeeding and the use of human milk. Pediatrics, 2012. 129(3): p. e827-41. 3. Victora, C.G., et al., Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. The Lancet, 2016. 387(10017): p. 475-490.
2830: PC-05 Exclusive Breast Milk Feeding	Submitted by Alison Mann Stuebe, MD	I am writing to express my strong support for continued endorsement of PC-05, Exclusive Breast Milk Feeding. Seminal research from the California Maternity Care Quality Collaborative demonstrated substantial variation in supplementation of breastfed infants among maternity centers. Moreover, national data confirm that there is wide

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		variation in the use of formula among breastfed infants in the first 2 days of life[1], ranging from 6.1% in Montana to 34.9% in New Jersey. This variation among states suggests that overutilization of formula occurs in many maternity hospitals. However, just as some infants require delivery via cesarean, some breastfeeding dyads require formula supplementation. It is therefore essential that implementation of PC05 occurs within a context that provides appropriate support for family-centered decision-making and transitions to outpatient support. The AAP recommends that all breastfeeding newborns be seen within 48 to 72h of discharge from the maternity center[2]. Because some families may initiate breastfeeding after leaving the hospital, it may be prudent to schedule all newborns for a 48 to 72h visit to establish care with a pediatric provider. It may be useful to consider a quality measure for the proportion of infants seen by a health professional, either in the office or for a home visit, within 48 to 72h of discharge. Of note, the Baby Friendly Hospital Initiative includes a metric for exclusive breast milk feeding as one of its metrics for certification. Differences exist between PC-05 and the BFHI measure, increasing reporting burden for maternity centers. It would be helpful if BFHI and NQF could work together to develop a common metric for measuring exclusive breast milk feeding. Evidence continues to accrue that there is no replacement for mother's milk[3]. We can enable families to achieve optimal infant feeding by reducing iatrogenic formula supplementation during the maternity stay, and by ensuring careful follow-up for all families in the early days of life. 1. Centers for Disease Control and Prevention. 2012: Percent of breastfed infants who were supplemented with infant formula within 2 days of life. 2015 [cited 2016 April 4]; Available from: https://nccd.cdc.gov/NPAO_DTM/IndicatorSummary.aspx?category=8&indicator=41. 2. American Academy of Pediatrics, Breastfeeding and the use of human milk. Pediatrics, 2012. 129(3): p. e827-41. 3. Victora, C.G., et al., Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. The Lancet, 2016. 387(10017): p. 475-490.
2902: Contraceptive Care -	Raegan McDonald-Mosley,	Planned Parenthood Federation of America, the nation’s leading provider of women’s reproductive healthcare, supports the endorsement of the proposed measures. Contraception is an

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Postpartum	PPFA; Submitted by Jennifer Fuld	important and effective preventive service to reduce unintended pregnancy as well as improve birth spacing and family planning. PPFA provided de-identified data included in the application to demonstrate the reliability and validity of the measures as well the feasibility of using them for quality improvement. Currently, PPFA has already begun using a developmental version of these measures for quality improvement and looks forward to incorporate NQF endorsed measure into its portfolio of internal quality improvement work. National endorsement of these new performance measures on contraceptive care aligns with the April 2015 call by the Institute of Medicine for standardized metrics that include measuring contraceptive use to support reducing unintended pregnancy. Further, these will be the first nationally endorsed measures on contraceptive care, providing important tools to all providers who serve women of reproductive age.
2902: Contraceptive Care - Postpartum	Raegan McDonald-Mosley, PPFA; Submitted by Jennifer Fuld	Planned Parenthood Federation of America, the nation's leading provider of women's reproductive healthcare, supports the endorsement of the proposed measures. Contraception is an important and effective preventive service to reduce unintended pregnancy as well as improve birth spacing and family planning. National endorsement of these new performance measures on contraceptive care aligns with the April 2015 call by the Institute of Medicine for standardized metrics that include measuring contraceptive use to support reducing unintended pregnancy. Further, these will be the first nationally endorsed measures on contraceptive care, providing important tools to all providers who serve women of reproductive age.
2903: Contraceptive Care – Most & Moderately Effective Methods	Raegan McDonald-Mosley, PPFA; Submitted by Jennifer Fuld	Planned Parenthood Federation of America, the nation's leading provider of women's reproductive healthcare, supports the endorsement of the proposed measures. Contraception is an important and effective preventive service to reduce unintended pregnancy as well as improve birth spacing and family planning. PPFA provided de-identified data included in the application to demonstrate the reliability and validity of the measures as well the feasibility of using them for quality improvement. Currently, PPFA has already begun using a developmental version of these measures for quality improvement and looks forward to incorporate NQF endorsed measure into its portfolio of internal quality improvement work. National endorsement of these new performance measures on

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		contraceptive care aligns with the April 2015 call by the Institute of Medicine for standardized metrics that include measuring contraceptive use to support reducing unintended pregnancy. Further, these will be the first nationally endorsed measures on contraceptive care, providing important tools to all providers who serve women of reproductive age.
2904: Contraceptive Care - Access to LARC	Raegan McDonald-Mosley, PPFA; Submitted by Jennifer Fuld	Planned Parenthood Federation of America, the nation's leading provider of women's reproductive healthcare, supports the endorsement of the proposed measures. Contraception is an important and effective preventive service to reduce unintended pregnancy as well as improve birth spacing and family planning. PPFA provided de-identified data included in the application to demonstrate the reliability and validity of the measures as well the feasibility of using them for quality improvement. Currently, PPFA has already begun using a developmental version of these measures for quality improvement and looks forward to incorporate NQF endorsed measure into its portfolio of internal quality improvement work. National endorsement of these new performance measures on contraceptive care aligns with the April 2015 call by the Institute of Medicine for standardized metrics that include measuring contraceptive use to support reducing unintended pregnancy. Further, these will be the first nationally endorsed measures on contraceptive care, providing important tools to all providers who serve women of reproductive age.

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