



Measure Information

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

Brief Measure Information

NQF #: 0475

Corresponding Measures:

De.2. Measure Title: Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge

Co.1.1. Measure Steward: Centers for Disease Control and Prevention

De.3. Brief Description of Measure: 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).

1b.1. Developer Rationale: Prevention of chronic Hepatitis B cases and its morbidity and mortality will be strengthened through the safety net provided by administration of the birth dose of the Hepatitis B vaccine to all infants before hospital or birthing facility discharge. The measure highlights the critical importance of the birth dose of Hepatitis B vaccine as a safety net for all infants. It provides an incentive to hospitals/birthing facilities to establish policies and address barriers to ensure a Hepatitis B birth dose for all infants.

S.4. 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).

S.6. Denominator Statement: The number of live newborn infants born at the hospital/birthing facility during the reporting window (one calendar year).

S.8. Denominator Exclusions: None.

De.1. Measure Type: Process

S.17. Data Source: Electronic Health Data, Electronic Health Records, Other, Paper Medical Records, Registry Data

S.20. Level of Analysis: Facility

IF Endorsement Maintenance – Original Endorsement Date: Oct 24, 2008 **Most Recent Endorsement Date:** Mar 30, 2012

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

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

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? N/A

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

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

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[Template_MeasSubm_Evidence.docx](#)

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

1b. Performance Gap

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

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

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

Prevention of chronic Hepatitis B cases and its morbidity and mortality will be strengthened through the safety net provided by administration of the birth dose of the Hepatitis B vaccine to all infants before hospital or birthing facility discharge. The measure highlights the critical importance of the birth dose of Hepatitis B vaccine as a safety net for all infants. It provides an incentive to hospitals/birthing facilities to establish policies and address barriers to ensure a Hepatitis B birth dose for all infants.

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

a. NQF MEASURE Feasibility Study: The Feasibility Study was conducted in 50 hospitals using 2008 data that were representative of labor and delivery hospitals in Texas. The annual birth cohort size at study hospitals ranged from 219 to 6,530 births and together represented more than 100,000 births. Hospitals were divided into urban and rural locations and included for-profit, not-for-profit, and public facilities. Thirty-six of 50 hospitals (72%), representing more than 62,000 births, calculated the measure. The Hepatitis B birth dose vaccination rates not excluding parent/guardian refusals were: median 94.5%; minimum 8%; maximum 100%.[a]

b. Estimates from a variety of other sources demonstrate wide variation in performance across providers, and substantial room for improvement.

i. The 2014 National Immunization Survey reported Hepatitis B birth dose rates by state and jurisdiction using verified vaccination records for 0-3 days of life among infants born from January 2011-May 2013 (the latest available). The survey reported a mean coverage of 72.4%±1.5, which was down from 74.2%±1.4 in 2013. Among U.S. Department of Health and Human Services states and local areas, the minimum coverage was 48.4%±7.5 and the maximum coverage was 88.4%±4.6.[b]

ii. Among 40 delivery facilities in New York City, representing 118,995 total births during 2013, 67.4% of infants received the birth dose of Hepatitis B vaccine, either given at day 0 (birth), day 1, day 2, and day 3. (Note that infants with birth weights less than 2000 grams were included in this calculation). This percentage is unchanged from 2012. Birth dose coverage ranged from a low of 5.4% at one facility to a high of 102.7% (note: 102.7% is the reported figure) at another facility.[c]

iii. Among 14 hospitals in New York City and Michigan, representing 36,046 live births during 2013, 77.3% of infants received the birth dose of Hepatitis B vaccine, when parent/guardian refusals were excluded from the denominator. This percentage represents an increase from 72.6% of infants during 2012.[d]

iv. The results of a Hepatitis B birth dose "Best Practices" Survey were presented at the National Immunization Conference in 2011. The survey was conducted by the New York State Department of Health's Perinatal Hepatitis B Prevention Program to identify common practices among hospitals with the highest birth dose coverage. Best practices that increased or were associated with high birth dose adherence included: early parental education prior to hospitalization, early consent before or upon hospital admission, staff education and "buy in", and state-funded vaccine for the birth dose at no cost to hospitals (a universal Hepatitis B vaccine supply policy).[e]

v. A Public Health Evaluation Project at 119 hospitals in Texas consisting of a chart review during 2009-2010 demonstrated the 0-3 day of life Hepatitis B vaccination rates by birthing facility: mean 90.4%; median 95.5%; maximum 100%; minimum 21.2%.[f]

vi. A survey of a nationally representative sample of birthing hospitals was conducted in 2005, with review of over 10,000 mother/infant charts. The study described major gaps in hospital policies and practices designed to prevent perinatal transmission of Hepatitis B virus. Receipt of Hepatitis B vaccine within 12 hours of birth, as recommended by the Advisory Committee on Immunization Practices (ACIP), was confirmed in 67.1% of infants born to HBsAg-positive women. More than one-tenth (13.7%) of infants born to HBsAg-positive women (infants at highest risk of perinatal Hepatitis B virus transmission) received no Hepatitis B vaccine prior to hospital discharge. Overall, 69% of infants born to HBsAg-negative pregnant women received the birth dose prior to

hospital discharge. The existence of a written policy was the strongest correlate of adherence to birth dose administration of newborn infants.[g]

vii. During July 1999–October 2002, a survey of public health departments reported more than 500 hospital medical errors in failures to administer immunoprophylaxis at birth, including routine Hepatitis B birth dose was not part of hospital policy so that proper prophylaxis was not provided to infants.[h]

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

a. Feasibility Study report based on review of medical records.

b. CDC. National, state, and selected local area vaccination coverage among children aged 19–35 months—United States, 2014. MMWR 2015; 64(33):889–96.

c. Hepatitis B Birth Dose Coverage by NYC Facility. <http://www.nyc.gov/html/doh/html/hcp/cd-hepatitisb-pregnancy.shtml>

d. Hepatitis B birth dose coverage data, excluding parent refusals, from New York City and Michigan hospitals; CDC, unpublished data, 2012–2013.

e. Pollock L. Hepatitis B Birth Dose Best Practices 2010 Survey. 2011 National Immunization Conference presentation (March 31, 2011) <http://cdc.confex.com/cdc/nic2011/webprogram/Paper25179.html>

f. Unpublished data from Texas Department of State Health Services, Public Health Evaluation Project (PHEP), 2010.

g. Willis BC, Wortley P, Wang S, Jacques-Carroll L, Zhang F. Gaps in Hospital Policies and Practices to Prevent Perinatal Transmission of Hepatitis B Virus. Pediatrics. 2010 125:704–711 (<http://pediatrics.aappublications.org/content/125/4/704.full.html>) alternate link: <http://pediatrics.aappublications.org/content/125/4/704.long>

h. <http://www.immunize.org/catg.d/p2128.pdf> and <http://www.immunize.org/catg.d/p2062.pdf> (Specific examples of medical errors resulting in HBV infection)

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

a. An analysis of data from 9,252 HBsAg-positive mothers and their infants among five U.S. jurisdictions during 2007–2013 demonstrated disparities regarding perinatal Hepatitis B transmission. Perinatal transmission occurred in 1.4% of infants born to mothers whose race was Asian/Pacific Islander, compared to 0.5%, 0.1%, and 0.6% of mothers whose race/ethnicity was black, white, or Hispanic, respectively ($p < 0.01$). Perinatal transmission occurred in 1.3% of infants whose mothers were foreign-born, compared to 0.6% of infants whose mothers were U.S.-born ($p = 0.02$).[a]

b. A 2006 study that estimated the number of births in the United States to HBsAg-positive women evaluated vital statistics data for 22 states that had information on country of birth of pregnant women. Results indicated that foreign-born women from countries highly endemic for Hepatitis B infection (despite being a minority of all women giving birth), U.S.- and Canadian-born non-Hispanic blacks, and Asian/Pacific Islanders represented the majority of all births to HBsAg-positive women. Of 2,359,912 births 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.[b]

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

a. Schillie S, Walker T, Veselsky S, Crowley S, Dusek C, Lazaroff J, Morris S, Onye K, Ko S, Fenlon N, Nelson N, Murphy T. Outcomes of Infants Born to Women Infected With Hepatitis B, Pediatrics 2015;135:e1141–7.

b. Din E, Wasley A, Jacques-Carroll L, Sirotkin B, Wang S. Estimating the Number of Births to Hepatitis B Virus-infected Women in 22 States, 2006; Pediatr Infect Dis J 2011;30:1–5.

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when

implemented. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

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

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

Cancer : Liver, Liver : Viral Hepatitis, Perinatal Health, Perinatal Health : Newborn Care

De.6. Non-Condition Specific(check all the areas that apply):

Immunization, Primary Prevention

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

Children, Populations at Risk

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

<http://www.cdc.gov/hepatitis/partners/perihepbcoord.htm>

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

This is not an eMeasure Attachment: [HepBNewborn_Artifacts_09252013-635319495478389727-635627868869221191-635787044983961955.zip](#)

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

Attachment Attachment: [ICD9_10Codes.docx](#)

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

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

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

[Exclusions for parent/caregiver refusals being removed from denominator.](#)

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

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).

S.5. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

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)

S.6. Denominator Statement (Brief, narrative description of the target population being measured)

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

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

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

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
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).

S.8. Denominator Exclusions (Brief narrative description of exclusions from the target population)

None.

S.9. Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

N/A

S.10. Stratification Information (Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)

N/A

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

No risk adjustment or risk stratification

If other:

S.12. Type of score:

Rate/proportion

If other:

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

Better quality = Higher score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

- 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. 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).

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

If an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

N/A, survey based on actual numbers.

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and

guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.

N/A

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Electronic Health Data, Electronic Health Records, Other, Paper Medical Records, Registry Data

S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)

If instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

N/A

S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

No data collection instrument provided

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

Facility

S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Inpatient/Hospital

If other:

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

N/A

2. Validity – See attached Measure Testing Submission Form

[testing_attachment-635930264661113192.docx](#)

2.1 For maintenance of endorsement

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

2.2 For maintenance of endorsement

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

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1, 2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without

undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

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

3a.1. Data Elements Generated as Byproduct of Care Processes.

Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

If other:

3b. Electronic Sources

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

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

Some data elements are in defined fields in electronic sources

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For maintenance of endorsement, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

Not all hospitals/birthing facilities currently have the infrastructure for electronic sources, therefore paper sources of medical records, pharmacy, etc. must be used until such time as all hospital/birthing facilities have electronic source capabilities. However, adoption of electronic health records has increased; in 2014, 75.5% of acute care hospitals had adopted at least a basic electronic health record, representing an eight-fold increase from 2008.

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

Attachment: 1a.3..docx

3c. Data Collection Strategy

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

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

o The Feasibility Study was conducted in 50 hospitals using 2008 data that were representative of labor and delivery hospitals in Texas. The annual birth cohort size at study hospitals ranged from 219 to 6,530 and together represented more than 100,000 births. Hospitals were divided among urban and rural locations and included for-profit, not-for-profit, and public facilities. Thirty-six of 50 hospitals (72%), representing more than 62,000 births, calculated the measure. No issue of patient confidentiality was encountered. Chart reviews were done under the auspices of the public health authority of the Texas Department of State Health Services.

o Among 50 hospitals participating in the survey, overall 38 (76%) indicated they were able to provide data for the measure; 2 of these hospitals eventually did not provide the data. However, only 19 (38%) of the hospitals indicated they had access to data to calculate the number of parent/guardian vaccination refusals. The two most common reasons for not providing data were the time burden (71%) and information management (64%). With increasing uptake of electronic health records, these reasons may become less important over time.

o The cost of providing the measure was based on responses from hospitals participating in the Feasibility Study. None had previous experience providing the measure information, and thus, reflect a "start-up" cost.

- o To determine the direct cost associated with determining the number of infants vaccinated with Hepatitis B vaccine prior to discharge, 6 hospitals provided information: mean \$65, median \$25, minimum \$0, maximum \$240 (2008 USD).
- o To determine the indirect cost associated with determining the number of infants vaccinated with Hepatitis B vaccine prior to discharge, 11 hospitals provided information: mean \$303, median \$100, minimum \$0, maximum \$1650 (2008 USD).
- o To determine the direct cost associated with determining the parent/guardian vaccination refusal rate (done before implementation of ICD-10 coding), 5 hospitals provided information: mean \$594, median \$10, minimum \$0, maximum \$2000 (2008 USD).
- o To determine the indirect cost associated with determining the parent/guardian vaccination refusal rate, 6 hospitals provided information: mean \$136, median \$27, minimum \$0, maximum \$725 (2008 USD).
- o Costs varied considerably by retrieval method:
 - o The highest cost was associated with retrieving information from an electronic health record; 5 hospitals provided information: mean \$970, median \$1160, minimum \$0, maximum \$2000 (2008 USD). Presumably some or most of this cost entailed initial programming which might not be necessary in subsequent years.
 - o The lowest cost was associated with retrieving information from an unknown source; 2 hospitals provided information.
 - o The measure would be more robust if parent/guardian refusals were not excluded from the denominator.

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

N/A

4. Usability and Use

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

4a. Accountability and Transparency

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

4.1. Current and Planned Use

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

Specific Plan for Use	Current Use (for current use provide URL)
Use Unknown	<p>Public Reporting New York City Department of Health and Mental Hygiene http://www.nyc.gov/html/doh/html/hcp/cd-hepatitisb-pregnancy.shtml</p> <p>Public Health/Disease Surveillance National Immunization Survey http://www.cdc.gov/nchs/nis.htm</p> <p>Professional Certification or Recognition Program Immunization Action Coalition http://www.immunize.org/honor-roll/birthdose/</p> <p>Quality Improvement (Internal to the specific organization) 3 hospitals in New York City N/A</p>

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

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

a. New York City Department of Health and Mental Hygiene; to offer healthcare professionals current information about prevention of perinatal transmission of Hepatitis B; New York City - 40 delivery facilities, 118,995 births

b. National Immunization Survey; to monitor childhood immunization coverage; 50 states, the District of Columbia, and some U.S. territories; 14,893 children (providing national estimate)

e. and f. Immunization Action Coalition Birth Dose Honor Roll; to recognize hospitals and birthing centers that have attained high coverage rates for administering Hepatitis B vaccine at birth; 220 hospitals in the United States

g. Hospitals in New York City and Michigan; to share results with nursery staff/obstetric providers/pediatric providers, used by quality assurance/risk management, reported to public health, publish in hospital newsletter/magazine/ website/promotional materials, used for research; 3 hospitals in New York City

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

N/A

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

N/A

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

4a2.2.2. Summarize the feedback obtained from those being measured.

4a2.2.3. Summarize the feedback obtained from other users

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

Improvement

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

could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

N/A

4b2. Unintended Consequences

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

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

Hospitals have not had a requirement to report data on Hepatitis B birth dose vaccination rates and/or parent/guardian refusals. As a consequence, the Feasibility Study demonstrated a wide variety of hospital capacity for providing the data for this measure. Some hospitals possessed the full capacity to produce the measure via easily accessible electronic or paper records. Others required laborious review of paper records. Other hospitals did not capture all the required information for the complete calculation in either a paper or electronic form, or kept some data electronically and some in paper records. Despite these challenges, most hospitals were able to provide the measure at a value within 10% of that determined by the sample of medical charts reviewed. A few hospitals provided a value that was considerably different. Inaccuracies in the calculations will be directly related to a given hospital's information management practices for the data required. Although paper records will most likely require more time for review, this may not present an accuracy problem in hospitals with smaller delivery volumes that keep paper records and maintain them on site for easy access. Likewise, an electronic record management system will be accurate only so far as the data are required to be entered into the system, and the retrieval of the data is subsequently easy. ICD-9 and ICD-10 codes are available for both live births (V27.x) and hepatitis B vaccination (V05.3). A hospital with high rates of vaccination might be targeted with anti-vaccine advocacy pressure.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

5. Comparison to Related or Competing Measures

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

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

No

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

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

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

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

N/A

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

N/A

Appendix

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

Attachment **Attachment:** [FeasibilityReportTexas-635882735966472669.pdf](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): [Centers for Disease Control and Prevention](#)

Co.2 Point of Contact: [Sarah, Schillie, \[sschillie@cdc.gov\]\(mailto:sschillie@cdc.gov\), 404-718-8608-](#)

Co.3 Measure Developer if different from Measure Steward: [Centers for Disease Control and Prevention](#)

Co.4 Point of Contact: [Sarah, Schillie, \[sschillie@cdc.gov\]\(mailto:sschillie@cdc.gov\), 404-718-8608-](#)

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

N/A

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: [2007](#)

Ad.3 Month and Year of most recent revision: [10, 2011](#)

Ad.4 What is your frequency for review/update of this measure?

Ad.5 When is the next scheduled review/update for this measure? [05, 2016](#)

Ad.6 Copyright statement: [I was an employee of the U.S. Federal Government when this work was conducted and prepared for publication; therefore, it is not protected by the Copyright Act, and copyright ownership cannot be transferred.](#)

Ad.7 Disclaimers: [The findings and conclusions in this report are those of the author\(s\) and do not necessarily represent the views of the Centers for Disease Control and Prevention.](#)

Ad.8 Additional Information/Comments: [Please note that the figure for 1.a.3 is also attached in a separate file \(in case it is unreadable in the submission\). Note that this separate file is attached at 3.b.3, as the Feasibility Report was attached for extra files](#)

(and hence 3.b.3 was the 'space' that allowed for attachment of an additional file [Appendix]).