NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1403 **NQF Project:** Child Health Quality Measures 2010

MEASURE DESCRIPTIVE INFORMATION

De.1 Measure Title: Newborn Blood Spot Screening

De.2 Brief description of measure: The percentage of children who turned 6 months old during the measurement year who had documentation in the medical record of a review of their newborn blood spot screening results by their 3-month birthday.

1.1-2 Type of Measure: Process
De.3 If included in a composite or paired with another measure, please identify composite or paired measure This measure appears in the composite Comprehensive Well Care by Age 6 Months.

De.4 National Priority Partners Priority Area: Care coordination, Population health
De.5 IOM Quality Domain: Effectiveness, Timeliness
De.6 Consumer Care Need: Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* **A.1 Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes **A.2 Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure **A.3 Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission **A.4 Measure Steward Agreement attached:**	**A** Y☐ N☐

B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Frequently performed procedure, Severity of illness, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Annually an estimated 4.1 million infants are screened for genetic and metabolic disorders. Of these, 4,000 infants are diagnosed with a genetic and metabolic disorder. On average, an additional 1,000 infants have a genetic and metabolic disorders that go undetected. (Advisory Committee on Heritable Disorders and Genetic Diseases in Newborns and Children, 2004). The genetic metabolic diseases are caused either by an abnormality in a person´s genes or by the presence/absence of key proteins whose production is directed by specific genes. The three most common genetic disorders are phenylketonuria (PKU), galactosemia (a sickle-cell disorder) and congenital hypothyroidism. Hyperphenylalaninemia is an abnormal increase in the concentration of the amino acid phenylalanine (Phe) in the blood. When the concentration of Phe is very high (_20 mg/dL or 1210 _mol/L) and there is accumulation of phenylketones, the condition is called classic phenylketonuria (PKU). (National Center for Biotechnology Information. 2006) The reported incidence ranges from 1 in 19 000 to 1 in 13 500 newborn infants. For non-PKU hyperphenylalaninemia, the estimated incidence is 1 in 48 000 newborn infants. (NIH, 2000) PKU is rarely diagnosed before 6 months of age without newborn screening, because the most common manifestation without treatment is developmental delay followed by mental retardation. Untreated individuals may also develop microcephaly, delayed or absent speech, seizures, eczema, and behavioral abnormalities. (Celia I.	**1a** C☐ P☐ M☐ N☐

Kaye, 2006) Galactosemia is an increased concentration of galactose in the blood. The genetic disorders that cause galactosemia vary in severity from a benign condition to a life-threatening disorder of early infancy. Early diagnosis and treatment of the latter condition can be life saving. (Celia I. Kaye, 2006)

Thyroid hormone deficiency at birth is one of the most common treatable causes of mental retardation. There are multiple etiologies of this disorder, both heritable and sporadic, varying in severity. Congenital hypothyroidism (CH) occurs in 1 in 4000 to 1 in 3000 newborns. Programs reporting a higher incidence may include some transient cases. (Celia I. Kaye, 2006)

1a.4 **Citations for Evidence of High Impact:** Overview of NBS Programs: State of the States. Briefing presented at: the first meeting of the Advisory Committee on Heritable Disorders and Genetic Diseases in Newborns and Children; June 7-8, 2004; Washington, DC.

National Center for Biotechnology Information. OMIM: Online Mendelian Inheritance in Man [database]. Available at: www.ncbi.nlm.nih.gov/entrez/query.fcgi?db_OMIM. Accessed March 1, 2006

National Institutes of Health. Consensus Development Conference on Phenylketonuria (PKU): Screening and Management. Bethesda, MD: US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development; 2000

Celia I. Kaye, MD, PhD, and the Committee on Genetics. American Academy of Pediatrics: Newborn Screening Fact Sheets. 2006 PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

1b. Opportunity for Improvement

1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** Newborn screening is a recognized preventive measure for the early detection of disorders that can cause severe mental retardation, chronic disability or death. Early detection of these abnormalities can prevent morbidity and mortality. The Newborn Screening Authoring Committee (2008) stated that an important goal of newborn screening is to identify infants with treatable congenital conditions before they become symptomatic. Pediatricians and emergency care physicians are often among the first health care professionals to encounter symptomatic infants, so they should be knowledgeable about the newborn screening program, ACT sheets for suspected conditions, and local or regional pediatric medical subspecialists to whom infants can be referred.The state newborn screening program usually can provide information about suspected conditions and expedite the newborn's follow-up confirmatory testing and care.

This measure encourages pediatricians and primary care physicians to ensure results of hospital-based newborn screenings are in the medical chart and to perform needed follow up.

1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:**
While infants are screened in the hospital, national recommendations suggest primary care physicians should receive notification of positive newborn screens within 5 to 7 days after testing. Despite this recommendation, one study showed that only slightly more than half received results within 2 weeks; others not at all. The majority of clinicians reported rarely attempting to obtain written copies of screening results if they were not readily available (Oyeku et al., 2010).

In a study focusing on the likelihood of primary care clinician's follow-up of positive newborn screening results for Sickle Cell Disease, nearly 84 percent (71 of 85) reported that they hardly ever attempted to obtain a written copy of newborn screening results when reports were not readily available during a clinic visit. For their patients with positive or abnormal newborn screening results, only 50 percent received results within two weeks of birth (Oyeku et al, 2010).

In addition, overall, clinicians' knowledge of newborn screening management is poor (Oyeku et al, 2010). In 2006, a national survey found that most primary care physicians thought that they were responsible for newborn screening follow-up care. Unfortunately, many felt unprepared to manage follow-up care for a child with a positive newborn screen. For example, nearly 20% of the pediatricians and half of the family physicians reported that they were not competent to discuss PKU (Kemper et al, 2006).

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These gaps in coordination of care represent a missed opportunity to treat patients and educate families about these conditions.

1b.3 Citations for data on performance gap:
Kemper, Uren, Moseley & Clark. Primary Care Physicians' Attitudes Regarding Follow-up Care for Children with positive Newborn Screening Results. Pediatrics 2006;118;1836-1841.

Oyeku, Feldman, Ryan, Muret-Wagstaff, Neufeld. Primary Care Clinicians' Knowledge and Confidence About Newborn Screening for Sickle Cell Disease: Randomized Assessment of Educational Strategies. JAMA. VOL. 102, NO. 8, AUGUST 2010.

1b.4 Summary of Data on disparities by population group:
There are large variations in the incidence of PKU by ethnic and cultural groups, with individuals of Northern European ancestry and American Indian/Alaska Native individuals having a higher incidence than black, Hispanic, and Asian individuals.(NIH, 2000)

Congenital hypothyroidism (CH) seems to occur more commonly in Hispanic and American Indian/ Alaska Native people (1 in 2000 to 1 in 700 newborns) and less commonly in black people (1 in 3200 to 1 in 17 000 newborns). Programs report a consistent 2:1 female/male ratio, which is unexplained but speculated to be related to an autoimmune risk factor. (Celia I. Kaye, 2006)

1b.5 Citations for data on Disparities:
National Institutes of Health. Consensus Development Conference on Phenylketonuria (PKU): Screening and Management. Bethesda, MD: US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development; 2000

Celia I. Kaye, MD, PhD, and the Committee on Genetics. American Academy of Pediatrics: Newborn Screening Fact Sheets. 2006 PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Many metabolic diseases, if detected and treated early, can lead to improved outcomes. For example, early treatment of PKU is associated with improved intellectual outcome. There is an inverse relationship between age at diagnosis of congenital hypothyroidism and neurodevelopmental outcome; the later treatment is started, the lower the IQ will be.

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
There is evidence that early detection of metabolic diseases can lead to improved outcomes. Furthermore, comprehensive state newborn screening programs involve more than the initial screening. Diagnosis, follow-up, treatment and evaluation are also vital components to ensure that children with potentially life threatening conditions receive necessary care (Advisory Committee on Heritable Disorders and Genetic Diseases in Newborns and Children, 2004). Children with PKU who are treated appropriately after positive newborn screening have average intelligence as measured by IQ tests; on average their intelligence is slightly lower when compared with parent and sibling IQs. There is an inverse relationship between the age at which treatment is begun and the IQ level, even in PKU that is treated early (Hellekson, 2001). Adolescents and young adults who are treated early and continuously seem to have no increased incidence of psychiatric, emotional, or functional disorders, and there is no increase in problems of self-concept (Landolt, 2002; Sullivan, 2001). With early detection of galactosemia, parents can exclude galactose from their child's diet. The exclusion of galactose can improve the life-threatening complications of classic galactosemia. This treatment has only limited efficacy in the prevention of long-term complications from galactosemia. Complications include impaired cognitive development, with mean IQ in the range of 70 to 90; verbal dyspraxia, a speech disorder attributable to a sensorimotor disturbance of articulation; growth delay, with ultimate height in the normal range; neurologic findings, including tremor and ataxia beginning in midchildhood to middle age; and ovarian failure, manifesting as delayed puberty, primary amenorrhea,

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secondary amenorrhea, or oligomenorrhea. (Berry, 2001) Prepubertal children with GALT deficiency are also at increased risk of having decreased bone mineral density despite normal calcium intake. (Panis, 2004). For congenital hypothyroidism, most newborn screening programs report no difference in global IQ score compared with sibling or classmate controls, whereas some report a reduction in IQ ranging from 6 to 15 points. Recent data suggest that a starting dose of 10 to 15 _g/kg per day normalized serum thyrotropin by 1 month and resulted in a higher IQ as compared with infants started on a lower treatment dose (Salerno, 2002).

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):** Good

1c.6 Method for rating evidence: Expert consensus

1c.7 Summary of Controversy/Contradictory Evidence: There is general agreement that newborn blood spot testing is an important practice. The current national controversy concerning newborn screening involves the discrepancy in the number of genetic screenings mandated by each state. Each state (and the District of Columbia) determines its own list of diseases and methods for screening. All states test for a core group of disorders including PKU, hypothyroidism and galactosemia. However, each state´s mandated newborn screening tests vary tremendously despite identical World Health Organization criteria for disorder screening. State screening laws vary based on disorder prevalence, detectability, treatment availability, outcome and overall cost effectiveness. For instance, North Carolina mandates 32 tests, while Arkansas only screens for four conditions.

However, this measure does not specify which screening tests are done but rather ensures that the results of any screening tests mandated by the state are documented in the medical record and transferred to primary care. The intent of this measure is to assess care coordination.

1c.8 Citations for Evidence (*other than guidelines***):**

Berry GT, Leslie N, Reynolds R, Yager CT, Segal S. Evidence for alternate galactose oxidation in a patient with deletion of the galactose-1-phosphate uridyltransferase gene. Mol Genet Metab. 2001;72:316–321

Hagan JF, Shaw Js, Ducan PM, eds. 2008. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, Third Edition. Elk Grove Village, IL: American Academy of Pediatrics.

Hellekson KL; National Institutes of Health. NIH consensus statement on phenylketonuria. Am Fam Physician. 2001;63: 1430–1432

Celia I. Kaye, MD, PhD, and the Committee on Genetics. American Academy of Pediatrics: Newborn Screening Fact Sheets. 2006 PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Kilpatrick NM, Awang H, Wilcken B, Christodoulou J. The implication of phenylketonuria on oral health. Pediatr Dent. 1999;21:433–437

Landolt MA, Nuoffer JM, Steinmann B, Superti-Furga A. Quality of life and psychologic adjustment in children and adolescents with early treated phenylketonuria can be normal. J Pediatr. 2002;140:516–521

Newborn Screening Authoring Committee. Newborn Screening Expands: Recommendations for Pediatricians and Medical Homes—Implications for the System. 2008. www.pediatrics.org/cgi/doi/10.1542/ peds.2007-3021 doi:10.1542/peds.2007-3021

Panis B, Forget PP, van Kroonenburgh MJ, et al. Bone metabolism in galactosemia. Bone. 2004;35:982–987

Perez-Duenas B, Valls-Sole J, Fernandez-Alvarez E, et al. Characterization of tremor in phenylketonuric patients. J Neurol. 2005;252:1328–1334

Salerno M, Militerni R, Bravaccio C, et al. Effect of different starting doses of levothyroxine on growth and intellectual outcome at four years of age in congenital hypothyroidism. Thyroid. 2002;12:45–52

Sullivan JE. Emotional outcome of adolescents and young adults with early and continuously treated phenylketonuria. J Pediatr Psychol. 2001;26:477–484

Overview of NBS Programs: State of the States. Briefing presented at: the first meeting of the Advisory Committee on Heritable Disorders and Genetic Diseases in Newborns and Children; June 7-8, 2004; Washington, DC.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
Newborn screening programs are state-based, so the number of tests performed, retesting guidelines, and other important issues vary from state to state. All states and U.S. territories screen newborns for phenylketonuria (PKU), hypothyroidism, galactosemia and sickle cell disease.

In 2005, the American Academy of Pediatrics (AAP) endorsed a report from the American College of Medical Genetics (ACMG), which recommended that all states screen newborn infants for a core panel of 29 treatable congenital conditions and an additional 25 conditions that may be detected by screening.

The Secretary of Health and Human Services' Advisory Committee on Heritable Disorders and Genetic Diseases in Newborns and Children (ACHDGDNC)† also adopted that report. Some states are now screening for more than 50 congenital conditions, many of which are rare and unfamiliar to pediatricians and other primary health care professionals. In the foreseeable future, screening programs will likely adopt screening technologies that will further expand the number of conditions screened and tests offered.

In 2004, the Maternal and Child Health Bureau of the Health Resources and Services Administration called on states to adopt a uniform panel of 29 newborn screening tests performed using tandem mass spectrometry, which requires blood from only a single heel-stick.

1c.10 Clinical Practice Guideline Citation: Newborn Screening Authoring Committee. Newborn Screening Expands: Recommendations for Pediatricians
and Medical Homes—Implications for the System. 2008. www.pediatrics.org/cgi/doi/10.1542/ peds.2007-3021 doi:10.1542/peds.2007-3021

http://www.aap.org/healthtopics/newbornscreening.cfm

http://www.aafp.org/online/etc/medialib/aafp_org/documents/policy/state/newborn.Par.0001.File.tmp/stateadv_newbornscreening.pdf

1c.11 National Guideline Clearinghouse or other URL: Follow-up testing for metabolic diseases identified by expanded newborn screening using tandem mass spectrometry.
http://www.guideline.gov/content.aspx?id=14282&search=newborn+screening

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**
Good

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*:
State mandates

1c.14 Rationale for using this guideline over others:
This measure is based on the body of guidelines and literature as evaluated by an expert panel.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	Eval Rating
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Children who had documentation in the medical record of a review of their newborn blood spot screening results by their 3-month birthday. **2a.2 Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*)**:** 6 months **2a.3 Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:** Documentation must include a note indicating the date and both of the following. • Evidence that newborn blood spot screening results were reviewed by the practice by the child´s 3-month birthday The blood spot or metabolic test is any test required by the state.	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*)**:** Children with a visit who turned 6 months old during the measurement year **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** 0 – 6 months **2a.7 Denominator Time Window** (*The time period in which cases are eligible for inclusion in the denominator*)**:** 1 year **2a.8 Denominator Details** (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*)**:** Children who turned 6 months of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 6 months.	
2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*)**:** None **2a.10 Denominator Exclusion Details** (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*)**:** NA	
2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*)**:** The measure is not stratified	
2a.12-13 Risk Adjustment Type: No risk adjustment necessary **2a.14 Risk Adjustment Methodology/Variables** (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method*)**:** NA **2a.15-17 Detailed risk model available Web page URL or attachment:**	**2a-specs** C☐ P☐ M☐ N☐

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year, AND
Who had a visit within the past 12 months of the child´s birthday
Step 2: Determine the numerator
Children who had documentation in the medical record of the screening or service during the measurement year or the year previous to the measurement year.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
For this physician-level measure, we anticipate the entire population will be used in the denominator. If a sample is used, a random sample is ideal. NCQA's work has indicated that a sample size of 30-50 patients would be necessary for a typical practice size of 2000 patients.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Paper medical record/flow-sheet, Electronic clinical data, Electronic Health/Medical Record

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Medical Record

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group, Population: national, Population: regional/network

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Office, Ambulatory Care: Clinic, Ambulatory Care: Hospital Outpatient

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure)

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
We calculated 95% confidence intervals, which speak to the precision of the rates obtained from field testing.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
Rate (Upper Confidence Interval, Lower Confidence Interval):
0.878 (0.83, 0.93)

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2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure)

2c.2 Analytic Method *(type of validity & rationale, method for testing)*:

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NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area. 2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: This measure was deemed valid by the expert panel. In addition, this measure does not utilize administrative data sources; data recorded in the chart is considered the gold standard.	
2d. Exclusions Justified 2d.1 **Summary of Evidence supporting exclusion(s):** No exclusions 2d.2 **Citations for Evidence:** NA 2d.3 **Data/sample** *(description of data/sample and size)*: NA 2d.4 **Analytic Method** *(type analysis & rationale)*: NA 2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures 2e.1 **Data/sample** *(description of data/sample and size)*: NA 2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA 2e.3 **Testing Results** *(risk model performance metrics)*: NA 2e.4 **If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**2e** C☐ P☐ M☐ N☐ NA ☐
2f. Identification of Meaningful Differences in Performance 2f.1 **Data/sample from Testing or Current Use** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure) 2f.2 **Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance 2f.3 **Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Elig Population: 180 Performance Rates Results Documented: 87%	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods	**2g** C☐

2g.1 Data/sample *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure)) **2g.2 Analytic Method** *(type of analysis & rationale)*: This measure is chart review only; no other sources were identified by the expert panel; this measure does not utilize administrative data. **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*: NA	P☐ M☐ N☐ NA ☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	**2** C☐ P☐ M ☐ N ☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Eval Rating
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** Not in use but testing completed **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): This measure is not currently publicly reported. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** This measure is not currently used in QI. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. NCQA anticipates that after we release these measures, they will become widely used, as all our measures do. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)*: Expert panel, other stakeholders, and 19 physician field test participants **3a.5 Methods** *(e.g., focus group, survey, QI project)*: NCQA vetted the measures with its expert panel. In addition, throughout the development process, NCQA vetted the measure concepts and specifications with other stakeholder groups, including the National Association of State Medicaid Directors, NCQA's Health Plan Advisory Council, NCQA's Committee on	**3a** C☐ P☐ M☐ N☐

Performance Measurement, and the American Academy of Pediatrician's Quality Improvement Innovation Network. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*: NCQA received feedback that the measure is understandable, feasible, important and valid.	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** The Centers for Disease Control and Prevention (CDC), the HRSA Maternal and Child Health Bureau (MCHB) and the National Committee for Quality Assurance (NCQA) have submitted 2010 Child Health Quality Measures to NQF that relate to the topic of newborn screening. However the measures target different care settings and data sources. CDC, MCHB, and NCQA are collaborating to ensure the measure specifications have distinctive additive value and are harmonized. Please note this applies to both Newborn Blood Spot Screening (the current measure) as well as NCQA´s Newborn Hearing Screening measure submission.	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources	**4b** C☐

4b.1 Are all the data elements available electronically? (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.** NCQA plans to eventually adapt this measure for use in electronic health records.	P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** During the measure development process the Child Health MAP and measure development team worked with NCQA's certified auditors and audit department to ensure that the measure specifications were clear and auditable. The denominator, numerator and any exclusions are concisely specified and align with our audit standards.	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on field test results, we have specified the measure to assess whether screening was documented and whether results were also documented in the medical record. Our field test results showed that these data elements are available in the medical record. In addition, our field test participants noted that many were able to program these requirements into their electronic health record systems, and several implemented point-of-service physician reminders for this measure. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Collecting measures from medical charts is time-consuming and can be burdensome. Adapting this measure in electronic health records may relieve some of this burden. **4e.3 Evidence for costs:** Based on field test participant feedback and other stakeholder input. **4e.4 Business case documentation:**	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement?	Y☐

Comments:	N☐ A☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
National Committee for Quality Assurance, 1100 13th Street, NW Suite 1000, Washington, District Of Columbia, 20005

Co.2 Point of Contact
Sepheen, Byron, byron@ncqa.org, 202-955-3573-

Measure Developer If different from Measure Steward
Co.3 Organization
National Committee for Quality Assurance, 1100 13th Street, NW Suite 1000, Washington, District Of Columbia, 20005

Co.4 Point of Contact
Sepheen, Byron, byron@ncqa.org, 202-955-3573-

Co.5 Submitter If different from Measure Steward POC
Sepheen, Byron, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Child Health Measurement Advisory Panel:
Jeanne Alicandro
Barbara Dailey
Denise Dougherty, PhD
Ted Ganiats, MD
Foster Gesten, MD
Nikki Highsmith, MPA
Charlie Homer, MD, MPH
Jeff Kamil, MD
Elizabeth Siteman
Mary McIntyre, MD, MPH
Virginia Moyer, MD, MPH, FAAP
Lee Partridge
Xavier Sevilla, MD, FAAP
Michael Siegal
Jessie Sullivan

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released:
Ad.7 Month and Year of most recent revision:
Ad.8 What is your frequency for review/update of this measure?
Ad.9 When is the next scheduled review/update for this measure?

Ad.10 Copyright statement/disclaimers: © 2009 by the National Committee for Quality Assurance
1100 13th Street, NW, Suite 1000

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM*/*DD*/*YY*)**:** 01/06/2011

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1417 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Screening for hyperbilirubinemia in term and near term neonates
De.2 **Brief description of measure:** Percentage of newborn infants > 2500g birthweight who receive either serum or transcutaneous bilirubin screening prior to hospital discharge
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Safety De.5 **IOM Quality Domain:** Safety De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	A Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least	B Y☐

every 3 years. Yes, information provided in contact section	N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Severity of illness 1a.2 1a.3 **Summary of Evidence of High Impact:** Bilirubin encephalopathy results in major lifelong morbidity and cost and is generally preventable if hyperbilirubinemia is identified and treated in a timely manner. 1a.4 **Citations for Evidence of High Impact:** 1. Bhutani VK et al. Predictive ability of a pre-discharge hour-specific serum bilirubin for subsequent significant hyperbilirubinemia in healthy term and near term newborns. Pediatrics 1999:103:6-14 2. Mah MP et al. Reduction in severe hyperbilirubinemia after institution of predischarge bilirubin screening Pediatrics 2010125 e 1143-8 3. American Acadamy of Pediatrics Clincal Practice Guidelines. Management of hyperbilirubinemia in the newborn infant 35 weeks or more gestation. 2004 4.Eggert LD et al. The effect of instituting a pre-hospital discharge newborn bilirubin screening program in a 16 hospital health system Pediatrics 2006;1176:e855	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** The AAP has emphasized the difficulty in judging early stages of clinical jaundice from physicial exam alone, particulary in infants of color, and well as the ongoing problem with bilirubin encephalopathy in the term newborn.	**1b** C☐ P☐ M☐ N☐

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
The AAP has emphasized the difficulty in judging early stages of clinical jaundice from physicial exam alone, particulary in infants of color, and well as the ongoing problem with bilirubin encephalopathy in the term newborn.

1b.3 Citations for data on performance gap:
Mah MP et al. Reduction in severe hyperbilirubinemia after institution of predischarge bilirubin screening Pediatrics 2010125 e 1143-8
American Acadamy of Pediatrics Clincal Practice Guidelines. Management of hyperbilirubinemia in the newborn infant 35 weeks or more gestation. 2004

1b.4 Summary of Data on disparities by population group:
The AAP has emphasized the difficulty in assessing clinical jaundice, and that this problem is especially common in newborns of color.

1b.5 Citations for data on Disparities:
American Acadamy of Pediatrics Clincal Practice Guidelines. Management of hyperbilirubinemia in the newborn infant 35 weeks or more gestation. 2004

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Bilirubin encephalopathy does not occur in term and near term infants without significant hyperbilirubinemia. Risk thresholds have been quantitatively defined

1c.2-3. Type of Evidence: Observational study, Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Prevention of severe hyperbilirubinemia (> 25mg%) will reliably prevent bilirubin encephalopathy in term and near term newborns. Predischarge screening and use of the Bhutani nomogram allows accuate identification, appropriate follow up and early treatment (phototherapy) in infants at risk for pathologic hyperbilirubinemia. Severe hyperbilirubinemia (>25mg%) may be almost entirely prevented by universal predischarge screening

References:
1. Bhutani VK et al. Predictive ability of a pre-discharge hour-specific serum bilirubin for subsequent significant hyperbilirubinemia in healthy term and near term newborns. Pediatrics 1999:103:6-14
2. Mah MP et al. Reduction in severe hyperbilirubinemia after institution of predischarge bilirubin screening Pediatrics 2010125 e 1143-8
3. American Acadamy of Pediatrics Clincal Practice Guidelines. Management of hyperbilirubinemia in the newborn infant 35 weeks or more gestation. 2004
4. Eggert LD et al. The effect of instituting a pre-hospital discharge newborn bilirubin screening program in a 16 hospital health system Pediatrics 2006;1176:e855

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*)**:**
II

1c.6 Method for rating evidence: II

1c.7 Summary of Controversy/Contradictory Evidence: Hypothetically, a skilled clinician may be able to use physicil observation to detect early jaundice in white infants, thus avoiding the need for acutual bilirubin quantitation. However, while good data exists to document the efficacy of transcutaneous or serum screening, no evidence exists to document the efficacy of clinical observation across broad populations. Further the continued occurence of bilirubin encephalopathy in unscreened term and near term newborns is well documented and suggests the inefficacy of clincial observation among the general

1c
C☐
P☐
M☐
N☐

pediatrician population in the U.S. **1c.8 Citations for Evidence (*other than guidelines*):** 1. Bhutani VK et al. Predictive ability of a pre-discharge hour-specific serum bilirubin for subsequent significant hyperbilirubinemia in healthy term and near term newborns. Pediatrics 1999:103:6-14 2. Mah MP et al. Reduction in severe hyperbilirubinemia after institution of predischarge bilirubin screening Pediatrics 2010125 e 1143-8 3. American Acadamy of Pediatrics Clincal Practice Guidelines. Management of hyperbilirubinemia in the newborn infant 35 weeks or more gestation. 2004 4. Eggert LD et al. The effect of instituting a pre-hospital discharge newborn bilirubin screening program in a 16 hospital health system Pediatrics 2006;1176:e855 **1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*):** "The best documented method for assessing the risk of subsequent hyperbilirubinemia is to measure the TSB or TcB level and plot the results on a nomogram" AAP (see above citation) **1c.10 Clinical Practice Guideline Citation:** "The best documented method for assessing the risk of subsequent hyperbilirubinemia is to measure the TSB or TcB level and plot the results on a nomogram" AAP (see above citation) **1c.11 National Guideline Clearinghouse or other URL:** na **1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom*):** II **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF*): na **1c.14 Rationale for using this guideline over others:** see above. no NQF metrics currently address this issue.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*): Number of neonates with birthweight >2500g who receive either serum or transcutaneous bilirubin screening prior to hospital discharge **2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator*):**	**2a-specs** **C☐** **P☐** **M☐** **N☐**

Birth to hospital discharge

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*):
Birth weight > 2500g
Serum or transcutaneous bilirubin test performed

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*):
All newborns > 2500g

2a.5 Target population gender: Female, Male
2a.6 Target population age range: Neonates

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator*):
Birth to hospital discharge

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*):
Birth, with birthweight > 2500g

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*): none

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*):
na

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*):
na

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method*):
na

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps*):
Neonates screened/total neonates

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:
chi square with Yates correction

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
na

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Electronic administrative data/claims, Lab data

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*):
na

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)* Facility/Agency, Population: national **2a.36-37 Care Settings (***Check the setting(s) for which the measure is specified and tested)* Hospital **2a.38-41 Clinical Services** (*Healthcare services being measured, check all that apply*) Laboratory	
TESTING/ANALYSIS	
2b. Reliability testing **2b.1 Data/sample** *(description of data/sample and size)*: Measure has been tested in approximately 1 million infants (see reference Mah et al)over 21 states **2b.2 Analytic Method** *(type of reliability & rationale, method for testing)*: cohort studies **2b.3 Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*: Application of such screening eliminated pathologic levels of hyperbilirubinemia in normal term and near term neonates whose caregivers were compliant with recommended care. see references, Mah et al and Eggert et al.	**2b** C☐ P☐ M☐ N☐
2c. Validity testing **2c.1 Data/sample** *(description of data/sample and size)*: Over 1 million infants **2c.2 Analytic Method** *(type of validity & rationale, method for testing)*: Cohort observational studies of rates of pathologic hyperbilirubinemia. Both studies, conducted in different, large populations, demonstrated similar results. (see Mah et al and Eggert et al) **2c.3 Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: Validity demonstrated over large and diverse populations, see Mah et al. Universal newborn screening correlates well with subsequent risk of hyperbilirubinemia, see Bhutani et al and Mah et al.	**2c** C☐ P☐ M☐ N☐
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** none **2d.2 Citations for Evidence:** na **2d.3 Data/sample** *(description of data/sample and size)*: na **2d.4 Analytic Method** *(type analysis & rationale)*: na **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: na	**2d** C☐ P☐ M☐ N☐ NA☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: na	**2e** C☐ P☐ M☐

2e.2 Analytic Method *(type of risk adjustment, analysis, & rationale)*: na **2e.3 Testing Results** *(risk model performance metrics)*: na **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** no risk adjustment necessary since this measure applied primarily to normal, term and near term newborns.	**N☐** **NA☐**
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: Testing in approximately 1 million newborns demonstrates ease of assessment of % infants screened. **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Chi square with Yates correction using 2 tailed P values. **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Distribution by % newborns screened suggests rates approaching 100% can be achieved across a large, diverse population	**2f** **C☐** **P☐** **M☐** **N☐**
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: Only 2 different data source exist - serum or transcutaneous assessment. Both have been shown to be equivalent. see Bhutani et al, Mah et al, Eggert et al. Administrative claims data used to collect statistics. **2g.2 Analytic Method** *(type of analysis & rationale)*: Analysis of administrative claims data **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*: Chi square with Yates correction	**2g** **C☐** **P☐** **M☐** **N☐** **NA☐**
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: na **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** na	**2h** **C☐** **P☐** **M☐** **N☐** **NA☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** **C☐** **P☐** **M☐** **N☐**
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** In use	**3a** **C☐** **P☐** **M☐**

3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large) (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** public reporting expected to follow potential NQF approval. **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*)**:** http://www.hcahealthcare.com/CustomPage.asp?guidCustomContentID=8838FE94-377C-4AE4-BE74-FFA58C708791 **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)***:** A simple % in a large population is easily understood **3a.5 Methods** *(e.g., focus group, survey, QI project)***:** na **3a.6 Results** *(qualitative and/or quantitative results and conclusions)***:** na	**N☐**
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:** none	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?** na	**3b** **C☐** **P☐** **M☐** **N☐** **NA☐**
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** na **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** na	**3c** **C☐** **P☐** **M☐** **N☐** **NA☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** **C☐** **P☐** **M☐** **N☐**
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by	**4a** **C☐** **P☐** **M☐**

healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition)	N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** C☐ P☐ M☐ N☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No 4c.2 **If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** Simplicity of measure (using single lab analysis without exclusions and simple % calculation minimized chance of error.	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Data is easily collected electronically. It is being reported quarterly in HCA´s population of 220,000 delivieries annually. No significant difficulties in collection or understanding of data have been encountered. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** none 4e.3 **Evidence for costs:** na 4e.4 **Business case documentation:** na	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y**☐ **N**☐

	A☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
Hospital Corporation of America, 1 Park Plaza, Building 2-W4, Nashville, Tennessee, 37202

Co.2 Point of Contact
Steven, Clark, steven.clark1@hcahealthcare.com, 801-440-1630-

Measure Developer If different from Measure Steward
Co.3 Organization
Hospital Corporation of America, 1 Park Plaza, Building 2-W4, Nashville, Tennessee, 37202

Co.4 Point of Contact
Steven, Clark, steven.clark1@hcahealthcare.com, 801-440-1630-

Co.5 Submitter If different from Measure Steward POC
Steven, Clark, steven.clark1@hcahealthcare.com, 801-440-1630-, Hospital Corporation of America

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

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

Ad.2 If adapted, provide name of original measure: na
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 2006
Ad.7 Month and Year of most recent revision: 01, 2006
Ad.8 What is your frequency for review/update of this measure? annually
Ad.9 When is the next scheduled review/update for this measure? 01, 2010

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment: URL
http://www.hcahealthcare.com/CustomPage.asp?guidCustomContentID=8838FE94-377C-4AE4-BE74-FFA58C708791

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1356 **NQF Project:** Child Health Quality Measures 2010

MEASURE DESCRIPTIVE INFORMATION

De.1 Measure Title: Hearing Screening refer rate at hospital discharge (EHDI-1b)

De.2 Brief description of measure: This measure assesses the proportion of all newborn infants who fail initial screening and fail any subsequent re-screening before hospital discharge.

*Numbering within the parentheses references the US national extension quality measure identifiers developed for the Use Cases published in the Integrating the Healthcare Enterprise (IHE) Quality, Research and Public Health (QRPH) EHDI Technical Framework Supplement available at www.ihe.net/Technical_Framework/index.cfm#quality

1.1-2 Type of Measure: Process
De.3 If included in a composite or paired with another measure, please identify composite or paired measure
This measure is paired with other measures relevant to the monitoring and measurement of the early screening evaluation and intervention process.

De.4 National Priority Partners Priority Area: Population health
De.5 IOM Quality Domain: Effectiveness
De.6 Consumer Care Need: Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* **A.1 Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes **A.2 Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:**	**A** **Y**☐ **N**☐

A.3 **Measure Steward Agreement:** Government entity and in the public domain - no agreement necessary A.4 **Measure Steward Agreement attached:**	
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 12 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, Frequently performed procedure 1a.2 1a.3 **Summary of Evidence of High Impact:** U.S. Preventive Services Task Force. The USPSTF recommends screening for hearing loss in all newborn infants. There is good evidence that newborn hearing screening testing is highly accurate and leads to earlier identification and treatment of infants with hearing loss. Good-quality evidence shows that early detection improves language outcomes. http://www.uspreventiveservicestaskforce.org/uspstf08/newbornhear/newbhearrs.pdf 1a.4 **Citations for Evidence of High Impact:** Nelson HD, Bougatsos C, Nygren P. Universal Newborn Hearing Screening: Systematic Review to Update the 2001 U.S. Preventive Services Task Force Recommendation. AHRQ Publication No. 08-05117-EF-4, July 2008. Agency for Healthcare Research and Quality (AHRQ), Rockville, MD.	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement	**1b** C☐

1b.1 Benefits (improvements in quality) envisioned by use of this measure: From page 194 of the 2007 Joint Committee on Infant Hearing (JCIH) Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs(http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals)
"The JCIH supports the concept of regular measurements of performance and recommends routine monitoring of these measures for interprogram comparison and continuous quality improvement. Performance benchmarks represent a consensus of expert opinion in the field of newborn hearing screening and intervention. The benchmarks are the minimal requirements that should be attained by high quality programs. Frequent measures of quality permit prompt recognition and correction of any unstable component of the EHDI process."

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
http://www.cdc.gov/ncbddd/ehdi/data.htm

1b.3 Citations for data on performance gap:
"Identifying Infants with Hearing Loss --- United States, 1999—2007." CDC Morbidity and Mortality Weekly Report (MMWR). March 5, 2010 / 59(08);220-223.
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5908a2.htm
"Newborn hearing screening and follow-up: are children receiving recommended services?" Public Health Rep. 2010 Mar-Apr;125(2):199-207.

1b.4 Summary of Data on disparities by population group:
Births occurring in small and rural birthing facilities are more likely not to receive inpatient hearing screening.

1b.5 Citations for data on Disparities:
Some state statutes (e.g. Texas and Kentucky) exempt hospitals with small birth cohorts from requiring hearing screening for all infants.

P☐ M☐ N☐

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Children with hearing loss who are screened for hearing loss at birth have better language outcomes at school age than those not screened. Infants identified with hearing loss through universal screening have significantly earlier referral, diagnosis, and treatment than those identified in other ways. Language outcomes at school age strengthen the case for newborn hearing screening but are also dependent on effective methods of referral, follow-up, and treatment.

1c.2-3. Type of Evidence: Cohort study, Observational study, Evidence-based guideline, Expert opinion, Systematic synthesis of research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
U.S. Preventive Services Task Force (www.ahrq.gov/clinic/uspstf/uspsnbhr.htm)
Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs. Joint Committee on Infant Hearing. Pediatrics 2007;120;898-921
(http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals)

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**
Grade: B (Recommendation by the USPSTF recommends screening for hearing loss in all newborn infants.)

1c.6 Method for rating evidence: Scientific evidence review conducted by the Oregon Evidence-based Practice Center under contract to the Agency for Healthcare Research and Quality

1c.7 Summary of Controversy/Contradictory Evidence: There is limited evidence about the harms of

1c
C☐ P☐ M☐ N☐

screening, with conflicting research findings regarding anxiety associated with false-positive test results. There is limited information about the harms of treatment 1c.8 **Citations for Evidence (***other than guidelines***):** 1c.9 **Quote the Specific guideline recommendation (***including guideline number and/or page number***):** 1c.10 **Clinical Practice Guideline Citation:** Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs. Joint Committee on Infant Hearing. Pediatrics 2007;120;898-921 (http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals) 1c.11 **National Guideline Clearinghouse or other URL:** Newborn Screening Coding and Terminology Guide. http://newbornscreeningcodes.nlm.nih.gov/nb/sc/condition/HEAR 1c.12 **Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** 1c.13 **Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)***:** 1c.14 **Rationale for using this guideline over others:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 **Numerator Statement (***Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** Numerator contains the number of infants born at a given facility during the time window who have not passed ("Fail / Refer") hearing screening before hospital discharge. 2a.2 **Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** The measurement time period varies upon needs of the particular user (e.g. calendar year, quarterly, monthly) but must be the same for both the numerator and denominator. 2a.3 **Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** Total number with final hearing screening results indicating "Fail / Refer" prior to hospital discharge. (LOINC# 54109-4: Newborn hearing screen – right = Refer LA10393-9 OR LOINC# 54108-6: Newborn hearing screen –	**2a-specs** **C☐** **P☐** **M☐** **N☐**

left= Refer LA10393-9)

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*)**:**
Denominator contains the total number of infants born at a given facility during the time window successfully screened for hearing loss before hospital discharge.

2a.5 Target population gender: Female, Male
2a.6 Target population age range: Newborn period

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator*)**:**
The measurement time period varies upon needs of the particular user (e.g. calendar year, quarterly, monthly) but must be the same for both the numerator and denominator.

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*)**:**
Total number with "Hearing Screening Performed": evidence of hearing screening performed. (LOINC# 54109-4: Newborn hearing screen – right = Pass LA10392-1 OR Refer LA10393-9 AND LOINC# 54108-6: Newborn hearing screen – left= Pass LA10392-1 OR Refer LA10393-9)

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*)**:** Patient deceased: Patient has expired prior to discharge.

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*)**:**
Joint Commission Discharge Disposition - Death Value Set (86986.v1) 1.3.6.1.4.1.33895.1.3.0.12.

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*)**:**

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method*)**:**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Score within a defined interval
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps*)**:**
(1) The time period for births included in the estimate is specified (see 2a.2, 2a.7).
(2) All live births that occurred at a facility during the time period are selected.
(3) Result of step 2 is filtered to remove children who died prior to discharge (see 2a.9, 2a.10).

The denominator is calculated using the following step:
(4) Result of step 3 is filtered to be limited to the subset that has been discharged from the hospital AND were screened prior to discharge (see 2a.8). This result is saved as the denominator (see 2a.4).

The numerator is calculated using the following step:
(5) Result of step 4 is further filtered to be limited to the subset that received a “refer” for their final screen prior to discharge (see 2a.3). This result is saved as the numerator (see 2a.1).

EHDI-1b is calculated using the following step:
(6) EHDI-1b is calculated by dividing the numerator (result of step 5) by the denominator (result of step 4).

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Method to discriminate performance is based upon jurisdictionally based statistical measurement reflecting local and national variability.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Electronic clinical data, Public health data/vital statistics, Electronic Health/Medical Record, Registry data

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Electronic Health/Medical Record, Public health information system

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
www.hitsp.org AND www.ihe.net/Technical_Framework/index.cfm#quality AND
www.cdc.gov/ncbddd/ehdi/data.htm

2a.29-31 Data dictionary/code table web page URL or attachment: URL
http://newbornscreeningcodes.nlm.nih.gov AND www.hitsp.org AND
www.ihe.net/Technical_Framework/index.cfm#quality

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Facility/Agency, Population: national, Population: states

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Hospital

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: Audiologist, Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO), Clinicians: PT/OT/Speech

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)***:** Data used in this measure are included in the EHR. As noted in the NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties, "…the EHR will be considered the authoritative source of clinical information and legal record of care. Quality measures based on EHRs require exporting clinical information recorded by healthcare clinicians from discrete computer readable fields; therefore, measurement errors due to manual abstraction, coding by persons other than the originator, or transcription are eliminated."
As these data elements are extracted from EHRs using computer programming, they "are by virtue of automation repeatable (reliable); therefore, testing at the data element level should focus on validity… reliability of data items may be bypassed if validity of data items is demonstrated."
EHR data used in this measure reflect part of a national, population-based public health surveillance data collection. Data are collected at the individual-child level within each state/territory and reported nationally at an aggregated state-level to CDC. This population-based collection of EHDI data has been occurring for over a decade. For the reporting period of calendar year 2007, 47 states and 2 territories reported newborn hearing screening data on a total of 3,345,629 births.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)***:**
As noted in 2b.1., given data are extracted from EHRs, "reliability of data items may be bypassed if validity of data items is demonstrated". (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties)

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)***:**
While the use of EHRs for data elements reflects a particular strength of this measure, "EHRs and EHR measures are new and will most likely require some adjustment of local EHR structures and recording practices to meet standards." (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties). This has been and will continue to be addressed in the manner

2b
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P ☐
M ☐
N ☐

recommended in the Guidance document cited above. First, nationally, CDC EHDI has and will continue to provide states and territories with a summary of results of measures reported as part of the national population-based public health data collection. This allows them to identify and address potential discrepancies. Similarly, EHDI programs are and will continue to be encouraged to provide similar feedback to their reporting sources as a means of quality control and programmatic feedback. Second, state EHDI programs have been and will continue to be encouraged to conduct their own reliability/validity studies, and to encourage data quality studies on the part of their reporting sources.	
2c. Validity testing 2c.1 **Data/sample** *(description of data/sample and size)*: Data used in this measure reflect EHR extracted information that is part of a national, population-based public health surveillance data collection. Data are collected at the individual-child level within each state/territory, and reported at state-level aggregate form nationally to CDC. This population-based collection of EHDI data has been occurring for over a decade. For the reporting period of calendar year 2007, 47 states and 2 territories reported newborn hearing screening data on a total of 3,345,629 births. 2c.2 **Analytic Method** *(type of validity & rationale, method for testing)*: A formal and systematic testing of face validity of the measure score as an indicator of quality has been conducted in order to serve as an acceptable indicator for validity of the measure score (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties). This evaluation has been conducted through the CDC EHDI Data Committee. 2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: Face validity has been systematically assessed by relevant stakeholders in order to assess whether the measure represents quality care for this specific topic and whether the focus of this measure is the most important aspect of quality for this specific topic (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties).	**2c** C☐ P☐ M☐ N☐
2d. Exclusions Justified 2d.1 **Summary of Evidence supporting exclusion(s):** Not applicable – exclusions are limited to cases of infant death prior to discharge. 2d.2 **Citations for Evidence:** Not applicable – see 2d.1. 2d.3 **Data/sample** *(description of data/sample and size)*: Not applicable – see 2d.1. 2d.4 **Analytic Method** *(type analysis & rationale)*: Not applicable – see 2d.1. 2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: Not applicable – see 2d.1.	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures 2e.1 **Data/sample** *(description of data/sample and size)*: Not applicable – no risk adjustment is included 2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*: Not applicable – no risk adjustment is included 2e.3 **Testing Results** *(risk model performance metrics)*: Not applicable – no risk adjustment is included 2e.4 **If outcome or resource use measure is not risk adjusted, provide rationale:** Not applicable – no risk adjustment is included	**2e** C☐ P☐ M☐ N☐ NA ☐
2f. Identification of Meaningful Differences in Performance	**2f**

2f.1 Data/sample from Testing or Current Use *(description of data/sample and size)*: National, population-based public health surveillance data, collected at the individual-child level within each state/territory, and reported at state-level aggregate form nationally to CDC. This population-based collection of EHDI data has been occurring for over a decade. For the reporting period of calendar year 2007, 47 states and 2 territories reported newborn hearing screening data on a total of 3,345,629 births. **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Statistical analysis comparing individual entities (provider, network of providers, state/territory) to the mean level of performance for similar entities. When appropriate, this can be limited to similar entities within a given jurisdiction (e.g., performance of a specific provider relative to other providers in a state) or nationally (e.g., mean performance across an entire state relative to other state/territories). In addition, performance can be evaluated through direct comparison to current national standards of performance (e.g., CDC National Goals, Joint Committee on Infant Hearing,Healthy People 2020.) **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: For statistical analyses comparing individual entities to the mean level of performance for similar entities, performance that is 2 standard deviations below the corresponding mean can be flagged. When appropriate, this can be done both within a given jurisdiction and nationally. For example, overall performance for a low performing state may be more than 2 standard deviations below the mean for all states/territories, resulting in that state being identified. However, within that state, there may be no significant difference among providers (i.e., all are performing equally poorly). For direct comparisons to current national standards, identification will consist of (1) a determination that performance falls below the standard, and (2) a measure of the difference between observed performance and the stated standard.	C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: All data will be collected through Electronic Health Records – not applicable **2g.2 Analytic Method** *(type of analysis & rationale)*: All data will be collected through Electronic Health Records – not applicable **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*: All data will be collected through Electronic Health Records – not applicable	**2g** C☐ P☐ M☐ N☐ NA ☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: Not applicable – measure is not stratified **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** Follow-up analysis can be performed at state and national levels based upon disparities noted in 1b.4 / 1b.5	**2h** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M ☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand	Eval

the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Rating
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** In use **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** Healthy People 2010 objective 28-11: Increase the proportion of newborns who are screened for hearing loss by age 1 month, have audiologic evaluation by age 3 months, and are enrolled in appropriate intervention services by age 6 months. Proposed Healthy People 2020 ENT-VSL HP2020-8: Increase the proportion of newborns who are screened for hearing loss by no later than age 1 month, have audiologic evaluation by age 3 months, and are enrolled in appropriate intervention services by age 6 months. **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)***:** CDC Survey (http://www.cdc.gov/ncbddd/ehdi/data.htm) Summary of 2007 National CDC EHDI Data: Number Screened = 3,345,629 **3a.5 Methods** *(e.g., focus group, survey, QI project)***:** Hearing Screening and Follow-up Survey (HSFS): OMB No. 0920-0733 **3a.6 Results** *(qualitative and/or quantitative results and conclusions)***:** Qualitative: "Identifying Infants with Hearing Loss --- United States, 1999—2007." CDC Morbidity and Mortality Weekly Report (MMWR). March 5, 2010 / 59(08);220-223. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5908a2.htm	**3a** C☐ P☐ M☐ N☐
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:** no current NQF endorsed measure	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?** The Centers for Disease Control and Prevention (CDC), the HRSA Maternal and Child Health Bureau (MCHB) and the National Committee for Quality Assurance (NCQA) have submitted 2010 Child Health Quality Measures to NQF that relate to the topic of newborn screening, however the measures target different care settings and data sources. CDC, MCHB, and NCQA are collaborating to ensure the measure specifications have distinctive additive value and are harmonized.	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA☐

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** **C☐** **P☐** **M☐** **N☐**
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** **C☐** **P☐** **M☐** **N☐**
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** **C☐** **P☐** **M☐** **N☐**
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** **C☐** **P☐** **M☐** **N☐** **NA☐**
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** The use of EHRs for this measure provide a number of strengths that facilitate data quality, including EHRs serving as the authoritative source of clinical information and legal record of care. Furthermore, the use of discrete, computer readable fields results in reduced measurement error that may emerge from manual abstraction, third party coding, or transcription errors. Nevertheless, potential sources of error exist and include incorrect measure, code, or logic specification, as well as incorrect programming, system structure, or data exporting code, or inconsistent field definitions across providers or users. These can be audited through quality control measures. For example, CDC EHDI provides states and territories with a summary of results of measures reported as part of the national population-based public health data collection. This allows them to identify and address potential discrepancies. Similarly, EHDI programs are encouraged to provide similar feedback to their reporting sources as a means of quality control and programmatic feedback. Furthermore, state EHDI programs are encouraged to conduct their own reliability/validity studies, and to encourage data quality studies on the part of their reporting sources.	**4d** **C☐** **P☐** **M☐** **N☐**
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:**	**4e** **C☐** **P☐** **M☐** **N☐**

Requires an accurate standardized denominator and numerator to successfully determine that all infants have been accounted for and received necessary care. The limitation has been that providers have only reported on a subset of infants seen. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*): Hearing Screening refer rate at hospital discharge is not a proprietary measure. Many public health EHDI programs have already assumed the cost to implement and report this measure. Depending on availability, federal funds can be provided for additional public health programs to strengthen infrastructure which might be needed for this data collection. 4e.3 **Evidence for costs:** 4e.4 **Business case documentation:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** **C☐** **P☐** **M☐** **N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y☐** **N☐** **A☐**
CONTACT INFORMATION	
Co.1 **Measure Steward (Intellectual Property Owner)** Co.1 **Organization** Centers for Disease Control and Prevention, Early Hearing Detection and Intervention (EHDI), 1600 Clifton Road NE, MS E-88, Atlanta, Georgia, 30333 Co.2 **Point of Contact** John, Eichwald, M.A. FAAA, jeichwald@cdc.gov, 404-498-3961-	
Measure Developer If different from Measure Steward Co.3 **Organization** Centers for Disease Control and Prevention, Early Hearing Detection and Intervention (EHDI), 1600 Clifton Road NE, MS E-88, Atlanta, Georgia, 30333 Co.4 **Point of Contact** Craig, Mason, Ph.D., Craig_Mason@umit.maine.edu, 207-581-9059-	
Co.5 **Submitter If different from Measure Steward POC** John, Eichwald, M.A. FAAA, jeichwald@cdc.gov, 404-498-3961-, Centers for Disease Control and Prevention	
Co.6 **Additional organizations that sponsored/participated in measure development** On July 24, the Joint Committee on Infant Hearing (JCIH) voted unanimously to proceed with the submission these EHDI measures to NQF. Liaison representatives were present from all of the participating organizations: American Academy of Pediatrics (AAP), American Academy of Audiology (AAA), American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS), American Speech-	

Language-Hearing Association (ASHA), Alexander Graham Bell Association for the Deaf and Hard of Hearing, Council of Education of
the Deaf (CED), and Directors of Speech and Hearing Programs in State Health and Welfare Agencies (DSHPSHWA).

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 **Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.**
CDC EHDI Data Committee and the Joint Committee on Infant Hearing (JCIH) both participated in the development of EHDI quality benchmarks on which this measure is based

Ad.2 **If adapted, provide name of original measure:**
Ad.3-5 **If adapted, provide original specifications URL or attachment**

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 **Year the measure was first released:** 2000
Ad.7 **Month and Year of most recent revision:** 10, 2007
Ad.8 **What is your frequency for review/update of this measure?**
Ad.9 **When is the next scheduled review/update for this measure?**

Ad.10 **Copyright statement/disclaimers:**

Ad.11 -13 **Additional Information web page URL or attachment:** URL http://jcih.org/posstatemts.htm

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1358 **NQF Project:** Child Health Quality Measures 2010

MEASURE DESCRIPTIVE INFORMATION

De.1 Measure Title: Infants identified with risk factors for hearing loss within the Medical Home (EHDI-2a)

De.2 Brief description of measure: This measure assesses the percent of infants in a practice that have completed risk factor analysis for delayed onset or progressive hearing loss.

*Numbering within the parentheses references the US national extension quality measure identifiers developed for the Use Cases published in the Integrating the Healthcare Enterprise (IHE) Quality, Research and Public Health (QRPH) EHDI Technical Framework Supplement available at www.ihe.net/Technical_Framework/index.cfm#quality

1.1-2 Type of Measure: Process
De.3 If included in a composite or paired with another measure, please identify composite or paired measure
This measure is paired with other measures relevant to the monitoring and measurement of the early screening evaluation and intervention process.

De.4 National Priority Partners Priority Area: Population health
De.5 IOM Quality Domain: Effectiveness
De.6 Consumer Care Need: Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* **A.1 Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes **A.2 Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:**	**A** **Y**☐ **N**☐

A.3 **Measure Steward Agreement:** Government entity and in the public domain - no agreement necessary A.4 **Measure Steward Agreement attached:**	
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes <u>both</u> public reporting <u>and</u> quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 12 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers 1a.2 1a.3 **Summary of Evidence of High Impact:** U.S. Preventive Services Task Force. The USPSTF recommends screening for hearing loss in all newborn infants. There is good evidence that newborn hearing screening testing is highly accurate and leads to earlier identification and treatment of infants with hearing loss. Good-quality evidence shows that early detection improves language outcomes. http://www.uspreventiveservicestaskforce.org/uspstf08/newbornhear/newbhearrs.pdf 1a.4 **Citations for Evidence of High Impact:** Nelson HD, Bougatsos C, Nygren P. Universal Newborn Hearing Screening: Systematic Review to Update the 2001 U.S. Preventive Services Task Force Recommendation. AHRQ Publication No. 08-05117-EF-4, July 2008. Agency for Healthcare Research and Quality (AHRQ), Rockville, MD. http://www.ahrq.gov/clinic/uspstf08/newbornhear/newbornart.htm	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** From page 194 of the 2007	**1b** C☐ P☐

Joint Committee on Infant Hearing (JCIH) Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs(http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals)
"The JCIH supports the concept of regular measurements of performance and recommends routine monitoring of these measures for interprogram comparison and continuous quality improvement. Performance benchmarks represent a consensus of expert opinion in the field of newborn hearing screening and intervention. The benchmarks are the minimal requirements that should be attained by high quality programs. Frequent measures of quality permit prompt recognition and correction of any unstable component of the EHDI process."

M☐ N☐

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:

1b.3 Citations for data on performance gap:

1b.4 Summary of Data on disparities by population group:

1b.5 Citations for data on Disparities:

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Children with hearing loss who are screened for hearing loss at birth have better language outcomes at school age than those not screened. Infants identified with hearing loss through universal screening have significantly earlier referral, diagnosis, and treatment than those identified in other ways. Language outcomes at school age strengthen the case for newborn hearing screening but are also dependent on effective methods of referral, follow-up, and treatment.

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion, Systematic synthesis of research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs. Joint Committee on Infant Hearing. Pediatrics 2007;120;898-921 (http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals)

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**

1c.6 Method for rating evidence:

1c.7 Summary of Controversy/Contradictory Evidence:

1c.8 Citations for Evidence (*other than guidelines***):**

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
"Because some important indicators, such as family history of hearing loss, may not be determined during the course of UNHS [Universal Newborn Hearing Screening] the presence of all risk indicators for acquired hearing loss should be determined in the medical home during early well-infant visits." Page 912 Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs. Joint Committee on Infant Hearing.

1c C☐ P☐ M☐ N☐

1c.10 **Clinical Practice Guideline Citation:** Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs. Joint Committee on Infant Hearing. Pediatrics 2007;120;898-921 (http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals) 1c.11 **National Guideline Clearinghouse or other URL:** 1c.12 **Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** 1c.13 **Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)***:** 1c.14 **Rationale for using this guideline over others:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 **Numerator Statement (***Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** Numerator contains the number of infants in a practice born during the time window that have completed risk factor analysis for delayed onset or progressive hearing loss. 2a.2 **Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** The measurement time period varies upon needs of the particular user (e.g. calendar year, quarterly, monthly) but must be the same for both the numerator and denominator. 2a.3 **Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** Total number with “Hearing Loss Risk Factors Value Set" (Discharge DX) contains LOINC# 58232-0: JCIH Risk Indicators: LA12667-4, LA12668-2, LA12669-0, LA12670-8, LA12671-6, LA12672-4, LA12673-2, LA12674-0, LA12675-7, LA12681-5, LA12676-5, LA12677-3, LA12678-1, LA12679-9, LA6172-6 OR: Risk Factors for Hearing Loss (NICU 2865 > 5 Days) OR: Risk Factors for Hearing Loss (Problem List) - SNOMED Hearing Loss Risk Factors Value Set: 439750006, 441899004, 276687002, 281610001, 281612009, 281611002, 206363004, 206331005, 206005002, 80690008, 178280004, 312972009, 161653008.	**2a-specs** **C☐** **P☐** **M☐** **N☐**
2a.4 **Denominator Statement (***Brief, text description of the denominator - target population being measured***):** Denominator contains the number of infants in a practice born during the time window. 2a.5 **Target population gender:** Female, Male	

2a.6 Target population age range: Infancy

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
The measurement time period varies upon needs of the particular user (e.g. calendar year, quarterly, monthly) but must be the same for both the numerator and denominator.

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
Total number of patients during the specified time period for a given provider/practice (see 2a.7).

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** "Patient Deceased": Patient has expired.

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
Joint Commission Discharge Disposition - Death Value Set (86986.v1) 1.3.6.1.4.1.33895.1.3.0.12. "Patient Deceased": Patient has
expired.

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
(1) The time period for births included in the estimate is specified (see 2a.2, 2a.7).
(2) All live births that occurred during the time period for a given provider/practice are selected.

The denominator is calculated using the following steps:
(3) The result of step 2 is further reduced by removing all cases where the infant has died (see 2a.9, 2a.10). This result is saved as the denominator (see 2a.8 and 2a.4).

The numerator is calculated using the following step:
(4) Result of step 3 is filtered to be limited to the subset with any corresponding entries for the Hearing Loss Risk Factors Value Set OR Risk Factors for Hearing Loss (see 2a.3) prior to 12 months of age (2a.2). This result is saved as the numerator (see 2a.1).

EHDI-2a is calculated using the following step:
(5) EHDI-2a is calculated by dividing the numerator (result of step 4) by the denominator (result of step 3).

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Method to discriminate performance is based upon jurisdictionally based statistical measurement reflecting local and national
variability.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested***)**
Public health data/vital statistics, Electronic Health/Medical Record

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Electronic Health/Medical Record, Public health information system

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
www.ihe.net/Technical_Framework/index.cfm#quality

2a.29-31 Data dictionary/code table web page URL or attachment: URL
http://newbornscreeningcodes.nlm.nih.gov AND www.hitsp.org AND
www.ihe.net/Technical_Framework/index.cfm#quality

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Facility/Agency, Population: states

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Office, Ambulatory Care: Clinic

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: Nurses, Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*: Data used in this measure are included in the EHR. As noted in the NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties, "…the EHR will be considered the authoritative source of clinical information and legal record of care. Quality measures based on EHRs require exporting clinical information recorded by healthcare clinicians from discrete computer readable fields; therefore, measurement errors due to manual abstraction, coding by persons other than the originator, or transcription are eliminated."
As these data elements are extracted from EHRs using computer programming, they "are by virtue of automation repeatable (reliable); therefore, testing at the data element level should focus on validity… reliability of data items may be bypassed if validity of data items is demonstrated."
EHR data used in this measure reflect part of a national, population-based public health surveillance data collection.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
As noted in 2b.1., given data are extracted from EHRs, "reliability of data items may be bypassed if validity of data items is demonstrated". (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties)

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
While the use of EHRs for data elements reflects a particular strength of this measure, "EHRs and EHR measures are new and will most likely require some adjustment of local EHR structures and recording practices to meet standards." (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties). This has been and will continue to be addressed in the manner recommended in the Guidance document cited above. First, nationally, CDC EHDI has and will continue to provide states and territories with a summary of results of measures reported as part of the national population-based public health data collection. This allows them to identify and address potential discrepancies. Similarly, EHDI programs are and will continue to be encouraged to provide similar feedback to their reporting sources as a means of quality control and programmatic feedback. Second, state EHDI programs have been and will continue to be encouraged to conduct their own reliability/validity studies, and to encourage data quality studies on the part of their reporting sources.

2b C☐ P☐ M☐ N☐

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*: Data used in this measure reflect EHR extracted information that is part of a national, population-based public health surveillance data collection.

2c C☐ P☐ M☐

2c.2 Analytic Method *(type of validity & rationale, method for testing)*: A formal and systematic testing of face validity of the measure score as an indicator of quality will be conducted in order to serve as an acceptable indicator for validity of the measure score (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties). This evaluation will be conducted through the CDC EHDI Data Committee. **2c.3 Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: Face validity has been systematically assessed by relevant stakeholders in order to assess whether the measure represents quality care for this specific topic and whether the focus of this measure is the most important aspect of quality for this specific topic (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties).	**N**☐
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** Not applicable –exclusions are limited to cases of infant death **2d.2 Citations for Evidence:** Not applicable – see 2d.1. **2d.3 Data/sample** *(description of data/sample and size)*: Not applicable – see 2d.1. **2d.4 Analytic Method** *(type analysis & rationale)*: Not applicable – see 2d.1. **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: Not applicable – see 2d.1.	**2d** **C**☐ **P**☐ **M**☐ **N**☐ **NA** ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: Not applicable – no risk adjustment is included **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: Not applicable – no risk adjustment is included **2e.3 Testing Results** *(risk model performance metrics)*: Not applicable – no risk adjustment is included **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** Not applicable – no risk adjustment is included	**2e** **C**☐ **P**☐ **M**☐ **N**☐ **NA** ☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Statistical analysis comparing individual entities (provider, network of providers, state/territory) to the mean level of performance for similar entities. When appropriate, this can be limited to similar entities within a given jurisdiction (e.g., performance of a specific provider relative to other providers in a state) or nationally (e.g., mean performance across an entire state relative to other state/territories). In addition, performance can be evaluated through direct comparison to current national standards of performance (e.g., CDC National Goals, Joint Committee on Infant Hearing,Healthy People 2020.) **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: For statistical analyses comparing individual entities to the mean level of performance for similar entities,	**2f** **C**☐ **P**☐ **M**☐ **N**☐

performance that is 2 standard deviations below the corresponding mean can be flagged. When appropriate, this can be done both within a given jurisdiction and nationally. For example, overall performance for a low performing state may be more than 2 standard deviations below the mean for all states/territories, resulting in that state being identified. However, within that state, there may be no significant difference among providers (i.e., all are performing equally poorly).	
2g. Comparability of Multiple Data Sources/Methods 2g.1 **Data/sample** *(description of data/sample and size)*: All data will be collected through Electronic Health Records – not applicable 2g.2 **Analytic Method** *(type of analysis & rationale)*: All data will be collected through Electronic Health Records – not applicable 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*: All data will be collected through Electronic Health Records – not applicable	**2g** C☐ P☐ M☐ N☐ NA ☐
2h. Disparities in Care 2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: Not applicable – measure is not stratified 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Ratin g**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** Testing not yet completed 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): AAP Recommendations for Preventive Pediatric Health Care (Periodicity Schedule). AAP Clinical Report-Hearing Assessment in Infants and Children: Recommendations Beyond Neonatal Screening. Guidance for the Clinician in Rendering Pediatric Care. www.pediatrics.org/cgi/doi/10.1542/peds.2009-1997. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)*:	**3a** C☐ P☐ M☐ N☐

3a.5 Methods *(e.g., focus group, survey, QI project)*: **3a.6 Results** *(qualitative and/or quantitative results and conclusions)*:	
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:** no current NQF endorsed measure	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?** The Centers for Disease Control and Prevention (CDC), the HRSA Maternal and Child Health Bureau (MCHB) and the National Committee for Quality Assurance (NCQA) have submitted 2010 Child Health Quality Measures to NQF that relate to the topic of newborn screening, however the measures target different care settings and data sources. CDC, MCHB, and NCQA are collaborating to ensure the measure specifications have distinctive additive value and are harmonized.	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** C☐ P☐ M☐ N☐
4c. Exclusions	**4c**

4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications? **4c.2 If yes, provide justification.**	**C☐ P☐ M☐ N☐ NA ☐**
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** The use of EHRs for this measure provide a number of strengths that facilitate data quality, including EHRs serving as the authoritative source of clinical information and legal record of care. Furthermore, the use of discrete, computer readable fields results in reduced measurement error that may emerge from manual abstraction, third party coding, or transcription errors. Nevertheless, potential sources of error exist and include incorrect measure, code, or logic specification, as well as incorrect programming, system structure, or data exporting code, or inconsistent field definitions across providers or users. These can be audited through quality control measures. For example, CDC EHDI provides states and territories with a summary of results of measures reported as part of the national population-based public health data collection. This allows them to identify and address potential discrepancies. Similarly, EHDI programs are encouraged to provide similar feedback to their reporting sources as a means of quality control and programmatic feedback. Furthermore, state EHDI programs are encouraged to conduct their own reliability/validity studies, and to encourage data quality studies on the part of their reporting sources.	**4d** **C☐ P☐ M☐ N☐**
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Requires an accurate standardized denominator and numerator to successfully determine that all infants have been accounted for and received necessary care. The limitation has been that providers have only reported on a subset of infants seen. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Infants identified with risk factors for hearing loss within the Medical Home is not a proprietary measure. Public health EHDI programs may need to assume the cost to implement this measure. This measure may require costs of additional system development at the public health level and may require costs of systems development and data entry at the provider level. Depending on availability, federal funds might be provided to public health programs in order to strengthen infrastructure needed for this data collection. **4e.3 Evidence for costs:** **4e.4 Business case documentation:**	**4e** **C☐ P☐ M☐ N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** **C☐ P☐ M☐ N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**

Steering Committee: Do you recommend for endorsement? Comments:	Y☐ N☐ A☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
Centers for Disease Control and Prevention, Early Hearing Detection and Intervention (EHDI), 1600 Clifton Road NE, Atlanta, Georgia, 30333

Co.2 Point of Contact
John, Eichwald, M.A. FAAA, jeichwald@cdc.gov, 404-498-3961-

Measure Developer If different from Measure Steward
Co.3 Organization
Centers for Disease Control and Prevention, Early Hearing Detection and Intervention (EHDI), 1600 Clifton Road NE, MS E-88, Atlanta, Georgia, 30333

Co.4 Point of Contact
Craig, Mason, Ph.D., Craig_Mason@umit.maine.edu, 207-581-9059-

Co.5 Submitter If different from Measure Steward POC
John, Eichwald, M.A. FAAA, jeichwald@cdc.gov, 404-498-3961-, Centers for Disease Control and Prevention

Co.6 Additional organizations that sponsored/participated in measure development
On July 24, the Joint Committee on Infant Hearing (JCIH) voted unanimously to proceed with the submission these EHDI measures to NQF. Liaison representatives were present from all of the participating organizations: American Academy of Pediatrics (AAP), American Academy of Audiology (AAA), American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS), American Speech-Language-Hearing Association (ASHA), Alexander Graham Bell Association for the Deaf and Hard of Hearing, Council of Education of the Deaf (CED), and Directors of Speech and Hearing Programs in State Health and Welfare Agencies (DSHPSHWA).

ADDITIONAL INFORMATION

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

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 2000
Ad.7 Month and Year of most recent revision: 10, 2007
Ad.8 What is your frequency for review/update of this measure?
Ad.9 When is the next scheduled review/update for this measure?

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment: URL http://jcih.org/posstatemts.htm

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1359 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Infants identified with risk factors for hearing loss and have an audiological diagnosis (EHDI-2b)
De.2 **Brief description of measure***:* This measure assesses the proportion of young children in a practice that have an identified risk factor for delayed onset or progressive hearing loss and have an audiological diagnosis.
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure is paired with other measures relevant to the monitoring and measurement of the early screening evaluation and intervention process.
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Effectiveness De.6 **Consumer Care Need:** Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** A.3 **Measure Steward Agreement:** Government entity and in the public domain - no agreement necessary A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 12 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers 1a.2 1a.3 **Summary of Evidence of High Impact:** U.S. Preventive Services Task Force. The USPSTF recommends screening for hearing loss in all newborn infants. There is good evidence that newborn hearing screening testing is highly accurate and leads to earlier identification and treatment of infants with hearing loss. Good-quality evidence shows that early detection improves language outcomes. http://www.uspreventiveservicestaskforce.org/uspstf08/newbornhear/newbhearrs.pdf 1a.4 **Citations for Evidence of High Impact:** Nelson HD, Bougatsos C, Nygren P. Universal Newborn Hearing Screening: Systematic Review to Update the 2001 U.S. Preventive Services Task Force Recommendation. AHRQ Publication No. 08-05117-EF-4, July 2008. Agency for Healthcare Research and Quality (AHRQ), Rockville, MD. http://www.ahrq.gov/clinic/uspstf08/newbornhear/newbornart.htm	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** From page 194 of the 2007 Joint Committee on Infant Hearing (JCIH) Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs(http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals)	**1b** C☐ P☐ M☐ N☐

"The JCIH supports the concept of regular measurements of performance and recommends routine monitoring of these measures for interprogram comparison and continuous quality improvement. Performance benchmarks represent a consensus of expert opinion in the field of newborn hearing screening and intervention. The benchmarks are the minimal requirements that should be attained by high quality programs. Frequent measures of quality permit prompt recognition and correction of any unstable component of the EHDI process."

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:

1b.3 Citations for data on performance gap:

1b.4 Summary of Data on disparities by population group:

1b.5 Citations for data on Disparities:

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Children with hearing loss who are screened for hearing loss at birth have better language outcomes at school age than those not screened. Infants identified with hearing loss through universal screening have significantly earlier referral, diagnosis, and treatment than those identified in other ways. Language outcomes at school age strengthen the case for newborn hearing screening but are also dependent on effective methods of referral, follow-up, and treatment.

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion, Systematic synthesis of research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs. Joint Committee on Infant Hearing. Pediatrics 2007;120;898-921 (http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals)

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*)**:**

1c.6 Method for rating evidence:

1c.7 Summary of Controversy/Contradictory Evidence:

1c.8 Citations for Evidence (*other than guidelines*)**:**

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*)**:**
"Every child with 1 or more risk factors on the hearing risk assessment should have ongoing developmentally appropriate hearing screening and at least 1 diagnostic audiology assessment by 24 to 30 months of age." Page 1254 from AAP Clinical Report-Hearing Assessment in Infants and Children: Recommendations Beyond Neonatal Screening. Guidance for the Clinician in Rendering Pediatric Care. www.pediatrics.org/cgi/doi/10.1542/peds.2009-1997.

1c.10 Clinical Practice Guideline Citation: AAP Clinical Report-Hearing Assessment in Infants and Children: Recommendations Beyond Neonatal Screening. Guidance for the Clinician in Rendering Pediatric Care. www.pediatrics.org/cgi/doi/10.1542/peds.2009-1997.

1c.11 National Guideline Clearinghouse or other URL:

1c
C☐
P☐
M☐
N☐

1c.12 **Rating of strength of recommendation** (*also provide narrative description of the rating and by whom*)**:** 1c.13 **Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: 1c.14 **Rationale for using this guideline over others:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 **Numerator Statement** (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Numerator contains the number of infants that have been an identified risk factor for delayed onset or progressive hearing loss and have documentation of an audiological diagnosis by 36 months of age. 2a.2 **Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*)**:** The measurement time period varies upon needs of the particular user (e.g. calendar year, quarterly, monthly) but must be the same for both the numerator and denominator. 2a.3 **Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:** Total number of patients with "Audiological Diagnosis" SNOMED-CT equals “Hearing Normal” 164059009, “Permanent Conductive” 44057004, “Sensorineural” 60700002, “Mixed” 77507001, “Auditory Neuropathy Spectrum Disorder” 443805006, “Transient Hearing Loss” 123123005	
2a.4 **Denominator Statement** (*Brief, text description of the denominator - target population being measured*)**:** Total number with “Hearing Loss Risk Factors Value Set". (See EHDI-2a numerator) 2a.5 **Target population gender:** Female, Male 2a.6 **Target population age range:** Infancy 2a.7 **Denominator Time Window** (*The time period in which cases are eligible for inclusion in the denominator*)**:** The measurement time period varies upon needs of the particular user (e.g. calendar year, quarterly, monthly) but must be the same for both the numerator and denominator. 2a.8 **Denominator Details** (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*)**:**	**2a-specs** **C☐** **P☐** **M☐** **N☐**

Total number with “Hearing Loss Risk Factors Value Set" (Discharge DX) contains LOINC# 58232-0: JCIH Risk Indicators: LA12667-4, LA12668-2, LA12669-0, LA12670-8, LA12671-6, LA12672-4, LA12673-2, LA12674-0, LA12675-7, LA12681-5, LA12676-5, LA12677-3, LA12678-1, LA12679-9, LA6172-6
OR: Risk Factors for Hearing Loss (NICU 2865 > 5 Days)
OR: Risk Factors for Hearing Loss (Problem List) - SNOMED Hearing Loss Risk Factors Value Set: 439750006, 441899004, 276687002, 281610001, 281612009, 281611002, 206363004, 206331005, 206005002, 80690008, 178280004, 312972009, 161653008.

2a.9 **Denominator Exclusions (***Brief text description of exclusions from the target population***):** "Patient Deceased": Patient has expired.

2a.10 **Denominator Exclusion Details (***All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
Joint Commission Discharge Disposition - Death Value Set (86986.v1) 1.3.6.1.4.1.33895.1.3.0.12. "Patient Deceased": Patient has expired.

2a.11 **Stratification Details/Variables (***All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**

2a.12-13 **Risk Adjustment Type:** No risk adjustment necessary

2a.14 **Risk Adjustment Methodology/Variables (***List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 **Detailed risk model available Web page URL or attachment:**

2a.18-19 **Type of Score:** Rate/proportion
2a.20 **Interpretation of Score:** Better quality = Higher score
2a.21 **Calculation Algorithm (***Describe the calculation of the measure as a flowchart or series of steps***):**
(1) The time period for births included in the estimate is specified (see 2a.2, 2a.7).
(2) All live births that occurred during the time period for a given provider/practice are selected.
(3) Result of step 2 is filtered to be limited to the subset with any corresponding entries for the Hearing Loss Risk Factors Value Set OR Risk Factors for Hearing Loss (see 2a.8) prior to 36 months of age (see 2a.2, 2a.7). This result is saved.

The numerator is calculated using the following step:
(4) Result of step 3 is filtered to be limited to the subset with any corresponding entries for Audiological Diagnosis (see 2a.3) prior to 36 months of age (see 2a.2). This result is saved as the numerator (see 2a.1).

The denominator is calculated using the following step:
(5) Result of step 3 is filtered to remove children who both (a) died prior to 36 months of age (see 2a.9, 2a.10) AND had no corresponding entries for Audiological Diagnosis (see 2a.3). This result is saved as the denominator (see 2a.4).

EHDI-2b is calculated using the following step:
(6) EHDI-2b is calculated by dividing the numerator (result of step 4) by the denominator (result of step 5).

2a.22 **Describe the method for discriminating performance** *(e.g., significance testing)***:**
Method to discriminate performance is based upon jurisdictionally based statistical measurement reflecting local and national variability.

2a.23 **Sampling (Survey) Methodology** *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:

2a.24 **Data Source (***Check the source(s) for which the measure is specified and tested)*
Public health data/vital statistics, Electronic Health/Medical Record

2a.25 **Data source/data collection instrument (***Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**

Electronic Health/Medical Record, Public health information system

2a.26-28 **Data source/data collection instrument reference web page URL or attachment:** URL
www.ihe.net/Technical_Framework/index.cfm#quality

2a.29-31 **Data dictionary/code table web page URL or attachment:** URL
http://newbornscreeningcodes.nlm.nih.gov AND www.hitsp.org AND
www.ihe.net/Technical_Framework/index.cfm#quality

2a.32-35 **Level of Measurement/Analysis** (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Facility/Agency, Population: states

2a.36-37 **Care Settings (***Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Office, Ambulatory Care: Clinic

2a.38-41 **Clinical Services** (*Healthcare services being measured, check all that apply*)
Clinicians: Nurses, Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 **Data/sample** *(description of data/sample and size)*: Data used in this measure are included in the EHR. As noted in the NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties, "…the EHR will be considered the authoritative source of clinical information and legal record of care. Quality measures based on EHRs require exporting clinical information recorded by healthcare clinicians from discrete computer readable fields; therefore, measurement errors due to manual abstraction, coding by persons other than the originator, or transcription are eliminated."
As these data elements are extracted from EHRs using computer programming, they "are by virtue of automation repeatable (reliable); therefore, testing at the data element level should focus on validity… reliability of data items may be bypassed if validity of data items is demonstrated."
EHR data used in this measure reflect part of a national, population-based public health surveillance data collection.

2b.2 **Analytic Method** *(type of reliability & rationale, method for testing)*:
As noted in 2b.1., given data are extracted from EHRs, "reliability of data items may be bypassed if validity of data items is demonstrated". (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties)

2b.3 **Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
While the use of EHRs for data elements reflects a particular strength of this measure, "EHRs and EHR measures are new and will most likely require some adjustment of local EHR structures and recording practices to meet standards." (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties). This has been and will continue to be addressed in the manner recommended in the Guidance document cited above. First, nationally, CDC EHDI has and will continue to provide states and territories with a summary of results of measures reported as part of the national population-based public health data collection. This allows them to identify and address potential discrepancies. Similarly, EHDI programs are and will continue to be encouraged to provide similar feedback to their reporting sources as a means of quality control and programmatic feedback. Second, state EHDI programs have been and will continue to be encouraged to conduct their own reliability/validity studies, and to encourage data quality studies on the part of their reporting sources.

2b C☐ P☐ M☐ N☐

2c. Validity testing

2c.1 **Data/sample** *(description of data/sample and size)*: Data used in this measure reflect EHR extracted information that is part of a national, population-based public health surveillance data collection.

2c.2 **Analytic Method** *(type of validity & rationale, method for testing)*:

2c C☐ P☐ M☐ N☐

A formal and systematic testing of face validity of the measure score as an indicator of quality will be conducted in order to serve as an acceptable indicator for validity of the measure score (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties). This evaluation will be conducted through the CDC EHDI Data Committee. 2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: Face validity has been systematically assessed by relevant stakeholders in order to assess whether the measure represents quality care for this specific topic and whether the focus of this measure is the most important aspect of quality for this specific topic (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties).	
2d. Exclusions Justified 2d.1 **Summary of Evidence supporting exclusion(s):** Not applicable –exclusions are limited to cases of infant death 2d.2 **Citations for Evidence:** Not applicable – see 2d.1. 2d.3 **Data/sample** *(description of data/sample and size)*: Not applicable – see 2d.1. 2d.4 **Analytic Method** *(type analysis & rationale)*: Not applicable – see 2d.1. 2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: Not applicable – see 2d.1.	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures 2e.1 **Data/sample** *(description of data/sample and size)*: Not applicable – no risk adjustment is included 2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*: Not applicable – no risk adjustment is included 2e.3 **Testing Results** *(risk model performance metrics)*: Not applicable – no risk adjustment is included 2e.4 **If outcome or resource use measure is not risk adjusted, provide rationale:** Not applicable – no risk adjustment is included	**2e** C☐ P☐ M☐ N☐ NA ☐
2f. Identification of Meaningful Differences in Performance 2f.1 **Data/sample from Testing or Current Use** *(description of data/sample and size)*: 2f.2 **Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Statistical analysis comparing individual entities (provider, network of providers, state/territory) to the mean level of performance for similar entities. When appropriate, this can be limited to similar entities within a given jurisdiction (e.g., performance of a specific provider relative to other providers in a state) or nationally (e.g., mean performance across an entire state relative to other state/territories). In addition, performance can be evaluated through direct comparison to current national standards of performance (e.g., CDC National Goals, Joint Committee on Infant Hearing,Healthy People 2020.) 2f.3 **Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: For statistical analyses comparing individual entities to the mean level of performance for similar entities, performance that is 2 standard deviations below the corresponding mean can be flagged. When appropriate, this can be done both within a given jurisdiction and nationally. For example, overall performance for a low	**2f** C☐ P☐ M☐ N☐

performing state may be more than 2 standard deviations below the mean for all states/territories, resulting in that state being identified. However, within that state, there may be no significant difference among providers (i.e., all are performing equally poorly).	
2g. Comparability of Multiple Data Sources/Methods 2g.1 **Data/sample** *(description of data/sample and size)*: All data will be collected through Electronic Health Records – not applicable 2g.2 **Analytic Method** *(type of analysis & rationale)*: All data will be collected through Electronic Health Records – not applicable 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*: All data will be collected through Electronic Health Records – not applicable	**2g** C☐ P☐ M☐ N☐ NA ☐
2h. Disparities in Care 2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: Not applicable – measure is not stratified 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	**2** C☐ P☐ M ☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** Testing not yet completed 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): AAP Clinical Report-Hearing Assessment in Infants and Children: Recommendations Beyond Neonatal Screening. Guidance for the Clinician in Rendering Pediatric Care. www.pediatrics.org/cgi/doi/10.1542/peds.2009-1997. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)*: 3a.5 **Methods** *(e.g., focus group, survey, QI project)*:	**3a** C☐ P☐ M☐ N☐

3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*:	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:** no current NQF endorsed measure	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?** The Centers for Disease Control and Prevention (CDC), the HRSA Maternal and Child Health Bureau (MCHB) and the National Committee for Quality Assurance (NCQA) have submitted 2010 Child Health Quality Measures to NQF that relate to the topic of newborn screening, however the measures target different care settings and data sources. CDC, MCHB, and NCQA are collaborating to ensure the measure specifications have distinctive additive value and are harmonized.	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** C☐ P☐ M☐ N☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?**	**4c** C☐ P☐ M☐

4c.2 **If yes, provide justification.**	N☐ NA ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** The use of EHRs for this measure provide a number of strengths that facilitate data quality, including EHRs serving as the authoritative source of clinical information and legal record of care. Furthermore, the use of discrete, computer readable fields results in reduced measurement error that may emerge from manual abstraction, third party coding, or transcription errors. Nevertheless, potential sources of error exist and include incorrect measure, code, or logic specification, as well as incorrect programming, system structure, or data exporting code, or inconsistent field definitions across providers or users. These can be audited through quality control measures. For example, CDC EHDI provides states and territories with a summary of results of measures reported as part of the national population-based public health data collection. This allows them to identify and address potential discrepancies. Similarly, EHDI programs are encouraged to provide similar feedback to their reporting sources as a means of quality control and programmatic feedback. Furthermore, state EHDI programs are encouraged to conduct their own reliability/validity studies, and to encourage data quality studies on the part of their reporting sources.	4d C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Requires an accurate standardized denominator and numerator to successfully determine that all infants have been accounted for and received necessary care. The limitation has been that providers have only reported on a subset of infants seen. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Infants identified with risk factors and have an audiological diagnosis is not a proprietary measure. Public health EHDI programs may need to assume the cost to implement this measure. This measure may require costs of additional system development at the public health level and may require costs of systems development and data entry at the provider level. Depending on availability, federal funds might be provided to public health programs in order to strengthen infrastructure needed for this data collection. 4e.3 **Evidence for costs:** 4e.4 **Business case documentation:**	4e C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	4
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	4 C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	Time-limited ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
Centers for Disease Control and Prevention, Early Hearing Detection and Intervention (EHDI), 1600 Clifton Road NE, MS E-88, Atlanta, Georgia, 30333

Co.2 Point of Contact
John, Eichwald, M.A. FAAA, jeichwald@cdc.gov, 404-498-3961-

Measure Developer If different from Measure Steward
Co.3 Organization
Centers for Disease Control and Prevention, Early Hearing Detection and Intervention (EHDI), 1600 Clifton Road NE, MS E-88, Atlanta, Georgia, 30333

Co.4 Point of Contact
Craig, Mason, Ph.D., Craig_Mason@umit.maine.edu, 207-581-9059-

Co.5 Submitter If different from Measure Steward POC
John, Eichwald, M.A. FAAA, jeichwald@cdc.gov, 404-498-3961-, Centers for Disease Control and Prevention

Co.6 Additional organizations that sponsored/participated in measure development
On July 24, the Joint Committee on Infant Hearing (JCIH) voted unanimously to proceed with the submission these EHDI measures to NQF. Liaison representatives were present from all of the participating organizations: American Academy of Pediatrics (AAP), American Academy of Audiology (AAA), American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS), American Speech-Language-Hearing Association (ASHA), Alexander Graham Bell Association for the Deaf and Hard of Hearing, Council of Education of the Deaf (CED), and Directors of Speech and Hearing Programs in State Health and Welfare
Agencies (DSHPSHWA).

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
CDC EHDI Data Committee and the Joint Committee on Infant Hearing (JCIH) both participated in the development of EHDI quality benchmarks on which this measure is based.

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 2000
Ad.7 Month and Year of most recent revision: 10, 2007
Ad.8 What is your frequency for review/update of this measure?
Ad.9 When is the next scheduled review/update for this measure?

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment: URL http://jcih.org/posstatemts.htm

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1362 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Referral to intervention within 48 hours (EHDI-4b)
De.2 **Brief description of measure:** This measure assesses the proportion of infants and young children referred to intervention within 48 hours of the confirmation of permanent hearing loss.
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure is paired with other measures relevant to the monitoring and measurement of the early screening evaluation and intervention process.
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Timeliness De.6 **Consumer Care Need:** Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** A.3 **Measure Steward Agreement:** Government entity and in the public domain - no agreement necessary A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 12 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers 1a.2 1a.3 **Summary of Evidence of High Impact:** U.S. Preventive Services Task Force. The USPSTF recommends screening for hearing loss in all newborn infants. There is good evidence that newborn hearing screening testing is highly accurate and leads to earlier identification and treatment of infants with hearing loss. Good-quality evidence shows that early detection improves language outcomes. http://www.uspreventiveservicestaskforce.org/uspstf08/newbornhear/newbhearrs.pdf 1a.4 **Citations for Evidence of High Impact:** Nelson HD, Bougatsos C, Nygren P. Universal Newborn Hearing Screening: Systematic Review to Update the 2001 U.S. Preventive Services Task Force Recommendation. AHRQ Publication No. 08-05117-EF-4, July 2008. Agency for Healthcare Research and Quality (AHRQ), Rockville, MD. http://www.uspreventiveservicestaskforce.org/uspstf08/newbornhear/newbornart.pdf	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** From page 194 of the 2007 Joint Committee on Infant Hearing (JCIH) Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs(http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals)	**1b** C☐ P☐ M☐ N☐

"The JCIH supports the concept of regular measurements of performance and recommends routine monitoring of these measures for interprogram comparison and continuous quality improvement. Performance benchmarks represent a consensus of expert opinion in the field of newborn hearing screening and intervention. The benchmarks are the minimal requirements that should be attained by high quality programs. Frequent measures of quality permit prompt recognition and correction of any unstable component of the EHDI process."

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:

1b.3 Citations for data on performance gap:

1b.4 Summary of Data on disparities by population group:

1b.5 Citations for data on Disparities:

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Children with hearing loss who are screened for hearing loss at birth have better language outcomes at school age than those not screened. Infants identified with hearing loss through universal screening have significantly earlier referral, diagnosis, and treatment than those identified in other ways. Language outcomes at school age strengthen the case for newborn hearing screening but are also dependent on effective methods of referral, follow-up, and treatment.

1c.2-3. Type of Evidence: Cohort study, Observational study, Evidence-based guideline, Expert opinion, Systematic synthesis of research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
U.S. Preventive Services Task Force (www.ahrq.gov/clinic/uspstf/uspsnbhr.htm)
Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs. Joint Committee on Infant Hearing. Pediatrics 2007;120;898-921 (http://pediatrics.aappublications.org/cgi/content/full/120/4/898?ijkey=oj9BAleq21OlA&keytype=ref&siteid=aapjournals)

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**
Grade: B (Recommendation by the USPSTF recommends screening for hearing loss in all newborn infants.)

1c.6 Method for rating evidence: Scientific evidence review conducted by the Oregon Evidence-based Practice Center under contract to the Agency for Healthcare Research and Quality.

1c.7 Summary of Controversy/Contradictory Evidence: There is limited evidence about the harms of screening, with conflicting research findings regarding anxiety associated with false positive test results. There is limited information about the harms of treatment

1c.8 Citations for Evidence (*other than guidelines***):**

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
Federal Regulations for 34 CFR Part 303, Early Intervention Program for Infants and Toddlers with Disabilities. Subpart D: Program and Service Components of Statewide Early Intervention Services. "The procedures required in paragraph (b)(1) of this section must ensure that referrals are made no more than two working days after a child has been identified"
Sec. 303.342(a) or Sec. 303.345. [Page 193]

1c
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http://www.nectac.org/idea/303regs.asp **1c.10 Clinical Practice Guideline Citation:** **1c.11 National Guideline Clearinghouse or other URL:** **1c.12 Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** Grade: B (Recommendation by the USPSTF recommends screening for hearing loss in all newborn infants.) **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: **1c.14 Rationale for using this guideline over others:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** Numerator contains the number of infants diagnosed with permanent hearing loss who are referred to intervention within 48 hours of the confirmation of hearing loss. **2a.2 Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** The measurement time period varies upon needs of the particular user (e.g. calendar year, quarterly, monthly) but must be the same for both the numerator and denominator. **2a.3 Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** Total number of infants with "Audiological Diagnosis" (SNOMED-CT equals “Hearing Normal” 164059009, “Permanent Conductive” 44057004, “Sensorineural” 60700002, “Mixed” 77507001, “Auditory Neuropathy Spectrum Disorder” 443805006, “Transient Hearing Loss” 123123005) and whose date of diagnosis and date of referral to education service” (SNOMED-CT 415271004) is within 48 hours.	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):** Denominator contains the number of infants that have been diagnosed with permanent hearing loss. **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** Infancy **2a.7 Denominator Time Window (***The time period in which cases are eligible for inclusion in the denominator***):**	**2a-specs** **C☐** **P☐** **M☐** **N☐**

The measurement time period varies upon needs of the particular user (e.g. calendar year, quarterly, monthly) but must be the same for both the numerator and denominator.

2a.8 **Denominator Details (***All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
Total number of infants with "Audiological Diagnosis" (SNOMED-CT equals “Hearing Normal” 164059009, “Permanent Conductive” 44057004, “Sensorineural” 60700002, “Mixed” 77507001, or “Auditory Neuropathy Spectrum Disorder” 443805006.

2a.9 **Denominator Exclusions (***Brief text description of exclusions from the target population***):** Patient deceased: Patient has expired.

2a.10 **Denominator Exclusion Details (***All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
Death Value Set.

2a.11 **Stratification Details/Variables (***All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**

2a.12-13 **Risk Adjustment Type:** No risk adjustment necessary

2a.14 **Risk Adjustment Methodology/Variables (***List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 **Detailed risk model available Web page URL or attachment:**

2a.18-19 **Type of Score:** Rate/proportion
2a.20 **Interpretation of Score:** Better quality = Higher score
2a.21 **Calculation Algorithm (***Describe the calculation of the measure as a flowchart or series of steps***):**
(1) The time period for births included in the estimate is specified (see 2a.2, 2a.7).
(2) All live births that occurred during the time period for a given provider/practice are selected.
(3) Result of step 2 is filtered to remove children who died (see 2a.9, 2a.10).

The denominator is calculated using the following step:
(4) Result of step 3 is filtered to be limited to the subset with an Audiological Diagnosis of permanent hearing loss (see 2a.8) by 36 months of age (see 2a.7). This result is saved as the denominator (see 2a.4).

The numerator is calculated using the following step:
(5) Result of step 4 is further filtered to be limited to the subset for which the date of EHDI referral to education service is within 48 hours after the date of diagnosis (see 2a.3). This result is saved as the numerator (see 2a.1).

EHDI-4b is calculated using the following step:
(6) EHDI-4b is calculated by dividing the numerator (result of step 5) by the denominator (result of step 4).

2a.22 **Describe the method for discriminating performance** *(e.g., significance testing)***:**
Method to discriminate performance is based upon jurisdictionally based statistical measurement reflecting local and national variability.

2a.23 **Sampling (Survey) Methodology** *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:

2a.24 **Data Source (***Check the source(s) for which the measure is specified and tested)*
Electronic clinical data, Public health data/vital statistics, Electronic Health/Medical Record

2a.25 **Data source/data collection instrument (***Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Electronic Health/Medical Record, Public health information system

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL www.hitsp.org AND www.ihe.net/Technical_Framework/index.cfm#quality AND www.cdc.gov/ncbddd/ehdi/data.htm **2a.29-31 Data dictionary/code table web page URL or attachment:** URL http://newbornscreeningcodes.nlm.nih.gov AND www.hitsp.org AND www.ihe.net/Technical_Framework/index.cfm#quality **2a.32-35 Level of Measurement/Analysis** (*Check the level(s) for which the measure is specified and tested)* Clinicians: Individual, Facility/Agency, Population: national, Population: states **2a.36-37 Care Settings (***Check the setting(s) for which the measure is specified and tested)* Ambulatory Care: Office, Ambulatory Care: Clinic **2a.38-41 Clinical Services** (*Healthcare services being measured, check all that apply*) Clinicians: Audiologist, Clinicians: Nurses, Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)	
TESTING/ANALYSIS	
2b. Reliability testing **2b.1 Data/sample** *(description of data/sample and size)*: 2b.1. Data Sample (Description of data sample and size) Data used in this measure are included in the EHR. As noted in the NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties, "…the EHR will be considered the authoritative source of clinical information and legal record of care. Quality measures based on EHRs require exporting clinical information recorded by healthcare clinicians from discrete computer readable fields; therefore, measurement errors due to manual abstraction, coding by persons other than the originator, or transcription are eliminated." As these data elements are extracted from EHRs using computer programming, they "are by virtue of automation repeatable (reliable); therefore, testing at the data element level should focus on validity… reliability of data items may be bypassed if validity of data items is demonstrated." EHR data used in this measure reflect part of a national, population-based public health surveillance data collection. Data are collected at the individual-child level within each state/territory and reported nationally at an aggregated state-level to CDC. This population-based collection of EHDI data has been occurring for over a decade. For the reporting period of calendar year 2007, 43 states and territories reported 3,364 infants were identified with permanent congenital hearing loss. **2b.2 Analytic Method** *(type of reliability & rationale, method for testing)*: As noted in 2b.1., given data are extracted from EHRs, "reliability of data items may be bypassed if validity of data items is demonstrated". (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties) **2b.3 Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*: While the use of EHRs for data elements reflects a particular strength of this measure, "EHRs and EHR measures are new and will most likely require some adjustment of local EHR structures and recording practices to meet standards." (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties). This has been and will continue to be addressed in the manner recommended in the Guidance document cited above. First, nationally, CDC EHDI has and will continue to provide states and territories with a summary of results of measures reported as part of the national population-based public health data collection. This allows them to identify and address potential discrepancies. Similarly, EHDI programs are and will continue to be encouraged to provide similar feedback to their reporting sources as a means of quality control and programmatic feedback. Second, state EHDI programs have been and will continue to be encouraged to conduct their own reliability/validity studies, and to encourage data quality studies on the part of their reporting sources.	**2b** C☐ P☐ M☐ N☐
2c. Validity testing	**2c**

2c.1 Data/sample *(description of data/sample and size)*: Data used in this measure reflect EHR extracted information that is part of a national, population-based public health surveillance data collection. Data are collected at the individual-child level within each state/territory, and reported at state-level aggregate form nationally to CDC. This population-based collection of EHDI data has been occurring for over a decade. For the reporting period of calendar year 2007, 43 states and territories reported 3,364 infants were identified with permanent congenital hearing loss. **2c.2 Analytic Method** *(type of validity & rationale, method for testing)*: A formal and systematic testing of face validity of the measure score as an indicator of quality will be conducted in order to serve as an acceptable indicator for validity of the measure score (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties). This evaluation will be conducted through the CDC EHDI Data Committee. **2c.3 Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: Face validity has been systematically assessed by relevant stakeholders in order to assess whether the measure represents quality care for this specific topic and whether the focus of this measure is the most important aspect of quality for this specific topic (NQF draft Guidance for Measure Testing and Evaluating Scientific Acceptability of Measure Properties).	C☐ P☐ M☐ N☐
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** Not applicable –exclusions are limited to cases of infant death **2d.2 Citations for Evidence:** Not applicable – see 2d.1. **2d.3 Data/sample** *(description of data/sample and size)*: Not applicable – see 2d.1. **2d.4 Analytic Method** *(type analysis & rationale)*: Not applicable – see 2d.1. **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: Not applicable – see 2d.1.	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: Not applicable – no risk adjustment is included **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: Not applicable – no risk adjustment is included **2e.3 Testing Results** *(risk model performance metrics)*: Not applicable – no risk adjustment is included **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** Not applicable – no risk adjustment is included	**2e** C☐ P☐ M☐ N☐ NA ☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: National, population-based public health surveillance data, collected at the individual-child level within each state/territory, and reported at state-level aggregate form nationally to CDC. This population-based collection of EHDI data has been occurring for over a decade. For the reporting period of calendar year 2007, 43 states and territories reported 3,364 infants were identified with permanent congenital hearing loss. **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*:	**2f** C☐ P☐ M☐ N☐

Statistical analysis comparing individual entities (provider, network of providers, state/territory) to the mean level of performance for similar entities. When appropriate, this can be limited to similar entities within a given jurisdiction (e.g., performance of a specific provider relative to other providers in a state) or nationally (e.g., mean performance across an entire state relative to other state/territories). In addition, performance can be evaluated through direct comparison to current national standards of performance (e.g., CDC National Goals, Joint Committee on Infant Hearing,Healthy People 2020.) 2f.3 **Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: For statistical analyses comparing individual entities to the mean level of performance for similar entities, performance that is 2 standard deviations below the corresponding mean can be flagged. When appropriate, this can be done both within a given jurisdiction and nationally. For example, overall performance for a low performing state may be more than 2 standard deviations below the mean for all states/territories, resulting in that state being identified. However, within that state, there may be no significant difference among providers (i.e., all are performing equally poorly).	
2g. Comparability of Multiple Data Sources/Methods 2g.1 **Data/sample** *(description of data/sample and size)*: All data will be collected through Electronic Health Records – not applicable 2g.2 **Analytic Method** *(type of analysis & rationale)*: All data will be collected through Electronic Health Records – not applicable 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*: All data will be collected through Electronic Health Records – not applicable	**2g** C☐ P☐ M☐ N☐ NA ☐
2h. Disparities in Care 2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: Not applicable – measure is not stratified 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M ☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** Testing not yet completed 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives,*	**3a** C☐ P☐ M☐ N☐

name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years)**:** **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)***:** 3a.5 **Methods** *(e.g., focus group, survey, QI project)***:** 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)***:**	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:** no current NQF endorsed measure	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?** The Centers for Disease Control and Prevention (CDC), the HRSA Maternal and Child Health Bureau (MCHB) and the National Committee for Quality Assurance (NCQA) have submitted 2010 Child Health Quality Measures to NQF that relate to the topic of newborn screening, however the measures target different care settings and data sources. CDC, MCHB, and NCQA are collaborating to ensure the measure specifications have distinctive additive value and are harmonized.	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry), Survey	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources	**4b**

4b.1 Are all the data elements available electronically? (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.**	C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** The use of EHRs for this measure provide a number of strengths that facilitate data quality, including EHRs serving as the authoritative source of clinical information and legal record of care. Furthermore, the use of discrete, computer readable fields results in reduced measurement error that may emerge from manual abstraction, third party coding, or transcription errors. Nevertheless, potential sources of error exist and include incorrect measure, code, or logic specification, as well as incorrect programming, system structure, or data exporting code, or inconsistent field definitions across providers or users. These can be audited through quality control measures. For example, CDC EHDI provides states and territories with a summary of results of measures reported as part of the national population-based public health data collection. This allows them to identify and address potential discrepancies. Similarly, EHDI programs are encouraged to provide similar feedback to their reporting sources as a means of quality control and programmatic feedback. Furthermore, state EHDI programs are encouraged to conduct their own reliability/validity studies, and to encourage data quality studies on the part of their reporting sources.	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Requires an accurate standardized denominator and numerator to successfully determine that all infants have been accounted for and received necessary care. The limitation has been that providers have only reported on a subset of infants seen. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Referral to intervention within 48 hours is not a proprietary measure. Public health EHDI programs may need to assume the cost to implement this measure. This measure may require costs of additional system development at the public health level and may require costs of systems development and data entry at the provider level. Depending on availability, federal funds might be provided to public health programs in order to strengthen infrastructure needed for this data collection. **4e.3 Evidence for costs:** **4e.4 Business case documentation:**	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** C☐ P☐

	M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	Time-limited ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
Centers for Disease Control and Prevention, Early Hearing Detection and Intervention (EHDI), 1600 Clifton Road NE, MS E-88, Atlanta, Georgia, 30333

Co.2 Point of Contact
John, Eichwald, M.A. FAAA, jeichwald@cdc.gov, 404-498-3961-

Measure Developer If different from Measure Steward
Co.3 Organization
Centers for Disease Control and Prevention, Early Hearing Detection and Intervention (EHDI), 1600 Clifton Road NE, MS E-88, Atlanta, Georgia, 30333

Co.4 Point of Contact
Craig, Mason, Ph.D., Craig_Mason@umit.maine.edu, 207-581-9059-

Co.5 Submitter If different from Measure Steward POC
John, Eichwald, M.A. FAAA, jeichwald@cdc.gov, 404-498-3961-, Centers for Disease Control and Prevention

Co.6 Additional organizations that sponsored/participated in measure development
On July 24, the Joint Committee on Infant Hearing (JCIH) voted unanimously to proceed with the submission these EHDI measures to NQF. Liaison representatives were present from all of the participating organizations: American Academy of Pediatrics (AAP), American Academy of Audiology (AAA), American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS), American Speech-Language-Hearing Association (ASHA), Alexander Graham Bell Association for the Deaf and Hard of Hearing, Council of Education of the Deaf (CED), and Directors of Speech and Hearing Programs in State Health and Welfare
Agencies (DSHPSHWA).

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
CDC EHDI Data Committee and the Joint Committee on Infant Hearing (JCIH) both participated in the development of EHDI quality benchmarks on which this measure is based.

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 2000
Ad.7 Month and Year of most recent revision: 10, 2007
Ad.8 What is your frequency for review/update of this measure?
Ad.9 When is the next scheduled review/update for this measure?

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment: URL http://jcih.org/posstatemts.htm

Date of Submission (*MM*/*DD*/*YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1341 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Autism Screening
De.2 **Brief description of measure:** The percentage of children who turned 2 years old during the measurement year who had an autism screening and proper follow up performed between 6 months and 2 years of age.
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure is included in the NCQA composite measure: Comprehensive Well Care for Children by Age 2 Years
De.4 **National Priority Partners Priority Area:** Patient and family engagement, Care coordination, Population health De.5 **IOM Quality Domain**: Effectiveness, Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐

B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** High resource use, Severity of illness, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Autism, or autistic spectrum disorder (ASD), is a developmental disorder. Children with ASD demonstrate deficits in social interaction, verbal and nonverbal communication, and repetitive behaviors or interests. Many ASD children are highly attuned or even painfully sensitive to certain sounds, textures, tastes, and smells, and can be oblivious to extreme cold or pain(NIMH, 2008). Many children with ASD have some degree of mental impairment, and one in four develop seizures (NIMH, 2008). Early intervention can improve long-term outcomes. Estimates of the prevalence of ASD vary widely. The Centers for Disease Control and Prevention's (CDC) Autism and Developmental Disabilities Monitoring Network released data in 2007 that showed about one in 150 eight-year-old children in multiple areas of the U.S. had an ASD (CDC, 2007). The National Institute of Mental Health (NIMH) estimates the prevalence to be one in every 500 children. Younger ages at diagnosis, migration, changes in diagnostic criteria, and inclusion of milder cases is partially responsible; to what extent is not certain. However, according to the NIMH, recent reports suggest that the incidence of autism may be substantially increasing (NIMH, 2008). Each individual with autism accrues about $3.2 million in costs to society over his or her lifetime, with lost	**1a** C☐ P☐ M☐ N☐

productivity and adult care being the most expensive components (Leslie, 2007). In total, autism costs society more than $35 billion in direct and indirect expenses each year.

1a.4 Citations for Evidence of High Impact: American Academy of Pediatrics, Section on Developmental and Behavioral Pediatrics Committee on Coding and Nomenclature. Guidance on reporting developmental screening, testing. AAP News. 2005;26 :34

American Academy of Pediatrics Committee on Children with Disabilities. The Pediatrician's Role in the Diagnosis and Management of Autistic Spectrum Disorder in Children. Pediatrics 2001; 107 No5.

Centers for Disease Control and Prevention. Autism Information Center – Overview. http://www.cdc.gov/ncbddd/autism/overview.htm. Updated 2007.

Douglas L. Leslie, PhD; Andrés Martin, MD, MPH . Health Care Expenditures Associated With Autism Spectrum Disorders. Arch Pediatr Adolesc Med. 2007;161(4):350-355.

National Institute of Mental Health. Autism Spectrum Disorders (Pervasive Developmental Disorders) http://www.nimh.nih.gov/health/publications/autism/complete-publication.shtml. Updated 2008.

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: Early intervention for autism is important. Although the age of diagnosis has been decreasing in recent years, children still do not receive the proper diagnosis until 3½ to 4 years old (Gupta, 2007). It is estimated that 16 percent of children have some type of developmental and/or behavioral disorder; however, only 30 percent of these cases are identified before a child begins school. This measure will encourage autism screening using a standardized tool.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
From 1999 to 2000, approximately two percent of children under three years of age received early intervention services in the U.S. under the Individuals with Disabilities Education Act Part C, whereas an estimated five percent of preschoolers were served under Part B (DOE, 2001). Moreover, one study found that in a sample of 121 pediatricians, where more than 60 percent reported using a developmental screening test, only 15 to 20 percent of these physicians screened more than ten percent of their patients.

Many clinicians hesitate to discuss the possibility of a diagnosis of autism with parents of young children, even when some symptoms are present, due to concerns about family distress, the possible adverse effects of labeling a child, the possibility of being incorrect, or the hope that the symptoms will reverse over time. However, the positive outcomes of accurate diagnosis may far outweigh the negative effects, and families universally express the desire to be informed as early as possible.

1b.3 Citations for data on performance gap:
Gupta VB, et al. Identifying Children With Autism Early? Pediatrics 2007;119;152-153

Marcus, L. M., & Stone, W. L. (1993). Assessment of the young autistic child. In E. Schopler & G. B. Mesibov (Eds.), Preschool issues in autism? New York: Plenum Press. (From: Pauline A. Filipek et al).

Palfrey JS; Singer JD; Walker DK; Butler JA. Early identification of children´s special needs: a study in five metropolitan communities. J Pediatr 1987 Nov;111(5):651-9.

Pauline A. Filipek, Pasquale J. Accardo, Grace T. Baranek, Edwin H. Cook, Jr., Geraldine Dawson, Barry Gordon, Judith S. Gravel, Chris P. Johnson, Ronald J. Kallen, Susan E. Levy, Nancy J. Minshew, Barry M. Prizant, Isabelle Rapin, Sally J. Rogers, Wendy L.

Smith RD. The use of developmental screening tests by primary-care pediatricians. J Pediatr. 1978; 93:524-527 (From Sices et al).

Stone, Stuart Teplin, Roberto F. Tuchman, and Fred R. Volkmar. The Screening and Diagnosis of Autistic

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Spectrum Disorders. Journal of Autism and Developmental Disorders Vol. 29, No. 6, 1999

U.S. Department of Education. Twenty-Third Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act. Washington, D.C.; 2001. (From Sices et al)

1b.4 Summary of Data on disparities by population group:
ASD occurs in all racial/ethnic, and socioeconomic groups. Males are more often affected by the disorder, with one in 94 boys diagnosed, and they are four times more likely than females to be diagnosed (ASA, 2008).

ASDs tend to occur more often than expected among people who have certain other medical conditions, including Fragile X syndrome, tuberous sclerosis, congenital rubella syndrome, and untreated phenylketonuria (PKU) (CDC, 2007). Some drugs taken during pregnancy also have been linked with a higher risk of autism, specifically the prescription drug thalidomide (CDC, 2007).

1b.5 Citations for data on Disparities:
Autism Society of America. http://www.autism-society.org/site/PageServer?pagename=about_home. Updated 2008.

Centers for Disease Control and Prevention. Autism Information Center – Overview. http://www.cdc.gov/ncbddd/autism/overview.htm. Updated 2007.

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Early intervention services have been shown to be associated with improved long-term outcomes (AAP, 2001) and an easing of parental anxiety (Gupta et al 2007). According to the AAP, currently accepted strategies are to "improve the overall functional status of the child by enrolling the child in an appropriate and intensive early intervention program that promotes development of communication, social, adaptive, behavioral, and academic skills; decrease maladaptive and repetitive behaviors through use of behavioral and sometimes pharmacologic strategies; and help the family manage the stress associated with raising a child with autism, particularly by providing information about community resources, respite care, and parent support organizations (AAP 2001)."

Although there is growing agreement among experts that early and sustained intensive behavioral and educational interventions may improve overall outcomes, there is less agreement regarding the relative effectiveness of specific intervention strategies or the degree to which they should be delivered (AAP, 2001). Intervention strategies should be tailored to the child´s needs; although the menu of services may vary among children, all children with ASD should be cared for in the context of the medical home (AAP 2001).

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Major pediatric health organizations recommend autism screening based on scientific evidence. The American Academy of Pediatrics has recommended administering autism-specific screening tools at the 18-month preventive care visit (in addition to a general developmental screening tool) (Bright futures, 2006). The policy statement recommends surveillance for developmental problems at the 9-, 18-, and 30-month visits, plus screening with an autism-specific tool at the age of 18 months. Screening with an autism-specific screening tool should be repeated at the age of 24 months or at any encounter when a parent raises concerns (Gupta VB, 2007). The American Academy of Neurology recommends that developmental surveillance be performed at all well-child visits from infancy through school-age, and at any age thereafter if concerns are raised about social acceptance, learning, or behavior. The CDC recommends that screening tests used solely for identifying children with developmental disabilities should be given to all children during the 9-month, 18 month, and 24- or 30- month well-child visits.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by*

1c
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N☐

whom):
Fair to Good

1c.6 **Method for rating evidence:** Expert Consensus

1c.7 **Summary of Controversy/Contradictory Evidence:** The USPSTF concluded that the evidence was insufficient to recommend for or against the use of brief, formal screening instruments in primary care to detect speech and language delay in children. However, it is important to note that this recommendation did NOT examine ASD specifically. The USPSTF recommendation statement for speech and language delay and accompanying explanation are below.

The USPSTF concludes that the evidence is insufficient to recommend for or against routine use of brief, formal screening instruments in primary care to detect speech and language delay in children up to 5 years of age.

Speech and language delay affects 5 to 8 percent of preschool children, often persists into the school years, and may be associated with lowered school performance and psychosocial problems. The USPSTF found insufficient evidence that brief, formal screening instruments that are suitable for use in primary care for assessing speech and language development can accurately identify children who would benefit from further evaluation and intervention. Fair evidence suggests that interventions can improve the results of short-term assessments of speech and language skills; however, no studies have assessed long-term outcomes. Furthermore, no studies have assessed any additional benefits that may be gained by treating children identified through brief, formal screening who would not be identified by addressing clinical or parental concerns. No studies have addressed the potential harms of screening or interventions for speech and language delays, such as labeling, parental anxiety, or unnecessary evaluation and intervention. Thus, the USPSTF could not determine the balance of benefits and harms of using brief, formal screening instruments to screen for speech and language delay in the primary care setting.

1c.8 **Citations for Evidence (***other than guidelines***):** Council on Children with Disabilities, Section on Developmental Behavioral Pediatrics, Bright Futures Steering Committee and Medical Home Initiatives for Children With Special Needs Project Advisory Committee. Identifying infants and young children with developmental disorders in the medical home: an algorithm for developmental surveillance and screening. Pediatrics. 2006; 118: 405-420

Gupta VB, Hyman SL, Johnson CP, et al. Identifying children with autism early? Pediatrics. 2007;119; 152-153

Hagan, JF, Shaw JS, Duncan PM, eds. 2008. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, Third Edition. Elk Grove, IL: American Academy of Pediatrics

American Academy of Pediatrics. The Pediatrician´s Role in the Diagnosis and Management of Autistic Spectrum Disorder in Children. PEDIATRICS Vol. 107 No. 5 May 2001, pp. 1221-1226

Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Child Neurology Society. Practice parameter: Screening and diagnosis of autism. December 2008.

Center for Disease Control. Autism Information Center. Screening and Diagnosis. Update April 2008. U.S. Department of Health & Health Services http://www.ahrq.gov/clinic/uspstf06/speech/speechrs.htm

1c.9 **Quote the Specific guideline recommendation (***including guideline number and/or page number***):** American Academy of Pediatrics (2007): The AAP recommends autism screening at the 18-month and 24-month well-baby examinations. Before 18 months of age, screening tools that evaluate social and communication skills may assist in systematic detection of early signs of ASD.

Common, classic presentations of ASD are lack of speech, scripted speech, parroting without communicative intent, and pop-up and giant words. Earlier prespeech deficits are often present and, if recognized, may allow earlier diagnosis. These deficits may include lack of appropriate gaze or of warm, joyful expressions with gaze; lack of alternating to-and-fro pattern of vocalizations between infant and parent; lack of

recognition of parent's voice; disregard for vocalizations (e.g., own name) with keen awareness for environmental sounds; lack of expressions such as "oh-oh" or "huh." Based on a review of these results and his or her own observations, the pediatrician may make a negative or positive determination.

If ASD is not ruled out:
No action is taken when ASD is ruled out, but 3 immediate responses are triggered for positive cases, including: a referral to an autism diagnostic clinic for a definitive evaluation, a prescription for an early intervention program for treatment, and a referral to an audiologist to rule out hearing problems.

Grade: Expert Consensus Policy Statement

American Academy of Neurology (2008): Developmental surveillance should be performed at all well-child visits from infancy through school-age, and at any age thereafter if concerns are raised about social acceptance, learning, or behavior.Screening should be performed not only for autism-related symptoms but also for language delays, learning difficulties, social problems, and anxiety or depressive symptoms.

Recommended developmental screening tools include the Ages and Stages Questionnaire, the BRIGANCE(R) Screens, the Child Development Inventories, and the Parents´ Evaluations of Developmental Status.
Because of the lack of sensitivity and specificity, the Denver-II (DDST-II) and the Revised Denver Pre-Screening Developmental Questionnaire (R-DPDQ) are not recommended for appropriate primary-care developmental surveillance.
Screening specifically for autism should be performed on all children failing routine developmental surveillance procedures using one of the validated instruments: the Checklist for Autism in Toddlers (CHAT) or the Autism Screening Questionnaire.

Further developmental evaluation is required whenever a child fails to meet any milestones (babbling; gesturing; single words by 16 months; two-word spontaneous phrases by 24 months; loss of any language or social skills at any age.
- Siblings of children with autism should be carefully monitored for acquisition of social, communication, and play skills, and the occurrence of maladaptive behaviors.
- Laboratory investigations recommended for any child with developmental delay and/or autism include audiologic assessment and lead screening
- Early referral for a formal audiologic assessment should include behavioral audiometric measures, assessment of middle ear function, and electrophysiologic procedures using experienced pediatric audiologists with current audiologic testing methods and technologies
- Lead screening should be performed in any child with developmental delay and pica.

Additional periodic screening should be considered if the pica persists
Grade: A recommendation for patient management that reflects moderate clinical certainty (usually requires one or more Class II studies or a strong consensus of Class III evidence).

Centers for Disease Control and Prevention (2008): The CDC recommends all children be screened for ASD using Screening tests used solely for identifying children with developmental disabilities should be given to all children during the 9-month, 18-month, and 24- or 30-month well-child visits. Thorough evaluation may include clinical observations, parent interviews, developmental histories, psychological testing, speech and language assessments, and possibly the use of one or more autism diagnostic scales. Because ASDs are complex disorders, a comprehensive evaluation may also include physical, neurological, and genetic testing. Many tools have been designed to assess ASDs in young children, but no single tool should be used as the only basis for diagnosing autism. Diagnostic tools usually rely on two main sources of information—parents' or caregivers' descriptions of their child's development and direct observation of behavior.

If a parent or doctor thinks there could be a problem, there should be a referral to see a developmental pediatrician or other specialist. Parents can also call local early intervention agency (for children under 3) or public school (for children 3 and older).
Grade: Expert Consensus

1c.10 Clinical Practice Guideline Citation: Hagan, JF, Shaw JS, Duncan PM, eds. 2008. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, Third Edition. Elk Grove, IL: American Academy of Pediatrics

American Academy of Pediatrics. The Pediatrician´s Role in the Diagnosis and Management of Autistic Spectrum Disorder in Children. PEDIATRICS Vol. 107 No. 5 May 2001, pp. 1221-1226 Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Child Neurology Society. Practice parameter: Screening and diagnosis of autism. December 2008. Centers for Disease Control and Prevention. Autism Information Center. Screening and Diagnosis. Update April 2008. U.S. Preventive Services Task Force. Screening for speech and language delay in preschool children: recommendation statement. Pediatrics. 2006;117(2):497–501 1c.11 **National Guideline Clearinghouse or other URL:** Assessment, diagnosis and clinical interventions for children and young people with autism spectrum disorders. A national clinical guideline. 1c.12 **Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** AAP: Expert Consensus Policy Statement; AAN: A recommendation; CDC: Expert Consensus 1c.13 **Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: Expert consensus with evidence review 1c.14 **Rationale for using this guideline over others:** NCQA convened a multistakeholder panel of experts to review evidence and guidelines for child health care. The Child Health Measurement Advisory Panel reviewed these guidelines together with the health importance and field test results of this measure. The MAP concluded that the health importance, evidence and feasibility supports this measure.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 **Numerator Statement (***Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** Children who had documentation in the medical record of an autism screening between 6 months and 2 years of life. 2a.2 **Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** 2 years 2a.3 **Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** Documentation must include a note indicating the date of screening and the following. The type of standardized tool used A result of normal, abnormal or indeterminate	**2a-specs** **C☐** **P☐** **M☐** **N☐**

For abnormal or indeterminate results, evidence of cconfirmatory testing, referral or treatment

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):**
Children who turned 2 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months.

2a.5 Target population gender: Female, Male
2a.6 Target population age range: 6 months to 2 years old

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
1 year

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
Children who turned 2 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months.

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** None

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
NA

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
None

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**
NA

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Step 1: Determine the denominator
Children who turned age 2 years in the measurement year, AND
Who had a visit that predates the child´s birthday by 12 months
Step 2: Determine the numerator
Children who had documentation in the medical record of an autism screening between 6 months and 2 years of life.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
For this physician-level measure, we anticipate the entire population will be used in the denominator. If a sample is used, a random sample is ideal. NCQA's work has indicated that a sample size of 30-50 patients would be necessary for a typical practice size of 2000 patients.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Paper medical record/flow-sheet, Electronic clinical data, Electronic Health/Medical Record

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Medical record

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group, Population: national, Population: regional/network

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Office, Ambulatory Care: Clinic, Ambulatory Care: Hospital Outpatient, Behavioral health/psychiatric unit

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Behavioral Health: Mental Health, Clinicians: Nurses, Clinicians: Physicians (MD/DO), Clinicians: PT/OT/Speech

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)***:** NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure).

2b.2 Analytic Method *(type of reliability & rationale, method for testing)***:**
We did not conduct reliability testing for this measure.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)***:**
We did not conduct reliability testing for this measure.

2b
C☐
P☐
M☐
N☐

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)***:** NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure).

2c.2 Analytic Method *(type of validity & rationale, method for testing)***:**
NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area. This measure was deemed valid by the expert panel. In addition, this measure does not utilize administrative data sources; data recorded in the chart is considered the gold standard.

For autism screening, the expert panel concluded that the most important aspect of care was whether screening was documented using a scientifically sound standardized instrument and whether or not follow-up of abnormal or indeterminate results were documented in the medical chart.

2c.3 Testing Results *(statistical results, assessment of adequacy in the context of norms for the test conducted)***:**
Eligible: 180
Needed and Received Follow Up: 1/1 (100%)
Screening Documented: 39%
Results Documented: 38%
Standardized Tool Documented: 38%

2c
C☐
P☐
M☐
N☐

Results and Proper Follow Up Documented: 38%	
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** Upon reviewing the measure, the expert panel suggested adding an exclusion for children already diagnosed or in treatment. Note, this exclusion is not evidence dependent but rather a specification issue. **2d.2 Citations for Evidence:** NA **2d.3 Data/sample** *(description of data/sample and size)*: NA **2d.4 Analytic Method** *(type analysis & rationale)*: NA **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** C☐ P☐ M☐ N☐ NA☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: NA **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA **2e.3 Testing Results** *(risk model performance metrics)*: NA **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**2e** C☐ P☐ M☐ N☐ NA☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure). **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Eligible: 180 Needed and Received Follow Up: 1/1 (100%) Screening Documented: 39% Results Documented: 38% Standardized Tool Documented: 38% Results and Proper Follow Up Documented: 38%	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure) **2g.2 Analytic Method** *(type of analysis & rationale)*: This measure is chart review only; no other sources were identified by the expert panel; this measure does not utilize administrative data.	**2g** C☐ P☐ M☐ N☐ NA☐

2g.3 Testing Results *(e.g., correlation statistics, comparison of rankings)*: NA	
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: This measure is not stratified by disparities. **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** Not in use but testing completed **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): This measure is not currently publicly reported. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** This measure is not currently used in QI. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. NCQA anticipates that after we release these measures, they will become widely used, as all our measures do. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)*: NA **3a.5 Methods** *(e.g., focus group, survey, QI project)*: NCQA vetted the measures with its expert panel. In addition, throughout the development process, NCQA vetted the measure concepts and specifications with other stakeholder groups, including the National Association of State Medicaid Directors, NCQA's Health Plan Advisory Council, NCQA's Committee on Performance Measurement, and the American Academy of Pediatrician's Quality Improvement Innovation Network. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. **3a.6 Results** *(qualitative and/or quantitative results and conclusions)*: NCQA received feedback that the measure is understandable, feasible, important and valid.	**3a** C☐ P☐ M☐ N☐
3b/3c. Relation to other NQF-endorsed measures	

3b.1 NQF # and Title of similar or related measures: NA	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?** NA	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** NA **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** NA	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.** NCQA plans to eventually specify this measure for electronic health records.	**4b** C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and**	**4d** C☐ P☐

describe how these potential problems could be audited. If audited, provide results. During the measure development process the Child Health MAP and measure development team worked with NCQA's certified auditors and audit department to ensure that the measure specifications were clear and auditable. The denominator, numerator and optional exclusions are concisely specified and align with our audit standards.	**M☐** **N☐**
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on field test results, we have specified the measure to assess whether screening was documented and whether use of a standardized tool was documented. Our field test results showed that these data elements are available in the medical record. In addition, our field test participants noted that many were able to program these requirements into their electronic health record systems, and several implemented point-of-service physician reminders for this measure. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Collecting measures from medical charts is time-consuming and can be burdensome. Adapting this measure in electronic health records may relieve some of this burden. **4e.3 Evidence for costs:** Based on field test participant feedback and other stakeholder input **4e.4 Business case documentation:** NA	**4e** **C☐** **P☐** **M☐** **N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** **C☐** **P☐** **M☐** **N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y☐** **N☐** **A☐**
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005 **Co.2 Point of Contact** Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-	
Measure Developer If different from Measure Steward **Co.3 Organization** National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005	

Co.4 Point of Contact
Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-

Co.5 Submitter If different from Measure Steward POC
Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Child Health Measurement Advisory Panel:
Jeanne Alicandro
Barbara Dailey
Denise Dougherty, PhD
Ted Ganiats, MD
Foster Gesten, MD
Nikki Highsmith, MPA
Charlie Homer, MD, MPH
Jeff Kamil, MD
Elizabeth Siteman
Mary McIntyre, MD, MPH
Virginia Moyer, MD, MPH, FAAP
Lee Partridge
Xavier Sevilla, MD, FAAP
Michael Siegal
Jessie Sullivan

Ad.2 If adapted, provide name of original measure: NA
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released:
Ad.7 Month and Year of most recent revision:
Ad.8 What is your frequency for review/update of this measure?
Ad.9 When is the next scheduled review/update for this measure?

Ad.10 Copyright statement/disclaimers: © 2009 by the National Committee for Quality Assurance
1100 13th Street, NW, Suite 1000
Washington, DC 20005

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1398 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Vision Screening By 6 years of age
De.2 **Brief description of measure:** Percentage of children with documentation of appropriate vision screening or services by the time they reach 6 years of age.
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure appears in the composite Comprehensive Well Care by Age 6 Years
De.4 **National Priority Partners Priority Area:** Care coordination, Population health De.5 **IOM Quality Domain**: Effectiveness, Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, Leading cause of morbidity/mortality, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Vision-threatening eye problems, including amblyopia, strabismus, and significant refractive error, are estimated to occur in two to five percent of preschool children (Hartmann, 2006), and vision disorders are now the fourth leading disability among children in the U.S (Sunnah, 2003). These impairments often go undetected, as many children do not know when they have a vision problem, and their parents may be equally unaware. While loss of vision is the most serious outcome, children with visual problems also suffer in other ways that affect their quality of life. For example, uncorrected amblyopia may adversely affect school performance, ability to learn, and later, adult self-image (Packwood, 1999). Undiagnosed poor vision can be a burden on public health resources (CDC, 2008). The average lifetime cost for one person with vision impairment was estimated in 2003 to be $566,000, which represents costs over and above those experienced by a person who does not have a disability (CDC, 2004). It is estimated that the lifetime costs for all people with vision impairment who were born in 2000 will total $2.5 billion, for both direct and indirect costs. These estimates consist of direct medical costs (6 percent), such as doctor visits and prescription drugs; direct nonmedical expenses (16 percent), such as home modifications and special education, and indirect costs (77 percent), such as the value of lost wages when a person dies early, cannot work, or is limited in the amount or type of work he or she can do (CDC, 2004). One study found that	**1a** C☐ P☐ M☐ N☐

all screening programs, whether visual acuity or photoscreening, had benefits that exceeded the cost of screening (Joish, 2003), with the total net benefit highest for children three to four years of age.

1a.4 **Citations for Evidence of High Impact:** American Academy of Pediatrics Committee on Practice and Ambulatory Medicine, Section on Ophthalmology. Vision screening guidelines. Pediatrics 1996;98:156

American Association for Pediatric Ophthalmology and Strabismus and the American Academy of Ophthalmology. Vision Screening for Infants and Children. Policy Statement. http://one.aao.org/asset.axd?id=2efe6879-b631-4878-b878-18bc1679114c 2007

Centers for Disease Control and Prevention. Economic costs associated with mental retardation, cerebral palsy, hearing loss, and vision impairment --- United States, 2003. http://www.cdc.gov/ncbddd/dd/vision3.htm. Updated 2004.

Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report. Visual Impairment and Use of Eye-Care Services and Protective Eyewear Among Children --- United States, 2002. http://www.cdc.gov/mmwR/preview/mmwrhtml/mm5417a2.htm. Updated May 6, 2005. Accessed July 2008.

Centers for Disease Control and Prevention. Vision Impairment. http://www.cdc.gov/ncbddd/dd/vision3.htm. Updated October 2004

Hartmann EE, Bradford GE, Chaplin PK, Johnson T, Kemper AR, Kim S, Marsh-Tootle W; PUPVS Panel for the American Academy of Pediatrics. Project Universal Preschool Vision Screening: a demonstration project. Pediatrics. 2006 Feb;117(2):e226-37.

Joish VN, Malone DC, Miller JM. A cost-benefit analysis of vision screening methods for preschoolers and school-age children. J AAPOS. 2003 Aug;7(4):283-90

Packwood EA, Cruz OA, Rychwalski PJ, Keech RV. The psychosocial effects of amblyopia study. J AAPOS 1999;3:15-7.

Partnership for Prevention. Preventive Care: A National Profile on Use, Disparities, and Health Benefits. 2007. Accessed July 2008.

Sunnah K, Project Manager, Project Universal Preschool Vision Screening (PUPVS), June 30, 2003, personal communication. Available at: http://www.medicalhomeinfo.org/screening/vision.html.

1b. Opportunity for Improvement

1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** This measure encourages vision screening and follow-up of abnormal or indeterminate results. Screening for vision problems is inexpensive and can result in significant improvement in a child's quality of life. Pediatric well-child visits provide an excellent opportunity for vision screening and allows for an opportunity of success in treatment.

1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:**
While many professional organizations endorse screening, and more than 34 states have implemented programs for vision screening, there is still a gap in care, as the implementation of these programs remains variable and inconsistent (Hartmann, 2006). Many primary care pediatricians do not follow the American Academy of Pediatrics (AAP) guidelines for vision screening and referral, especially in younger children. One study found that nearly two-thirds of pediatricians did not begin visual acuity testing at age three years as recommended, and about one-fifth did not test until age five years (Wall, 2002). Despite various efforts aimed at increasing screening, recent estimates show that only 21 percent of preschool children receive vision screening, and only 14 percent receive a comprehensive exam (AAP, 2007). Visual impairments are higher in children ages six to 17; however, only 30 percent of adolescents receive vision tests.

1b.3 **Citations for data on performance gap:**
American Academy of Pediatrics. Preschool Vision Screening Activities.

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http://www.medicalhomeinfo.org/screening/vision.html Updated March 2007.

Hartmann EE, Bradford GE, Chaplin PK, Johnson T, Kemper AR, Kim S, Marsh-Tootle W; PUPVS Panel for the American Academy of Pediatrics. Project Universal Preschool Vision Screening: a demonstration project. Pediatrics. 2006 Feb;117(2):e226-37.

Wall TC, Marsh-Tootle W, Evans HH, Fargason CA, Ashworth CS, Hardin JM. Compliance with vision-screening guidelines among a national sample of pediatricians. Ambul Pediatr. 2002 Nov-Dec;2(6):449-55.

1b.4 Summary of Data on disparities by population group:
Children from families in the lower economic brackets and Asian, black, and Hispanic children are less likely to receive vision screening than white children (CDC, 2002). Among children with special health care needs, African Americans had twice the odds, and children of multiracial backgrounds had three times the odds, of having unmet need for vision care compared to whites (Heslin, 2005).

1b.5 Citations for data on Disparities:

Morbidity and Mortality Weekly Report. Centers for Disease Control and Prevention. Visual Impairment and Use of Eye-Care Services and Protective Eyewear Among Children --- United States, 2002. http://www.cdc.gov/mmwR/preview/mmwrhtml/mm5417a2.htm. Updated May 6, 2005. Accessed July 2008.

Heslin K, Baker RS, Shaheen M, Casey R; AcademyHealth. Meeting (2005 : Boston, Mass.). Racial and Ethnic Disparities in Access to Vision Care among Children with Special Health Care Needs in the United States. Abstr AcademyHealth Meet. 2005; 22: abstract no. 3232

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** While the USPSTF found no direct evidence that screening for visual impairment, compared with no screening, leads to improved visual acuity, the Task Force found one fair-quality study that showed intense screening by eye professionals decreases the prevalence of amblyopia (USPSTF, 2004).

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
There is broad guideline support for visual acuity testing. Visual acuity testing is recommended for all children starting at 3 years of age. In the event that the child is unable to cooperate for vision testing, a second attempt should be made 4 to 6 months later. For children 4 years and older, the second attempt should be made in 1 month. Children who cannot be tested after repeated attempts should be referred to an ophthalmologist experienced in the care of children for an eye evaluation.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*)**:**
Good

1c.6 Method for rating evidence: Expert consensus

1c.7 Summary of Controversy/Contradictory Evidence: None

1c.8 Citations for Evidence (*other than guidelines*)**:** Broderick, P. MD. Pediatric Vision Screening for the Family Physician. American Academy of Family Physicians, 1998.

U.S. Preventive Services Task Force. Screening for Visual Impairment in Children Younger than Age 5 Years: Recommendation Statement. May 2004. Agency for Healthcare Research and Quality, Rockville, MD. http://www.uspreventiveservicestaskforce.org/3rduspstf/visionscr/vischrs.htm

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*)**:**

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Institute for Clinical Systems Improvement (2008)
Children 4 years old and younger should be screened for amblyopia, strabismus and defects in visual acuity. By age 5, it should be performed as part of preschool screening.
Grade: Level I - preventive services are worthy of attention at every provider visit

American Academy of Ophthalmology and American Association for Pediatric Ophthalmology (2007)
- Emphasis should be placed on checking visual acuity as soon as a child is cooperative enough to complete the examination. Generally, this occurs between ages 2 1/2 to 3 1/2.
It is essential that a formal testing of visual acuity be performed by the age of 5 years.
- Some evidence currently exists to suggest that photoscreening may be a valuable adjunct to the traditional screening process, particularly in pre-literate children.
- Further screening examinations should be done at routine school checks or after the appearance of symptoms. Routine comprehensive professional eye examination of the normal asymptomatic child has no proven medical benefit.
- Any child who does not pass the recommended screening tests should have an ophthalmological examination
- School aged children who pass standard vision screening tests but who demonstrate difficulties learning to read, should be referred to reading specialists such as educational psychologists for evaluation for language processing disorders such as dyslexia. There is not adequate scientific evidence to suggest that defective eye teaming", and "accommodative disorders" are common causes of educational impairment. Hence, routine screening for these conditions is not recommended.
Grade: Expert Consensus

AAP (2003)
Children up to 5 years of age should be screened for the following:
Distance visual acuity: Snellen letters; Snellen numbers; Tumbling E; HOTV; Picture tests (Allen figures, LEA symbols).
Ocular alignment: Cross cover test at 10 ft (3 m), Random dot E stereo test at 40 cm, Simultaneous red reflex test (Bruckner test); Ocular media clarity (cataracts, tumors, etc.); Red reflex

Children 6 years of age and older should be screened for the following:
Distance visual acuity: Snellen letters; Snellen numbers; Tumbling E; HOTV; Picture tests (Allen figures, LEA symbols)
Ocular alignment: Cross cover test at 10 ft (3 m), Random dot E stereo test at 40 cm, Simultaneous red reflex test (Bruckner test)
Ocular media clarity (cataracts, tumors, etc.): Red reflex

The results of vision assessments along with instructions for follow-up care, should be clearly communicated to parents. All children who are found to have an ocular abnormality or who fail vision screening should be referred to a pediatric ophthalmologist or an eye care specialist appropriately trained to treat pediatric patients.
Grade: Expert Consensus policy statement

American Optometric Association (2007)
2 to 5 years
Asymptomatic /risk-free: At 3 years of age
At risk: At 3 years of age or as recommended
- Patient history
- Visual Acuity (Fixation preference tests, Preferential looking visual acuity test)
- Refraction (Cycloplegic retinoscopy, Near retinoscopy)
- Binocular Vision and Ocular Motility (Cover test, Hirschberg test, Krimsky test, Brückner test, Versions Near point of convergence)
- Ocular Health Assessment and Systemic Health Screening (Evaluation of the ocular anterior segment and adnexa, the ocular posterior segment, pupillary responses, Visual field screening (confrontation),
- Assessment and Diagnosis

Age-appropriate examination and management strategies should be used. Major modifications include relying more on objective examination procedures and performing tests considerably more rapidly than with

older children.

Children 6-18 years of age
Asymptomatic /risk-free: Before first grade and every two years thereafter
At risk: Annually or as recommended
- Patient history
- Visual Acuity (Fixation preference tests, Preferential looking visual acuity test)
- Refraction (Cycloplegic retinoscopy, Near retinoscopy)
- Binocular Vision and Ocular Motility (Cover test, Hirschberg test, Krimsky test, Brückner test, Versions Near point of convergence)
- Ocular Health Assessment and Systemic Health Screening (Evaluation of the ocular anterior segment and adnexa, the ocular posterior segment, pupillary responses, Visual field screening (confrontation),
- Assessment and Diagnosis
Most of the examination procedures used with this age group are identical to those recommended for adults, age-appropriate modifications of instructions and targets often may be required
Grade: Expert Consensus

1c.10 Clinical Practice Guideline Citation: American Academy of Ophthalmology and the American Association for Pediatric Ophthalmology. Clinical statement: Vision Screening for Infants and Children. March 2007.

American Academy of Pediatrics. Committee on Practice and Ambulatory Medicine of American Academy of Pediatrics, Section on Ophthalmology of American Academy of Pediatrics, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus and American Academy of Ophthalmology. Eye Examination in Infants, Children, and Young Adults by Pediatricians. Pediatrics 2003;111;902-907

American Optometric Association. Pediatric eye and vision examination. 2nd ed. St. Louis (MO): American Optometric Association; 2002. 57 p.

Institute for Clinical Systems Improvement. Preventive Services for Children and Adolescents Thirteenth Edition. October 2009.

Preferred Practice Patterns Committee. Comprehensive adult medical eye evaluation. San Francisco (CA): American Academy of Ophthalmology (AAO); 2005. 15 p. (Preferred practice pattern).

1c.11 National Guideline Clearinghouse or other URL:
http://www.guideline.gov/content.aspx?id=4822&search=vision+screening

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**
USPSTF Based

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*:
Expert consensus

1c.14 Rationale for using this guideline over others:
There is broad guideline support from leading vision care organizations that recommend visual acuity screening and follow up in school-aged children.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	Eval Rating
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** Children with documentation of appropriate vision screening or services by the time they reach 6 years of age. **2a.2 Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** 2 years **2a.3 Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** Documentation must include the date and a note indicating the following. • Visual screening results of distance visual acuity documented for each eye separately, and • For abnormal or indeterminate results, evidence of confirmatory testing, referral or treatment, or • Documentation of optometrist or ophthalmologist visit.	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):** Children with a visit who turned 6 years in the measurement year **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** 4 years-6 years **2a.7 Denominator Time Window (***The time period in which cases are eligible for inclusion in the denominator***):** 1 year **2a.8 Denominator Details (***All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):** Children who turned 6 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months.	
2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** None **2a.10 Denominator Exclusion Details (***All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):** NA	
2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):** NA	
2a.12-13 Risk Adjustment Type: No risk adjustment necessary **2a.14 Risk Adjustment Methodology/Variables (***List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):** NA **2a.15-17 Detailed risk model available Web page URL or attachment:**	**2a-specs** **C☐** **P☐** **M☐** **N☐**

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year, AND
Who had a visit within the past 12 months of the child´s birthday
Step 2: Determine the numerator
Children who had documentation in the medical record of the screening or service during the measurement year or the year previous to the measurement year.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
For this physician-level measure, we anticipate the entire population will be used in the denominator. If a sample is used, a random sample is ideal. NCQA's work has indicated that a sample size of 30-50 patients would be necessary for a typical practice size of 2000 patients.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Paper medical record/flow-sheet, Electronic clinical data, Electronic Health/Medical Record

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Medical Record

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group, Population: national, Population: regional/network

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Office, Ambulatory Care: Clinic

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure)

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
We calculated 95% confidence intervals, which speak to the precision of the rates obtained from field testing.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
Rate (Upper Confidence Interval, Lower Confidence Interval):
0.883 (0.84, 0.93)

2b
C☐ P☐ M☐ N☐

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure)

2c
C☐ P☐ M☐

2c.2 Analytic Method *(type of validity & rationale, method for testing)*: NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area. **2c.3 Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: This measure was deemed valid by the expert panel. In addition, this measure does not utilize administrative data sources; data recorded in the chart is considered the gold standard.	**N**☐
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** No exclusions **2d.2 Citations for Evidence:** NA **2d.3 Data/sample** *(description of data/sample and size)*: NA **2d.4 Analytic Method** *(type analysis & rationale)*: NA **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** **C**☐ **P**☐ **M**☐ **N**☐ **NA**☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: NA **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA **2e.3 Testing Results** *(risk model performance metrics)*: NA **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**2e** **C**☐ **P**☐ **M**☐ **N**☐ **NA**☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure) **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance. **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Eligible population: Vision Screening by Age 6 years: 180 Performance rate for the numerator Documentation of Normal Screen or Abnormal with Follow Up OR	**2f** **C**☐ **P**☐ **M**☐ **N**☐

Documentation of a Visit: Vision Screening by Age 6 years: 0.883	
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure) **2g.2 Analytic Method** *(type of analysis & rationale)*: This measure is chart review only; no other sources were identified by the expert panel; this measure does not utilize administrative data **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*: NA	**2g** C☐ P☐ M☐ N☐ NA☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** Not in use but testing completed **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): This measure is not currently publicly reported. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** This measure is not currently used in QI. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. NCQA anticipates that after we release these measures, they will become widely used, as all our measures do. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)*: Expert panel, other stakeholders, and 19 physician field test participants **3a.5 Methods** *(e.g., focus group, survey, QI project)*: NCQA vetted the measures with its expert panel. In addition, throughout the development process, NCQA vetted the measure concepts and specifications with other stakeholder groups, including the National	**3a** C☐ P☐ M☐ N☐

Association of State Medicaid Directors, NCQA's Health Plan Advisory Council, NCQA's Committee on Performance Measurement, and the American Academy of Pediatrician's Quality Improvement Innovation Network. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*: NCQA received feedback that the measure is understandable, feasible, important and valid.	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** NA	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No	**4b** C☐ P☐ M☐ N☐

4b.2 If not, specify the near-term path to achieve electronic capture by most providers. NCQA plans to eventually adapt this measure for use in electronic health records.	
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** During the measure development process the Child Health MAP and measure development team worked with NCQA's certified auditors and audit department to ensure that the measure specifications were clear and auditable. The denominator, numerator and any exclusions are concisely specified and align with our audit standards.	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on field test results, we have specified the measure to assess whether visual acuity was documented for each eye. Our field test results showed that these data elements are available in the medical record. In addition, our field test participants noted that many were able to program these requirements into their electronic health record systems, and several implemented point-of-service physician reminders for this measure. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Collecting measures from medical charts is time-consuming and can be burdensome. Adapting this measure in electronic health records may relieve some of this burden. **4e.3 Evidence for costs:** Based on field test participant feedback and other stakeholder input. **4e.4 Business case documentation:**	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y**☐ **N**☐ **A**☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005

Co.2 Point of Contact
Sepheen, Byron, byron@ncqa.org, 202-955-3573-

Measure Developer If different from Measure Steward
Co.3 Organization
National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005

Co.4 Point of Contact
Sepheen, Byron, byron@ncqa.org, 202-955-3573-

Co.5 Submitter If different from Measure Steward POC
Sepheen, Byron, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Child Health Measurement Advisory Panel:
Jeanne Alicandro
Barbara Dailey
Denise Dougherty, PhD
Ted Ganiats, MD
Foster Gesten, MD
Nikki Highsmith, MPA
Charlie Homer, MD, MPH
Jeff Kamil, MD
Elizabeth Siteman
Mary McIntyre, MD, MPH
Virginia Moyer, MD, MPH, FAAP
Lee Partridge
Xavier Sevilla, MD, FAAP
Michael Siegal
Jessie Sullivan

Ad.2 If adapted, provide name of original measure: NA
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released:
Ad.7 Month and Year of most recent revision:
Ad.8 What is your frequency for review/update of this measure?
Ad.9 When is the next scheduled review/update for this measure?

Ad.10 Copyright statement/disclaimers: © 2009 by the National Committee for Quality Assurance
1100 13th Street, NW, Suite 1000
Washington, DC 20005

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 01/06/2011

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1511 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Vision Screening By 13 years of age
De.2 **Brief description of measure***:* Percentage of children who turned 13 years of age in the measurement year with documentation of appropriate vision screening or services.
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure appears in the composite Comprehensive Well Care by Age 13 Years
De.4 **National Priority Partners Priority Area:** Care coordination, Population health De.5 **IOM Quality Domain**: Effectiveness, Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, Leading cause of morbidity/mortality, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Vision-threatening eye problems, including amblyopia, strabismus, and significant refractive error, are estimated to occur in two to five percent of preschool children (Hartmann, 2006), and vision disorders are now the fourth leading disability among children in the U.S (Sunnah, 2003). These impairments often go undetected, as many children do not know when they have a vision problem, and their parents may be equally unaware. While loss of vision is the most serious outcome, children with visual problems also suffer in other ways that affect their quality of life. For example, uncorrected amblyopia may adversely affect school performance, ability to learn, and later, adult self-image (Packwood, 1999). Undiagnosed poor vision can be a burden on public health resources (CDC, 2008). The average lifetime cost for one person with vision impairment was estimated in 2003 to be $566,000, which represents costs over and above those experienced by a person who does not have a disability (CDC, 2004). It is estimated that the lifetime costs for all people with vision impairment who were born in 2000 will total $2.5 billion, for both direct and indirect costs. These estimates consist of direct medical costs (6 percent), such as doctor visits and prescription drugs; direct nonmedical expenses (16 percent), such as home modifications and special education, and indirect costs (77 percent), such as the value of lost wages when a person dies early, cannot work, or is limited in the amount or type of work he or she can do (CDC, 2004). One study found that	**1a** C☐ P☐ M☐ N☐

all screening programs, whether visual acuity or photoscreening, had benefits that exceeded the cost of screening (Joish, 2003), with the total net benefit highest for children three to four years of age.

1a.4 **Citations for Evidence of High Impact:** American Academy of Pediatrics Committee on Practice and Ambulatory Medicine, Section on Ophthalmology. Vision screening guidelines. Pediatrics 1996;98:156

American Association for Pediatric Ophthalmology and Strabismus and the American Academy of Ophthalmology. Vision Screening for Infants and Children. Policy Statement. http://one.aao.org/asset.axd?id=2efe6879-b631-4878-b878-18bc1679114c 2007

Centers for Disease Control and Prevention. Economic costs associated with mental retardation, cerebral palsy, hearing loss, and vision impairment --- United States, 2003. http://www.cdc.gov/ncbddd/dd/vision3.htm. Updated 2004.

Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report. Visual Impairment and Use of Eye-Care Services and Protective Eyewear Among Children --- United States, 2002. http://www.cdc.gov/mmwR/preview/mmwrhtml/mm5417a2.htm. Updated May 6, 2005. Accessed July 2008.

Centers for Disease Control and Prevention. Vision Impairment. http://www.cdc.gov/ncbddd/dd/vision3.htm. Updated October 2004

Hartmann EE, Bradford GE, Chaplin PK, Johnson T, Kemper AR, Kim S, Marsh-Tootle W; PUPVS Panel for the American Academy of Pediatrics. Project Universal Preschool Vision Screening: a demonstration project. Pediatrics. 2006 Feb;117(2):e226-37.

Joish VN, Malone DC, Miller JM. A cost-benefit analysis of vision screening methods for preschoolers and school-age children. J AAPOS. 2003 Aug;7(4):283-90

Packwood EA, Cruz OA, Rychwalski PJ, Keech RV. The psychosocial effects of amblyopia study. J AAPOS 1999;3:15-7.

Partnership for Prevention. Preventive Care: A National Profile on Use, Disparities, and Health Benefits. 2007. Accessed July 2008.

Sunnah K, Project Manager, Project Universal Preschool Vision Screening (PUPVS), June 30, 2003, personal communication. Available at: http://www.medicalhomeinfo.org/screening/vision.html.

1b. Opportunity for Improvement

1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** This measure encourages vision screening and follow-up of abnormal or indeterminate results. Screening for vision problems is inexpensive and can result in significant improvement in a child's quality of life. Pediatric well-child visits provide an excellent opportunity for vision screening and allows for an opportunity of success in treatment.

1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:**
While many professional organizations endorse screening, and more than 34 states have implemented programs for vision screening, there is still a gap in care, as the implementation of these programs remains variable and inconsistent (Hartmann, 2006). Many primary care pediatricians do not follow the American Academy of Pediatrics (AAP) guidelines for vision screening and referral, especially in younger children. One study found that nearly two-thirds of pediatricians did not begin visual acuity testing at age three years as recommended, and about one-fifth did not test until age five years (Wall, 2002). Despite various efforts aimed at increasing screening, recent estimates show that only 21 percent of preschool children receive vision screening, and only 14 percent receive a comprehensive exam (AAP, 2007). Visual impairments are higher in children ages six to 17; however, only 30 percent of adolescents receive vision tests.

1b.3 **Citations for data on performance gap:**
American Academy of Pediatrics. Preschool Vision Screening Activities.

1b
C☐
P☐
M☐
N☐

http://www.medicalhomeinfo.org/screening/vision.html Updated March 2007.

Hartmann EE, Bradford GE, Chaplin PK, Johnson T, Kemper AR, Kim S, Marsh-Tootle W; PUPVS Panel for the American Academy of Pediatrics. Project Universal Preschool Vision Screening: a demonstration project. Pediatrics. 2006 Feb;117(2):e226-37.

Wall TC, Marsh-Tootle W, Evans HH, Fargason CA, Ashworth CS, Hardin JM. Compliance with vision-screening guidelines among a national sample of pediatricians. Ambul Pediatr. 2002 Nov-Dec;2(6):449-55.

1b.4 Summary of Data on disparities by population group:
Children from families in the lower economic brackets and Asian, black, and Hispanic children are less likely to receive vision screening than white children (CDC, 2002). Among children with special health care needs, African Americans had twice the odds, and children of multiracial backgrounds had three times the odds, of having unmet need for vision care compared to whites (Heslin, 2005).

1b.5 Citations for data on Disparities:

Morbidity and Mortality Weekly Report. Centers for Disease Control and Prevention. Visual Impairment and Use of Eye-Care Services and Protective Eyewear Among Children --- United States, 2002. http://www.cdc.gov/mmwR/preview/mmwrhtml/mm5417a2.htm. Updated May 6, 2005. Accessed July 2008.

Heslin K, Baker RS, Shaheen M, Casey R; AcademyHealth. Meeting (2005 : Boston, Mass.). Racial and Ethnic Disparities in Access to Vision Care among Children with Special Health Care Needs in the United States. Abstr AcademyHealth Meet. 2005; 22: abstract no. 3232

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** While the USPSTF found no direct evidence that screening for visual impairment, compared with no screening, leads to improved visual acuity, the Task Force found one fair-quality study that showed intense screening by eye professionals decreases the prevalence of amblyopia (USPSTF, 2004).

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
According to the American Academy of Pediatrics (AAP, 2003), eye examination and vision assessment are important to reduce morbidity and mortality in children. Eye examinations can detect conditions that can result in blindness, signify serious systemic disease, or lead to problems with school performance. Through careful evaluation of the ocular system, retinal abnormalities, cataracts, glaucoma, retinoblastoma, strabismus, and neurologic disorders can be identified. Prompt treatment of these conditions can serve to reduce problems. The AAP recommends that eye examination be performed beginning in the newborn period and at all well-child visits. Visual acuity measurement should be performed at the earliest possible age that is practical (usually at approximately 3 years of age).

Good screening tools for visual acuity that can be implemented in primary care settings exist. The AAP (2003) recommends the following tools for distance visual acuity:
Snellen letters
Snellen numbers
Tumbling E
HOTV
Picture tests
-Allen figures
-LEA symbols

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*)**:**
Good

1c
C☐
P☐
M☐
N☐

1c.6 Method for rating evidence: Expert consensus

1c.7 Summary of Controversy/Contradictory Evidence: There have been some assertions that screening should only take place in specialty care settings. However, moving screening to a specialty care setting is more costly and disadvantaged children in greatest need may be least likely to obtain these services outside of primary care. There is no evidence of higher quality. As noted, disparities in vision screening exist among children in lower economic brackets and those with special health care needs.

1c.8 Citations for Evidence (*other than guidelines*): Eye Examination in Infants, Children, and Young Adults by Pediatricians. Committee on Practice and Ambulatory Medicine of American Academy of Pediatrics, Section on Ophthalmology of American Academy of Pediatrics, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus and American Academy of Ophthalmology. Pediatrics 2003;111;902-907

Broderick, P. MD. Pediatric Vision Screening for the Family Physician. American Academy of Family Physicians, 1998.

U.S. Preventive Services Task Force. Screening for Visual Impairment in Children Younger than Age 5 Years: Recommendation Statement. May 2004. Agency for Healthcare Research and Quality, Rockville, MD. http://www.uspreventiveservicestaskforce.org/3rduspstf/visionscr/vischrs.htm

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*):
American Academy of Ophthalmology and American Association for Pediatric Ophthalmology (2007)
- Further screening examinations should be done at routine school checks or after the appearance of symptoms. Routine comprehensive professional eye examination of the normal asymptomatic child has no proven medical benefit.
- Any child who does not pass the recommended screening tests should have an ophthalmological examination
- School aged children who pass standard vision screening tests but who demonstrate difficulties learning to read, should be referred to reading specialists such as educational psychologists for evaluation for language processing disorders such as dyslexia. There is not adequate scientific evidence to suggest that defective eye teaming", and "accommodative disorders" are common causes of educational impairment. Hence, routine screening for these conditions is not recommended.
Grade: Expert Consensus

AAP (2003)
Children 6 years of age and older should be screened for the following:
Distance visual acuity: Snellen letters; Snellen numbers; Tumbling E; HOTV; Picture tests (Allen figures, LEA symbols)
Ocular alignment: Cross cover test at 10 ft (3 m), Random dot E stereo test at 40 cm, Simultaneous red reflex test (Bruckner test)
Ocular media clarity (cataracts, tumors, etc.): Red reflex

The results of vision assessments along with instructions for follow-up care, should be clearly communicated to parents. All children who are found to have an ocular abnormality or who fail vision screening should be referred to a pediatric ophthalmologist or an eye care specialist appropriately trained to treat pediatric patients.

Grade: Expert Consensus policy statement

American Optometric Association (2007)
Children 6-18 years of age
Asymptomatic /risk-free: Before first grade and every two years thereafter
At risk: Annually or as recommended
- Patient history
- Visual Acuity (Fixation preference tests, Preferential looking visual acuity test)
- Refraction (Cycloplegic retinoscopy, Near retinoscopy)

- Binocular Vision and Ocular Motility (Cover test, Hirschberg test, Krimsky test, Brückner test, Versions Near point of convergence) - Ocular Health Assessment and Systemic Health Screening (Evaluation of the ocular anterior segment and adnexa, the ocular posterior segment, pupillary responses, Visual field screening (confrontation), - Assessment and Diagnosis Most of the examination procedures used with this age group are identical to those recommended for adults, age-appropriate modifications of instructions and targets often may be required Grade: Expert Consensus 1c.10 **Clinical Practice Guideline Citation:** American Academy of Ophthalmology and the American Association for Pediatric Ophthalmology. Clinical statement: Vision Screening for Infants and Children. March 2007. American Academy of Pediatrics. Committee on Practice and Ambulatory Medicine of American Academy of Pediatrics, Section on Ophthalmology of American Academy of Pediatrics, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus and American Academy of Ophthalmology. Eye Examination in Infants, Children, and Young Adults by Pediatricians. Pediatrics 2003;111;902-907 American Optometric Association. Pediatric eye and vision examination. 2nd ed. St. Louis (MO): American Optometric Association; 2002. 57 p. Institute for Clinical Systems Improvement. Preventive Services for Children and Adolescents Thirteenth Edition. October 2009. Preferred Practice Patterns Committee. Comprehensive adult medical eye evaluation. San Francisco (CA): American Academy of Ophthalmology (AAO); 2005. 15 p. (Preferred practice pattern). 1c.11 **National Guideline Clearinghouse or other URL:** http://www.guideline.gov/content.aspx?id=4822&search=vision+screening 1c.12 **Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** Expert consensus 1c.13 **Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF*)**:** Expert consensus 1c.14 **Rationale for using this guideline over others:** There is broad guideline support from leading vision care organizations that recommend screening in older children.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	**2a-specs** **C☐** **P☐**

M☐
N☐

2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*):
Children with documentation of appropriate vision screening or services at least once in the measurement year or the year prior.

2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator*):
2 years

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*):
Documentation must include the date and a note indicating the following.
• Visual screening results of distance visual acuity documented for each eye separately, and
• For abnormal or indeterminate results, evidence of confirmatory testing, referral or treatment,
or
• Documentation of optometrist or ophthalmologist visit.

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*):
Children with a visit who turned who turn 13 years in the measurement year

2a.5 Target population gender: Female, Male
2a.6 Target population age range: 11 years-13 years

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator*):
1 year

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*):
Children who turned 13 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months.

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*): None

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*):
NA

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*):
NA

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method*):
NA

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps*):
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year, AND
Who had a visit within the past 12 months of the child´s birthday
Step 2: Determine the numerator
Children who had documentation in the medical record of the screening or service during the measurement year or the year previous to the measurement year.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
For this physician-level measure, we anticipate the entire population will be used in the denominator. If a sample is used, a random sample is ideal. NCQA's work has indicated that a sample size of 30-50 patients would be necessary for a typical practice size of 2000 patients.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Paper medical record/flow-sheet, Electronic clinical data, Electronic Health/Medical Record

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*):
Medical Record

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group, Population: national, Population: regional/network

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Office, Ambulatory Care: Clinic

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure)

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
We calculated 95% confidence intervals, which speak to the precision of the rates obtained from field testing.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
Rate (Upper Confidence Interval, Lower Confidence Interval):
0.860 (0.81, 0.91)

2b
C☐
P☐
M☐
N☐

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (180 records per measure)

2c.2 Analytic Method *(type of validity & rationale, method for testing)*:
NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area.

2c
C☐
P☐
M☐
N☐

2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: This measure was deemed valid by the expert panel. In addition, this measure does not utilize administrative data sources; data recorded in the chart is considered the gold standard.	
2d. Exclusions Justified 2d.1 **Summary of Evidence supporting exclusion(s):** No exclusions 2d.2 **Citations for Evidence:** NA 2d.3 **Data/sample** *(description of data/sample and size)*: NA 2d.4 **Analytic Method** *(type analysis & rationale)*: NA 2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** C☐ P☐ M☐ N☐ NA☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures 2e.1 **Data/sample** *(description of data/sample and size)*: NA 2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA 2e.3 **Testing Results** *(risk model performance metrics)*: NA 2e.4 **If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**2e** C☐ P☐ M☐ N☐ NA☐
2f. Identification of Meaningful Differences in Performance 2f.1 **Data/sample from Testing or Current Use** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (180 records per measure) 2f.2 **Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance. 2f.3 **Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Eligible population: Vision Screening by Age 13 years: 179 Performance rate for the numerator Documentation of Normal Screen or Abnormal with Follow Up OR Documentation of a Visit: Vision Screening by Age 13 years: 86.4	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods 2g.1 **Data/sample** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure) 2g.2 **Analytic Method** *(type of analysis & rationale)*:	**2g** C☐ P☐ M☐ N☐ NA☐

This measure is chart review only; no other sources were identified by the expert panel; this measure does not utilize administrative data 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*: NA	
2h. Disparities in Care 2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** Not in use but testing completed 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): This measure is not currently publicly reported. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** This measure is not currently used in QI. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. NCQA anticipates that after we release these measures, they will become widely used, as all our measures do. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)*: Expert panel, other stakeholders, and 19 physician field test participants 3a.5 **Methods** *(e.g., focus group, survey, QI project)*: NCQA vetted the measures with its expert panel. In addition, throughout the development process, NCQA vetted the measure concepts and specifications with other stakeholder groups, including the National Association of State Medicaid Directors, NCQA's Health Plan Advisory Council, NCQA's Committee on Performance Measurement, and the American Academy of Pediatrician's Quality Improvement Innovation Network. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible,	**3a** C☐ P☐ M☐ N☐

important, and had face validity. 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*: NCQA received feedback that the measure is understandable, feasible, important and valid.	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** NA	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.** NCQA plans to eventually adapt this measure for use in electronic health records.	**4b** C☐ P☐ M☐ N☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No	**4c** C☐ P☐ M☐ N☐

4c.2 **If yes, provide justification.**	NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** During the measure development process the Child Health MAP and measure development team worked with NCQA's certified auditors and audit department to ensure that the measure specifications were clear and auditable. The denominator, numerator and any exclusions are concisely specified and align with our audit standards.	4d C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on field test results, we have specified the measure to assess whether visual acuity was documented for each eye. Our field test results showed that these data elements are available in the medical record. In addition, our field test participants noted that many were able to program these requirements into their electronic health record systems, and several implemented point-of-service physician reminders for this measure. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Collecting measures from medical charts is time-consuming and can be burdensome. Adapting this measure in electronic health records may relieve some of this burden. 4e.3 **Evidence for costs:** Based on field test participant feedback and other stakeholder input. 4e.4 **Business case documentation:**	4e C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	4
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	4 C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	Time-limited ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐
CONTACT INFORMATION	
Co.1 **Measure Steward (Intellectual Property Owner)** Co.1 **Organization** National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005 Co.2 **Point of Contact** Sepheen, Byron, byron@ncqa.org, 202-955-3573-	

Measure Developer If different from Measure Steward
Co.3 Organization
National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005

Co.4 Point of Contact
Sepheen, Byron, byron@ncqa.org, 202-955-3573-

Co.5 Submitter If different from Measure Steward POC
Sepheen, Byron, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Child Health Measurement Advisory Panel:
Jeanne Alicandro
Barbara Dailey
Denise Dougherty, PhD
Ted Ganiats, MD
Foster Gesten, MD
Nikki Highsmith, MPA
Charlie Homer, MD, MPH
Jeff Kamil, MD
Elizabeth Siteman
Mary McIntyre, MD, MPH
Virginia Moyer, MD, MPH, FAAP
Lee Partridge
Xavier Sevilla, MD, FAAP
Michael Siegal
Jessie Sullivan

Ad.2 If adapted, provide name of original measure: NA
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released:
Ad.7 Month and Year of most recent revision:
Ad.8 What is your frequency for review/update of this measure?
Ad.9 When is the next scheduled review/update for this measure?

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 01/07/2011

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1513 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Vision Screening By 18 years of age
De.2 **Brief description of measure:** Percentage of adolescents who turned 18 years of age in the measurement year with documentation of appropriate vision screening or services.
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure appears in the composite Comprehensive Well Care by Age 18 Years.
De.4 **National Priority Partners Priority Area:** Care coordination, Population health De.5 **IOM Quality Domain**: Effectiveness, Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, Leading cause of morbidity/mortality, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Vision-threatening eye problems, including amblyopia, strabismus, and significant refractive error, are estimated to occur in two to five percent of preschool children (Hartmann, 2006), and vision disorders are now the fourth leading disability among children in the U.S (Sunnah, 2003). These impairments often go undetected, as many children do not know when they have a vision problem, and their parents may be equally unaware. While loss of vision is the most serious outcome, children with visual problems also suffer in other ways that affect their quality of life. For example, uncorrected amblyopia may adversely affect school performance, ability to learn, and later, adult self-image (Packwood, 1999). Undiagnosed poor vision can be a burden on public health resources (CDC, 2008). The average lifetime cost for one person with vision impairment was estimated in 2003 to be $566,000, which represents costs over and above those experienced by a person who does not have a disability (CDC, 2004). It is estimated that the lifetime costs for all people with vision impairment who were born in 2000 will total $2.5 billion, for both direct and indirect costs. These estimates consist of direct medical costs (6 percent), such as doctor visits and prescription drugs; direct nonmedical expenses (16 percent), such as home modifications and special education, and indirect costs (77 percent), such as the value of lost wages when a person dies early, cannot work, or is limited in the amount or type of work he or she can do (CDC, 2004). One study found that	**1a** C☐ P☐ M☐ N☐

all screening programs, whether visual acuity or photoscreening, had benefits that exceeded the cost of screening (Joish, 2003), with the total net benefit highest for children three to four years of age.

1a.4 **Citations for Evidence of High Impact:** American Academy of Pediatrics Committee on Practice and Ambulatory Medicine, Section on Ophthalmology. Vision screening guidelines. Pediatrics 1996;98:156

American Association for Pediatric Ophthalmology and Strabismus and the American Academy of Ophthalmology. Vision Screening for Infants and Children. Policy Statement. http://one.aao.org/asset.axd?id=2efe6879-b631-4878-b878-18bc1679114c 2007

Centers for Disease Control and Prevention. Economic costs associated with mental retardation, cerebral palsy, hearing loss, and vision impairment --- United States, 2003. http://www.cdc.gov/ncbddd/dd/vision3.htm. Updated 2004.

Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report. Visual Impairment and Use of Eye-Care Services and Protective Eyewear Among Children --- United States, 2002. http://www.cdc.gov/mmwR/preview/mmwrhtml/mm5417a2.htm. Updated May 6, 2005. Accessed July 2008.

Centers for Disease Control and Prevention. Vision Impairment. http://www.cdc.gov/ncbddd/dd/vision3.htm. Updated October 2004

Hartmann EE, Bradford GE, Chaplin PK, Johnson T, Kemper AR, Kim S, Marsh-Tootle W; PUPVS Panel for the American Academy of Pediatrics. Project Universal Preschool Vision Screening: a demonstration project. Pediatrics. 2006 Feb;117(2):e226-37.

Joish VN, Malone DC, Miller JM. A cost-benefit analysis of vision screening methods for preschoolers and school-age children. J AAPOS. 2003 Aug;7(4):283-90

Packwood EA, Cruz OA, Rychwalski PJ, Keech RV. The psychosocial effects of amblyopia study. J AAPOS 1999;3:15-7.

Partnership for Prevention. Preventive Care: A National Profile on Use, Disparities, and Health Benefits. 2007. Accessed July 2008.

Sunnah K, Project Manager, Project Universal Preschool Vision Screening (PUPVS), June 30, 2003, personal communication. Available at: http://www.medicalhomeinfo.org/screening/vision.html.

1b. Opportunity for Improvement

1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** This measure encourages vision screening and follow-up of abnormal or indeterminate results. Screening for vision problems is inexpensive and can result in significant improvement in a child's quality of life. Pediatric well-child visits provide an excellent opportunity for vision screening and allows for an opportunity of success in treatment.

1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:**
While many professional organizations endorse screening, and more than 34 states have implemented programs for vision screening, there is still a gap in care, as the implementation of these programs remains variable and inconsistent (Hartmann, 2006). Many primary care pediatricians do not follow the American Academy of Pediatrics (AAP) guidelines for vision screening and referral, especially in younger children. One study found that nearly two-thirds of pediatricians did not begin visual acuity testing at age three years as recommended, and about one-fifth did not test until age five years (Wall, 2002). Despite various efforts aimed at increasing screening, recent estimates show that only 21 percent of preschool children receive vision screening, and only 14 percent receive a comprehensive exam (AAP, 2007). Visual impairments are higher in children ages six to 17; however, only 30 percent of adolescents receive vision tests.

1b.3 **Citations for data on performance gap:**
American Academy of Pediatrics. Preschool Vision Screening Activities.

1b
C☐
P☐
M☐
N☐

http://www.medicalhomeinfo.org/screening/vision.html Updated March 2007.

Hartmann EE, Bradford GE, Chaplin PK, Johnson T, Kemper AR, Kim S, Marsh-Tootle W; PUPVS Panel for the American Academy of Pediatrics. Project Universal Preschool Vision Screening: a demonstration project. Pediatrics. 2006 Feb;117(2):e226-37.

Wall TC, Marsh-Tootle W, Evans HH, Fargason CA, Ashworth CS, Hardin JM. Compliance with vision-screening guidelines among a national sample of pediatricians. Ambul Pediatr. 2002 Nov-Dec;2(6):449-55.

1b.4 Summary of Data on disparities by population group:
Children from families in the lower economic brackets and Asian, black, and Hispanic children are less likely to receive vision screening than white children (CDC, 2002). Among children with special health care needs, African Americans had twice the odds, and children of multiracial backgrounds had three times the odds, of having unmet need for vision care compared to whites (Heslin, 2005).

1b.5 Citations for data on Disparities:

Morbidity and Mortality Weekly Report. Centers for Disease Control and Prevention. Visual Impairment and Use of Eye-Care Services and Protective Eyewear Among Children --- United States, 2002. http://www.cdc.gov/mmwR/preview/mmwrhtml/mm5417a2.htm. Updated May 6, 2005. Accessed July 2008.

Heslin K, Baker RS, Shaheen M, Casey R; AcademyHealth. Meeting (2005 : Boston, Mass.). Racial and Ethnic Disparities in Access to Vision Care among Children with Special Health Care Needs in the United States. Abstr AcademyHealth Meet. 2005; 22: abstract no. 3232

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** While the USPSTF found no direct evidence that screening for visual impairment, compared with no screening, leads to improved visual acuity, the Task Force found one fair-quality study that showed intense screening by eye professionals decreases the prevalence of amblyopia (USPSTF, 2004).

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
According to the American Academy of Pediatrics (AAP, 2003), eye examination and vision assessment are important to reduce morbidity and mortality in children. Eye examinations can detect conditions that can result in blindness, signify serious systemic disease, or lead to problems with school performance. Through careful evaluation of the ocular system, retinal abnormalities, cataracts, glaucoma, retinoblastoma, strabismus, and neurologic disorders can be identified. Prompt treatment of these conditions can serve to reduce problems. The AAP recommends that eye examination be performed beginning in the newborn period and at all well-child visits. Visual acuity measurement should be performed at the earliest possible age that is practical (usually at approximately 3 years of age).

Good screening tools for visual acuity that can be implemented in primary care settings exist. The AAP (2003) recommends the following tools for distance visual acuity:
Snellen letters
Snellen numbers
Tumbling E
HOTV
Picture tests
-Allen figures
-LEA symbols

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*)**:**
Good

1c
C☐
P☐
M☐
N☐

1c.6 **Method for rating evidence:** Expert consensus

1c.7 **Summary of Controversy/Contradictory Evidence:** There have been some assertions that screening should only take place in specialty care settings. However, moving screening to a specialty care setting is more costly and disadvantaged children in greatest need may be least likely to obtain these services outside of primary care. There is no evidence of higher quality. As noted, disparities in vision screening exist among children in lower economic brackets and those with special health care needs.

1c.8 **Citations for Evidence (***other than guidelines***):** Eye Examination in Infants, Children, and Young Adults by Pediatricians. Committee on Practice and Ambulatory Medicine of American Academy of Pediatrics, Section on Ophthalmology of American Academy of Pediatrics, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus and American Academy of Ophthalmology. Pediatrics 2003;111;902-907

Broderick, P. MD. Pediatric Vision Screening for the Family Physician. American Academy of Family Physicians, 1998.

U.S. Preventive Services Task Force. Screening for Visual Impairment in Children Younger than Age 5 Years: Recommendation Statement. May 2004. Agency for Healthcare Research and Quality, Rockville, MD. http://www.uspreventiveservicestaskforce.org/3rduspstf/visionscr/vischrs.htm

1c.9 **Quote the Specific guideline recommendation (***including guideline number and/or page number***):**
American Academy of Ophthalmology and American Association for Pediatric Ophthalmology (2007)
- Further screening examinations should be done at routine school checks or after the appearance of symptoms. Routine comprehensive professional eye examination of the normal asymptomatic child has no proven medical benefit.
- Any child who does not pass the recommended screening tests should have an ophthalmological examination
- School aged children who pass standard vision screening tests but who demonstrate difficulties learning to read, should be referred to reading specialists such as educational psychologists for evaluation for language processing disorders such as dyslexia. There is not adequate scientific evidence to suggest that defective eye teaming", and "accommodative disorders" are common causes of educational impairment. Hence, routine screening for these conditions is not recommended.
Grade: Expert Consensus

AAP (2003)
Children 6 years of age and older should be screened for the following:
Distance visual acuity: Snellen letters; Snellen numbers; Tumbling E; HOTV; Picture tests (Allen figures, LEA symbols)
Ocular alignment: Cross cover test at 10 ft (3 m), Random dot E stereo test at 40 cm, Simultaneous red reflex test (Bruckner test)
Ocular media clarity (cataracts, tumors, etc.): Red reflex

The results of vision assessments along with instructions for follow-up care, should be clearly communicated to parents. All children who are found to have an ocular abnormality or who fail vision screening should be referred to a pediatric ophthalmologist or an eye care specialist appropriately trained to treat pediatric patients.
Grade: Expert Consensus/Policy Statement

American Optometric Association (2007)
Children 6-18 years of age
Asymptomatic /risk-free: Before first grade and every two years thereafter
At risk: Annually or as recommended
- Patient history
- Visual Acuity (Fixation preference tests, Preferential looking visual acuity test)
- Refraction (Cycloplegic retinoscopy, Near retinoscopy)
- Binocular Vision and Ocular Motility (Cover test, Hirschberg test, Krimsky test, Brückner test, Versions

Near point of convergence) - Ocular Health Assessment and Systemic Health Screening (Evaluation of the ocular anterior segment and adnexa, the ocular posterior segment, pupillary responses, Visual field screening (confrontation), - Assessment and Diagnosis Most of the examination procedures used with this age group are identical to those recommended for adults, age-appropriate modifications of instructions and targets often may be required Grade: Expert Consensus/Policy Statement **1c.10 Clinical Practice Guideline Citation:** American Academy of Ophthalmology and the American Association for Pediatric Ophthalmology. Clinical statement: Vision Screening for Infants and Children. March 2007. American Academy of Pediatrics. Committee on Practice and Ambulatory Medicine of American Academy of Pediatrics, Section on Ophthalmology of American Academy of Pediatrics, American Association of Certified Orthoptists, American Association for Pediatric Ophthalmology and Strabismus and American Academy of Ophthalmology. Eye Examination in Infants, Children, and Young Adults by Pediatricians. Pediatrics 2003;111;902-907 American Optometric Association. Pediatric eye and vision examination. 2nd ed. St. Louis (MO): American Optometric Association; 2002. 57 p. Institute for Clinical Systems Improvement. Preventive Services for Children and Adolescents Thirteenth Edition. October 2009. Preferred Practice Patterns Committee. Comprehensive adult medical eye evaluation. San Francisco (CA): American Academy of Ophthalmology (AAO); 2005. 15 p. (Preferred practice pattern). **1c.11 National Guideline Clearinghouse or other URL:** http://www.guideline.gov/content.aspx?id=4822&search=vision+screening **1c.12 Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** Expert consensus **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: Expert consensus **1c.14 Rationale for using this guideline over others:** There is broad guideline support from leading vision care organizations that recommend screening in older children.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	**2a-specs** **C☐** **P☐**

M☐
N☐

2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*):
Adolescents who had documentation in the medical record of appropriate vision screening or services in at least once in the measurement year or the year prior.

2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator*):
2 years

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*):
Documentation must include the date and a note indicating the following.
• Visual screening results of distance visual acuity documented for each eye separately
or
• Documentation of optometrist or ophthalmologist visit.

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*):
Adolescents with a visit who turned 18 years in the measurement year

2a.5 Target population gender: Female, Male
2a.6 Target population age range: 16 years-18 years.

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator*):
1 year

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*):
Adolescents who turned 18 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months.

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*): None

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*):
NA

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*):
NA

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method*):
NA

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps*):
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year, AND
Who had a visit within the past 12 months of the child´s birthday
Step 2: Determine the numerator
Children who had documentation in the medical record of the screening or service during the measurement year or the year previous to the measurement year.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:

Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.	
2a.23 **Sampling (Survey) Methodology** *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*: For this physician-level measure, we anticipate the entire population will be used in the denominator. If a sample is used, a random sample is ideal. NCQA's work has indicated that a sample size of 30-50 patients would be necessary for a typical practice size of 2000 patients.	
2a.24 **Data Source** (*Check the source(s) for which the measure is specified and tested)* Paper medical record/flow-sheet, Electronic clinical data, Electronic Health/Medical Record 2a.25 **Data source/data collection instrument (***Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):** Medical Record 2a.26-28 **Data source/data collection instrument reference web page URL or attachment:** 2a.29-31 **Data dictionary/code table web page URL or attachment:** 2a.32-35 **Level of Measurement/Analysis** (*Check the level(s) for which the measure is specified and tested)* Clinicians: Individual, Clinicians: Group, Population: national, Population: regional/network 2a.36-37 **Care Settings (***Check the setting(s) for which the measure is specified and tested)* Ambulatory Care: Office, Ambulatory Care: Clinic 2a.38-41 **Clinical Services** (*Healthcare services being measured, check all that apply*) Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)	
TESTING/ANALYSIS	
2b. Reliability testing 2b.1 **Data/sample** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (180 records per measure) 2b.2 **Analytic Method** *(type of reliability & rationale, method for testing)*: We calculated 95% confidence intervals, which speak to the precision of the rates obtained from field testing. 2b.3 **Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*: Rate (Upper Confidence Interval, Lower Confidence Interval) 0.756 (0.69, 0.82)	**2b** C☐ P☐ M☐ N☐
2c. Validity testing 2c.1 **Data/sample** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (180 records per measure) 2c.2 **Analytic Method** *(type of validity & rationale, method for testing)*: NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area. 2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test*	**2c** C☐ P☐ M☐ N☐

conducted): This measure was deemed valid by the expert panel. In addition, this measure does not utilize administrative data sources; data recorded in the chart is considered the gold standard.	
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** No exclusions **2d.2 Citations for Evidence:** NA **2d.3 Data/sample** *(description of data/sample and size)*: NA **2d.4 Analytic Method** *(type analysis & rationale)*: NA **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** C☐ P☐ M☐ N☐ NA☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: NA **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA **2e.3 Testing Results** *(risk model performance metrics)*: NA **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**2e** C☐ P☐ M☐ N☐ NA☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (180 records per measure) **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance. **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Eligible population: 163 Performance rate for the numerator Documentation of Normal Screen or Abnormal with Follow Up OR Documentation of a Visit: Vision Screening or Services by Age 18 years: 75.6	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (180 records per measure) **2g.2 Analytic Method** *(type of analysis & rationale)*: This measure is chart review only; no other sources were identified by the expert panel; this measure does not utilize administrative data	**2g** C☐ P☐ M☐ N☐ NA☐

2g.3 Testing Results *(e.g., correlation statistics, comparison of rankings)*: NA	
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** Not in use but testing completed **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** *(If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years)*: This measure is not currently publicly reported. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** This measure is not currently used in QI. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. NCQA anticipates that after we release these measures, they will become widely used, as all our measures do. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)*: Expert panel, other stakeholders, and 19 physician field test participants **3a.5 Methods** *(e.g., focus group, survey, QI project)*: NCQA vetted the measures with its expert panel. In addition, throughout the development process, NCQA vetted the measure concepts and specifications with other stakeholder groups, including the National Association of State Medicaid Directors, NCQA's Health Plan Advisory Council, NCQA's Committee on Performance Measurement, and the American Academy of Pediatrician's Quality Improvement Innovation Network. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity.	**3a** C☐ P☐ M☐ N☐

3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*: NCQA received feedback that the measure is understandable, feasible, important and valid.	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** NA	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.** NCQA plans to eventually adapt this measure for use in electronic health records.	**4b** C☐ P☐ M☐ N☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No 4c.2 **If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐

4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** During the measure development process the Child Health MAP and measure development team worked with NCQA's certified auditors and audit department to ensure that the measure specifications were clear and auditable. The denominator, numerator and any exclusions are concisely specified and align with our audit standards.	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on field test results, we have specified the measure to assess whether visual acuity was documented for each eye. Our field test results showed that these data elements are available in the medical record. In addition, our field test participants noted that many were able to program these requirements into their electronic health record systems, and several implemented point-of-service physician reminders for this measure. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Collecting measures from medical charts is time-consuming and can be burdensome. Adapting this measure in electronic health records may relieve some of this burden. **4e.3 Evidence for costs:** Based on field test participant feedback and other stakeholder input. **4e.4 Business case documentation:**	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005 **Co.2 Point of Contact** Sepheen, Byron, byron@ncqa.org, 202-955-3573-	
Measure Developer If different from Measure Steward **Co.3 Organization**	

National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005

Co.4 **Point of Contact**
Sepheen, Byron, byron@ncqa.org, 202-955-3573-

Co.5 **Submitter If different from Measure Steward POC**
Sepheen, Byron, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 **Additional organizations that sponsored/participated in measure development**

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 **Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.**
Child Health Measurement Advisory Panel:
Jeanne Alicandro
Barbara Dailey
Denise Dougherty, PhD
Ted Ganiats, MD
Foster Gesten, MD
Nikki Highsmith, MPA
Charlie Homer, MD, MPH
Jeff Kamil, MD
Elizabeth Siteman
Mary McIntyre, MD, MPH
Virginia Moyer, MD, MPH, FAAP
Lee Partridge
Xavier Sevilla, MD, FAAP
Michael Siegal
Jessie Sullivan

Ad.2 **If adapted, provide name of original measure:** NA
Ad.3-5 **If adapted, provide original specifications URL or attachment**

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 **Year the measure was first released:**
Ad.7 **Month and Year of most recent revision:**
Ad.8 **What is your frequency for review/update of this measure?**
Ad.9 **When is the next scheduled review/update for this measure?**

Ad.10 **Copyright statement/disclaimers:**

Ad.11 -13 **Additional Information web page URL or attachment:**

Date of Submission (*MM/DD/YY*)**:** 01/07/2011

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1393 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Blood Pressure Screening by age 6
De.2 **Brief description of measure:** The percentage of children who turn 6 years of age in the measurement year who had a blood pressure screening with results at least once in the past 2 years.
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure appears in the composite Comprehensive Well Care by Age 6 Years.
De.4 **National Priority Partners Priority Area:** Care coordination, Population health De.5 **IOM Quality Domain**: Effectiveness, Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, High resource use, Severity of illness, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** High blood pressure (hypertension) is a growing concern for children in the U.S., due mostly in part to a rapid increase in childhood obesity (Luma, 2006). A recent study of National Health and Nutrition Examination Survey data showed that, during 2003-2006, 2.6 percent of boys and 3.4 percent of girls age eight to 17 years had high blood pressure. Moreover, 13.6 percent of boys and 5.7 percent of girls in this age group had pre-high blood pressure. Overweight boys and obese boys and girls were significantly more likely to have these classifications (Ostchega Y, 2009). Autopsy reports of children and adolescents who have died unexpectedly have shown a positive and significant association with systolic and diastolic blood pressure and body mass index (BMI) (Hayman, 2003). Autopsy reports of adults with high levels of cholesterol and coronary heart disease showed that precursors to these diseases began in childhood (National Cholesterol Education Program). High blood pressure represents a significant financial burden. In 2006, the direct and indirect costs of high blood pressure were estimated at $63.5 billion overall (CDC, 2007). In addition to costs, resource utilization is also significantly higher among hypertensive people. Prescription medicines, inpatient visits, and outpatient visits constitute more than 90 percent of the overall incremental cost of treating hypertension (Balu, 2005). These costs can be expected to rise with increasing prevalence among children.	**1a** C☐ P☐ M☐ N☐

1a.4 Citations for Evidence of High Impact: Balu, Sanjeev. Incremental cost of treating hypertension in the United States. http://docs.lib.purdue.edu/dissertations/AAI3191421/. Updated 2005.

Centers for Disease Control and Prevention. High Blood Pressure Facts. http://www.cdc.gov/bloodpressure/facts.htm. Updated February 2007.

L. Hayman and Kathryn Taubert Rae-Ellen W. Kavey, Stephen R. Daniels, Ronald M. Lauer, Dianne L. Atkins, Laura American Heart Association Guidelines for Primary Prevention of Atherosclerotic Cardiovascular Disease Beginning in Childhood. Circulation 2003;107;1562-1566. http://www.circ.ahajournals.org/cgi/reprint/107/11/1562

Luma, GB, MD and Spiotta RT, MD. Hypertension in Children and Adolescents. American Family Physician; Vol 73, Number 9. May, 2006

National Cholesterol Education Program. Overview and Summary. Pediatrics; Mar92 Part 2, Vol. 89 Issue 3, p525. http://web.ebscohost.com.proxygw.wrlc.org/ehost/pdf?vid=3&hid=8&sid=d3fa709d-0a3b-42ab-8371-6416129fe41f%40sessionmgr3

National Heart, Lung and Blood Institute. National Institutes of Health. High Blood Pressure. Nov 2008. http://www.nhlbi.nih.gov/health/dci/Diseases/Hbp/HBP_WhatIs.html

The Nemours Foundation. High Blood Pressure (Hypertension). http://kidshealth.org/parent/medical/heart/hypertension.html. Updated: October 2005

Ostchega Y, Carroll M, Prineas RJ, McDowell MA, Louis T, Tilert T. Trends of elevated blood pressure among children and adolescents: data from the National Health and Nutrition Examination Survey 1988-2006. Am J Hypertension. Vol 22(1): 59-67. Jan 2009.

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: If hypertension is detected early, children can be monitored and treated, which can lead to a normal and healthy life. If not detected or treated, hypertension can lead to damage of the eyes, heart, kidneys, and brain. In addition, high blood pressure can put children at a higher risk for heart attacks, strokes, kidney failure, and a hardening of the arteries (atherosclerosis) (The Nemours Foundation, 2005). Doctors may discover high blood pressure during a regular blood pressure screening. An early diagnosis and treatment leads to a better prognosis. Blood pressure screening can save lives by starting treatment well before the patient was aware of a problem.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
Despite the importance of measurement and treatment, one study found that almost three quarters of children diagnosed with hypertension did not have a diagnosis of high blood pressure in the electronic medical record; this led to undiagnosed hypertension for 75 percent of the children in this study (Hansen, 2007). Moreover, studies have found that hypertension and prehypertension were frequently undiagnosed in this pediatric population (Hansen, 2007).

1b.3 Citations for data on performance gap:
The Nemours Foundation. High Blood Pressure (Hypertension). http://kidshealth.org/parent/medical/heart/hypertension.html. Updated: October 2005

Hansen, ML, MD, et al. Underdiagnosis of Hypertension in Children and Adolescents. Journal of the American Medical Association, Vol 298, No. 8. August 22/29, 2007

Hansen ML, Gunn PW, Kaelber DC. Underdiagnosis of Hypertension in Children and Adolescents. JAMA. Vol. 298 No. 8, August 22/29, 2007.

1b.4 Summary of Data on disparities by population group:
Major racial/ethnic disparities exist among those with hypertension. One study using national surveys found that an ethnic and gender gap appeared for pre-high blood pressure in 1988 and for high blood pressure in

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1999 among children aged eight to 17 years: non-Hispanic blacks and Mexican Americans had a greater prevalence of both high blood pressure and pre-high blood pressure than non-Hispanic whites, and males had a greater prevalence than females (Din-Dzietham R, 2007). Studies suggest that racial differences in blood pressure control rates among those treated cannot be explained by nonpharmacologic management or health insurance, but there is some association with educational attainment (Robin P. Hertz, 2005).

1b.5 Citations for data on Disparities:
Din-Dzietham R, Liu Y, Bielo M, Shamsa F. High blood pressure trends in children and adolescents in national surveys, 1963-2002. Circulation Vol 116(13): 1488. Sep 2007.

Robin P. Hertz, PhD; Alan N. Unger, PhD; Jeffrey A. Cornell, MS; Elijah Saunders, MD. Racial Disparities in Hypertension Prevalence, Awareness, and Management. Arch Intern Med. 2005;165:2098-2104.

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Trials of hypertension treatment that compared pharmacologic and behavioral intervention to usual care showed a beneficial effect of treatment in patients who were enrolled on the basis of elevated blood pressures detected on screening examinations.

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Hypertension is defined as being in the 95th percentile for one's age, height, and gender (The Nemours Foundation, 2005), and it is a precursor to many serious conditions, such as kidney problems, stroke and heart failure (NIH, 2008). The National Heart, Lung and Blood Institute (NHLBI), the American Heart Association and the American Academy of Pediatrics recommend that children who are seen in medical care settings have their blood pressure measured at least once during every health care episode. Children less than 3 years of age should have their BP measured in special circumstances.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**
Good

1c.6 Method for rating evidence: Expert Concensus with evidence review

1c.7 Summary of Controversy/Contradictory Evidence: Though the National Heart, Lung and Blood Institute, the American Academy of Pediatrics, and the AMERICAN HEART ASSOCIATION recommend that children be screened for blood pressure, the U.S. Preventive Services Task Force (USPSTF) concluded that evidence is insufficient to recommend for or against routine screening for high blood pressure in children and adolescents to reduce the risk of cardiovascular disease. The USPSTF found poor evidence that routine blood pressure measurement accurately identifies children and adolescents at increased risk for cardiovascular disease, and poor evidence to determine whether treatment of elevated blood pressure in children or adolescents decreases the incidence of cardiovascular disease. As a result, the USPSTF could not determine the balance of benefits and harms of routine screening for high blood pressure in children and adolescents (I Statement, 2003).

1c.8 Citations for Evidence (*other than guidelines***):** National High Blood Pressure Education Program Working Group on High Blood Pressure in Children and Adolescents. The Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents. Pediatrics Vol. 114 No. 2 August 2004.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
National Heart, Lung and Blood Institute (NHLBI), 2004: The NHLBI states that children >3 years of age who are seen in medical care settings should have their blood pressure (BP) measured at least once during every health care episode. Children <3 years of age should have their BP measured in special circumstances. To confirm hypertension, the BP in children should be measured with a standard clinical sphygmomanometer,

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using a stethoscope placed over the brachial artery pulse, proximal and medial to the cubital fossa, and below the bottom edge of the cuff (i.e., ~2 cm above the cubital fossa). Ideally, the child whose BP is to be measured should have avoided stimulant drugs or foods, have been sitting quietly for 5 minutes, and seated with his or her back supported, feet on the floor and right arm supported, cubital fossa at heart level. Elevated BP must be confirmed on repeated visits before characterizing a child as having hypertension. Except in the presence of severe hypertension, a more precise characterization of a person's BP level is an average of multiple BP measurements taken over weeks to months. (Expert Consensus)

American Academy of Pediatrics (AAP), 2004: The AAP states that children >3 years of age who are seen in a medical setting should have blood pressure checked during regular office visits. The preferred method of BP measurement is auscultation. Correct measurement requires a cuff that is appropriate to the size of the child´s upper arm. Elevated BP must be confirmed on repeated visits before characterizing a child as having hypertension. Measures obtained by oscillometric devices that exceed the 90th percentile should be repeated by auscultation. (Expert Consensus)

American Heart Association (AHA), 2008: The AHA states that all children should be screened for blood pressure by personnel with specific training in the application of the device and interpretation of ABPM data in pediatric patients. Children should be screened by Auscultation with a standard mercury sphygmomanometer. The right arm is generally the preferred arm for blood pressure measurement for consistency and comparison with the reference tables. For newborn-premature infants, a cuff size of 4X8 cm is recommended; for infants, 6X12 cm; and for older children, 9X18 cm. A standard adult cuff, a large adult cuff, and a thigh cuff for leg blood pressure measurement and for use in children with very large arms should also be available. Elevated blood pressure measurements in a child or adolescent must be confirmed on repeated visits before characterizing a child as having hypertension. Children who show elevated blood pressure on repeated measurement should also have the blood pressure measured in the leg as a screen for coarctation of the aorta. (Expert Consensus)

1c.10 Clinical Practice Guideline Citation: Hagan, JF, Shaw JS, Duncan PM, eds. 2008. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, Third Edition. Elk Grove, IL: American Academy of Pediatrics

U.S. Preventive Services Task Force. Screening for High Blood Pressure: Recommendations and Rationale. July 2003. Agency for Healthcare Research and Quality

National High Blood Pressure Education Program Working Group on High Blood Pressure in Children and Adolescents. The Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents. Pediatrics Vol. 114 No. 2 August 2004.

American Heart Association Guidelines for Primary Prevention of Atherosclerotic Cardiovascular Disease Beginning in Childhood. Circulation. 2003;107:1562-1566.

1c.11 National Guideline Clearinghouse or other URL:
http://www.guidelines.gov/search/search.aspx?term=blood+pressure+screening

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**
Good

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*:
Expert consensus with evidence review

1c.14 Rationale for using this guideline over others:
The evidence and guidelines were evaluated by a group of diverse stakeholders and experts, which concluded that the guidelines were sufficient to develop as a measure that would improve quality of well child care.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**

Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Children who had a blood pressure screening with results **2a.2 Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*)**:** 2 years **2a.3 Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:** Documentation of the date of blood pressure screening, both diastolic and systolic results, and whether the results are abnormal (defined as >95th percentile for age/gender/height.based on NHLBI published norms) during the measurement year or the year prior.	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*)**:** Children with a visit who turned 6 years in the measurement year **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** 4 years-6 years **2a.7 Denominator Time Window** (*The time period in which cases are eligible for inclusion in the denominator*)**:** 1 year **2a.8 Denominator Details** (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*)**:** Children who turned 6 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months.	
2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*)**:** None **2a.10 Denominator Exclusion Details** (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*)**:** NA	
2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*)**:** None	
2a.12-13 Risk Adjustment Type: No risk adjustment necessary **2a.14 Risk Adjustment Methodology/Variables** (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method*)**:** NA	**2a-specs** **C☐** **P☐** **M☐** **N☐**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year, AND
Who had a visit within the past 12 months of the child´s birthday
Step 2: Determine the numerator
Children who had documentation in the medical record of the screening or service during the measurement year or the year previous to the measurement year.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
For this physician-level measure, we anticipate the entire population will be used in the denominator. If a sample is used, a random sample is ideal. NCQA's work has indicated that a sample size of 30-50 patients would be necessary for a typical practice size of 2000 patients.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Paper medical record/flow-sheet, Electronic clinical data, Electronic Health/Medical Record

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Medical Record

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group, Population: national, Population: regional/network

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Office, Ambulatory Care: Clinic, Ambulatory Care: Hospital Outpatient

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: Nurses, Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure).

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
We calculated 95% confidence intervals, which speak to the precision of the rates obtained from field testing.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
Rate (Upper Confidence Interval, Lower Confidence Interval):
0.994 (0.98, 1.00)

2b
C☐ P☐ M☐ N☐

2c. Validity testing — **2c**

2c.1 Data/sample *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure). **2c.2 Analytic Method** *(type of validity & rationale, method for testing)*: NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area. This measure was deemed valid by the expert panel. In addition, this measure does not utilize administrative data sources; data recorded in the chart is considered the gold standard. **2c.3 Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: NA	C☐ P☐ M☐ N☐
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** No exclusions **2d.2 Citations for Evidence:** NA **2d.3 Data/sample** *(description of data/sample and size)*: NA **2d.4 Analytic Method** *(type analysis & rationale)*: NA **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** C☐ P☐ M☐ N☐ NA☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: NA **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA **2e.3 Testing Results** *(risk model performance metrics)*: NA **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**2e** C☐ P☐ M☐ N☐ NA☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure). **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Blood Pressure Screening By Age 6 Years:	**2f** C☐ P☐ M☐ N☐

Elig Population: 180 Screening Documented: 99.4 Results Documented: 99.4 Results and Proper Follow Up Documented: 92.2%	
2g. Comparability of Multiple Data Sources/Methods 2g.1 **Data/sample** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure). 2g.2 **Analytic Method** *(type of analysis & rationale)*: This measure is chart review only; no other sources were identified by the expert panel; this measure does not utilize administrative data 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*: NA	**2g** C☐ P☐ M☐ N☐ NA☐
2h. Disparities in Care 2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** Not in use but testing completed 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): This measure is not currently publicly reported. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** This measure is not currently used in QI. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. NCQA anticipates that after we release these measures, they will become widely used, as all our measures do. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)*: NA 3a.5 **Methods** *(e.g., focus group, survey, QI project)*: NCQA vetted the measures with its expert panel. In addition, throughout the development process, NCQA	**3a** C☐ P☐ M☐ N☐

vetted the measure concepts and specifications with other stakeholder groups, including the National Association of State Medicaid Directors, NCQA's Health Plan Advisory Council, NCQA's Committee on Performance Measurement, and the American Academy of Pediatrician's Quality Improvement Innovation Network. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*: NCQA received feedback that the measure is understandable, feasible, important and valid.	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** NA	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No	**4b** C☐ P☐ M☐ N☐

4b.2 If not, specify the near-term path to achieve electronic capture by most providers. NCQA plans to eventually specify this measure for electronic health records.	
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** During the measure development process the Child Health MAP and measure development team worked with NCQA's certified auditors and audit department to ensure that the measure specifications were clear and auditable. The denominator, numerator and optional exclusions are concisely specified and align with our audit standards.	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on field test results, we have specified the measure to assess whether screening was documented and whether use of a standardized tool was documented. Our field test results showed that these data elements are available in the medical record. In addition, our field test participants noted that many were able to program these requirements into their electronic health record systems, and several implemented point-of-service physician reminders for this measure. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Collecting measures from medical charts is time-consuming and can be burdensome. Adapting this measure in electronic health records may relieve some of this burden. **4e.3 Evidence for costs:** Based on field test participant feedback and other stakeholder input. **4e.4 Business case documentation:** NA	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y**☐ **N**☐ **A**☐
CONTACT INFORMATION	

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005

Co.2 Point of Contact
Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-

Measure Developer If different from Measure Steward
Co.3 Organization
National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005

Co.4 Point of Contact
Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-

Co.5 Submitter If different from Measure Steward POC
Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Child Health Measurement Advisory Panel:
Jeanne Alicandro
Barbara Dailey
Denise Dougherty, PhD
Ted Ganiats, MD
Foster Gesten, MD
Nikki Highsmith, MPA
Charlie Homer, MD, MPH
Jeff Kamil, MD
Elizabeth Siteman
Mary McIntyre, MD, MPH
Virginia Moyer, MD, MPH, FAAP
Lee Partridge
Xavier Sevilla, MD, FAAP
Michael Siegal
Jessie Sullivan

Ad.2 If adapted, provide name of original measure: NA
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released:
Ad.7 Month and Year of most recent revision:
Ad.8 What is your frequency for review/update of this measure?
Ad.9 When is the next scheduled review/update for this measure?

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 01/06/2011

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1404 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Lead Screening
De.2 **Brief description of measure***:* The percentage of children 2 years of age who had one or more venous blood tests for lead poisoning by their 2nd birthday.
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure appears in the composite Comprehensive Well Care by Age 2 Years.
De.4 **National Priority Partners Priority Area:** Care coordination, Population health De.5 **IOM Quality Domain**: Effectiveness, Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Severity of illness, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** In 2001-2004, 250,000 children aged one to five years old had elevated levels of lead in their blood (EPA, 2008). Lead poisoning in children is most often caused from ingestion of contaminated lead paint chips or by consuming contaminated water (ATSDR, 2007). Approximately 24 million homes still contain lead paint that would be harmful if ingested. While there is no safe level of lead, a level of ten µg/dL is considered "elevated." However, studies have found that a decrease in IQ can result from blood lead levels that are below ten µg/dL (EPA, 2008). Elevated blood lead levels are not just important from a health standpoint; they also have significant financial impact. One study estimated the economic benefit of decreased lead exposure in a 3.8 million-person cohort of children aged two years in 2000. Based on the reduction in lead exposure since the 1970s, the estimated increase in earnings for the cohort of children was between $110 billion and $319 billion over their lifetimes (Grosse, 2002). Another study estimated the avoidable medical costs per child with an elevated blood lead level to be $1300. In addition, an elevated BLL was associated with avoidable special education costs of $3331 per child, and a 1 µg/dL increase in BLL resulted in decreased lifetime earnings of $1147 (DOH, 1998).	**1a** C☐ P☐ M☐ N☐

1a.4 Citations for Evidence of High Impact: Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for Lead. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Services. October 2007.

Grosse, S.D., T.D. Matte, J. Schwartz, R.J. Jackson. Economic gains resulting from the reduction in children´s exposure to lead in the United States. Environ. Health Perspect. 2002;563-9.

U.S. Environmental Protection Agency. Fast Facts on Children's Environmental Health. http://yosemite.epa.gov/ochp/ochpweb.nsf/content/fastfacts.htm#lead. Updated 2008.

U.S. Department of Health and Human Services Public Health Service Agency for Toxic Substances and Disease Registry. Division of Toxicology and Environmental Medicine Applied Toxicology Branch ToxGuideTM for Lead Pb. October 2007.

U.S. Environmental Protection Agency. Fast Facts on Children's Environmental Health. http://yosemite.epa.gov/ochp/ochpweb.nsf/content/fastfacts.htm#lead. Updated 2008.

U.S. Dep. Health Human Services, Public Health Service/Center for Disease Control. 1991. Strategic plan for the elimination of childhood lead poisoning. Prepared for Risk Management Subcommittee of Department of Health & Human Services. As quoted in: Needleman HL. Childhood lead poisoning: the promise and abandonment of primary prevention. American Journal of Public Health. Volume 88(12), December 1998, pp 1871-1877.

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: This measure encourages screening for elevated blood lead levels in children. Detecting elevated blood lead levels before the development of clinical manifestations allows a clinician to recommend interventions to limit further exposure and, when necessary, begin medical treatment with chelating agents. Early detection may also result in interventions that prevent lead exposure in other children (the child with elevated blood lead level acting as a sentinel for a hazardous environment).

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
The National Health and Nutrition Examination Survey (NHANES), an ongoing series of cross-sectional surveys on the health and nutrition of the U.S. population, reports on the BLLs of children and adults in the U.S. Children one to five years of age have the highest prevalence of elevated blood levels of any age group in the U.S., although the prevalence has declined over the past several decades. From 1976–1980 to 1991–1994, the percentage of children one to five years with a BLL of >10 µg/dL decreased from 78 to four percent. The prevalence of increased BLLs in this same age group decreased further to less than two percent in the NHANES survey conducted during the 1999–2002 period. However, even with these decreases, an estimated 310,000 children remain at risk for exposure to harmful levels of lead (CDC 2005).

NCQA's HEDIS measure has shown that performance among health plans is low. The rate for lead screening in children was 66.7 percent.

1b.3 Citations for data on performance gap:
Centers for Disease Control and Prevention. Blood Lead Levels—United States, 1999–2002. MMWR Morbidity & Mortality Weekly Report. May 2005;54(20):513-516.

CDC MMWR: Blood Lead Levels in Young Children ---United States and Selected States, 1996—1999. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4914a1.htm

NCQA State of Health Care Quality Report. 2009

1b.4 Summary of Data on disparities by population group:
High levels of lead in the blood are more common in children from lower-income families and from minority families. As foreign-born children are five times more likely to have increased levels of lead in their blood,

1b
C☐
P☐
M☐
N☐

immigrant children also may have an increased risk of lead poisoning (EPA, 2008).

1b.5 Citations for data on Disparities:
U.S. Environmental Protection Agency. Fast Facts on Children's Environmental Health. http://yosemite.epa.gov/ochp/ochpweb.nsf/content/fastfacts.htm#lead. Updated 2008.

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Lead poisoning can damage the kidneys, the nervous system, and the reproductive system and can lead to high blood pressure. In young children it can cause cerebral harm, anemia, renal alterations, colic, and impaired metabolism of vitamin D. Lead poisoning en utero or infancy can cause low weight and early birth, a retardation in neurological development, and lower IQ (HHS, 2007).

1c.2-3. Type of Evidence: Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
The U.S. Preventive Services Task Force evaluated the evidence for lead screening and released a recommendation statement in 2006. The Task Force concluded that the evidence was insufficient to recommend for or against routine lead screening in young children at increased risk, and the Task Force recommended against screening children who are at average risk. The Task Force noted that there is no direct evidence that screening for elevated lead levels in asymptomatic children at increased risk for lead exposure will improve clinical outcomes.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**
Fair

1c.6 Method for rating evidence: USPSTF, CDC, state mandates

1c.7 Summary of Controversy/Contradictory Evidence: There are conflicting guidelines on universal versus selective screening of children for lead. In 1991, the Centers for Disease Control and Prevention (CDC) recommended the near-universal screening of all children at ages one and two years. These recommendations were revised in 1997 in part because of decreasing BLLs in the U.S. The new recommendations in 1997 were to screen all children where more than 12 percent of children aged one to three years have elevated blood levels. The CDC recommends targeted screening for other children based on an individual risk assessment. Children at high risk of having an elevated blood lead concentration include children participating in federal health care programs like Medicaid and Women-Infants-and-Children (WIC) (CDC, 1997). The U.S. Preventive Services Task Force (USPSTF), however, recommends against lead screening for asymptomatic children at average risk (D Rating), and the Task Force concluded the evidence was insufficient to recommend for or against lead screening for asymptomatic children at increased risk (U.S. Preventive Services Task Force, 2006).

1c.8 Citations for Evidence (*other than guidelines***):** American Academy of Family Physicians (AAFP). Summary of recommendations for clinical preventive services. Revision 6.4. Leawood (KS): American Academy of Family Physicians (AAFP); 2008

American Academy of Pediatrics. Lead exposure in children: prevention, detection, and management. Pediatrics 2005 Oct;116(4):1036-46.

Centers for Disease Control and Prevention. Screening young children for lead poisoning: guidance for state and local health officials. Atlanta, GA: USDHHS, CDC, National Center for Environmental Health, 1997. Accessed Oct 10, 2005, at: http://www.cdc.gov/nceh/lead/guide/guide97.htm.

Centers for Disease Control and Prevention. Agency for toxic Substances and Disease Registry. Pediatric Environmental Health Appendix E: Lead Screening.1997. http://www.atsdr.cdc.gov/csem/pediatric/appendixe.html#universal

1c
C☐
P☐
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N☐

U.S. Preventive Services Task Force. Agency for Healthcare Research and Quality, Rockville, MD. Screening for Lead Levels in Childhood and Pregnancy. December 2006.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
Since 1989, federal law has required states to screen children enrolled in Medicaid for elevated BLLs as part of prevention services provided through the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program (CDC MMWR). Federal Medicaid regulations were updated in 1998 to require that all children must receive a blood lead screening test at ages 12 and 24 months (CDC MMWR). All children aged 36-72 months who have not previously been screened must also receive a blood lead test (CDC MMWR). Twenty-two states also require some form lead screening, although the requirements vary by state. While some states require only selective screening for at-risk children, others, like Connecticut, require universal screening for all children.

U.S. Preventive Services Task Force (2006)
The USPSTF concludes that evidence is insufficient to recommend for or against routine screening for elevated blood lead levels in asymptomatic children aged 1 to 5 who are at increased risk. (Go to Clinical Considerations for a discussion of risk.)
Grade: I Statement.

The USPSTF recommends against routine screening for elevated blood lead levels in asymptomatic children aged 1 to 5 years who are at average risk.
Grade: D Recommendation.

CDC (2007)
Provide anticipatory guidance to parents of all young children regarding sources of lead and help them identify sources of lead in their child´s environment.
Obtain an environmental and family occupational history and educate parents
Perform a diagnostic blood lead test on all children suspected of having lead exposure or an elevated BLL and institute the recommended management guidelines if a child´s BLL increases to >10 micrograms/dL.
Assess all children for developmental and behavior status
Consider the potential influences of lead when conducting developmental screening.
For children with multiple developmental risk factors, which might include lead exposures, consider more frequent developmental surveillance or conduct more extensive developmental evaluations.
Discuss with parents the potential impact of lead on child development and promote strategies that foster optimum development
For all children from economically and socially low-resource families living in areas where exposure to lead is likely, promote participation in early enrichment programs regardless of the child´s BLL.
Whenever possible, utilize laboratories that can achieve routine performance of + 2 micrograms/dL for blood lead analysis. Evaluate laboratory performance by reviewing the laboratory´s quality control chart or statistical quality control summary.
Become informed about lead exposure prevention strategies of local or state health departments and partner with public health agencies, community groups, and parents to work toward establishing lead-safe environments in homes and schools for all children and the reduction of exposure to lead from all sources.
Advocate for the expansion of services that foster lead poisoning primary prevention.
Expert Consensus – Policy Statement

ICSI (2008)
The work group does not recommend blood lead screening for average-risk children 1-2 years of age. It does recognize federal requirements made on providers to screen patients who are covered by federally funded health programs.
Level III: Evidence Is Currently Incomplete: Preventive services for which the evidence is currently incomplete and/or high burden and low cost, therefore left to the judgment of individual medical groups, clinicians and their patients

AAFP (2007)
The AAFP recommends against routine screening for elevated blood levels in asymptomatic children aged 1 to 5 years who are at average risk.

The AAFP concludes that evidence is insufficient to recommend for or against routine screening for elevated blood lead levels in asymptomatic children aged 1 to 5 years who are at increased risk.

AAP (2005)
Parents of children 6 months to 3 years of age should be made aware of potential hazards to their toddler; anticipatory guidance.
Children should be tested at least once when they are 2 years of age or, ideally, twice, at 1 and 2 years of age, unless lead exposure can be confidently excluded.
A blood lead measurement. Hair lead concentration gives no useful information and should not be performed.
All Medicaid-eligible children must be screened
Children with concentrations less than 10 µg/dL are not currently considered to have excess lead exposure. Children with concentrations 10 µg/dL or greater should have their concentrations rechecked; if many children in a community have concentrations greater than 10 µg/dL, the situation requires investigation for some controllable source of lead exposure. Children who ever have a concentration greater than 20 µg/dL or persistently (for more than 3 months) have a concentration greater than 15 µg/dL require environmental and medical evaluation.
Expert Consensus

1c.10 Clinical Practice Guideline Citation: Hagan, JF, Shaw JS, Duncan PM, eds. 2008. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, Third Edition. Elk Grove, IL: American Academy of Pediatrics

U.S. Preventive Services Task Force. Agency for Healthcare Research and Quality, Rockville, MD. Screening for Lead Levels in Childhood and Pregnancy. December 2006.
Institute for Clinical Systems Improvement. Preventive Services for Children and Adolescents Thirteenth Edition. October 2007

American Academy of Pediatrics. Lead exposure in children: prevention, detection, and management. Pediatrics 2005 Oct;116(4):1036-46.

Center for Disease Control. Agency for toxic Substances and Disease Registry. Pediatric Environmental Health Appendix E: Lead Screening.1997.
http://www.atsdr.cdc.gov/csem/pediatric/appendixe.html#universal
American Academy of Family Physicians (AAFP). Summary of recommendations for clinical preventive services. Revision 6.4. Leawood (KS): American Academy of Family Physicians (AAFP); 2008
1c.11 National Guideline Clearinghouse or other URL: Screening for elevated blood lead levels in children and pregnant women: recommendation statement.
http://www.guideline.gov/summary/summary.aspx?doc_id=10387&nbr=005433&string=lead+AND+screening

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**
Expert Consensus

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*:
USPSTF-based

1c.14 Rationale for using this guideline over others:
The USPSTF found insufficient evidence to recommend for or against lead screening in a high-risk population. However, the CDC and others recommend screening high-risk children. NCQA created a health plan measure that applies only to the Medicaid product line. In this case, Medicaid enrollee serves as a proxy for "high-risk". In looking at the body of evidence in conjunction with the importance of the condition, several members of the expert panel concluded that the measure was important to include. Thus, NCQA also included the measure in the Comprehensive Well Care by Age 2 Years composite measure, and we specified the measure for the physician level.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to*	**1**

Measure and Report?	
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** At least one capillary or venous blood test on or before the child´s second birthday **2a.2 Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** 2 years **2a.3 Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** For Chart review: At least one capillary or venous blood test on or before the child's second birthday as documented through either administrative data or medical record review. For Administrative: CPT 83655 LOINC 5671-3, 5674-7, 10368-9, 10912-4, 14807-2, 17052-2, 25459-9, 27129-6, 32325-3	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):** Children who turn 2 years old during the measurement year. **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** 0-2 years **2a.7 Denominator Time Window (***The time period in which cases are eligible for inclusion in the denominator***):** 2 years **2a.8 Denominator Details (***All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):** For chart review: Children who turned 2 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months. For health plan administrative: Product Line: Medicaid Continuous Enrollment: 12 months prior to the child´s second birthday Allowable gap: No more than one gap in enrollment of up to 45 days during the 12 months prior to the child's second birthday. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (i.e., a member whose coverage	**2a-specs** **C☐** **P☐** **M☐** **N☐**

lapses for 2 months [60 days] is not considered continuously enrolled).
Anchor date: Enrolled on the child´s second birthday
Benefit: Medical
Event/dx: None

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** No exclusions

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
NA

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
NA

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**
NA

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
For chart review:
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year, AND
Who had a visit within the past 12 months of the child´s birthday
Step 2: Determine the numerator
Children who had documentation in the medical record of the screening or service during the measurement year or the year previous to the measurement year.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
For the physician-level measurement:
We anticipate the entire population will be used in the denominator. If a sample is used, a random sample is ideal. NCQA's work has indicated that a sample size of 30-50 patients would be necessary for a typical practice size of 2000 patients.

For health-plan level measurement:
A systematic sample drawn from the eligible population.
Organizations that use the Hybrid Method to report the Childhood Immunization Status and Lead Screening in Children measures may use the same sample for both measures. If the organization applies optional exclusions to the CIS measure and uses the CIS systematic sample, the same children will be excluded from the LSC measure. Excluding these members will not create a statistically significant difference in the LSC eligible population. Organizations may reduce the sample size based on the current year's administrative rate or last year's audited, product line-specific rate for the lowest rate of all antigens, combinations and LSC rate.
If a separate sample from the Childhood Immunizations Status measure is used for Lead Screening in Children, the organization may reduce the sample based on the product line-specific current measurement year's administrative rate or the prior year's audited, product line-specific rate for Lead Screening in Children.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Paper medical record/flow-sheet, Electronic administrative data/claims, Electronic clinical data, Electronic

Health/Medical Record, Lab data

2a.25 **Data source/data collection instrument (***Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Administrative or Medical Record

2a.26-28 **Data source/data collection instrument reference web page URL or attachment:**

2a.29-31 **Data dictionary/code table web page URL or attachment:**

2a.32-35 **Level of Measurement/Analysis** (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group, Health Plan, Integrated delivery system, Population: national, Population: regional/network

2a.36-37 **Care Settings (***Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Office, Ambulatory Care: Clinic, Ambulatory Care: Hospital Outpatient

2a.38-41 **Clinical Services** (*Healthcare services being measured, check all that apply*)
Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO), Laboratory

TESTING/ANALYSIS

2b. Reliability testing

2b.1 **Data/sample** *(description of data/sample and size)***:** We did not conduct reliability testing for this measure.

2b.2 **Analytic Method** *(type of reliability & rationale, method for testing)***:**
NA

2b.3 **Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)***:**
NA

2b
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N☐

2c. Validity testing

2c.1 **Data/sample** *(description of data/sample and size)***:** For the physician-level field test, NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure).

For the health-plan-level field test, NCQA received data from 6 health plans who submitted 50 records per measure (total 300 records per measure)

2c.2 **Analytic Method** *(type of validity & rationale, method for testing)***:**
NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area.

2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)***:**
This measure was deemed valid by the expert panel. In addition, this measure does not utilize administrative data sources; data recorded in the chart is considered the gold standard.

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2d. Exclusions Justified

2d.1 **Summary of Evidence supporting exclusion(s):**
No Exclusions

2d
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M☐

2d.2 Citations for Evidence: NA **2d.3 Data/sample** *(description of data/sample and size)*: NA **2d.4 Analytic Method** *(type analysis & rationale)*: NA **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	N☐ NA☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: NA **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA **2e.3 Testing Results** *(risk model performance metrics)*: NA **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**2e** C☐ P☐ M☐ N☐ NA☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: For the physician-level field test, NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure). For the health-plan-level field test, NCQA received data from 6 health plans who submitted 50 records per measure (total 300 records per measure) **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Physician-level test results Elig population: 180 Performance rate: 73% Health-plan test results: Elig population: 305 Performance Rate: 61% HEDIS 2008 performance rates Mean: 61.4 10th percentile: 32.3 50th percentile: 65.8 90th percentile: 84.0	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: For the physician-level field test, NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure).	**2g** C☐ P☐ M☐

For the health-plan-level field test, NCQA received data from 6 health plans who submitted 50 records per measure (total 300 records per measure) 2g.2 **Analytic Method** *(type of analysis & rationale)*: Comparison of means 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*: Field test results indicated that, for the health plan level measure, using both administrative and medical record data is the optimal approach.	N☐ NA☐
2h. Disparities in Care 2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** In use 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): Physician Measure: This measure is not currently publicly reported. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. Current HEDIS Measure: This measure is used in public reporting. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*): Physician Measure: This measure is not currently used in QI. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. NCQA anticipates that after we release these measures, they will become widely used, as all our measures do. Current HEDIS Measure: This measure is part of the Healthcare Effectiveness Data and Information Set (HEDIS) **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)*: Expert panel, other stakeholders, and 19	**3a** C☐ P☐ M☐ N☐

physician field test participants Health plan measure: general public and other stakeholder groups (i.e. HEDIS users) **3a.5 Methods** *(e.g., focus group, survey, QI project)*: NCQA vetted the measures with its expert panel. In addition, throughout the development process, NCQA vetted the measure concepts and specifications with other stakeholder groups, including the National Association of State Medicaid Directors, NCQA's Health Plan Advisory Council, NCQA's Committee on Performance Measurement, and the American Academy of Pediatrician's Quality Improvement Innovation Network. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. For the health plan measure, we released the measure for public comment and reviewed all results with the NCQA Committee on Performance Measurement (CPM). We also reviewed first-year results with the CPM. **3a.6 Results** *(qualitative and/or quantitative results and conclusions)*: NCQA received feedback that the measure is understandable, feasible, important and valid. Health plan measure: Upon review of public comment results, the Committee on Performance Measurement approved the NCQA staff recommendation to add the measure to HEDIS. After reviewing first-year analysis results, the CPM approved the staff recommendation to publicly report the measure. The measure was deemed usable and feasible.	
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	4a C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.** NCQA plans to eventually adapt this measure for use in electronic health records.	4b C☐ P☐ M☐ N☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No 4c.2 **If yes, provide justification.**	4c C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** Physician Measures: During the measure development process the Child Health MAP and measure development team worked with NCQA's certified auditors and audit department to ensure that the measure specifications were clear and auditable. The denominator, numerator and any exclusions are concisely specified and align with our audit standards. Current HEDIS Measures: All measures that are used in NCQA programs are audited.	4d C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on field test results, we have specified the measure to assess whether screening was documented and whether use of a standardized tool was documented. Our field test results showed that these data elements are available in the medical record. In addition, our field test participants noted that many were able to program these requirements into their electronic health record systems, and several implemented point-of-service physician reminders for this measure. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Collecting measures from medical charts is time-consuming and can be burdensome. Adapting this measure in electronic health records may relieve some of this burden. 4e.3 **Evidence for costs:** Based on field test participant feedback and other stakeholder input	4e C☐ P☐ M☐ N☐

4e.4 **Business case documentation:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** **C☐** **P☐** **M☐** **N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y☐** **N☐** **A☐**

CONTACT INFORMATION

Co.1 **Measure Steward (Intellectual Property Owner)**
Co.1 **Organization**
National Committee for Quality Assurance, 1100 13th Street, NW, Suite 1000, Washington, District Of Columbia, 20005

Co.2 **Point of Contact**
Sepheen, Byron, byron@ncqa.org, 202-955-3573-

Measure Developer If different from Measure Steward
Co.3 **Organization**
National Committee for Quality Assurance, 1100 13th Street, NW, Suite 1000, Washington, District Of Columbia, 20005

Co.4 **Point of Contact**
Sepheen, Byron, byron@ncqa.org, 202-955-3573-

Co.5 **Submitter If different from Measure Steward POC**
Sepheen, Byron, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 **Additional organizations that sponsored/participated in measure development**

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 **Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.**
Child Health Measurement Advisory Panel:
Jeanne Alicandro
Barbara Dailey
Denise Dougherty, PhD
Ted Ganiats, MD
Foster Gesten, MD
Nikki Highsmith, MPA
Charlie Homer, MD, MPH
Jeff Kamil, MD
Elizabeth Siteman
Mary McIntyre, MD, MPH
Virginia Moyer, MD, MPH, FAAP
Lee Partridge

Xavier Sevilla, MD, FAAP Michael Siegal Jessie Sullivan
Ad.2 If adapted, provide name of original measure: NA **Ad.3-5 If adapted, provide original specifications URL or attachment**
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6 Year the measure was first released:** **Ad.7 Month and Year of most recent revision:** **Ad.8 What is your frequency for review/update of this measure?** **Ad.9 When is the next scheduled review/update for this measure?**
Ad.10 Copyright statement/disclaimers:
Ad.11 -13 Additional Information web page URL or attachment:
Date of Submission (*MM/DD/YY*)**:** 09/02/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1400 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Environmental Tobacco Assessment and Counseling
De.2 **Brief description of measure***:* The percentage of children who had an environmental tobacco assessment and counseling and proper follow-up performed. We are combining three measures into one form because measure features and evidence are the same or similar. Measure 1: Environmental Tobacco Assessment or Counseling By 6 months of age Measure 2: Environmental Tobacco Assessment or Counseling By 2 years of age Measure 3: Environmental Tobacco Assessment or Counseling By 6 years of age
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure appears in the composite Comprehensive Well Care by Age 6 Months Comprehensive Well Care by Age 2 Years and Comprehensive Well Care by Age 6 Years.
De.4 **National Priority Partners Priority Area:** Patient and family engagement, Population health De.5 **IOM Quality Domain**: Effectiveness, Patient-centered, Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure	A Y☐ N☐

A.3 Measure Steward Agreement: Agreement will be signed and submitted prior to or at the time of measure submission **A.4 Measure Steward Agreement attached:**	
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. **D.1Testing:** Yes, fully developed and tested **D.2 Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 Demonstrated High Impact Aspect of Healthcare: Affects large numbers, Leading cause of morbidity/mortality, Severity of illness, Patient/societal consequences of poor quality **1a.2** **1a.3 Summary of Evidence of High Impact:** Tobacco exposure has been linked to a variety of ailments in children, including asthma, bronchitis, pneumonia and middle-ear infections. In the U.S., approximately 38 percent of children between 2 months and 5 years of age are exposed to environmental tobacco smoke in the home (Gergen, 1998). Even if a parent smokes outside the home, children could still face a high level of environmental tobacco exposure. In addition to health consequences, there are health care expenditure implications. One study on the pediatric disease attributable to parental smoking found that tobacco-related morbidity in children results in annual direct medical expenditures of $4.6 billion and loss of life costs of $8.2 billion. **1a.4 Citations for Evidence of High Impact:** Weitzman M, Byrd RS, Aligne CA, Moss M. The effects of tobacco exposure on children´s behavioral and cognitive functioning: implications for clinical and public health policy	**1a** C☐ P☐ M☐ N☐

and future research. Neurotoxicol Teratol. 2002 May-Jun;24(3):397-406.

NIPO. Continuous research smoking habits in the Netherlands 2000-IV. Amsterdam: Defacto, 2000.

Gergen PJ, Fowler JA, Maurer KR, et al. The burden of environmental tobacco smoke exposure on the respiratory health of children 2 months through 5 years of age in the United States: Third National Health and Nutrition Examination Survey, 1988 to 1994. Pediatrics 1998;101:e8.

Research for International Tobacco Control. At What Cost? The Economic Impact of Tobacco Use on National Health Systems, societies and individuals: A Summary of Method and Findings. 2003. RITC Monograph Series No. 1:51: http://books.google.com/books?id=Z3C8NzjCTVgC&pg=PA51&lpg=PA51&dq=financial+impact+of+tobacco+exposure+to+children&source=bl&ots=a58XfftlZc&sig=H-6sJUBFI8IYEx_DiBedl2dxOtw&hl=en&ei=m3phTMaUEcOB8gaC_5WACg&sa=X&oi=book_result&ct=result&resnum=7&ved=0CD4Q6AEwBg#v=onepage&q&f=false. Accessed August 27, 2010.

1b. Opportunity for Improvement

1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** Healthcare providers who care for children, especially pediatricians, are in a unique position to assist with tobacco control. This measure requires that health care providers counsel parents and caregivers on the dangers of environmental tobacco exposure in children, which can be an important opportunity to improve care.

1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:**
Environmental tobacco smoke (ETS) exposure is still a leading health concern in the United States. Despite efforts to educate and counsel on the adverse health effects, 70 percent of smokers with children smoke inside their homes. Currently, between 35 and 80 percent of U.S. children are affected by ETS (Downs, Zhu, Anand, Biondich, Carroll, 2008).

Despite support from professional organizations and federal government groups, many pediatricians and family physicians do not routinely engage in intensive efforts to reduce children's environmental tobacco smoke exposure (Klerman, 2004). Physicians have reported a number of barriers to providing counseling on environmental tobacco smoke which could include: negative parental expectations, lack of time, lack of skills or confidence, and perceptions of professional norms (Victor, Brewster , Ferrence, Ashley, Cohen, Selby, 2010).

1b.3 **Citations for data on performance gap:**
Lorraine V. Klerman, Protecting children: Reducing their environmental tobacco smoke exposure. Nicotine & Tobacco Research Volume 6, Supplement 2 (April 2004) S239–S252.

Stead LF, Bergson G, Lancaster T. Physician advice for smoking cessation. Cochrane Database of Systematic Reviews 2008, Issue 2. Art. No.: CD000165. DOI: 10.1002/14651858.CD000165.pub3.

Downs SM, Zhu V, Anand V, Biondich PG, Carroll AE. The CHICA Smoking Cessation System. AMIA Annu Symp Proc. 2008; 2008: 166–170.

Can Fam Physician. J. Charles Victor MSc, Joan M. Brewster PhD , Roberta Ferrence PhD , Mary Jane Ashley MD, Joanna E. Cohen PhD, Peter Selby MB BS. Tobacco-related medical education and physician interventions with parents who smoke. Vol. 56, No. 2, February 2010, pp.157 – 163.

1b.4 **Summary of Data on disparities by population group:**
The use of cigarettes is most prevalent among adults living below the poverty line and who have not completed high school, resulting in environmental tobacco smoke disproportionately affecting children living in low-income households (Committee on Environmental Health, 2009). In addition, more asthma cases and high levels of ETS exposure are being reported in African American, inner-city children (Fagnano, Conn, Halterman, 2008).

1b.5 **Citations for data on Disparities:**

1b
C ☐
P ☐
M ☐
N ☐

Flores G, Olson L, Tomany S. Does Disadvantage Start at Home? Racial and Ethnic Disparities in Early Childhood Home Routines, Safety, and Educational Practices/Resources. Abstr AcademyHealth Meet. 2004; 21

Tobacco Use: A Pediatric Disease. PEDIATRICS Vol. 124 No. 5 November 2009, pp. 1474-1487 (doi:10.1542/peds.2009-2114).

Fagnano M, BA, MPH, Conn KM, MPH, Halterman JS, MD, MPH. Environmental Tobacco Smoke and Behaviors of Inner-City Children With Asthma. Ambul Pediatr. 2008; 8(5): 288–293.

1c. Outcome or Evidence to Support Measure Focus

1c.1 **Relationship to Outcomes** (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** ETS exposure is directly responsible for numerous health conditions, especially in children, as they are still in their growth development stage of life. Studies suggest that infants exposed to secondhand smoke are more likely to die from sudden infant death syndrome (O'Keefe, 2009). Children exposed to secondhand smoke are more susceptible to respiratory ailments and other infections. Morbidity among children with asthma due to ETS is on the rise (Halterman et al, 2008). Evidence shows ETS exposure increases the prevalence of asthma, increases the severity of asthma and worsens asthma control in children who already have the disease (Dae Jin Song, 2010).

ETS can have far-reaching adverse effects. Children of parents who smoke are more apt to model their parents' behavior. Teenagers who experiment with tobacco are more prone to becoming addicted to tobacco (O'Keefe, 2009). Tobacco smoke can remain on one's lungs for decades, contributing to emphysema and chronic obstructive pulmonary disease's rise as one of the leading causes of death (Lovasi, 2010).

1c.2-3. **Type of Evidence:** Evidence-based guideline, Expert opinion

1c.4 **Summary of Evidence** (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Providing simple advice to parents on the health benefits of quitting smoking has helped some parents to quit. More intensive efforts and counseling results in slightly higher rates of quitting (Stead, Bergson, Lancaster, 2008). Counseling parents on the dangers of smoking and warning them about the many health complications a child could develop as a result of environmental tobacco smoke exposure is an important way pediatricians and other health care professionals aid in the fight against tobacco use, the most preventable cause of death in our society.

Among the many health complications that are directly contributable to tobacco use include: asthma in children, worsened and increased severity of asthma, emphysema, chronic obstructive pulmonary disease, numerous respiratory ailments and infections, and cancer. It is important for pediatricians and other primary health care professionals to counsel patients and families on these risks and to encourage them to make the extra efforts to quit smoking and ban smoking in homes.

Children are at very high risk of developing health complications through environmental tobacco smoking exposure because their bodies are still developing. Through initial ETS education and counseling, physicians can prevent further exposure and could make a difference in the health of a child and their family.

1c.5 **Rating of strength/quality of evidence (***also provide narrative description of the rating and by whom***):**
Good

1c.6 **Method for rating evidence:** Expert Consensus

1c.7 **Summary of Controversy/Contradictory Evidence:** None

1c.8 **Citations for Evidence (***other than guidelines***):** Michigan Quality Improvement Consortium. Routine preventive services for infants and children (birth-24 months). May 2007
Michigan Quality Improvement Consortium. Routine preventive services for infants and children (ages 2-18). May 2007
Stead LF, Bergson G, Lancaster T. Physician advice for smoking cessation. Cochrane Database of Systematic

1c
C ☐
P ☐
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N ☐

Reviews 2008, Issue 2. Art. No.: CD000165. DOI: 10.1002/14651858.CD000165.pub3.

Dae Jin Song. (2010) Environmental tobacco smoke and childhood asthma. Korean Journal of Pediatrics 53:2, 121.

Columbia University´s Mailman School of Public Health (2009, December 29). Exposure to tobacco smoke in childhood home associated with early emphysema in adulthood. ScienceDaily. Retrieved August 24, 2010, from http://www.sciencedaily.com/releases/2009/12/091228114732.htm.

Jill S. Halterman, MD, MPH; Belinda Borrelli, PhD; Paul Tremblay, RN; Kelly M. Conn, MPH; Maria Fagnano, BA; Guillermo Montes, PhD; Telva Hernandez, BA. Screening for Environmental Tobacco Smoke Exposure among Inner City Children with Asthma. Pediatrics. 2008 December; 122(6): 1277–1283.

Lori O'Keefe. (2009) Snuffing out tobacco use: AAP statements guide pediatricians. AAP News Vol. 30 No. 11 November 2009, p. 8.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
U.S. Preventive Services Task Force (2009)
The USPSTF recommends that clinicians ask all adults about tobacco use and provide tobacco cessation interventions for those who use tobacco products.
Grade: A recommendation.

ICSI (2007)
ICSI recommends that health care providers counsel patients on education topics that include cigarette smoking.
Grade: Level III

Michigan Quality Improvement Consortium (2007)
The Consortium recommends that parents of children age one month to six years be counseled about various topics, including tobacco smoke.
Grade: Level B evidence

1c.10 Clinical Practice Guideline Citation: U.S. Preventive Services Task Force. Counseling and Interventions to Prevent Tobacco Use and Tobacco-Caused Disease in Adults and Pregnant Women. Ann Intern Med 2009;150:551-55

Institute for Clinical Systems Improvement. Preventive Services for Children and Adolescents Thirteenth Edition. October 2007

Michigan Quality Improvement Consortium. Routine preventive services for infants and children (birth-24 months). May 2007

Michigan Quality Improvement Consortium. Routine preventive services for infants and children (ages 2-18). May 2007

1c.11 National Guideline Clearinghouse or other URL:
http://www.guideline.gov/syntheses/synthesis.aspx?id=16422&search=environmental+tobacco+assessment+and+counseling

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**
Good

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*:
USPSTF based

1c.14 Rationale for using this guideline over others:
The USPSTF is an independent group of experts in clinical preventive services who base recommendations on a comprehensive evidence review. There is fairly consistent guideline support for these measures.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** "Numerator 1: Children who had documentation in the medical record of an environmental tobacco assessment or counseling by age 6 months Numerator 2: Children who had documentation in the medical record of an environmental tobacco assessment or counseling by age 2 years Numerator 3: Children who had documentation in the medical record of an environmental tobacco assessment or counseling by age 6 years" **2a.2 Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** 2 years **2a.3 Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** Documentation must include a note indicating at least one of the following. • A screening question result indicating whether the child is exposed to secondhand smoke or environmental tobacco • A note indicating at least one of the following. - Engagement in discussion of the harms of environmental tobacco (e.g., dangers of secondhand smoke) - Checklist indicating environmental tobacco or quitting smoking was addressed - Counseling on environmental tobacco or referral for quitting smoking - Member or patient received educational materials on the harms of environmental tobacco or quitting smoking - Anticipatory guidance on environmental tobacco or quitting smoking	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):** Denominator 1: Children who turned 6 months of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months. Denominator 2: Children who turned 2 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months. Denominator 3: Children who turned 6 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months. **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** Measure 1: 0-6 months, Measure 2: 6 months-2 years, Measure 3: 2 years-6 years	**2a-specs** **C☐** **P☐** **M☐** **N☐**

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
1 year

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
See above; chart review only

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** None

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
NA

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
None

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**
NA

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year, AND
Who had a visit within the past 12 months of the child´s birthday
Step 2: Determine the numerator
Children who had documentation in the medical record of the screening or service during the measurement year or the year previous to the measurement year.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
For this physician-level measure, we anticipate the entire population will be used in the denominator. If a sample is used, a random sample is ideal. NCQA's work has indicated that a sample size of 30-50 patients would be necessary for a typical practice size of 2000 patients.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Paper medical record/flow-sheet, Electronic clinical data, Electronic Health/Medical Record

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Medical Record

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis *(Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group, Population: national, Population: regional/network

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*

Ambulatory Care: Office, Ambulatory Care: Clinic, Ambulatory Care: Hospital Outpatient 2a.38-41 **Clinical Services** (*Healthcare services being measured, check all that apply*) Clinicians: Nurses, Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)	
TESTING/ANALYSIS	
2b. Reliability testing 2b.1 **Data/sample** *(description of data/sample and size)*: NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure) 2b.2 **Analytic Method** *(type of reliability & rationale, method for testing)*: We did not conduct reliability testing for this measure. 2b.3 **Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*: We did not conduct reliability testing for this measure.	**2b** C☐ P☐ M☐ N☐
2c. Validity testing 2c.1 **Data/sample** *(description of data/sample and size)*: NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure) 2c.2 **Analytic Method** *(type of validity & rationale, method for testing)*: NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area. This measure was deemed valid by the expert panel. In addition, this measure does not utilize administrative data sources; data recorded in the chart is considered the gold standard. 2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: NA	**2c** C☐ P☐ M☐ N☐
2d. Exclusions Justified 2d.1 **Summary of Evidence supporting exclusion(s):** No exclusions 2d.2 **Citations for Evidence:** NA 2d.3 **Data/sample** *(description of data/sample and size)*: NA 2d.4 **Analytic Method** *(type analysis & rationale)*: NA 2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures 2e.1 **Data/sample** *(description of data/sample and size)*: NA 2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA	**2e** C☐ P☐ M☐ N☐ NA ☐

2e.3 Testing Results *(risk model performance metrics)*: NA **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure) **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Measure 1: Environmental Tobacco Assessment and Counseling by Age 6 Mo Elig Population: 180 Documentation that the physician asked or counseled on ETS: 77.7 Measure 2: Environmental Tobacco Assessment and Counseling by Age 2 years Elig Population: 180 Documentation that the physician asked or counseled on ETS: 77.7 Measure 1: Environmental Tobacco Assessment and Counseling by Age 6 years Elig Population: 180 Documentation that the physician asked or counseled on ETS: 61.1	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure) **2g.2 Analytic Method** *(type of analysis & rationale)*: This measure is chart review only; no other sources were identified by the expert panel; this measure does not utilize administrative data **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*: NA	**2g** C☐ P☐ M☐ N☐ NA☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** **C** ☐ **P** ☐ **M** ☐ **N** ☐

3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Eval Rating
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** Not in use but testing completed 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** This measure is not currently publicly reported. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** This measure is not currently used in QI. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. NCQA anticipates that after we release these measures, they will become widely used, as all our measures do. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)***:** NA 3a.5 **Methods** *(e.g., focus group, survey, QI project)***:** NCQA vetted the measures with its expert panel. In addition, throughout the development process, NCQA vetted the measure concepts and specifications with other stakeholder groups, including the National Association of State Medicaid Directors, NCQA's Health Plan Advisory Council, NCQA's Committee on Performance Measurement, and the American Academy of Pediatrician's Quality Improvement Innovation Network. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)***:** NCQA received feedback that the measure is understandable, feasible, important and valid.	**3a** C☐ P☐ M☐ N☐
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same**	**3c** C☐ P☐ M☐ N☐ NA

target population), Describe why it is a more valid or efficient way to measure quality: NA	☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** **C☐** **P☐** **M☐** **N☐**
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** **C☐** **P☐** **M☐** **N☐**
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.** NCQA plans to eventually adapt this measure for use in electronic health records.	**4b** **C☐** **P☐** **M☐** **N☐**
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** **C☐** **P☐** **M☐** **N☐** **NA** ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** During the measure development process the Child Health MAP and measure development team worked with NCQA's certified auditors and audit department to ensure that the measure specifications were clear and auditable. The denominator, numerator and optional exclusions are concisely specified and align with our audit standards.	**4d** **C☐** **P☐** **M☐** **N☐**
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on field test results, we have specified the measure to assess whether screening was documented and whether use of a standardized tool was documented. Our field test results showed that these data elements are available in the medical record. In addition, our field test participants noted that many were able to program these requirements into their electronic health record systems, and several implemented point-of-service physician reminders for this measure.	**4e** **C☐** **P☐** **M☐** **N☐**

4e.2 Costs to implement the measure (*costs of data collection, fees associated with proprietary measures*)**:** Collecting measures from medical charts is time-consuming and can be burdensome. Adapting this measure in electronic health records may relieve some of this burden. **4e.3 Evidence for costs:** Based on field test participant feedback and other stakeholder input **4e.4 Business case documentation:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** **C☐** **P☐** **M☐** **N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y☐** **N☐** **A☐**
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** NCQA, 1100 13th St, NW, Suite 1000, Washington, District Of Columbia, 20005 **Co.2 Point of Contact** Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-	
Measure Developer If different from Measure Steward **Co.3 Organization** NCQA, 1100 13th St, NW, Suite 1000, Washington, District Of Columbia, 20005 **Co.4 Point of Contact** Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-	
Co.5 Submitter If different from Measure Steward POC Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-, NCQA	
Co.6 Additional organizations that sponsored/participated in measure development	
ADDITIONAL INFORMATION	
Workgroup/Expert Panel involved in measure development **Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.** Child Health Measurement Advisory Panel: Jeanne Alicandro Barbara Dailey Denise Dougherty, PhD Ted Ganiats, MD Foster Gesten, MD Nikki Highsmith, MPA Charlie Homer, MD, MPH	

Jeff Kamil, MD Elizabeth Siteman Mary McIntyre, MD, MPH Virginia Moyer, MD, MPH, FAAP Lee Partridge Xavier Sevilla, MD, FAAP Michael Siegal Jessie Sullivan
Ad.2 If adapted, provide name of original measure: NA **Ad.3-5 If adapted, provide original specifications URL or attachment**
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6 Year the measure was first released:** **Ad.7 Month and Year of most recent revision:** **Ad.8 What is your frequency for review/update of this measure?** **Ad.9 When is the next scheduled review/update for this measure?**
Ad.10 Copyright statement/disclaimers:
Ad.11 -13 Additional Information web page URL or attachment:
Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1405 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Oral Health Access By 2 years of age
De.2 **Brief description of measure:** Percentage of children who turned 2 years old during the measurement year who received oral health services or access by the time they reach 2 years of age
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This measure appears in the composite Comprehensive Well Care by Age 2 Years.
De.4 **National Priority Partners Priority Area:** Care coordination, Population health De.5 **IOM Quality Domain**: Effectiveness, Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, Leading cause of morbidity/mortality, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** For children, tooth decay is one of the most chronic infectious diseases; the Centers for Disease Control and Prevention (CDC) estimates that in the U.S. approximately 40 percent of children have tooth decay by the time they enter kindergarten (AAP, 2003), more than 50 percent have tooth decay by second grade and 80 percent have it by the time they graduate high school. Undiagnosed oral health deficiencies can cause social and developmental delay (CDC, 2007), and overall poor oral health can cause high levels of pain and infection that often result in emergency department visits (AAP 2007). More than 51 million school hours are lost each year because of dental-related illness (CDC 2004). In 2009, nearly $102 billion dollars was spent on dental services alone in the United States. On average there are 500 million dental visits each year. Tooth decay, or dental caries, is the most common chronic disease in children. Nearly 53 million children and adults in the US currently have untreated tooth decay on one of their permanent teeth (CDC, 2010). 1a.4 **Citations for Evidence of High Impact:** American Academy of Pediatrics—Section on Pediatric Dentistry; Policy Statement: Oral Health Risk Assessment Timing and Establishment of the Dental Home. Pediatrics 2003: 111(5).	**1a** C☐ P☐ M☐ N☐

Centers for Disease Control and Prevention: Children's Oral Health. http://www.cdc.gov/OralHealth/topics/child.htm. Updated Oct 2007.

American Academy of Pediatrics. Oral Health Risk Assessment Timing and Establishment of the Dental Home Policy Statement. Pediatrics May 2003 Vol. 111 No. 5

Centers for Disease Control and Prevention: Children's Oral Health. http://www.cdc.gov/OralHealth/publications/factsheets/sgr2000_fs3.htm. Updated October 2004.

Centers for Disease Control. Oral Health: Preventing Cavities, Gum Disease, Tooth Loss, and Oral Cancers: At A Glance 2010. http://www.cdc.gov/chronicdisease/resources/publications/AAG/doh.htm

1b. Opportunity for Improvement

1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** This measure encourages proper access to oral health care. Tooth decay is preventable, and early diagnosis is important for successful treatment of periodontal diseases. Good oral health in childhood and adolescence can promote a sound foundation for adult oral health by preventing periodontal disease and dental decay.

1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:**
While the overall trend in oral health has improved over the last 30 years, there remains a significant proportion of the population who do not have optimal oral health care. In the year 2000, reports showed that only 66 percent of Americans age two years and older had a dental visit within the last year. For those in poverty, the rate was 47 percent (CDC, 2002). Other reports have estimated that about 75 percent of children aged three to four have never seen their dentist (dela Cruz, 2004).

Medicaid's Early Periodic Screening Diagnosis and Treatment (EPSDT) program is intended to provide regular dental screenings and appropriate treatment. However, according to a report by the Office of the Inspector General of the Department of Health and Human Services, only 20 percent of children under 21 years of age who were enrolled in Medicaid and eligible for EPSDT actually received preventive dental services.

1b.3 **Citations for data on performance gap:**
CDC: Health, United States, 2002.

dela Cruz. G.G. MD, MPH, et al. Dental Screening and Referral of Young Children by Pediatric Primary Care Providers. Pediatrics November 2004. Vol. 114 No. 5

1b.4 **Summary of Data on disparities by population group:**
The most advanced oral health disease is found primarily among children living in poverty, some racial/ethnic minority populations, disabled children, and children with HIV infection. Low-income children are twice as likely to have tooth decay untreated (CDC, 2007) and have half the number of dental visits compared with higher-income children. African American and Mexican American adults have twice the amount of untreated decay as non-Hispanic whites (CDC, 2010).

1b.5 **Citations for data on Disparities:**
Centers for Disease Control and Prevention: Children's Oral Health. http://www.cdc.gov/OralHealth/topics/child.htm. Updated Oct 2007.

Centers for Disease Control. Oral Health: Preventing Cavities, Gum Disease, Tooth Loss, and Oral Cancers: At A Glance 2010. http://www.cdc.gov/chronicdisease/resources/publications/AAG/doh.htm

1b
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1c. Outcome or Evidence to Support Measure Focus

1c.1 **Relationship to Outcomes** (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Oral diseases range from cavities to oral cancer which causes pain and disabilities for millions each year. The most common oral problem is tooth decay, or cavities. Untreated cavities can cause a lot of pain, dysfunction, school absences, trouble concentrating and poor appearances in children, which can affect both their quality of

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life and their ability to succeed.

Most oral diseases are preventable; unfortunately many children and adults are missing out on how they can prevent oral issues and avoid costly trips to the dentists. By teacher parents and children how to properly brush and floss everyday and how simple and cost effective measures, such as using water fluoridation. Fluoride prevents tooth decay.

Unfortunately, both children and adults could be taking better care of their oral hygiene. It is important to develop healthy dental habits early. Approximately one-fourth of U.S. adults aged 65 and older have lost all of their teeth (CDC, 2010).

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
In their work producing the 2004 recommendation statement on screening for dental caries, the U.S. Preventive Services Task Force found that the strength of the evidence regarding the effectiveness of screening by primary care clinicians to identify children with dental caries or who are at high risk for future dental caries was poor. In addition, the Task Force found that the evidence regarding the effectiveness of referrals by primary care clincians resulting in actual visits was poor. Two case studies found that primary care clinicians identified caries lesions with an accuracy approaching that of dentists after 4 to 5 hours of training. While the studies were consistent, there were issues with the studies' external validity. No evidence was available at the time to document the accuracy with which primary care clinicians can identify children at elevated risk for dental caries. The Task Force found one study that showed that referral by the primary care clinician is at best only partially effective. The strength of the evidence for the effectiveness of counseling provided by primary care clinicians for caries-preventive behaviors was also deemed poor. The studies found suggested that knowledge improvement is easily achieved but behavioral change is more difficult; the studies also suggested that caries reduction is likely only if behavioral change includes fluoride use.

The American Academy of Pediatrics (AAP) recommends that children should begin to see their dentist around six months of age, and a dental home should be established by twelve months of age (AAP, 2003). With 80 percent of children visiting their primary care physician (based on AAP guidelines), pediatricians may have the best opportunity to deliver anticipatory guidance and recommend dental care (AAP, 2003). One study found that the level of knowledge a physician has on oral health is not as important as their awareness of their role in referring children to a dentist (dela Cruz., 2004). Referral by the primary care physician or health provider has been recommended, based on risk assessment, as early as 6 months of age, 6 months after the first tooth erupts, and no later than 12 months of age (AAP, 2007). The American Academy of Pediatric Dentistry (AAPD) recommends that children be referred to the dentist by age one, and general anticipatory guidance should be given to the mother (or other caregiver), during the first six months on a variety of topics, including oral hygiene, diet, fluoride, and caries removal (AAP, 2009). Thereafter, general anticipatory guidance should continue to be given regularly up to three years of age on oral hygiene, diet and fluoride (AAP, 2009).

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**
Good

1c.6 Method for rating evidence: Expert consensus

1c.7 Summary of Controversy/Contradictory Evidence: There is some disagreement over the care coordination responsibilities between pediatricians and dentists. The American Academy of Pediatric Dentistry (AAPD) recommends that children be referred to the dentist by age one, yet one study found that most pediatricians either were unaware of the recommendation or did not agree with it (Lewis CW, 2000). One survey of pediatric dentists found that less than half practiced the AAPD policy of performing the first oral evaluation at 12 months of age or younger (AAP, 2003). The American Academy of Pediatrics (AAP) concluded that pediatricians are capable of providing basic dental care for children under the age of three (Lewis, 2000). Thus, many pediatricians may believe a dental assessment and preventive education for very

young children falls under their care, as opposed to a visit to the dentist.

1c.8 Citations for Evidence (*other than guidelines*): American Academy of Pediatrics. Oral Health Risk Assessment Timing and Establishment of the Dental Home Policy Statement. Pediatrics May 2003 Vol. 111(5).

dela Cruz. G.G. MD, MPH, et al. Dental Screening and Referral of Young Children by Pediatric Primary Care Providers. Pediatrics November 2004. Vol. 114 No. 5

American Academy of Pediatric Dentistry: 2008-09 Definitions, Oral Health Policies, and Clinical Guidelines. Infant Oral Health Care. http://www.aapd.org/media/Policies_Guidelines/G_InfantOralHealthCare.pdf. Updated 2009.
Lewis CW, Grossman DC, Domoto PK, Deyo RA. The role of the pediatrician in the oral health of children: A national survey. Pediatrics. 2000 Dec;106(6):E84.

Lewis, Charlotte W. MD, MPH; David C. Grossman, MD, MPH; Peter K. Domoto, DDS, MPH; and Richard A. Deyo, MD, MPH. The Role of the Pediatrician in the Oral Health of Children: A National Survey. PEDIATRICS Vol. 106 No. 6 December 2000, p. e84

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*):
United States Preventive Services Task Force (2004)
The USPSTF recommends that primary care clinicians prescribe oral fluoride supplementation at currently recommended doses to preschool children older than 6 months of age whose primary water source is deficient in fluoride.
Grade: B Recommendation.

The USPSTF concludes that the evidence is insufficient to recommend for or against routine risk assessment of preschool children by primary care clinicians for the prevention of dental disease.
Grade: I Statement.

• The USPSTF recommends that primary care clinicians prescribe oral fluoride supplementation at currently recommended doses to preschool children older than 6 months of age whose primary water source is deficient in fluoride.
The USPSTF found fair evidence that, in preschool children with low fluoride exposure, prescription of oral fluoride supplements by primary care clinicians leads to reduced dental caries. The USPSTF concluded that the benefits of caries prevention using oral fluoride supplementation outweigh the potential harms of dental fluorosis, which in the United States are primarily observed as a mild cosmetic discoloration of the teeth.
B Recommendation

American Academy of Family Physicians (2007)
For children 6 months through 16 years of age:
The AAFP strongly recommends ordering fluoride supplementation to prevent dental caries based on age and fluoride concentration of patient's water supply for patients residing in areas with inadequate fluoride in the water supply (less than 0.6 ppm).

Institute for Clinical Systems Improvement (2009)
Children up to 2 years:
• Discourage the practice of putting infants and children to bed with a bottle.
• Encourage women to breast-feed.
• Encourage healthy eating habits to reduce the risk of dental caries.
• Supplement with .25 mg/dl fluoride starting at six months if water source is less than .3ppm.
Children at high risk for dental caries should be referred to the appropriate health care source.
Children 2-18 years of age:
• Encourage regular dental visits.
• Encourage brushing teeth daily with fluoridated toothpaste and flossing.
• Encourage healthy eating habits to reduce the risk of dental caries.
Children at high risk for dental caries should be referred to the appropriate health care source.

Level III: Preventive Services for Which the Evidence Is Currently Incomplete and/or High Burden of Disease and Low Cost of Delivering Care. Providing These Services Is Left to the Judgment of Individual Medical Groups, Clinicians and Their Patients
American Academy of Pediatric Dentistry (2007)
By 6 months
Oral health risk assessment:
• Assess patient´s risk of developing oral disease using CAT
• Provide education on infant oral health
• Evaluate and optimize fluoride exposure

By 12 months
• Establishment of dental home
• Recording thorough medical (infant) and dental (mother or primary caregiver and infant) histories
• Anticipatory guidance
• Oral hygiene
• High-risk diets and dietary practices
• Regarding dental and oral development
• Fluoride status
• Nonnutritive sucking habits
• Teething
• injury prevention
If patient diagnosed with oral disease or trauma: provide therapy or referral to an appropriately trained individual for treatment

Bright Futures (2008)
4 month old
- Anticipatory guidance
- Support the concept of the identification of a dental home

6 month old
- Administer the oral health risk assessment
- Anticipatory guidance
- Maternal oral health care, use of clean pacifier, teething/drooling, avoidance of bottle in bed
- Fluoride, oral hygiene/soft toothbrush, avoidance of bottle in bed

Children 2-5 years of age
- 2.5 yrs: For children that do not have a dental home, refer them to a dentist, if not available, oral health risk assessment. Also, if the primary source of water is deficient in fluoride, prescribe an oral fluoride supplementation
Expert Consensus

1c.10 Clinical Practice Guideline Citation: Hagan, JF, Shaw JS, Duncan PM, eds. 2008. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, Third Edition. Elk Grove, IL: American Academy of Pediatrics

Institute for Clinical Systems Improvement. Preventive Services for Children and Adolescents 15th Edition. October 2009

American Academy of Pediatric Dentistry. Clinical guideline on infant oral health care. Chicago (IL): American Academy of Pediatric Dentistry; 2004.

American Academy of Pediatrics. Oral Health Risk Assessment Timing and Establishment of the Dental Home. Pediatrics. Vol. 111 No. 5 May 2003. ADA endorsed.
1c.11 National Guideline Clearinghouse or other URL: http://www.guideline.gov/content.aspx?id=15251

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**
Fair to Good

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: Expert consensus with evidence review **1c.14 Rationale for using this guideline over others:** The measure is based on the guidelines and evidence body as a whole	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*): Children who had documentation in the medical record of oral health services or access by the time they reach age 2 years **2a.2 Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*): 1 Year **2a.3 Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*): Oral Health Services or Access is documentation of any of the following. > Assessment of Caries Risk using the American Academy of Pediatric Dentistry (AAPD) Caries-Risk Assessment Tool > Dental Treatment > Referal Attempt (e.g. list of providers given to caregiver) > Dental Visit	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*): Children with a visit who turned 2 years old in the measurement year **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** 1-2 years **2a.7 Denominator Time Window** (*The time period in which cases are eligible for inclusion in the denominator*): 1 year **2a.8 Denominator Details** (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*): Children who turned 2 years of age between January 1 of the measurement year and December 31 of the measurement year and who had documentation of a face-to-face visit between the clinician and the child that predates the child's birthday by at least 12 months.	**2a-specs** **C☐** **P☐** **M☐** **N☐**

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** None

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
NA

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
This measure is not stratified

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**
NA

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year, AND
Who had a visit within the past 12 months of the child´s birthday
Step 2: Determine the numerator
Children who had documentation in the medical record of the screening or service during the measurement year, going back to the child´s first birthday

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
For this physician-level measure, we anticipate the entire population will be used in the denominator. If a sample is used, a random sample is ideal. NCQA's work has indicated that a sample size of 30-50 patients would be necessary for a typical practice size of 2000 patients.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Paper medical record/flow-sheet, Electronic clinical data, Electronic Health/Medical Record

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Medical Record

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Clinicians: Individual, Clinicians: Group, Population: national, Population: regional/network

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Amb Surgery Center, Ambulatory Care: Office, Ambulatory Care: Clinic, Ambulatory Care: Hospital Outpatient, Behavioral health/psychiatric unit

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: PA/NP/Advanced Practice Nurse, Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing **2b.1 Data/sample** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure) **2b.2 Analytic Method** *(type of reliability & rationale, method for testing)*: We calculated 95% confidence intervals, which speak to the precision of the rates obtained from field testing. **2b.3 Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*: Rate (Upper Confidence Interval, Lower Confidence Interval): 0.594 (0.52, 0.67)	**2b** C☐ P☐ M☐ N☐
2c. Validity testing **2c.1 Data/sample** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure) **2c.2 Analytic Method** *(type of validity & rationale, method for testing)*: NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area. **2c.3 Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: This measure was deemed valid by the expert panel. In addition, this measure does not utilize administrative data sources; data recorded in the chart is considered the gold standard.	**2c** C☐ P☐ M☐ N☐
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** No Exclusions **2d.2 Citations for Evidence:** NA **2d.3 Data/sample** *(description of data/sample and size)*: NA **2d.4 Analytic Method** *(type analysis & rationale)*: NA **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** C☐ P☐ M☐ N☐ NA☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: NA **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA **2e.3 Testing Results** *(risk model performance metrics)*: NA **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**2e** C☐ P☐ M☐ N☐ NA☐

2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure) **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: Eligible population: Measure 1: Oral Health Access by age 2 years: 180 Performance rate: Oral Health Access by age 2 years: 74.4	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: NCQA received data from 18 physician practices who submitted 10 records per measure (total 180 records per measure) **2g.2 Analytic Method** *(type of analysis & rationale)*: This measure is chart review only; no other sources were identified by the expert panel; this measure does not utilize administrative data. **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*: NA	**2g** C☐ P☐ M☐ N☐ NA☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** Not in use but testing completed **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** *(If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years)*: This measure is not currently publicly reported. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate.	**3a** C☐ P☐ M☐ N☐

3a.3 If used in other programs/initiatives (*If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*): This measure is not currently used in QI. NCQA is exploring the feasibility of adding this measure and its related measures into a physician-level program and/or the HEDIS® measurement set as appropriate. NCQA anticipates that after we release these measures, they will become widely used, as all our measures do. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)*: Expert panel, other stakeholders, and 19 physician field test participants **3a.5 Methods** *(e.g., focus group, survey, QI project)*: NCQA vetted the measures with its expert panel. In addition, throughout the development process, NCQA vetted the measure concepts and specifications with other stakeholder groups, including the National Association of State Medicaid Directors, NCQA's Health Plan Advisory Council, NCQA's Committee on Performance Measurement, and the American Academy of Pediatrician's Quality Improvement Innovation Network. After field testing, NCQA also conducted a debrief call with field test participants. In the form of a group interview, NCQA systematically sought feedback on whether the measures were understandable, feasible, important, and had face validity. **3a.6 Results** *(qualitative and/or quantitative results and conclusions)*: NCQA received feedback that the measure is understandable, feasible, important and valid.	
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** NA	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be	**Eval**

implemented for performance measurement. (evaluation criteria)	Rating
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.** NCQA plans to eventually adapt this measure for use in electronic health records.	**4b** C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** During the measure development process the Child Health MAP and measure development team worked with NCQA's certified auditors and audit department to ensure that the measure specifications were clear and auditable. The denominator, numerator and any exclusions are concisely specified and align with our audit standards.	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on field test results, we have specified the measure to assess whether screening was documented and whether use of a standardized tool was documented. Our field test results showed that these data elements are available in the medical record. In addition, our field test participants noted that many were able to program these requirements into their electronic health record systems, and several implemented point-of-service physician reminders for this measure. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Collecting measures from medical charts is time-consuming and can be burdensome. Adapting this measure in electronic health records may relieve some of this burden. **4e.3 Evidence for costs:** Based on field test participant feedback and other stakeholder input **4e.4 Business case documentation:**	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**

Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? Rationale:	4 C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	Time-limited ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
National Committee for Quality Assurance, 1100 13th St, NW, Suite 1000, Washington, District Of Columbia, 20005

Co.2 Point of Contact
Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-

Measure Developer If different from Measure Steward
Co.3 Organization
National Committee for Quality Assurance, 1100 13th St, NW, Suite 1000, Washington, District Of Columbia, 20005

Co.4 Point of Contact
Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-

Co.5 Submitter If different from Measure Steward POC
Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Child Health Measurement Advisory Panel:
Jeanne Alicandro
Barbara Dailey
Denise Dougherty, PhD
Ted Ganiats, MD
Foster Gesten, MD
Nikki Highsmith, MPA
Charlie Homer, MD, MPH
Jeff Kamil, MD
Elizabeth Siteman
Mary McIntyre, MD, MPH
Virginia Moyer, MD, MPH, FAAP
Lee Partridge
Xavier Sevilla, MD, FAAP
Michael Siegal
Jessie Sullivan

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.6 Year the measure was first released: **Ad.7 Month and Year of most recent revision:** **Ad.8 What is your frequency for review/update of this measure?** **Ad.9 When is the next scheduled review/update for this measure?**
Ad.10 Copyright statement/disclaimers:
Ad.11 -13 Additional Information web page URL or attachment:
Date of Submission (*MM/DD/YY*)**:** 01/06/2011

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1411 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Adolescent Well Care
De.2 **Brief description of measure:** The percentage of enrolled members 12–21 years of age who had at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner during the measurement year.
1.1-2 **Type of Measure:** Use of services De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** NA
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain:** Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability, Payment incentive	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Investing in preventive care can reduce morbidity and mortality. In addition, this preventive services can result in significant cost savings. An analysis of the cost-effectiveness of recommended preventive services demonstrated that for a relatively small net cost, most of preventive services produce valuable health benefits. Eighteen of the 25 preventive services evaluated cost $50,000 or less per quality-adjusted life year (QALY), and 10 of these cost less than $15,000 per QALY, all within the range of what is considered a favorable cost-effectiveness ratio.(Schor T, 2007) 1a.4 **Citations for Evidence of High Impact:** Edward L. Schor T, MD. The future pediatrician: promoting children's health and development. Partnership for prevention. Preventive Care: A national profile on use, disparities, and health Benefits. November 2007.	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** This measure encourages health plans to invest in activities that use resources most effectively to maximize health. Routine well-care visits are an effective way for practitioners to dispense health promotion advice, intervene when an	**1b** C☐ P☐ M☐ N☐

adolescent is engaged in health risk behaviors (e.g., tobacco use) and identify patients who are at early stages of disease and illness.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
Studies assessing pediatric preventive services have revealed deficits in recommended preventive and health promotion services. Mangione-Smith et al found that children are receiving only about 43 percent of recommended preventive care. The national average of adolescent well-care visits was 41.8 percent in 2009.

The quality of well visits varies among physician practices. Approximately 72 percent of adolescents visit a physician at least once a year, but few are screened for or educated about health risks that affect adolescents directly (Halpern, 2000). Among Medicaid populations, only approximately one-fifth of children received preventive and developmental services that met a basic threshold of quality for each aspect of care assessed. A national survey of parents found that over 94 percent of parents reported an unmet need for parenting guidance, education, or screening by pediatric clinicians in one or more of the content of care areas. In general, substantially less than one-half of children and adolescents receive developmental and psychosocial surveillance, disease screening, and anticipatory guidance.

1b.3 Citations for data on performance gap:
http://health.utah.gov/hda/reports/2008/hmo/quality/commercial/wellcare.php#1
Edward L. Schor, MD. Rethinking Well-Child Care

1b.4 Summary of Data on disparities by population group:
Higher-need families, those with low incomes or low levels of maternal education, and those relying on Medicaid for their children's health care do not receive additional anticipatory guidance or longer well-child visits, and sometimes receive less information and shorter visits. At-risk children have been found to be less likely to receive preventive and developmental services during well care visits, and low-income families are less likely to receive referrals to community resources that may be helpful to them.

In addition, variables such as age, race/ethnicity and socioeconomic status affect receipt of well care services. Hispanic adolescents are less likely than white and black adolescents to have had a health care visit in the past 12 months (CDC, 2000).

1b.5 Citations for data on Disparities:
Edward L. Schor T, MD. The future pediatrician: promoting children's health and development.

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Although outcomes can focus on both the long and short term, it is important to remember that well-child care can affect the seemingly distant future for both child and family. For example, altering dietary habits in childhood or adolescence can help prevent heart attacks during middle age. Positive parenting can avoid adult depression and substance abuse.(Felitti, 1998) Researchers are increasingly recognizing the importance and impact of early life experience and health behaviors on health and wellbeing in later life. (Halfon, 2002)

1c.2-3. Type of Evidence: Observational study, Evidence-based guideline, Expert opinion, Systematic synthesis of research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Several national organizations have developed evidence-based guidelines and recommendations for adolescent preventive services, including the American Academy of Pediatrics (AAP), the American Academy of Family Practice (AAFP), the Maternal Child Health Bureau (MCHB) through Bright Futures, the American Medical Association (AMA) through the Guidelines for Adolescent Preventive Services (GAPS), and the United States Preventive Services Task Force (USPSTF). The federal government has also offered guidance regarding the provision of adolescent preventive services through its basic requirements of states´ Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) programs for Medicaid-enrolled adolescents . The American Academy of Pediatrics recommends well care visits yearly for those aged ten to 21 years old (AAP, 2000).

1c
C☐
P☐
M☐
N☐

Guidelines recommend that all adolescents have an annual, confidential preventive services visit during which primary care physicians should screen, educate, and counsel adolescent patients on a number of biomedical, emotional, and socio-behavioral areas currently threatening adolescent health.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):** Fair to good

1c.6 Method for rating evidence: Expert Consensus

1c.7 Summary of Controversy/Contradictory Evidence: None

1c.8 Citations for Evidence (*other than guidelines***):** American Medical Association. Guidelines for Adolescent Preventive Health Services- Recommendations for Physicians and other Health Professionals.
American Academy of Pediatrics. Committee on Practice and Ambulatory Medicine: Recommendations for Preventive Pediatric Health Care. Pediatrics 2000 105: 645-646.
CDC. Medical-Care Spending – United States. MMWR Weekly. August 19,1994/43(32);581-586.
CDC. NCHS. Health, United States, 2000 with Adolescent Health Chartbook.
Halpern-Felsher B L, PhD, et al. Preventative Services in a Health Maintenance Organization. Arch Pediatr Adolesc Med 154 (2000): 173-179.
Nevin, Janice E., MD, MPH., and Witt, Deborah K., MD. "Well child and preventive care" Prim Care Clin Office Pract 29 (2002): 543-555.
Towey, K., MEd, and Flaming, M., PhD. Healthy Youth 2010 – Supporting the 21 Critical Adolescent Objectives.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
The American Academy of Pediatrics recommends well care visits yearly for those aged ten to 21 years old (AAP, 2009). Guidelines recommend that all adolescents have an annual, confidential preventive services visit during which primary care physicians should screen, educate, and counsel adolescent patients on a number of biomedical, emotional, and socio-behavioral areas currently threatening adolescent health.

The American Medical Association recommends a preventive services package should be delivered during a series of annual health visits between the ages of 11-21. (AMA)

The Institute for Clinical Systems Improvement (ICSI, 2009) recommends to provide a comprehensive approach to the provision of preventive services, counseling, education and disease screening for average-risk, asymptomatic individuals. The guideline targets asymptomatic children seeking health care who would benefit from preventive services. This resource is intended to assist in the prioritization of screening maneuvers, testing and counseling opportunities. (Level 1)

1c.10 Clinical Practice Guideline Citation: American Academy of Pediatric Committee on Practice and Ambulatory Medicine. Recommendations for pediatric preventive healthcare. PEDIATRICS Vol. 105 No. 3 March 2000, pp. 645-646
American Academy of Family Physicians. Summary of policy recommendations for periodic health examinations, revision 6.0; August 2005.
Elster A, Kuznets N. AMA Guidelines for Adolescent Preventive Services (GAPS). Baltimore, MA: Williams & Wilkins; 1994.http://www.ama-assn.org/ama/pub/physician-resources/public-health/promoting-healthy-lifestyles/adolescent-health/guidelines-adolescent-preventive-services.shtml . Accessed August 2010
Green M, Palfrey JS, eds. 2002. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents (2nd ed., rev.). Arlington, VA: National Center for Education in Maternal and Child Health.
Institute for Clinical Systems Improvement (ICSI). Health Care Guideline: Preventive Services for Children and Adolescents. October 2009.
http://www.icsi.org/preventive_services_for_children__guideline_/preventive_services_for_children_and_adolescents_2531.html. Access August 2010
1c.11 National Guideline Clearinghouse or other URL: Routine preventive services for children and adolescents (ages 2 - 21):
http://www.guideline.gov/summary/summary.aspx?doc_id=15117&nbr=007412&string=Adolescent+AND+Preventive+AND+Services

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom*)**:** ICSI: Level I **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: ICSI Criteria: Level I Preventive Services that providers and care systems must deliver (based on best evidence). (Annotation #2) Level II Preventive Services that providers and care systems should deliver (based on good evidence). (Annotation #3) Level III Preventive Services for which the evidence is currently incomplete and/or high burden and low cost, therefore left to the judgment of individual medical groups, clinicians and their patients. (Annotation #4) Level IV Preventive services that are not supported by evidence and not recommended. (Annotation #5) **1c.14 Rationale for using this guideline over others:** NA	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	**2a-specs** **C☐** **P☐** **M☐** **N☐**
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Had at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner **2a.2 Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*)**:** 1 year **2a.3 Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:** At least one comprehensive well-care visit with a PCP or an OB/GYN practitioner during the measurement year. The PCP does not have to be assigned to the member. Adolescents who had a claim/encounter with a code listed in Table AWC-A are considered to have received a comprehensive well-care visit. Codes to Identify Adolescent Well-Care Visits: 99383-99385, 99393-99395 V20.2, V70.0, V70.3, V70.5, V70.6, V70.8, V70.9	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*)**:** percentage of enrolled members 12–21 years of age **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** 12–21 years	

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
1 year

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
Product lines: Commercial, Medicaid (report each product line separately).
Ages: 12–21 years as of December 31 of the measurement year.
Continuous enrollment: The measurement year.
Allowable gap: Members who have had no more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid member for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (i.e., a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).
Anchor date: December 31 of the measurement year.
Benefit: Medical

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** No exclusions

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
NA

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
Not stratified

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**
NA

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year
Step 2: Determine the numerator
Children who had documentation in the medical record of the screening or service during the measurement year or the year previous to the measurement year.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
None

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Electronic administrative data/claims

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
HEDIS

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment: **2a.32-35 Level of Measurement/Analysis** (*Check the level(s) for which the measure is specified and tested)* Health Plan, Integrated delivery system **2a.36-37 Care Settings (***Check the setting(s) for which the measure is specified and tested)* **2a.38-41 Clinical Services** (*Healthcare services being measured, check all that apply*) Clinicians: Physicians (MD/DO)	
TESTING/ANALYSIS	
2b. Reliability testing **2b.1 Data/sample** *(description of data/sample and size)*: We did not conduct reliability testing for this measure. **2b.2 Analytic Method** *(type of reliability & rationale, method for testing)*: NA **2b.3 Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*: NA	**2b** C☐ P☐ M☐ N☐
2c. Validity testing **2c.1 Data/sample** *(description of data/sample and size)*: stakeholders and experts **2c.2 Analytic Method** *(type of validity & rationale, method for testing)*: NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups, including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area. **2c.3 Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: This measure was deemed valid by the expert panel.	**2c** C☐ P☐ M☐ N☐
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** No exclusions **2d.2 Citations for Evidence:** NA **2d.3 Data/sample** *(description of data/sample and size)*: NA **2d.4 Analytic Method** *(type analysis & rationale)*: NA **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: NA	**2e** C☐ P☐

2e.2 Analytic Method *(type of risk adjustment, analysis, & rationale)*: NA **2e.3 Testing Results** *(risk model performance metrics)*: NA **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**M☐ N☐ NA ☐**
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: Currently used in HEDIS **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: HEDIS 2006 Data National Mean: 43.66 10th %tile: 31.32 50th %tile: 42.36 90th %tile: 58.88 HEDIS 2007 Data National Mean: 41.88 10th %tile: 26.24 50th %tile: 42.09 90th %tile: 56.67	**2f C☐ P☐ M☐ N☐**
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: NA **2g.2 Analytic Method** *(type of analysis & rationale)*: This measure is administrative data only **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*: NA	**2g C☐ P☐ M☐ N☐ NA ☐**
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h C☐ P☐ M☐ N☐ NA ☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** **C☐ P☐ M☐ N☐**

3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Eval Rating
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** In use 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** This measure is used in public reporting 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*)**:** This measure is a measure in the Healthcare Effectiveness Data and Information Set (HEDIS) **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)***:** Expert panel, other stakeholders, and 19 physician field test participants 3a.5 **Methods** *(e.g., focus group, survey, QI project)***:** For this health plan measure, we released the measure for public comment and reviewed all results with the NCQA Committee on Performance Measurement (CPM). We also reviewed first-year results with the CPM. 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)***:** NCQA received feedback that the measure is understandable, feasible, important and valid. Upon review of public comment results, the Committee on Performance Measurement approved the NCQA staff recommendation to add the measure to HEDIS. After reviewing first-year analysis results, the CPM approved the staff recommendation to publicly report the measure. The measure was deemed usable and feasible.	**3a** C☐ P☐ M☐ N☐
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:** NA	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?** NA	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** NA 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** NA	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met?	**3**

Rationale:	**C☐ P☐ M☐ N☐**
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** **C☐ P☐ M☐ N☐**
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.** NCQA may eventually adapt this measure for use in electronic health records.	**4b** **C☐ P☐ M☐ N☐**
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No 4c.2 **If yes, provide justification.**	**4c** **C☐ P☐ M☐ N☐ NA☐**
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** All measures that are used in NCQA programs are audited.	**4d** **C☐ P☐ M☐ N☐**
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on data analysis over the years, we specified the measure to assess whether adolescents received preventive care visits. HEDIS results show that these data elements are available in administrative data sources. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** This measure appears in HEDIS and is subject to HEDIS costs. 4e.3 **Evidence for costs:** User feedback 4e.4 **Business case documentation:**	**4e** **C☐ P☐ M☐ N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**

Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? Rationale:	4 C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	Time-limited ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005

Co.2 Point of Contact
Sepheen, Byron, byron@ncqa.org, 202-955-3573-

Measure Developer If different from Measure Steward
Co.3 Organization
National Committee for Quality Assurance, 1100 13th Street NW, Suite 1000, Washington, District Of Columbia, 20005

Co.4 Point of Contact
Sepheen, ByronByron, byron@ncqa.orgbyron@ncqa.org, 202-955-3573-

Co.5 Submitter If different from Measure Steward POC
Sepheen, Byron, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
Over the years, the following expert panel has contributed to many of the measures in the HEDIS set that apply to women and children.
David Archer, MD
Eastern Virginia Medical School
Grant P. Bagley, MD, JD
Arnold & Porter
Thomas J. Benedetti, MD
University of Washington Medical Center
Denis Dougherty
Agency for Healthcare Research and Quality (AHRQ)
Christopher B. Forrest, MD, PhD
The Children's Hospital of Philadelphia
Shirley Girouard, PhD, RN
Southern Connecticut State University
Bill Heuston, MD
Medical University of South Carolina
Mary Kay Holleran

Highmark Caring Foundation
Charles Homer MD, MPH
National Initiative for Children's Healthcare Quality
Marilyn C. Jones, MD
Children's Hospital
Milton Kotelchuck, PhD, MPH
Boston University School of Public Health Mark Mandell, MD
Partners Community Health Care, Inc.
Dorothy Mann, PhD, MPH
Consultant
Robert H. Pantell, MD
University of California, San Francisco
Lee Partridge
Health Resources and Services Administration (HRSA)
Mark Pearlman, MD
University of Michigan Health Systems
Robin S. Richman, MD
Harvard Vanguard Medical Associates
Michael G. Ross, MD, MPH
University of California, Los Angeles
Medical Center
Maureen Shannon, CNM, FNP, MS
University of California, San Francisco
Jeff Susman, MD
University of Cincinnati
Lynne S. Wilcox, MD, MPH
Centers for Disease Control and Prevention (CDC)

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 1995
Ad.7 Month and Year of most recent revision: 07, 2010
Ad.8 What is your frequency for review/update of this measure? Annual
Ad.9 When is the next scheduled review/update for this measure? 07, 2011

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 09/02/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1390 **NQF Project:** Child Health Quality Measures 2010

MEASURE DESCRIPTIVE INFORMATION

De.1 Measure Title: Child and Adolescents´ Access to Primary Care Practitioners

De.2 Brief description of measure: The percentage of members 12 months–19 years of age who had a visit with a PCP. The organization reports four separate percentages for each product line.
-Children 12–24 months and 25 months–6 years who had a visit with a PCP during the measurement year
-Children 7–11 years and adolescents 12–19 years who had a visit with a PCP during the measurement year or the year prior to the measurement year

1.1-2 Type of Measure: Access
De.3 If included in a composite or paired with another measure, please identify composite or paired measure
None

De.4 National Priority Partners Priority Area: Population health
De.5 IOM Quality Domain: Timeliness
De.6 Consumer Care Need: Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* **A.1 Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes **A.2 Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure **A.3 Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission	**A** Y☐ N☐

A.4 Measure Steward Agreement attached:	
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement Accountability	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. **D.1Testing:** Yes, fully developed and tested **D.2 Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 Demonstrated High Impact Aspect of Healthcare: Affects large numbers, Patient/societal consequences of poor quality **1a.2** **1a.3 Summary of Evidence of High Impact:** Primary care is defined as integrated and accessible care from physicians, nurse practitioners, or other qualified providers who are accountable for a wide range of personal health care needs, who have a relationship with patients, and practice in the context of the family and community (Agency for Healthcare Research and Quality, 2007). Despite the United States having the highest per capita health expenditures in the world, it ranks at the bottom or near bottom of a wide array of health measures, and one reason for this low ranking is a lack of emphasis on primary care services. Countries that emphasize primary care (namely Denmark, Finland, Netherlands, Spain, and the United Kingdom) have better health outcomes, such as reduced rates of low birthweight, neonatal mortality, child mortality, and injury-related deaths (Starfield, 2002). Countries with a stronger orientation towards primary care also have fewer years of life lost (a reduced rate of premature mortality); and a lower incidence of influenza, pneumonia, asthma, bronchitis, and heart disease (Macinko, 2003) The lowered rate of illness means lower healthcare expenditures. Even in the U.S., cities that have a higher-than-average proportion of primary care practices experience lower in- and out-patient care costs.	**1a** C☐ P☐ M☐ N☐

1a.4 Citations for Evidence of High Impact: Agency for Healthcare Research and Quality. Primary Care: Where Research and Practice Meet: Fact Sheet. Available at: http://www.ahrq.gov/about/cpcr/practice.htm. Accessed on July 12, 2007.

Starfield B, Shi L. Policy relevant determinants of health: an international perspective.Health Policy. 2002;60(3):201-218.

Macinko J, Starfield B, Shi L. The contribution of primary care systems to health outcomes within organization for economic cooperation and development (OECD) countries, 1970-1998. Health Services Research. 2003;38(3):831-865.

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: This measure encourages access to primary care. Access to primary care has been shown to correlate with reduced hospital use while preserving quality (Bindham 1995, Bodenheimer 2005).

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
Numerous studies have demonstrated the value of primary care in improving health outcomes of various populations. (Macinko J, 2007) Despite this evidence, effective primary care physician (PCP) workforce distribution remains a problem in the United States. Although physician supply has been increasing in the United States, (Phillips RL, 2006) the PCP workforce for children varies by more than sixfold across primary care service areas, and nearly 1 million children live in areas without physicians. (Shipman S, 2006)

In addition, NCQA's HEDIS measure has shown that performance among health plans is low. The rate of Children and Adolescents´ access to PCP was 93.45% among children with 12-24 months old in 2007; the rate was 84.32% among children with 25 months-6 years old; the rate was 85.86 among children with 7-11 years old; and the rate was 82.66% among adolescents with 12-19 years old. (NCQA, 2009)

1b.3 Citations for data on performance gap:
Macinko J, Starfield B, Shi L. Quantifying the health benefits of primary care physician supply in the United States. Int J Health Serv. 2007;37(1):111–126

Phillips RL, Jr, Bazemore AW, Dodoo MS, Shipman SA, Green LA. Family physicians in the child health care workforce: opportunities for collaboration in improving the health of children. Pediatrics. 2006;118(3):1200–1206

Shipman S, Goodman D, Bethell C, Newton K. Pediatric workforce maldistribution: examining the scope of the problem [abstract]. Presented at Pediatric Academic Societies Meeting; April 29–May 2, 2006; San Francisco, CA.

1b.4 Summary of Data on disparities by population group:
Among children ages 0-17, having a usual primary care provider varies by income. Data for 2006 show that children in high-income families are more likely than children at other income levels to have a primary care provider (94 percent of high-income families versus 87 percent of poor families, 85 percent of near poor families and 90% of middle-income families). Children with private insurance are more likely to have a usual source of care than children with public insurance or children who are uninsured (94 percent compared with 88 percent and 68 percent, respectively) (AHRQ, 2010).

1b.5 Citations for data on Disparities:
Agency for Healthcare Research and Quality. Findings on Children's Health Care Quality and Disparities. June 2010.
http://www.ahrq.gov/qual/nhqrdr09/nhqrdrchild09.pdf

1b C☐ P☐ M☐ N☐

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired*

1c C☐ P☐

outcome. For outcomes, describe why it is relevant to the target population)**:** Numerous studies have demonstrated the value of primary care in improving health outcomes of various populations. Studies showed that those U.S. states with higher ratios of primary care physicians to population had better health outcomes, including lower rates of all causes of mortality. For state-level all-cause mortality, an increase in primary care supply is predicted to reduce mortality by 41 to 85 per 100,000, averaging about 68 per 100,000. One additional primary care physician per 10,000 population is estimated to result in a fourfold greater reduction in mortality for black populations than for white populations (Macinko, 2007).

Consistent with these findings for total and cause-specific mortality, the reduction in low birth weight at the state level was significantly associated with the supply of primary care physicians in the concurrent year as well as after one-, three-, and five-year lag periods (Shi et al. 2004). A greater supply of primary care physicians was associated with lower infant mortality as well and persisted after controlling for various socioeconomic characteristics and income inequality.

1c.2-3. Type of Evidence: Evidence-based guideline, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
It has been long documented that having a primary care provider serve as the first point-of-contact has many benefits. The primary care provider can serve two main functions. First, the patient benefits from obtaining care from the most appropriate source of care; second, to the extent that the gatekeeper either provides care him/herself or refers the patient to non-specialist providers, this practice is likely to result in lower costs of treatment, because specialist care is more expensive (Starfield, 1992).

A large number of studies have documented the benefit of facilitating access to care in general on morbidity and mortality. Few studies, however, investigate the separate impact of its various components. In general, studies find that while access to care for poor children improves when public policy is directed at achieving this goal, poor children still have inadequate access to care given their greater health needs. Access to care is better for poor children on Medicaid as compared with poor children without Medicaid, but Medicaid coverage does not ensure access to care similar to other children in terms of locations and continuity (Johansen, 1994)).

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*)**:** Good

1c.6 Method for rating evidence: Expert Consensus

1c.7 Summary of Controversy/Contradictory Evidence: None

1c.8 Citations for Evidence (*other than guidelines*)**:** Starfield, B. (1992). Primary Care, Concept, Evaluation, and Policy. New York: Oxford University Press.

Anne S. Johansen, Barbara Starfield, Jennifer Harlow, Analysis of the Concept of Primary Care for Children and Adolescents. http://www.jhsph.edu/wchpc/publications/Analysis_Concept_Primary_Care.pdf

James Macinko, Barbara Starfield, and Leiyu Shi. QUANTIFYING THE HEALTH BENEFITS OF PRIMARY CARE PHYSICIAN SUPPLY IN THE UNITED STATES. International Journal of Health Services; 2007, Vol. 37 Issue 1, p111-126, 16p, 1 Chart, 4 Graphs

Starfield, B., and L. Shi. 2004. The Medical Home, Access to Care, and Insurance: A Review of Evidence. Pediatrics 113:1493–8.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*)**:**
AAP/Bright Futures (2008)
AAP/Bright Futures recommends preventive care visits at the following periodicity for early childhood and adolescence stages of life:

One visit at the following ages:

M☐
N☐

12 months 15 months 18 months 24 months 30 months Annual visits beginning at age 3 years and ending at age 21 years **1c.10 Clinical Practice Guideline Citation:** Hagan JF, Shaw JS, Duncan PM, eds. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2008. **1c.11 National Guideline Clearinghouse or other URL:** http://www.icsi.org/preventive_services_for_children__guideline_/preventive_services_for_children_and_adolescents_2531.html **1c.12 Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** Good **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: Expert Consensus **1c.14 Rationale for using this guideline over others:** These guidelines represent a consensus by the American Academy of Pediatrics (AAP) and Bright Futures. The AAP continues to emphasize the great importance of continuity of care in comprehensive health supervision and the need to avoid fragmentation of care.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** Members 12 months–19 years of age who had a visit with a PCP **2a.2 Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** 2 years **2a.3 Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** For 12–24 months, 25 months–6 years: One or more visits with a PCP during the measurement year. For 7–11 years, 12–19 years: One or more visits with a PCP during the measurement year or the year prior to the measurement year.	**2a-specs** **C☐** **P☐** **M☐** **N☐**

The organization should count all members who had an ambulatory or preventive care visit to any PCP, as defined by the organization, with a CPT or ICD-9-CM code listed in Table CAP-A. Exclude specialist visits.

Codes to Identify Ambulatory or Preventive Care Visits
Office or other outpatient services: 99201-99205, 99211-99215, 99241-99245
Home services: 99341-99345, 99347-99350
Preventive medicine: 99381-99385, 99391-99395, 99401-99404, 99411-99412, 99420, 99429
General medical examination: V20.2, V70.0, V70.3, V70.5, V70.6, V70.8, V70.9

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):**
12 months–19 years as of December 31 of the measurement year. Report four age stratifications.

2a.5 Target population gender: Female, Male
2a.6 Target population age range: 12 months–19 years of age

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
1 year

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
Product lines: Commercial, Medicaid
Ages: 12 months–19 years as of December 31 of the measurement year. Report four age stratifications.
• 12–24 months as of December 31 of the measurement year. Include all children who are at least 12 months old but younger than 25 months old during the measurement year (i.e., born on or between December 31, 2009, and December 1, 2008).
• 25 months–6 years as of December 31 of the measurement year. Include all children who are at least 2 years and 31 days old but not older than 6 years during the measurement year (i.e., born on or between November 30, 2008, and January 1, 2004).
• 7–11 years as of December 31 of the measurement year.
• 12–19 years as of December 31 of the measurement year.
Continuous EnrollmentFor 12–24 months, 25 months–6 years: The measurement year.
For 7–11 years, 12–19 years: The measurement year and the year prior to the measurement year.
Allowable gap
For 12–24 months, 25 months–6 years: No more than one gap in enrollment of up to 45 days during the measurement year.
For 7–11 years, 12–19 years: No more than one gap in enrollment of up to 45 days during each year of continuous enrollment.
To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (i.e., a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled) during each year of continuous enrollment.
Anchor date: Dec 31 of measurement year
Benefit: medical

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** No exclusions

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
NA

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
Measure is stratified by age group

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

NA

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Step 1: Determine the denominator
Children who turned the requisite age in the measurement year
Step 2: Determine the numerator
Children who had a preventive care visit as determined by the codes listed above.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:
Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
NA

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Electronic administrative data/claims

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
HEDIS

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Health Plan, Integrated delivery system, Population: national, Population: regional/network

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care: Office, Ambulatory Care: Clinic, Ambulatory Care: Hospital Outpatient

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*: We did not conduct reliability testing for this measure.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
NA

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
NA

2b
C☐ P☐ M☐ N☐

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*: expert panel

2c.2 Analytic Method *(type of validity & rationale, method for testing)*:
NCQA tested the measure for face validity using a panel of stakeholders with specific expertise in measurement and child health care. This panel included representatives from key stakeholder groups,

2c
C☐ P☐ M☐ N☐

including pediatricians, family physicians, health plans, state Medicaid agencies and researchers. Experts reviewed the results of the field test and assessed whether the results were consistent with expectations, whether the measure represented quality care, and whether we were measuring the most important aspect of care in this area. 2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: This measure was deemed valid by the expert panel.	
2d. Exclusions Justified 2d.1 **Summary of Evidence supporting exclusion(s):** No exclusions 2d.2 **Citations for Evidence:** NA 2d.3 **Data/sample** *(description of data/sample and size)*: NA 2d.4 **Analytic Method** *(type analysis & rationale)*: NA 2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*: NA	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures 2e.1 **Data/sample** *(description of data/sample and size)*: NA 2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*: NA 2e.3 **Testing Results** *(risk model performance metrics)*: NA 2e.4 **If outcome or resource use measure is not risk adjusted, provide rationale:** The measure assesses prevention and wellness in a general population; risk adjustment is not indicated.	**2e** C☐ P☐ M☐ N☐ NA ☐
2f. Identification of Meaningful Differences in Performance 2f.1 **Data/sample from Testing or Current Use** *(description of data/sample and size)*: national HEDIS data (not a sample) 2f.2 **Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: Comparison of means and percentiles; analysis of variance against established benchmarks; if sample size is >400, we would use an analysis of variance 2f.3 **Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: 2a3 For 12–24 months, 25 months–6 years: One or more visits with a PCP during the measurement year. For 7–11 years, 12–19 years: One or more visits with a PCP during the measurement year or the year prior to the measurement year. The organization should count all members who had an ambulatory or preventive care visit to any PCP, as defined by the organization, with a CPT or ICD-9-CM code listed in Table CAP-A. Exclude specialist visits. Codes to Identify Ambulatory or Preventive Care Visits Office or other outpatient services: 99201-99205, 99211-99215, 99241-99245	**2f** C☐ P☐ M☐ N☐

Home services: 99341-99345, 99347-99350
Preventive medicine: 99381-99385, 99391-99395, 99401-99404, 99411-99412, 99420, 99429
General medical examination: V20.2, V70.0, V70.3, V70.5, V70.6, V70.8, V70.9

2a4
12 months–19 years as of December 31 of the measurement year. Report four age stratifications.
2a8
Product lines: Commercial, Medicaid
Ages: 12 months–19 years as of December 31 of the measurement year. Report four age stratifications.
• 12–24 months as of December 31 of the measurement year. Include all children who are at least 12 months old but younger than 25 months old during the measurement year (i.e., born on or between December 31, 2009, and December 1, 2008).
• 25 months–6 years as of December 31 of the measurement year. Include all children who are at least 2 years and 31 days old but not older than 6 years during the measurement year (i.e., born on or between November 30, 2008, and January 1, 2004).
• 7–11 years as of December 31 of the measurement year.
• 12–19 years as of December 31 of the measurement year.
Continuous EnrollmentFor 12–24 months, 25 months–6 years: The measurement year.
For 7–11 years, 12–19 years: The measurement year and the year prior to the measurement year.
Allowable gap
For 12–24 months, 25 months–6 years: No more than one gap in enrollment of up to 45 days during the measurement year.
For 7–11 years, 12–19 years: No more than one gap in enrollment of up to 45 days during each year of continuous enrollment.
To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (i.e., a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled) during each year of continuous enrollment.
Anchor date: Dec 31 of measurement year
Benefit: medical

25 Months-6 Years Old
National Mean: 84.92
10th %ile: 77.85
50th %ile: 86.74
90th %ile: 91.36
National Mean: 84.32
10th %ile: 74.2
50th %ile: 86.55
90th %ile: 91.98
7-11 Years Old
National Mean: 85.95
10th %ile: 76.99
50th %ile: 87.23
90th %ile: 93.26
National Mean: 85.86
10th %ile: 75.46
50th %ile: 87.83
90th %ile: 94.05
12-19 Years Old
National Mean: 83.22
10th %ile: 73.88
50th %ile: 85.26
90th %ile: 91.35
National Mean: 82.66
10th %ile: 70.56
50th %ile: 84.71
90th %ile: 91.86

2g. Comparability of Multiple Data Sources/Methods 2g.1 **Data/sample** *(description of data/sample and size)*: NCQA received data from 19 physician practices who submitted 10 records per measure (total 190 records per measure) 2g.2 **Analytic Method** *(type of analysis & rationale)*: This measure is chart review only; no other sources were identified by the expert panel; this measure does not utilize administrative data. 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*: NA	**2g** C☐ P☐ M☐ N☐ NA ☐
2h. Disparities in Care 2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified to detect disparities. 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:** NA	**2h** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** In use 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): This measure is used in public reporting. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** This measure is a measure in the Healthcare Effectiveness Data and Information Set (HEDIS) **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)*: General public and other stakeholder groups (i.e. HEDIS users) 3a.5 **Methods** *(e.g., focus group, survey, QI project)*: For the health plan measure, we released the measure for public comment and reviewed all results with the NCQA Committee on Performance Measurement (CPM). We also reviewed first-year results with the CPM. 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*: Upon review of public comment results, the Committee on Performance Measurement approved the NCQA staff recommendation to add the measure to HEDIS. After reviewing first-year analysis results, the CPM	**3a** C☐ P☐ M☐ N☐

approved the staff recommendation to publicly report the measure. The measure was deemed usable and feasible.	
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** NA	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.** NCQA plans to eventually adapt this measure for use in electronic health records.	**4b** C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No	**4c** C☐ P☐ M☐ N☐ NA

4c.2 **If yes, provide justification.**	☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** All measures that are used in NCQA programs are audited.	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Based on data analysis over the years, we specified the measure to assess whether children received preventive care visits; we assess two age bands that focus on early childhood and then school-age children and up. HEDIS results show that these data elements are available in administrative data sources. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** This measure appears in HEDIS and is subject to HEDIS costs. 4e.3 **Evidence for costs:** User feedback 4e.4 **Business case documentation:**	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐
CONTACT INFORMATION	
Co.1 **Measure Steward (Intellectual Property Owner)** Co.1 **Organization** National Committee for Quality Assurance, 1100 13th Street, NW, Suite 1000, Washington, District Of Columbia, 20005 Co.2 **Point of Contact** Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-	
Measure Developer If different from Measure Steward Co.3 **Organization** National Committee for Quality Assurance, 1100 13th Street, NW, Suite 1000, Washington, District Of Columbia, 20005 Co.4 **Point of Contact** Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-	

Co.5 Submitter If different from Measure Steward POC
Sepheen, Byron, MHS, byron@ncqa.org, 202-955-3573-, National Committee for Quality Assurance

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
The following panel has contributed over the years to the various HEDIS measures that relate to Women and Children´s health:
David Archer, MD
Eastern Virginia Medical School
Grant P. Bagley, MD, JD
Arnold & Porter
Thomas J. Benedetti, MD
University of Washington Medical Center
Denis Dougherty
Agency for Healthcare Research and Quality (AHRQ)
Christopher B. Forrest, MD, PhD
The Children's Hospital of Philadelphia
Shirley Girouard, PhD, RN
Southern Connecticut State University
Bill Heuston, MD
Medical University of South Carolina
Mary Kay Holleran
Highmark Caring Foundation
Charles Homer MD, MPH
National Initiative for Children's Healthcare Quality
Marilyn C. Jones, MD
Children's Hospital
Milton Kotelchuck, PhD, MPH
Boston University School of Public Health Mark Mandell, MD
Partners Community Health Care, Inc.
Dorothy Mann, PhD, MPH
Consultant
Robert H. Pantell, MD
University of California, San Francisco
Lee Partridge
Health Resources and Services Administration (HRSA)
Mark Pearlman, MD
University of Michigan Health Systems
Robin S. Richman, MD
Harvard Vanguard Medical Associates
Michael G. Ross, MD, MPH
University of California, Los Angeles
Medical Center
Maureen Shannon, CNM, FNP, MS
University of California, San Francisco
Jeff Susman, MD
University of Cincinnati
Lynne S. Wilcox, MD, MPH
Centers for Disease Control and Prevention (CDC)

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.6 Year the measure was first released: 1994 **Ad.7 Month and Year of most recent revision:** **Ad.8 What is your frequency for review/update of this measure?** 07/2010 **Ad.9 When is the next scheduled review/update for this measure?** 07, 2011
Ad.10 Copyright statement/disclaimers:
Ad.11 -13 Additional Information web page URL or attachment:
Date of Submission (*MM/DD/YY*)**:** 09/02/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1329 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Children Who Have a Personal Doctor or Nurse
De.2 **Brief description of measure:** Whether child has one or more doctors, nurses or other healthcare providers who know the child well
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain:** Effectiveness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least	**B** Y☐

every 3 years. Yes, information provided in contact section	N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Having a personal doctor or nurse that knows the child well and is familiar with his or her medical history is necessary for a child to receive effective preventive and acute medical care. It has been recognized as an initiative by the U.S. Department of Health and Human Services´ Healthy People 2020 (AHS HP2020-3: Increase the proportion of persons with a usual primary care provider). 1a.4 **Citations for Evidence of High Impact:** Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children´s Health, Data Resource Center for Child and Adolescent Health website. www.nschdata.org U.S. Department of Health and Human Services. Healthy People 2020. http://www.healthypeople.gov/HP2020/.	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** Health care providers, public health professionals and population-based health analysts can all benefit from knowing whether or not children are receiving quality care. Having the ability to recognize the what proportion of children have a personal doctor or nurse in various populations is essential to providing equitable and effective care to all patients across sociodemographic backgrounds.	**1b** C☐ P☐ M☐ N☐

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
Nationally, 92.2% of children age 0-17 have at least 1 personal doctor or nurse. There is a broad range in the prevalence of children who have a personal doctor or nurse, from 82.4% in Nevada to 97.3% New Hampshire.

1b.3 Citations for data on performance gap:
Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children´s Health, Data Resource Center for Child and Adolescent Health website. www.nschdata.org

1b.4 Summary of Data on disparities by population group:
The proportion of children who have a personal doctor or nurse (PDN) varies by race. 85.8% of Hispanic children, 88.8% of black, non-Hispanic children and 95.5% white, non-Hispanic children have a PDN. 80.7% of Hispanic children living in Spanish speaking households, and 91.2% of Hispanic children living in English speaking Hispanic HHs have a personal doctor or nurse.

1b.5 Citations for data on Disparities:
Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children´s Health, Data Resource Center for Child and Adolescent Health website. www.nschdata.org

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Health care providers, public health professionals and population-based health analysts can all benefit from knowing whether or not children are receiving quality care. Having the ability to recognize what proportion of various populations have a personal doctor or nurse is essential to providing equitable and effective care to all patients across sociodemographic backgrounds.

1c.2-3. Type of Evidence: Other Population Based Research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Children who have a personal doctor or nurse are less likely to have one or more unmet needs for care (6.4% vs. 11.4%). Children who have a personal doctor or nurse are also more likely to be in very good or excellent overall health than children who do not have a PDN (85.4% vs. 72.4%).

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**

1c.6 Method for rating evidence:

1c.7 Summary of Controversy/Contradictory Evidence:

1c.8 Citations for Evidence (*other than guidelines***):**

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**

1c.10 Clinical Practice Guideline Citation:
1c.11 National Guideline Clearinghouse or other URL:

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF)***:**

1c
C☐
P☐
M☐
N☐

1c.14 **Rationale for using this guideline over others:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 **Numerator Statement** (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Children with one or more health professionals considered by parents to be their child´s personal doctor or nurse 2a.2 **Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*)**:** Encounter or point in time. 2a.3 **Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:** For a child to be included in the target numerator of having a personal doctor or nurse, their parent must answer "yes" to the following question: A personal doctor or nurse is a health professional who knows your child well and is familiar with your child´s health history. Do you have one or more person(s) you think of as your child´s personal doctor or nurse? (K4Q04)	
2a.4 **Denominator Statement** (*Brief, text description of the denominator - target population being measured*)**:** Children age 0-17 years 2a.5 **Target population gender:** Female, Male 2a.6 **Target population age range:** Children age 0-17 years 2a.7 **Denominator Time Window** (*The time period in which cases are eligible for inclusion in the denominator*)**:** No defined time window for denominator--all parents of children 0-17 years are included in the denominator, and the question isn´t anchored to a specific point in time. 2a.8 **Denominator Details** (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*)**:** All children age 0-17 years	
2a.9 **Denominator Exclusions** (*Brief text description of exclusions from the target population*)**:** Excluded from denominator if child does not fall in target population age range of 0-17 years. 2a.10 **Denominator Exclusion Details** (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*)**:**	**2a-specs** **C☐** **P☐** **M☐** **N☐**

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
No stratification is required.
When the Personal Doctor or Nurse measure was administered in its most recent form, in the 2007 NSCH, the survey included a number of child demographic variables that allow for stratification of the findings by possible vulnerability:
- Age
- Gender
- Geographic location- State, HRSA Region, National level Rural Urban Commuter Areas (RUCA)
- Race/ethnicity
- Health insurance- type, consistency
- Primary household language
- Household income
- Special Health Care Needs- status and type

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
In order for a child to be scored as having a personal doctor or nurse, their parent must report that child has at least one health professional who knows the child well and is familiar with the child´s health history (K4Q04=1).

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
Best guideline to follow is the survey methodology used in the 2007 National Survey of Children´s Health.

The goal of the NSCH sample design was to generate samples representative of populations of children within each state. An additional goal of the NSCH was to obtain state-specific sample sizes that were sufficiently large to permit reasonably precise estimates of the health characteristics of children in each state.

To achieve these goals, state samples were designed to obtain a minimum of 1,700 completed interviews. The number of children to be selected in each National Immunization Survey (NIS) estimation area was determined by allocating the total of 1,700 children in the state to each National Immunization Survey (NIS) estimation area within the state in proportion to the total estimated number of households with children in the NIS estimation area. Given this allocation, the number of households that needed to be screened in each NIS estimation area was calculated using the expected proportion of households with children under 18 years of age in the area. Then, the number of telephone numbers that needed to be called was computed using the expected working residential number rate, adjusted for expected nonresponse.

A total of 91,642 interviews were completed from April 2007 to July 2008 for the 2007 National Survey of Children´s Health. A random-digit-dialed sample of households with children less than 18 years of age was selected from each of the 50 states and the District of Columbia. One child was randomly selected from all children in each identified household to be the subject of the survey. The respondent was a parent or guardian who knew about the child's health and health care.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested***)**
Survey: Patient

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**

2007 National Survey of Children´s Health; 2005/06 National Survey of Children with Special Health Care Needs

2a.26-28 **Data source/data collection instrument reference web page URL or attachment:** URL ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/slaits/nsch07/1a_Survey_Instrument_English/NSCH_Questionnaire_052109.pdf

2a.29-31 **Data dictionary/code table web page URL or attachment:** URL http://nschdata.org/Viewdocument.aspx?item=519

2a.32-35 **Level of Measurement/Analysis** (*Check the level(s) for which the measure is specified and tested)*
Population: national, Population: regional/network, Population: states

2a.36-37 **Care Settings (***Check the setting(s) for which the measure is specified and tested)*
Other Applies to any care setting in which child receives care. Can stratify by usual source of care.

2a.38-41 **Clinical Services** (*Healthcare services being measured, check all that apply*)
Other Patient Experience

TESTING/ANALYSIS

2b. Reliability testing

2b.1 **Data/sample** *(description of data/sample and size)*: Qualitative testing of the entire 2007 National Survey of Children´s Health was conducted by the National Center for Health Statistics. They conducted cognitive interviews with the 2007 NSCH Computer-Assisted Telephone Interview (CATI) to make sure the entire survey instrument was functioning properly. N=640 interviews were completed over 3 days in December 2006. The questionnaire was then revised and finalized based on feedback from participants in these interviews.

2b.2 **Analytic Method** *(type of reliability & rationale, method for testing)*:
Cognitive testing was conducted to test reliability and interpretability of questions across population.

2b.3 **Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
The Maternal and Child Health Bureau leads the development of the NSCH and NS-CSHCN survey and indicators, in collaboration with the National Center for Health Statistics (NCHS) and a national technical expert panel. The expert panel includes representatives from other federal agencies, state Title V leaders, family organizations, and child health researchers, and experts in all fields related to the surveys (adolescent health, family and neighborhoods, early childhood and development etc.). Previously validated questions and scales are used when available. Extensive literature reviewing and expert reviewing of items is conducted for all aspects of the survey. Respondents' cognitive understanding of the survey questions is assessed during the pretest phase and revisions made as required. All final data components are verified by NCHS and DRC/CAHMI staff prior to public release. Face validity is conducted in comparing results with prior years of the survey and/or results from other implementations of items. No specific reliability results are available for this measure. Please contact the CAHMI if quantitative measures are needed.

2b C☐ P☐ M☐ N☐

2c. Validity testing

2c.1 **Data/sample** *(description of data/sample and size)*: 640 interviews were completed over 3 days in December 2006

2c.2 **Analytic Method** *(type of validity & rationale, method for testing)*:
Cognitive testing was conducted with parents of children ages 0-17 years (interviews conducted over the phone with residential households).

2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*:
Please see the references section for peer-reviewed articles which have used these items. Peer-reviewed

2c C☐ P☐ M☐ N☐

papers generally undertake their own validity testing in order to meet strict peer review standards. See also Reliability Testing Results above.	
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** **2d.2 Citations for Evidence:** **2d.3 Data/sample** *(description of data/sample and size)*: **2d.4 Analytic Method** *(type analysis & rationale)*: **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: **2e.3 Testing Results** *(risk model performance metrics)*: **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** C☐ P☐ M☐ N☐ NA ☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: **2g.2 Analytic Method** *(type of analysis & rationale)*: **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*:	**2g** C☐ P☐ M☐ N☐ NA ☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA ☐

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	**2** **C☐** **P☐** **M☐** **N☐**
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** In use 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The Health and Well-Being of Children: A Portrait of States and the Nation 2007. Chartbook based on data from the 2007 National Survey of Children's Health. http://mchb.hrsa.gov/nsch07/index.html. 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** The Data Resource Center websites have been accessed more than 18 million times since 2006. Thousands of state and national researchers, MCH providers and analysts use the data to report valid children's health data. Healthy People 2010 uses items from the national surveys, and several more are slated to be added into Healthy People 2020. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)***:** Focus groups were held with numerous stakeholder groups—family advocates, clinicians, Title V leaders, researchers—to obtain feedback on report formats. The Child and Adolescent Health Measurement Initiative led the focus groups and developed reports in accordance with a general consumer information framework. Additional focus groups were held when preparing data and reports for display on the Data Resource Center website. The Data Resource Center executive committee also reviewed report formats for interpretability and applicability. 3a.5 **Methods** *(e.g., focus group, survey, QI project)***:** Focus groups 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)***:**	**3a** **C☐** **P☐** **M☐** **N☐**
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** **C☐** **P☐** **M☐** **N☐**

	NA ☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Survey	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Items are well understood and easy to implement. Items yield very low levels of missing values, don't know or refused answers.	**4e** C☐ P☐ M☐ N☐

4e.2 Costs to implement the measure (*costs of data collection, fees associated with proprietary measures*): Item is public domain and there is no cost associated with its use. **4e.3 Evidence for costs:** **4e.4 Business case documentation:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** **C☐** **P☐** **M☐** **N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y☐** **N☐** **A☐**
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau, Oregon Health & Science University, 707 SW Gaines Street, Portland, Oregon, 97239 **Co.2 Point of Contact** Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-	
Measure Developer If different from Measure Steward **Co.3 Organization** Maternal and Child Health Bureau, Parklawn Building Room 18-05, 5600 Fishers Lane, Rockville, Maryland, 20857 **Co.4 Point of Contact** Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-	
Co.5 Submitter If different from Measure Steward POC Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-, Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau	
Co.6 Additional organizations that sponsored/participated in measure development	
ADDITIONAL INFORMATION	
Workgroup/Expert Panel involved in measure development **Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.** The Maternal and Child Health Bureau convenes a Technical Expert Panel (TEP) comprised of dozens of health services researchers, survey methodology experts, and clinical health experts on children´s health to develop items for the National Survey of Children´s Health. In addition, members of the National Center for Health Statistics are included in item construction and measure development. The TEP participates in all aspects of measure development.	

Ad.2 If adapted, provide name of original measure: **Ad.3-5 If adapted, provide original specifications URL or attachment**
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6 Year the measure was first released:** 2003 **Ad.7 Month and Year of most recent revision:** 04, 2007 **Ad.8 What is your frequency for review/update of this measure?** Updated every 4 years when a new National Survey of Children´s Health is developed **Ad.9 When is the next scheduled review/update for this measure?** 01, 2011
Ad.10 Copyright statement/disclaimers:
Ad.11 -13 Additional Information web page URL or attachment:
Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1344 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Children Who Have Problems Accessing Needed Specialist Care
De.2 **Brief description of measure***:* Measures how many children needed to see a specialist but had problems receiving specialist care in the past 12 months
1.1-2 **Type of Measure:** Outcome De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Effectiveness De.6 **Consumer Care Need:** Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least	**B** Y☐

every 3 years. Yes, information provided in contact section	N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Nationally, 23.5% of children who needed or received specialist care in the previous 12 months had a problem accessing that care. 1a.4 **Citations for Evidence of High Impact:** Child and Adolescent Health Measurement Initiative. 2005/06 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent Health website. www.cshcndata.org Ngui EM, Flores G. Unmet needs for specialty, dental, mental, and allied health care among children with special health care needs: are there racial/ethnic disparities? J Health Care Poor Underserved. 2007;18(4):931-949. Sices, L., Feudtner, C., McLaughlin, J., Drotar, D., & Williams, M. (2004). How do primary care physicians manage children with possible developmental delays? A national survey with an experimental design. Pediatrics, 113(2), 274-282. Thomas, KC, Ellis, AR, McLaurin, C, Daniels, J, & Morrissey, JP. (2007). Access to care for autism-related services.	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement	**1b**

1b.1 Benefits (improvements in quality) envisioned by use of this measure: Health care providers, public health professionals and population-based health analysts can all benefit from knowing whether or not children are receiving quality care. Having the ability to recognize the problems various populations have accessing needed specialist care is essential to providing equitable and effective care to all patients across sociodemographic backgrounds.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
There is a large range in the proportion of children who had problems accessing needed specialist care, from 15.5% in Nebraska to 31.7% in New Mexico.

1b.3 Citations for data on performance gap:
Child and Adolescent Health Measurement Initiative. 2005/06 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent Health website. www.cshcndata.org

1b.4 Summary of Data on disparities by population group:
The proportion of children who had problems accessing needed specialist care varies by insurance status. 39.4% of uninsured children, 32.4% of publicly insured children, 18.0% of privately insured children who needed or received specialist care had problems doing so.
Children with special health care needs are more likely to have problems getting needed specialist care than non-CSHCN (27.0% vs. 21.2%).
Problems accessing needed specialist care also varies by income level. 37.5% of children living below 99% FPL, 29.7% of children living at 100-199% FPL, 21.3% of children living at 200-399% FPL, and 15.7% of children living at 400% FPL and above have problems getting needed specialist care.

1b.5 Citations for data on Disparities:
Child and Adolescent Health Measurement Initiative. 2005/06 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent Health website. www.cshcndata.org

C☐ P☐ M☐ N☐

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Outcomes are relevant to the target population for purposes of quality improvement. Measurement and receipt of high quality care can only be strenghtened with expansion of evidence based quality indicators. All children who require specialist care should have timely access to that care.

1c.2-3. Type of Evidence: Other Population-Based Research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
All items included in the measure are report of patient experience with healthcare services.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*)**:**

1c.6 Method for rating evidence:

1c.7 Summary of Controversy/Contradictory Evidence:

1c.8 Citations for Evidence (*other than guidelines*)**:**

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*)**:**

1c.10 Clinical Practice Guideline Citation:
1c.11 National Guideline Clearinghouse or other URL:

1c
C☐ P☐ M☐ N☐

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom*)**:** **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: **1c.14 Rationale for using this guideline over others:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Percentage of children who had problems receiving specialist care in the past 12 months **2a.2 Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*)**:** Encounter or point in time; question is anchored to past 12 months **2a.3 Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:** Parents of children who saw a specialist doctor (K4Q24) or who needed to see a specialist (K4Q25) during the past 12 months were asked how much of a problem it was to get specialist care (K4Q26). Problem is defined as those who answered big problem or small problem. Children with no problems obtaining specialist care were those for whom parent answered "no problem".	
2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*)**:** Children age 0-17 years who needed specialist care **2a.5 Target population gender:** Female, Male **2a.6 Target population age range:** Children age 0-17 years **2a.7 Denominator Time Window** (*The time period in which cases are eligible for inclusion in the denominator*)**:** Encounter or point in time; question is anchored to past 12 months **2a.8 Denominator Details** (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*)**:** Children age 0-17 years who needed specialist care, defined as either seeing a specialist (K4Q24=Yes) or needed to see a specialist (K4Q25=Yes)	**2a-specs** **C☐** **P☐** **M☐** **N☐**

2a.9 **Denominator Exclusions (***Brief text description of exclusions from the target population***):** Excluded from denominator if child does not fall in target population age range of 0-17 years and/or did not need specialist care

2a.10 **Denominator Exclusion Details (***All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
If child is older than 17 years of age, excluded from denominator.
If child did not see or need to see a specialist (K4Q24 or K4Q25), excluded from denominator.

2a.11 **Stratification Details/Variables (***All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
No stratification is required.

When the Problems Accessing Specialist Care measure was administered in its most recent form, in the 2007 National Survey of Children´s Health, the survey included a number of child demographic variables that allow for stratification of the findings by possible vulnerability:
- Age
- Gender
- Geographic location- State, HRSA Region, National level Rural Urban Commuter Areas (RUCA)
- Race/ethnicity
- Health insurance- type, consistency
- Primary household language
- Household income
- Special Health Care Needs- status and type

2a.12-13 **Risk Adjustment Type:** No risk adjustment necessary

2a.14 **Risk Adjustment Methodology/Variables (***List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 **Detailed risk model available Web page URL or attachment:**

2a.18-19 **Type of Score:** Rate/proportion
2a.20 **Interpretation of Score:** Better quality = Lower score
2a.21 **Calculation Algorithm (***Describe the calculation of the measure as a flowchart or series of steps***):**
To receive numerator of child having problems accessing specialist care:
-Child had small problem accessing specialist care (K4Q26= Small Problem), OR
-Child had big problem accessing specialist care (K4Q26= Big Problem).

2a.22 **Describe the method for discriminating performance** *(e.g., significance testing)***:**

2a.23 **Sampling (Survey) Methodology** *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
Best guideline to follow is the survey methodology used in the 2005/2006 National Survey of Children with Special Health Care Needs (NS-CSHCN). The NS-CSHCN first uses the sampling frame generated in the process of data collection for the National Immunization Survey (NIS). Once it is determined whether a child is present in the household and whether or not they are age eligible for the NIS, it is then determined whether the child may also be eligible for the NS-CSHCN.

The goal of the NS-CSHCN sample design was to generate samples representative of populations of children with special health care needs within each state. An additional goal of the NS-CSHCN was to obtain state-specific sample sizes that were sufficiently large to permit reasonably precise estimates of the health characteristics of CSHCN in each state.

To achieve these goals, state samples were designed to obtain a minimum of 750 completed interviews. The number of children to be selected in each NIS estimation area was determined by allocating the total of 750 CSHCN in the state to each NIS estimation area within the state in proportion to the total estimated number of households with children in the NIS estimation area. Given this allocation, the number of households that needed to be screened in each NIS estimation area was calculated using the expected proportion of

households with children under 18 years of age in the area. Then, the number of telephone numbers that needed to be called was computed using the expected working residential number rate, adjusted for expected nonresponse.

A total of 40,723 interviews were completed from April 2005 to February 2007 for the 2005/2006 National Survey of Children with Special Health Care Needs. A random-digit-dialed sample of households with children less than 18 years of age was selected from each of the 50 states and the District of Columbia. All children residing in the household under 18 years of age were screened for special health care needs using the validated CSHCN Screener. If more than one child in the household was identified with special needs, only one child with special health care needs was randomly selected to be the subject of the survey. The respondent was a parent or guardian who knew about the child's health and health care.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Survey: Patient

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
2007 National Survey of Children´s Health; 2005/06 National Survey of Children with Special Health Care Needs

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/slaits/nsch07/1a_Survey_Instrument_English/NSCH_Questionnaire_052109.pdf

2a.29-31 Data dictionary/code table web page URL or attachment: URL
http://nschdata.org/Viewdocument.aspx?item=519

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Population: national, Population: states, Population: counties or cities

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Other Applies to any care setting in which child receives care. Can stratify by usual source of care.

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Other Patient Experience

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)***:** Qualitative testing of the entire 2007 National Survey of Children´s Health was conducted by the National Center for Health Statistics. They conducted cognitive interviews with the 2007 NSCH Computer-Assisted Telephone Interview (CATI) to make sure the entire survey instrument was functioning properly. N=640 interviews were completed over 3 days in December 2006. The questionnaire was then revised and finalized based on feedback from participants in these interviews.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)***:**
Cognitive testing was conducted to test reliability and interpretability of questions across population.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)***:**
The Maternal and Child Health Bureau leads the development of the NSCH and NS-CSHCN survey and indicators, in collaboration with the National Center for Health Statistics (NCHS) and a national technical expert panel. The expert panel includes representatives from other federal agencies, state Title V leaders, family organizations, and child health researchers, and experts in all fields related to the surveys (adolescent health, family and neighborhoods, early childhood and development etc.). Previously validated questions and scales are used when available. Extensive literature reviewing and expert reviewing of items is conducted for all aspects of the survey. Respondents' cognitive understanding of the survey questions is assessed during the

2b
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pretest phase and revisions made as required. All final data components are verified by NCHS and DRC/CAHMI staff prior to public release. Face validity is conducted in comparing results with prior years of the survey and/or results from other implementations of items. No specific reliability results are available for this measure. Please contact the CAHMI if quantitative measures are needed.	
2c. Validity testing 2c.1 **Data/sample** *(description of data/sample and size)*: 640 interviews were completed over 3 days in December 2006 2c.2 **Analytic Method** *(type of validity & rationale, method for testing)*: Cognitive testing was conducted with parents of children ages 0-17 years (interviews conducted over the phone with residential households). 2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: Please see the references section for peer-reviewed articles which have used these items. Peer-reviewed papers generally undertake their own validity testing in order to meet strict peer review standards. See also Reliability Testing Results above.	**2c** C☐ P☐ M☐ N☐
2d. Exclusions Justified 2d.1 **Summary of Evidence supporting exclusion(s):** 2d.2 **Citations for Evidence:** 2d.3 **Data/sample** *(description of data/sample and size)*: 2d.4 **Analytic Method** *(type analysis & rationale)*: 2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures 2e.1 **Data/sample** *(description of data/sample and size)*: 2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*: 2e.3 **Testing Results** *(risk model performance metrics)*: 2e.4 **If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** C☐ P☐ M☐ N☐ NA ☐
2f. Identification of Meaningful Differences in Performance 2f.1 **Data/sample from Testing or Current Use** *(description of data/sample and size)*: 2f.2 **Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: 2f.3 **Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:	**2f** C☐ P☐ M☐ N☐

2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: **2g.2 Analytic Method** *(type of analysis & rationale)*: **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*:	**2g** C☐ P☐ M☐ N☐ NA ☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	**2** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** In use **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The Health and Well-Being of Children: A Portrait of States and the Nation 2007. Chartbook based on data from the 2007 National Survey of Children's Health. http://mchb.hrsa.gov/nsch07/index.html. **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*): The Data Resource Center websites have been accessed more than 18 million times since 2006. Thousands of state and national researchers, MCH providers and analysts use the data to report valid children's health data. Healthy People 2010 uses items from the national surveys, and several more are slated to be added into Healthy People 2020. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)*: Focus groups were held with numerous stakeholder groups—family advocates, clinicians, Title V leaders, researchers—to obtain feedback on report formats. The Child and Adolescent Health Measurement Initiative led the focus groups and developed reports in accordance with a general consumer information framework. Additional focus groups were held when preparing data and reports for display on the Data Resource Center website. The Data Resource Center executive committee also reviewed report formats for interpretability and applicability.	**3a** C☐ P☐ M☐ N☐

3a.5 Methods *(e.g., focus group, survey, QI project)*: Focus groups **3a.6 Results** *(qualitative and/or quantitative results and conclusions)*:	
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Survey	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?**	**4c** C☐ P☐ M☐

No 4c.2 **If yes, provide justification.**	N☐ NA ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**	4d C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Items are well understood and easy to implement. Items yield very low levels of missing values, don't know or refused answers. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Item is public domain and there is no cost associated with its use. 4e.3 **Evidence for costs:** 4e.4 **Business case documentation:**	4e C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	4
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	4 C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	Time-limited ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐
CONTACT INFORMATION	
Co.1 **Measure Steward (Intellectual Property Owner)** Co.1 **Organization** Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau, Oregon Health & Science University, 707 SW Gaines Street, Portland, Oregon, 97239 Co.2 **Point of Contact** Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-	
Measure Developer If different from Measure Steward Co.3 **Organization** Maternal and Child Health Bureau, Parklawn Building Room 18-05, 5600 Fishers Lane, Rockville, Maryland, 20857 Co.4 **Point of Contact** Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-	

Co.5 Submitter If different from Measure Steward POC
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-, Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
The Maternal and Child Health Bureau convenes a Technical Expert Panel (TEP) comprised of dozens of health services researchers, survey methodology experts, and clinical health experts on children´s health to develop items for the National Survey of Children´s Health. In addition, members of the National Center for Health Statistics are included in item construction and measure development. The TEP participates in all aspects of measure development.

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 2007
Ad.7 Month and Year of most recent revision: 04, 2007
Ad.8 What is your frequency for review/update of this measure? Updated every 4 years when a new National Survey of Children´s Health is developed
Ad.9 When is the next scheduled review/update for this measure? 01, 2011

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1347 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Children Who Needed and Received Mental Health Services
De.2 **Brief description of measure:** Assesses if children age 2-17 years old who have an emotional, developmental or behavioral problem requiring treatment or counseling actually received services from a mental health professional in the past 12 months
1.1-2 **Type of Measure:** Outcome De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain:** Effectiveness De.6 **Consumer Care Need:** Getting better

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	C Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	D Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	Met Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	Eval Rating
(for NQF staff use) Specific NPP goal:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** National initiatives such as the U.S. Department of Health and Human Services' Healthy People 2010 have recently begun prioritizing the need to increase the proportion of children with mental disorders that receive mental health care (Objective 18-7). 1a.4 **Citations for Evidence of High Impact:** U.S. Department of Health and Human Services. Healthy People 2010. Conference Edition. Washington, DC. 2000.	1a C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** Health care providers, public health professionals and population-based health analysts can all benefit from knowing whether or not children are receiving quality care. Having the ability to recognize the unmet mental health needs of various populations is essential to providing equitable and effective care to all patients across sociodemographic backgrounds. 1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:** Nationally, only 60.0% of U.S. children age 2-17 years who need mental health care receive it.	1b C☐ P☐ M☐ N☐

1b.3 Citations for data on performance gap:
Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children´s Health, Data Resource Center for Child and Adolescent Health website. www.nschdata.org

1b.4 Summary of Data on disparities by population group:
The range of receiving needed mental health care varies across race, with Hispanic children least likely to receive needed care (50.6%) and Multi-racial children most likely to receive needed care (73.8%). Among Hispanic children, children with Spanish as the primary household language are significantly less likely to receive needed mental health care (33.5%) compared to Hispanic children whose primary household language is English (66.2%).
More black female CSHCN have unment mental health care needs (41%) than white female CSHCN(16%) or Hispanic female CSHCN (13%).

1b.5 Citations for data on Disparities:
Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children´s Health, Data Resource Center for Child and Adolescent Health website. www.nschdata.org

Ngui EM, Flores G. Unmet needs for specialty, dental, mental, and allied health care among children with special health care needs: are there racial/ethnic disparities? J Health Care Poor Underserved. 2007;18(4):931-949.

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Outcomes are relevant to the target population for purposes of quality improvement. Measurement and receipt of high quality care can only be strenghtened with expansion of evidence based quality indicators. All children who have an ongoing mental, emotional or behavioral condition need immediate access to high quality mental health care.

1c.2-3. Type of Evidence: Other Population-Based Research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
All items included in the measure are report of patient experience with healthcare services. Healthcare providers who identify patients with an ongoing mental, emotional or behavioral condition may refer their patients to a mental health specialist.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**

1c.6 Method for rating evidence:

1c.7 Summary of Controversy/Contradictory Evidence:

1c.8 Citations for Evidence (*other than guidelines***):**

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**

1c.10 Clinical Practice Guideline Citation:
1c.11 National Guideline Clearinghouse or other URL:

1c.12 Rating of strength of recommendation (*also provide narrative description of the rating and by whom***):**

1c.13 Method for rating strength of recommendation (*If different from USPSTF system, also describe rating and how it relates to USPSTF)***:**

1c
C☐
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N☐

1c.14 **Rationale for using this guideline over others:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 **Numerator Statement (***Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** Percentage of children age 2-17 who needed and received mental health care during the previous 12 months 2a.2 **Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** Encounter or point in time. 2a.3 **Numerator Details (***All information required to collect/calculate the numerator, including all codes, logic, and definitions***):** -Children who have any kind of current emotional, developmental, or behavioral problem that requires treatment or counseling (K2Q22=YES) AND -Children who received treatment or counseling from a mental health professional during the past 12 months (K4Q22=YES).	
2a.4 **Denominator Statement (***Brief, text description of the denominator - target population being measured***):** Children age 2-17 years who have emotional, developmental, or behavioral problems for which they need treatment or counseling 2a.5 **Target population gender:** Female, Male 2a.6 **Target population age range:** Children age 2-17 years 2a.7 **Denominator Time Window (***The time period in which cases are eligible for inclusion in the denominator***):** Denominator window is a fixed point in time anchored to within the past 12 months. 2a.8 **Denominator Details (***All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):** Children age 2-17 years who have emotional, developmental, or behavioral problems for which they need treatment or counseling (K2Q22).	
2a.9 **Denominator Exclusions (***Brief text description of exclusions from the target population***):** Excluded from denominator if child does not fall in target population age range of 2-17 years and/or did not have emotional, developmental, or behavioral problems for which they need treatment or counseling. 2a.10 **Denominator Exclusion Details (***All information required to collect exclusions to the denominator,*	**2a-specs** **C☐** **P☐** **M☐** **N☐**

including all codes, logic, and definitions):
If child is younger than 2 years of age, excluded from denominator.
If child is older than 17 years of age, excluded from denominator.
If child did does not have emotional, developmental, or behavioral problems for which they need treatment or counseling (K2Q22=No), excluded from denominator.

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
No stratification is required.

When the Received Needed Mental Health Care measure was administered in its most recent form, in the 2007 National Survey of Children´s Health, the survey included a number of child demographic variables that allow for stratification of the findings by possible vulnerability:
- Age
- Gender
- Geographic location- State, HRSA Region, National level Rural Urban Commuter Areas (RUCA)
- Race/ethnicity
- Health insurance- type, consistency
- Primary household language
- Household income
- Type of Special Health Care Needs

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
To receive numerator of child receiving needed mental health care:
-Child has emotional, developmental, or behavioral problems for which they need treatment or counseling (K2Q22=Yes), AND
-Child received care from a mental health professional (K4Q22=Yes).

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
Best guideline to follow is the survey methodology used in the 2007 National Survey of Children´s Health.

The goal of the NSCH sample design was to generate samples representative of populations of children within each state. An additional goal of the NSCH was to obtain state-specific sample sizes that were sufficiently large to permit reasonably precise estimates of the health characteristics of children in each state.

To achieve these goals, state samples were designed to obtain a minimum of 1,700 completed interviews. The number of children to be selected in each National Immunization Survey (NIS) estimation area was determined by allocating the total of 1,700 children in the state to each National Immunization Survey (NIS) estimation area within the state in proportion to the total estimated number of households with children in the NIS estimation area. Given this allocation, the number of households that needed to be screened in each NIS estimation area was calculated using the expected proportion of households with children under 18 years of age in the area. Then, the number of telephone numbers that needed to be called was computed using the expected working residential number rate, adjusted for expected nonresponse.

A total of 91,642 interviews were completed from April 2007 to July 2008 for the 2007 National Survey of Children´s Health. A random-digit-dialed sample of households with children less than 18 years of age was selected from each of the 50 states and the District of Columbia. One child was randomly selected from all

children in each identified household to be the subject of the survey. The respondent was a parent or guardian who knew about the child's health and health care.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Survey: Patient

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
2007 National Survey of Children´s Health

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/slaits/nsch07/1a_Survey_Instrument_English/NSCH_Questionnaire_052109.pdf

2a.29-31 Data dictionary/code table web page URL or attachment: URL
http://nschdata.org/Viewdocument.aspx?item=519

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Population: national, Population: regional/network, Population: states

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Other Applies to any care setting in which child receives care. Can stratify by usual source of care.

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Other Patient Experience

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)***:** Qualitative testing of the entire 2007 National Survey of Children´s Health was conducted by the National Center for Health Statistics. They conducted cognitive interviews with the 2007 NSCH Computer-Assisted Telephone Interview (CATI) to make sure the entire survey instrument was functioning properly. N=640 interviews were completed over 3 days in December 2006. The questionnaire was then revised and finalized based on feedback from participants in these interviews.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)***:**
Cognitive testing was conducted to test reliability and interpretability of questions across population.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)***:**
The Maternal and Child Health Bureau leads the development of the NSCH and NS-CSHCN survey and indicators, in collaboration with the National Center for Health Statistics (NCHS) and a national technical expert panel. The expert panel includes representatives from other federal agencies, state Title V leaders, family organizations, and child health researchers, and experts in all fields related to the surveys (adolescent health, family and neighborhoods, early childhood and development etc.). Previously validated questions and scales are used when available. Extensive literature reviewing and expert reviewing of items is conducted for all aspects of the survey. Respondents' cognitive understanding of the survey questions is assessed during the pretest phase and revisions made as required. All final data components are verified by NCHS and DRC/CAHMI staff prior to public release. Face validity is conducted in comparing results with prior years of the survey and/or results from other implementations of items. No specific reliability results are available for this measure. Please contact the CAHMI if quantitative measures are needed.

2b C☐ P☐ M☐ N☐

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)***:** 640 interviews were completed over 3 days in December 2006

2c.2 Analytic Method *(type of validity & rationale, method for testing)***:**

2c C☐ P☐ M☐ N☐

Cognitive testing was conducted with parents of children ages 0-17 years (interviews conducted over the phone with residential households). 2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: Please see the references section for peer-reviewed articles which have used these items. Peer-reviewed papers generally undertake their own validity testing in order to meet strict peer review standards. See also Reliability Testing Results above.	
2d. Exclusions Justified 2d.1 **Summary of Evidence supporting exclusion(s):** 2d.2 **Citations for Evidence:** 2d.3 **Data/sample** *(description of data/sample and size)*: 2d.4 **Analytic Method** *(type analysis & rationale)*: 2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:	**2d** C☐ P☐ M☐ N☐ NA ☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures 2e.1 **Data/sample** *(description of data/sample and size)*: 2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*: 2e.3 **Testing Results** *(risk model performance metrics)*: 2e.4 **If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** C☐ P☐ M☐ N☐ NA ☐
2f. Identification of Meaningful Differences in Performance 2f.1 **Data/sample from Testing or Current Use** *(description of data/sample and size)*: 2f.2 **Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: 2f.3 **Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods 2g.1 **Data/sample** *(description of data/sample and size)*: 2g.2 **Analytic Method** *(type of analysis & rationale)*: 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*:	**2g** C☐ P☐ M☐ N☐ NA ☐
2h. Disparities in Care	**2h**

2h.1 If measure is stratified, provide stratified results *(scores by stratified categories/cohorts)***:** **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**C☐ P☐ M☐ N☐ NA ☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** **C☐ P☐ M☐ N☐**
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** In use **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The Health and Well-Being of Children: A Portrait of States and the Nation 2007. Chartbook based on data from the 2007 National Survey of Children's Health. http://mchb.hrsa.gov/nsch07/index.html. **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** The Data Resource Center websites have been accessed more than 18 million times since 2006. Thousands of state and national researchers, MCH providers and analysts use the data to report valid children's health data. Healthy People 2010 uses items from the national surveys, and several more are slated to be added into Healthy People 2020. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)***:** Focus groups were held with numerous stakeholder groups—family advocates, clinicians, Title V leaders, researchers—to obtain feedback on report formats. The Child and Adolescent Health Measurement Initiative led the focus groups and developed reports in accordance with a general consumer information framework. Additional focus groups were held when preparing data and reports for display on the Data Resource Center website. The Data Resource Center executive committee also reviewed report formats for interpretability and applicability. **3a.5 Methods** *(e.g., focus group, survey, QI project)***:** Focus groups **3a.6 Results** *(qualitative and/or quantitative results and conclusions)***:**	**3a** **C☐ P☐ M☐ N☐**
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:**	

(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Survey	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation	**4e**

4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues: Items are well understood and easy to implement. Items yield very low levels of missing values, don't know or refused answers. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Item is public domain and there is no cost associated with its use. **4e.3 Evidence for costs:** **4e.4 Business case documentation:**	**C☐ P☐ M☐ N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** **C☐ P☐ M☐ N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y☐ N☐ A☐**
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau, Oregon Health & Science University, 707 SW Gaines Street, Portland, Oregon, 97239 **Co.2 Point of Contact** Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-	
Measure Developer If different from Measure Steward **Co.3 Organization** Maternal and Child Health Bureau, Parklawn Building Room 18-05, 5600 Fishers Lane, Rockville, Maryland, 20857 **Co.4 Point of Contact** Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-	
Co.5 Submitter If different from Measure Steward POC Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-, Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau	
Co.6 Additional organizations that sponsored/participated in measure development	
ADDITIONAL INFORMATION	
Workgroup/Expert Panel involved in measure development **Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.**	

The Maternal and Child Health Bureau convenes a Technical Expert Panel (TEP) comprised of dozens of health services researchers, survey methodology experts, and clinical health experts on children´s health to develop items for the National Survey of Children´s Health. In addition, members of the National Center for Health Statistics are included in item construction and measure development. The TEP participates in all aspects of measure development.
Ad.2 If adapted, provide name of original measure: **Ad.3-5 If adapted, provide original specifications URL or attachment**
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6 Year the measure was first released:** 2007 **Ad.7 Month and Year of most recent revision:** 04, 2007 **Ad.8 What is your frequency for review/update of this measure?** Updated every 4 years when a new National Survey of Children´s Health is developed **Ad.9 When is the next scheduled review/update for this measure?** 01, 2011
Ad.10 Copyright statement/disclaimers:
Ad.11 -13 Additional Information web page URL or attachment:
Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1350 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Emergency Room Visits
De.2 **Brief description of measure:** Measures the number of times a child visited the emergency room in the past 12 months
1.1-2 **Type of Measure:** Outcome De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain:** Efficiency De.6 **Consumer Care Need:** Getting better

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	A Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least	B Y☐

every 3 years. Yes, information provided in contact section	N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 12 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** 1a.4 **Citations for Evidence of High Impact:** Child and Adolescent Health Measurement Initiative. 2003 National Survey of Children´s Health, Data Resource Center for Child and Adolescent Health website. www.nschdata.org	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** 1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:** 1b.3 **Citations for data on performance gap:** 1b.4 **Summary of Data on disparities by population group:**	**1b** C☐ P☐ M☐ N☐

1b.5 Citations for data on Disparities:	
1c. Outcome or Evidence to Support Measure Focus **1c.1 Relationship to Outcomes** (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** **1c.2-3. Type of Evidence:** Other Population-Based Research **1c.4 Summary of Evidence** (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:** **1c.5 Rating of strength/quality of evidence (***also provide narrative description of the rating and by whom***):** **1c.6 Method for rating evidence:** **1c.7 Summary of Controversy/Contradictory Evidence:** **1c.8 Citations for Evidence (***other than guidelines***):** **1c.9 Quote the Specific guideline recommendation (***including guideline number and/or page number***):** **1c.10 Clinical Practice Guideline Citation:** **1c.11 National Guideline Clearinghouse or other URL:** **1c.12 Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: **1c.14 Rationale for using this guideline over others:**	**1c** **C☐** **P☐** **M☐** **N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	**2a-specs** **C☐** **P☐**

M☐
N☐

2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*):
In development-- measures how many times the child visited the emergency room for his/her health during the past 12 months

2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator*):

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*):

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*):
Children age 0-17 years

2a.5 Target population gender: Female, Male
2a.6 Target population age range: Children age 0-17 years

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator*):

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*):
Children age 0-17 years

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*):

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*):

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*):
No stratification is required.

When the Emergency Room Visits measure was administered in its most recent form, in the 2003 National Survey of Children´s Health, the survey included a number of child demographic variables that allow for stratification of the findings by possible vulnerability:
- Age
- Gender
- Geographic location- State, HRSA Region, National level Rural Urban Commuter Areas (RUCA)
- Race/ethnicity
- Health insurance- type, consistency
- Primary household language
- Household income
- Special Health Care Needs- status and type

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method*):

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Lower score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps*):

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
The goal of the NSCH sample design was to generate samples representative of populations of children within each state. An additional goal of the NSCH was to obtain state-specific sample sizes that were sufficiently large to permit reasonably precise estimates of the health characteristics of children in each state.

To achieve these goals, state samples were designed to obtain a minimum of 1,700 completed interviews. The number of children to be selected in each National Immunization Survey (NIS) estimation area was determined by allocating the total of 1,700 children in the state to each National Immunization Survey (NIS) estimation area within the state in proportion to the total estimated number of households with children in the NIS estimation area. Given this allocation, the number of households that needed to be screened in each NIS estimation area was calculated using the expected proportion of households with children under 18 years of age in the area. Then, the number of telephone numbers that needed to be called was computed using the expected working residential number rate, adjusted for expected nonresponse.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Survey: Patient

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*):
2003 National Survey of Children´s Health

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
http://www.cdc.gov/nchs/data/slaits/NSCH_Questionnaire.pdf

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Population: national, Population: regional/network, Population: states

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Other Applies to any care setting in which child receives care. Can stratify by usual source of care.

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Other Patient Experience

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*:

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:

2b
C☐
P☐
M☐
N☐

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*:

2c.2 Analytic Method *(type of validity & rationale, method for testing)*:

2c
C☐
P☐
M☐
N☐

2c.3 Testing Results *(statistical results, assessment of adequacy in the context of norms for the test conducted)*:	
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** **2d.2 Citations for Evidence:** **2d.3 Data/sample** *(description of data/sample and size)*: **2d.4 Analytic Method** *(type analysis & rationale)*: **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:	**2d** **C☐** **P☐** **M☐** **N☐** **NA☐**
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: **2e.3 Testing Results** *(risk model performance metrics)*: **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** **C☐** **P☐** **M☐** **N☐** **NA☐**
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:	**2f** **C☐** **P☐** **M☐** **N☐**
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: **2g.2 Analytic Method** *(type of analysis & rationale)*: **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*:	**2g** **C☐** **P☐** **M☐** **N☐** **NA☐**
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities,**	**2h** **C☐** **P☐** **M☐** **N☐**

provide follow-up plans:	**NA☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** **C☐** **P☐** **M☐** **N☐**
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** Testing not yet completed **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children´s Health Chartbook 2003. Rockville, Maryland: U.S. Department of Health and Human Services, 2005. http://www.mchb.hrsa.gov/ruralhealth/index.htm **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** The Data Resource Center websites have been accessed more than 18 million times since 2006. Thousands of state and national researchers, MCH providers and analysts use the data to report valid children's health data. Healthy People 2010 uses items from the national surveys, and several more are slated to be added into Healthy People 2020. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)***:** Focus groups were held with numerous stakeholder groups—family advocates, clinicians, Title V leaders, researchers—to obtain feedback on report formats. The Child and Adolescent Health Measurement Initiative led the focus groups and developed reports in accordance with a general consumer information framework. Additional focus groups were held when preparing data and reports for display on the Data Resource Center website. The Data Resource Center executive committee also reviewed report formats for interpretability and applicability. **3a.5 Methods** *(e.g., focus group, survey, QI project)***:** Focus groups **3a.6 Results** *(qualitative and/or quantitative results and conclusions)***:**	**3a** **C☐** **P☐** **M☐** **N☐**
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?**	**3b** **C☐** **P☐** **M☐**

	N☐ NA☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Survey	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.** No- measure still in development. The questionnaire with the measure specifications isn't available yet due to potential final changes from MCHB, but we will provide the electronic version of the questionnaire once it is finalized.	**4b** C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation**	**4e** C☐ P☐ M☐ N☐

issues: Items are well understood and easy to implement. Items yield very low levels of missing values, don't know or refused answers. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Item is public domain and there is no cost associated with its use. 4e.3 **Evidence for costs:** 4e.4 **Business case documentation:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** **C☐** **P☐** **M☐** **N☐**
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited ☐**
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y☐** **N☐** **A☐**
CONTACT INFORMATION	
Co.1 **Measure Steward (Intellectual Property Owner)** Co.1 **Organization** Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau, Oregon Health & Science University, 707 SW Gaines Street, Portland, Oregon, 97239 Co.2 **Point of Contact** Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-	
Measure Developer If different from Measure Steward Co.3 **Organization** Maternal and Child Health Bureau, Parklawn Building Room 18-05, 5600 Fishers Lane, Rockville, Maryland, 20857 Co.4 **Point of Contact** Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-	
Co.5 **Submitter If different from Measure Steward POC** Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-, Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau	
Co.6 **Additional organizations that sponsored/participated in measure development**	
ADDITIONAL INFORMATION	
Workgroup/Expert Panel involved in measure development Ad.1 **Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.** The Maternal and Child Health Bureau convenes a Technical Expert Panel (TEP) comprised of dozens of health services researchers, survey methodology experts, and clinical health experts on children´s health to develop items for the National Survey of Children´s Health. In addition, members of the National Center for Health	

Statistics are included in item construction and measure development. The TEP participates in all aspects of measure development.
Ad.2 If adapted, provide name of original measure: **Ad.3-5 If adapted, provide original specifications URL or attachment**
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6 Year the measure was first released:** 2003 **Ad.7 Month and Year of most recent revision:** **Ad.8 What is your frequency for review/update of this measure?** Every 4 years-- the next NSCH will be in 2011 and the questionnaire is being finalized now **Ad.9 When is the next scheduled review/update for this measure?** 01, 2011
Ad.10 Copyright statement/disclaimers:
Ad.11 -13 Additional Information web page URL or attachment:
Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1343 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Children Whose Family Members had to Cut Back or Stop Working due to Child´s Health
De.2 **Brief description of measure:** Measure to assess whether a family member had to cut back or stop working due to child´s condition.
1.1-2 **Type of Measure:** Outcome De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Efficiency De.6 **Consumer Care Need:** Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least	**B** Y☐

every 3 years. Yes, information provided in contact section	N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** A family member cutting back or stopping work due to a child´s condition affects a child´s insurance status, household income, and financial hardship on the family. CSHCN whose parents do not work full-time reduces the likelihood that the child is covered by employer-sponsored health insurance, influencing the access to and rate of service use as well as quality of care. A reduction in hours reduces the household income, which can cause financial hardship on the family to pay for housing, food and out of pocket costs for child´s health care. 1a.4 **Citations for Evidence of High Impact:** Child and Adolescent Health Measurement Initiative. 2005/06 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent Health website. www.cshcndata.org Heck, K. E., & Makuc, D. M. (2000). Parental employment and health insurance coverage among school-aged children with special health care needs. American Journal of Public Health, 90(12), 1856-1860.	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** Health care providers, public health professionals and population-based health analysts can all benefit from knowing the factors that influence a family member´s decision to cut back or stop working due to a child´s condition. Due to the	**1b** C☐ P☐ M☐ N☐

impact of employment decision on child´s insurance status, household income, and financial hardship on the family, a measure in changes to employment status assists in understanding the impact of CSHCN on the family, as well as across populations or demographic groups.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
Nationally, 23.8% of CSHCN had conditions which caused family members to cut back or stop working.

1b.3 Citations for data on performance gap:
Child and Adolescent Health Measurement Initiative. 2005/06 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent Health website. www.cshcndata.org

1b.4 Summary of Data on disparities by population group:
Children living in a lower income household (0-99% FPL; 32.9%) are more likely to have family members who cut back or stopped working due to child´s condition than children living in a higher income household (400% FPL or more; 16.9%).

Uninsured children are the most likely to have family members cut back or stop working (34.5%), followed by publicly insured children (32.1%) and privately insured children (17.5%).

Children who were consistently insured over the past year were less likely to have family members cut back or stop working (22.6%) compared to children with inconsistent insurance (36.0%).

43.7% of children living in Spanish speaking households had family members cut back or stop working, compared to 27.2% of Hispanic children living in English speaking households and 22.5% of non-Hispanic children.

CSHCN with mental health care needs are more likely to have family members cut back or stop working than parents of CSHCN without mental health care needs (30.0% vs. 12.7%)

CSHCN whose conditions cause greater functional limitations which affect his/her ability to do things, the greater rate of a family member having to cut back or stop work (46.8% vs 16.5%).

CSHCN with single parent caretakers are more than 15 times more likely to stop working compared with children in two-parent families.

1b.5 Citations for data on Disparities:
Child and Adolescent Health Measurement Initiative. 2005/06 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent Health website. www.cshcndata.org

Thyen, U., Kuhlthau, K., & Perrin, J. M. (1999). Employment, child care, and mental health of mothers caring for children assisted by technology. Pediatrics, 103(6 Pt 1), 1235-1242.

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Children whose family members had to cut back or stop working are more likely to pay $1000 or more in Out of Pocket medical expenses a year than families of CSHCN that did not cut back or stop working (31.6% vs. 16.4%)

CSHCN with at least 1 unmet need for specific health services are more likely to have families that cut back or stop working than CSHCN with no unmet need for specific health services (28.0% vs. 12.3%).

CSHCN with a medical home reduces the risk of a parent cutting hours decreases by 51%. The relative risk of choosing to stop working rather than not change hours decreases by an estimated 64% (Derigne, 2010).

1c.2-3. Type of Evidence: Other Population-Based Research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that*

1c
C☐
P☐
M☐
N☐

healthcare services/care processes influence the outcome): Outcome is relevant to the target population for purposes of quality improvement. Higher quality of health care services, such as care coordination and community-based services decreases the impact of a child´s condition on the family, including cutting back or stop working to care for child. 1c.5 **Rating of strength/quality of evidence** (*also provide narrative description of the rating and by whom*)**:** 1c.6 **Method for rating evidence:** 1c.7 **Summary of Controversy/Contradictory Evidence:** 1c.8 **Citations for Evidence** (*other than guidelines*)**:** 1c.9 **Quote the Specific guideline recommendation** (*including guideline number and/or page number*)**:** 1c.10 **Clinical Practice Guideline Citation:** 1c.11 **National Guideline Clearinghouse or other URL:** 1c.12 **Rating of strength of recommendation** (*also provide narrative description of the rating and by whom*)**:** 1c.13 **Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: 1c.14 **Rationale for using this guideline over others:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 **Numerator Statement** (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Percentage of children whose family members had to cut back or stop working due to the child´s health. 2a.2 **Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*)**:** Encounter or point in time. 2a.3 **Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:**	**2a-specs** **C☐** **P☐** **M☐** **N☐**

If child´s family members had to stop working (C9Q10) or cut down on the hours worked (C9Q06) due to child´s health

2a.4 **Denominator Statement (***Brief, text description of the denominator - target population being measured***):**
Children with Special Health Care Needs (CSHCN) age 0-17 years

2a.5 **Target population gender:** Female, Male
2a.6 **Target population age range:** Children with Special Health Care Needs (CSHCN) age 0-17 years

2a.7 **Denominator Time Window (***The time period in which cases are eligible for inclusion in the denominator***):**
Denominator window is a fixed point in time anchored to "current".

2a.8 **Denominator Details (***All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
Children with Special Health Care Needs (CSHCN) age 0-17 years

2a.9 **Denominator Exclusions (***Brief text description of exclusions from the target population***):** Children age 0-17 years who are not identified as having special health care needs are excluded.

2a.10 **Denominator Exclusion Details (***All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
If child is older than 17 years of age, excluded from denominator.
CSHCN are defined by the standardized and validated CSHCN Screener. The screener is administered at the beginning of the survey and all remaining items in the survey are only asked regarding a child with special health care needs.

2a.11 **Stratification Details/Variables (***All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
No stratification is required.

When the Family Members had to Cut Back or Stop Working measure was administered in its most recent form, in the 2005/06 National Survey of Children with Special Health Care Needs, the survey included a number of child demographic variables that allow for stratification of the findings by possible vulnerability:
- Age
- Gender
- Geographic location- State, HRSA Region, National level Rural Urban Commuter Areas (RUCA)
- Race/ethnicity
- Health insurance- type, consistency
- Primary household language
- Household income
- Type of Special Health Care Need

2a.12-13 **Risk Adjustment Type:** No risk adjustment necessary

2a.14 **Risk Adjustment Methodology/Variables (***List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 **Detailed risk model available Web page URL or attachment:**

2a.18-19 **Type of Score:** Rate/proportion
2a.20 **Interpretation of Score:** Better quality = Lower score
2a.21 **Calculation Algorithm (***Describe the calculation of the measure as a flowchart or series of steps***):**
To receive numerator of family members having to cut back or stop working due to child´s health, either:
-A family member stopped working due to child´s health (C9Q10= Yes), OR
-A family member cut back on the number of hours worked due to child´s health (C9Q06= Yes).

2a.22 **Describe the method for discriminating performance** *(e.g., significance testing)***:**

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
Best guideline to follow is the survey methodology used in the 2005/2006 National Survey of Children with Special Health Care Needs (NS-CSHCN). The NS-CSHCN first uses the sampling frame generated in the process of data collection for the National Immunization Survey (NIS). Once it is determined whether a child is present in the household and whether or not they are age eligible for the NIS, it is then determined whether the child may also be eligible for the NS-CSHCN.

The goal of the NS-CSHCN sample design was to generate samples representative of populations of children with special health care needs within each state. An additional goal of the NS-CSHCN was to obtain state-specific sample sizes that were sufficiently large to permit reasonably precise estimates of the health characteristics of CSHCN in each state.

To achieve these goals, state samples were designed to obtain a minimum of 750 completed interviews. The number of children to be selected in each NIS estimation area was determined by allocating the total of 750 CSHCN in the state to each NIS estimation area within the state in proportion to the total estimated number of households with children in the NIS estimation area. Given this allocation, the number of households that needed to be screened in each NIS estimation area was calculated using the expected proportion of households with children under 18 years of age in the area. Then, the number of telephone numbers that needed to be called was computed using the expected working residential number rate, adjusted for expected nonresponse.

A total of 40,723 interviews were completed from April 2005 to February 2007 for the 2005/2006 National Survey of Children with Special Health Care Needs. A random-digit-dialed sample of households with children less than 18 years of age was selected from each of the 50 states and the District of Columbia. All children residing in the household under 18 years of age were screened for special health care needs using the validated CSHCN Screener. If more than one child in the household was identified with special needs, only one child with special health care needs was randomly selected to be the subject of the survey. The respondent was a parent or guardian who knew about the child's health and health care.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Survey: Patient

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
2005/06 National Survey of Children with Special Health Care Needs

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
http://www.cdc.gov/nchs/data/slaits/NSCSHCNIIEnglishQuest.pdf

2a.29-31 Data dictionary/code table web page URL or attachment: URL
http://www.cshcndata.org/ViewDocument.aspx?item=260

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Population: national, Population: regional/network, Population: states

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Other Applies to any care setting in which child receives care. Can stratify by usual source of care.

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Other Patient Experience

TESTING/ANALYSIS

2b. Reliability testing — **2b** C☐ P☐ M☐

2b.1 Data/sample *(description of data/sample and size)***:**

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*: Cognitive testing was conducted to test reliability and interpretability of questions across population. **2b.3 Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*: The Maternal and Child Health Bureau leads the development of the NSCH and NS-CSHCN survey and indicators, in collaboration with the National Center for Health Statistics (NCHS) and a national technical expert panel. The expert panel includes representatives from other federal agencies, state Title V leaders, family organizations, and child health researchers, and experts in all fields related to the surveys (adolescent health, family and neighborhoods, early childhood and development etc.). Previously validated questions and scales are used when available. Extensive literature reviewing and expert reviewing of items is conducted for all aspects of the survey. Respondents' cognitive understanding of the survey questions is assessed during the pretest phase and revisions made as required. All final data components are verified by NCHS and DRC/CAHMI staff prior to public release. Face validity is conducted in comparing results with prior years of the survey and/or results from other implementations of items. No specific reliability results are available for this measure. Please contact the CAHMI if quantitative measures are needed.	**N**☐
2c. Validity testing **2c.1 Data/sample** *(description of data/sample and size)*: **2c.2 Analytic Method** *(type of validity & rationale, method for testing)*: Cognitive testing was conducted with parents of children ages 0-17 years (interviews conducted over the phone with residential households). **2c.3 Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*: Please see the references section for peer-reviewed articles which have used these items. Peer-reviewed papers generally undertake their own validity testing in order to meet strict peer review standards. See also Reliability Testing Results above.	**2c** **C**☐ **P**☐ **M**☐ **N**☐
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** **2d.2 Citations for Evidence:** **2d.3 Data/sample** *(description of data/sample and size)*: **2d.4 Analytic Method** *(type analysis & rationale)*: **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:	**2d** **C**☐ **P**☐ **M**☐ **N**☐ **NA**☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: **2e.3 Testing Results** *(risk model performance metrics)*: **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** **C**☐ **P**☐ **M**☐ **N**☐ **NA**☐
2f. Identification of Meaningful Differences in Performance	**2f**

2f.1 Data/sample from Testing or Current Use *(description of data/sample and size)*: **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:	C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: **2g.2 Analytic Method** *(type of analysis & rationale)*: **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*:	**2g** C☐ P☐ M☐ N☐ NA☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** In use **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children with Special Health Care Needs Chartbook 2005–2006. Rockville, Maryland: U.S. Department of Health and Human Services, 2008. http://mchb.hrsa.gov/cshcn05/ **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** The Data Resource Center websites have been accessed more than 18 million times since 2006. Thousands of state and national researchers, MCH providers and analysts use the data to report valid children's health data. Healthy People 2010 uses items from the national surveys, and several more are slated to be added into Healthy People 2020.	**3a** C☐ P☐ M☐ N☐

Testing of Interpretability (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)*: Focus groups were held with numerous stakeholder groups—family advocates, clinicians, Title V leaders, researchers—to obtain feedback on report formats. The Child and Adolescent Health Measurement Initiative led the focus groups and developed reports in accordance with a general consumer information framework. Additional focus groups were held when preparing data and reports for display on the Data Resource Center website. The Data Resource Center executive committee also reviewed report formats for interpretability and applicability. 3a.5 **Methods** *(e.g., focus group, survey, QI project)*: Focus groups 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*:	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Survey	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*)	**4b** C☐ P☐ M☐

Yes **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.**	N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Items are well understood and easy to implement. Items yield very low levels of missing values, don't know or refused answers. **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Item is public domain and there is no cost associated with its use. **4e.3 Evidence for costs:** **4e.4 Business case documentation:**	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau, Oregon Health & Science University, 707 SW Gaines Street, Portland, Oregon, 97239	

Co.2 **Point of Contact**
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-

Measure Developer If different from Measure Steward
Co.3 **Organization**
Maternal and Child Health Bureau, Parklawn Building Room 18-05, 5600 Fishers Lane, Rockville, Maryland, 20857

Co.4 **Point of Contact**
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-

Co.5 **Submitter If different from Measure Steward POC**
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-, Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau

Co.6 **Additional organizations that sponsored/participated in measure development**

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 **Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.**
The Maternal and Child Health Bureau convenes a Technical Expert Panel (TEP) comprised of dozens of health services researchers, survey methodology experts, and clinical health experts on children´s health to develop items for the National Survey of Children´s Health. In addition, members of the National Center for Health Statistics are included in item construction and measure development. The TEP participates in all aspects of measure development.

Ad.2 **If adapted, provide name of original measure:**
Ad.3-5 **If adapted, provide original specifications URL or attachment**

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 **Year the measure was first released:** 2005
Ad.7 **Month and Year of most recent revision:** 01, 2009
Ad.8 **What is your frequency for review/update of this measure?** Updated every 4 years when a new NS-CSHCN is developed
Ad.9 **When is the next scheduled review/update for this measure?** 01, 2013

Ad.10 **Copyright statement/disclaimers:**

Ad.11 -13 **Additional Information web page URL or attachment:**

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1331 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Community-Based Service Systems are Organized so that Families of Children with Special Health Care Needs Can Easily Use Them
De.2 **Brief description of measure:** The measure describes the percentage of CSHCN who have families who have encountered difficulties or delays in accessing health care services for their children in the past 12 months
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Patient and family engagement De.5 **IOM Quality Domain**: Patient-centered De.6 **Consumer Care Need:** Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 12 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers 1a.2 1a.3 **Summary of Evidence of High Impact:** 1a.4 **Citations for Evidence of High Impact:** Child and Adolescent Health Measurement Initiative. 2005/06 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent Health website. www.cshcndata.org	**1a** C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** 1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:** 1b.3 **Citations for data on performance gap:** 1b.4 **Summary of Data on disparities by population group:**	**1b** C☐ P☐ M☐ N☐

1b.5 Citations for data on Disparities:	
1c. Outcome or Evidence to Support Measure Focus **1c.1 Relationship to Outcomes** (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** **1c.2-3. Type of Evidence:** Other Population Based Research **1c.4 Summary of Evidence** (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:** **1c.5 Rating of strength/quality of evidence (***also provide narrative description of the rating and by whom***):** **1c.6 Method for rating evidence:** **1c.7 Summary of Controversy/Contradictory Evidence:** **1c.8 Citations for Evidence (***other than guidelines***):** **1c.9 Quote the Specific guideline recommendation (***including guideline number and/or page number***):** **1c.10 Clinical Practice Guideline Citation:** **1c.11 National Guideline Clearinghouse or other URL:** **1c.12 Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)***:** **1c.14 Rationale for using this guideline over others:**	**1c** **C☐** **P☐** **M☐** **N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:**	**2a-specs** **C☐**

2a. Precisely Specified

P☐ M☐ N☐

2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*):
Percentage of children had difficulties trying to use community-based services

*Community-based services include any services that children need because of their health.

2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator*):

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*):

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*):
Children with Special Health Care Needs (CSHCN) age 0-17 years

2a.5 Target population gender: Female, Male
2a.6 Target population age range: Children with Special Health Care Needs (CSHCN) age 0-17 years

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator*):
Denominator window is a fixed point in time

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*):
Children with special health care needs (CSHCN) age 0-17 years.

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*): Excluded from denominator if child does not fall in target population age range of 0-17 years and/or does not have special health care needs.

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*):
If child is older than 17 years of age, excluded from denominator.
CSHCN are defined by the standardized and validated CSHCN Screener. The screener is administered at the beginning of the survey and all remaining items in the survey are only asked regarding a child with special health care needs.

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*):
No stratification is required.

The Community-Based Service Systems are Organized for Ease of Use measure is currently being administered in the 2009/10 National Survey of Children with Special Health Care Needs, which includes a number of child demographic variables that allow for stratification of the findings by possible vulnerability:
- Age
- Gender
- Geographic location- State, HRSA Region, National level Rural Urban Commuter Areas (RUCA)
- Race/ethnicity
- Health insurance- type, consistency
- Primary household language
- Household income
- Tyep of Special Health Care Need

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
In development

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
Best guideline to follow is the survey methodology used in the most recently completed survey, the 2005/2006 National Survey of Children with Special Health Care Needs (NS-CSHCN). The NS-CSHCN first uses the sampling frame generated in the process of data collection for the National Immunization Survey (NIS). Once it is determined whether a child is present in the household and whether or not they are age eligible for the NIS, it is then determined whether the child may also be eligible for the NS-CSHCN.

The goal of the NS-CSHCN sample design was to generate samples representative of populations of children with special health care needs within each state. An additional goal of the NS-CSHCN was to obtain state-specific sample sizes that were sufficiently large to permit reasonably precise estimates of the health characteristics of CSHCN in each state.

To achieve these goals, state samples were designed to obtain a minimum of 750 completed interviews. The number of children to be selected in each NIS estimation area was determined by allocating the total of 750 CSHCN in the state to each NIS estimation area within the state in proportion to the total estimated number of households with children in the NIS estimation area. Given this allocation, the number of households that needed to be screened in each NIS estimation area was calculated using the expected proportion of households with children under 18 years of age in the area. Then, the number of telephone numbers that needed to be called was computed using the expected working residential number rate, adjusted for expected nonresponse.

A total of 40,723 interviews were completed from April 2005 to February 2007 for the 2005/2006 National Survey of Children with Special Health Care Needs. A random-digit-dialed sample of households with children less than 18 years of age was selected from each of the 50 states and the District of Columbia. All children residing in the household under 18 years of age were screened for special health care needs using the validated CSHCN Screener. If more than one child in the household was identified with special needs, only one child with special health care needs was randomly selected to be the subject of the survey. The respondent was a parent or guardian who knew about the child's health and health care.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Survey: Patient

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
2009/10 National Survey of Children with Special Health Care Needs

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis *(Check the level(s) for which the measure is specified and tested)*
Population: national, Population: regional/network, Population: states

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)* Other Applies to any care setting in which child receives care. Can stratify by usual source of care. **2a.38-41 Clinical Services** (*Healthcare services being measured, check all that apply*) Other Patient Experience	
TESTING/ANALYSIS	
2b. Reliability testing **2b.1 Data/sample** *(description of data/sample and size)*: **2b.2 Analytic Method** *(type of reliability & rationale, method for testing)*: **2b.3 Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:	**2b** C☐ P☐ M☐ N☐
2c. Validity testing **2c.1 Data/sample** *(description of data/sample and size)*: **2c.2 Analytic Method** *(type of validity & rationale, method for testing)*: **2c.3 Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*:	**2c** C☐ P☐ M☐ N☐
2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** **2d.2 Citations for Evidence:** **2d.3 Data/sample** *(description of data/sample and size)*: **2d.4 Analytic Method** *(type analysis & rationale)*: **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:	**2d** C☐ P☐ M☐ N☐ NA☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: **2e.3 Testing Results** *(risk model performance metrics)*: **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** C☐ P☐ M☐ N☐ NA☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*:	**2f** C☐ P☐

2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance *(type of analysis & rationale)*: **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:	**M☐ N☐**
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: **2g.2 Analytic Method** *(type of analysis & rationale)*: **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*:	**2g C☐ P☐ M☐ N☐ NA☐**
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h C☐ P☐ M☐ N☐ NA☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** **C☐ P☐ M☐ N☐**
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** Testing not yet completed **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children with Special Health Care Needs Chartbook 2005–2006. Rockville, Maryland: U.S. Department of Health and Human Services, 2008. http://mchb.hrsa.gov/cshcn05/ **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*): The Data Resource Center websites have been accessed more than 18 million times since 2006. Thousands of state and national researchers, MCH providers and analysts use the data to report valid children's health data. Healthy People 2010 uses items from the national surveys, and several more are slated to be added into Healthy People 2020. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users*	**3a C☐ P☐ M☐ N☐**

for public reporting and quality improvement) 3a.4 **Data/sample** *(description of data/sample and size)*: Focus groups were held with numerous stakeholder groups—family advocates, clinicians, Title V leaders, researchers—to obtain feedback on report formats. The Child and Adolescent Health Measurement Initiative led the focus groups and developed reports in accordance with a general consumer information framework. Additional focus groups were held when preparing data and reports for display on the Data Resource Center website. The Data Resource Center executive committee also reviewed report formats for interpretability and applicability. 3a.5 **Methods** *(e.g., focus group, survey, QI project)*: Focus groups 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)*:	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Survey	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No	**4b** C☐ P☐ M☐ N☐

4b.2 If not, specify the near-term path to achieve electronic capture by most providers. No- measure still in development. The questionnaire with the measure specifications isn't available yet due to potential final changes from MCHB, but we will provide the electronic version of the questionnaire once it is finalized.	
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**	**4d** C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** **4e.3 Evidence for costs:** **4e.4 Business case documentation:**	**4e** C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) **Co.1 Organization** Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau, Oregon Health & Science University, 707 SW Gaines Street, Portland, Oregon, 97239	

Co.2 **Point of Contact**
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-

Measure Developer If different from Measure Steward
Co.3 **Organization**
Maternal and Child Health Bureau, Parklawn Building Room 18-05, 5600 Fishers Lane, Rockville, Maryland, 20857

Co.4 **Point of Contact**
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Co.5 **Submitter If different from Measure Steward POC**
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-, Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau

Co.6 **Additional organizations that sponsored/participated in measure development**

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Ad.3-5 **If adapted, provide original specifications URL or attachment**

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 **Year the measure was first released:** 2009
Ad.7 **Month and Year of most recent revision:** 01, 2009
Ad.8 **What is your frequency for review/update of this measure?** Updated every 4 years when a new NS-CSHCN is developed
Ad.9 **When is the next scheduled review/update for this measure?** 01, 2013

Ad.10 **Copyright statement/disclaimers:**

Ad.11 -13 **Additional Information web page URL or attachment:**

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

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Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
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NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1345 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Children with Special Health Care Needs (CSHCN) Screener
De.2 **Brief description of measure:** The CSHCN Screener is a validated tool for identifying children who have ongoing health conditions. It is a non-condition specific screener which operationalizes the Maternal and Child Health Bureau definition of children with special health care needs. Specifically, children who currently experience one or more of five common health consequences: (1) need or use of prescription medications; (2) an above routine use of services; (3) need or use of specialized therapies or services; (4) need or use of mental health counseling (5) a functional limitation; due to a physical, mental, behavioral or other type of health condition lasting or expected to last at least 12 months are identified as having special health care needs.
1.1-2 **Type of Measure:** Outcome De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Effectiveness De.6 **Consumer Care Need:** Living with illness

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of	**A** Y☐ N☐

measure submission A.4 **Measure Steward Agreement attached:**	
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers 1a.2 1a.3 **Summary of Evidence of High Impact:** Children with special health care needs use a disproportionate amount of health care services and corresponding health care costs. Children who experience chronic conditions require extra health care services in order to ameliorate conditions and prevent emerging conditions. Identifying CSHCN is important for public policy. CHIPRA legislation will require that children´s quality health measures be reported by special health care needs status. The CSHCN Screener is a validated methods for identify CSHCN. The CSHCN Screener is in the National Measures Clearinghouse, has been used in five large national surveys (3 iterations of the NS-CSHCN and 2 iterations of the NSCH), and is included in CAHPS. 1a.4 **Citations for Evidence of High Impact:** Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children´s Health, Data Resource Center for Child and Adolescent Health website. www.nschdata.org Bethell, C. D., Read, D., Neff, J., Blumberg, S. J., Stein, R., Sharp, V. and Newacheck, P. W. Comparison of	**1a** C☐ P☐ M☐ N☐

the Children with Special Health Care Needs Screener to the Questionnaire for Identifying Children with Chronic Conditions—revised. Ambulatory Pediatrics. 2002; 2 (1): 49–57. http://www.ncbi.nlm.nih.gov/pubmed/11888438
Bethell, C. D., Read, D., Stein, R. E. K., Blumberg, S. J., Wells, N. and Newacheck, P. W. Identifying children with special health needs: development and evaluation of a short screening instrument. Ambulatory Pediatrics. 2002; 2 (1): 38–48. http://www.ncbi.nlm.nih.gov/pubmed/11888437
van Dyck, P. C., Kogan, M. D., McPherson, M. G., Weissman, G.R. and Newacheck, P.W. Prevalence and characteristics of children with special health care needs. Archives of Pediatrics & Adolescents Medicine. 2004; 158: 884–890. http://www.ncbi.nlm.nih.gov/pubmed/15351754
Davidoff, A. J. Identifying children with special health care needs in the National Health Interview Survey: a new resource for policy analysis. Health Services Research. 2004; 39(1), 53– 71. http://www.ncbi.nlm.nih.gov/pubmed/14965077
Bethell, C., Read, D. and Blumberg, S.J. What is the prevalence of children with special health care needs? Toward an understanding of variations in findings and methods across three national surveys Maternal and Child Health Journal. 2008; 12:1–14. http://www.ncbi.nlm.nih.gov/pubmed/17566855
Read, D., Bethell, C., Blumberg, S.J., Abreu, M. and Molina, C. An evaluation of the linguistic and cultural validity of the Spanish language version of the Children with Special Health Care Needs Screener. Maternal and Child Health Journal. 2007; 11(6):568-85. http://www.ncbi.nlm.nih.gov/pubmed/17562154
Carle, A.C., Blumberg, S.J. and Poblenz, C. Internal psychometric properties of the Children with Special Health Care Needs Screener. Academic Pediatrics. 2010; Epub. http://www.ncbi.nlm.nih.gov/pubmed/20227936
Bramlett, M.D., Read, D., Bethell, C. and Blumberg, S.J. Differentiating subgroups of children with special health care needs by health status and complexity of health care needs. Maternal and Child Health Journal. 2009; 13:151-163. http://www.ncbi.nlm.nih.gov/pubmed/18386168

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: Identifying children with special health care needs will be a requirement for ongoing measures of quality health care for children. Policy makers and public health officials benefit from looking at quality measures for CSHCN as distinct from the child population who do not experience chronic health conditions.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
Nationally, 12.8%-19.2% of children ages 0-17 years meet criteria having special health care needs according to National Surveys (NSCH, NS-CSHCN,MEPS) conducted between 2001 and 2007. The prevalence rates vary slightly due to survey year and sampling methods.

1b.3 Citations for data on performance gap:
Bethell, C.D., Read, D., and Blumberg, S.J. 2008. What is the Prevalence of Children with Special Health Care Needs? Toward an Understanding of Variations in Findings and Methods Across Three National Surveys Maternal Child Health Journal 12:1–14

Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children´s Health, Data Resource Center for Child and Adolescent Health website. www.nschdata.org

1b.4 Summary of Data on disparities by population group:
Children with special health care needs are less likely to receive care within a medical home – only 49.8% of CSHCN receive such coordinated and ongoing care, compared with 59.4% of children living without special needs.

Boys are more likely to have special health care needs than girls –22.2% versus 16.0%, respectively.

Children with special health care needs are more likely to be insured by public health insurance: public 23.6% and private 18.1%

More children with special health care needs live in families with income of below poverty level: 0-99% FPL 20.8%. 18.6%-18.9% of CSHCN live in families with above 100% FPL.

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Children who live in families with two biological or adoptive parents less likely to have special health care needs (16.3%), compared to the children live in families of two parent with at least one step-parent (23.2%) and single mother (25.9%).

1b.5 Citations for data on Disparities:
Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children´s Health, Data Resource Center for Child and Adolescent Health website. www.nschdata.org

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** 18.1% of CSHCN live in families where their conditions have caused financial problems for the family
Almost one quarter (24%) of CSHCN have health conditions which consistently and often greatly affect their daily activities
14.3% of CSHCN ages 5-17 years missed more than 11 days of school due to illness.
23.8-29.8% of CSHCN live in families where one or more members had to cut back or stop working due to children's condition (rates vary due to survey year question wording and ordering).
These adverse child and family-level impacts were concentrated among low income and uninsured CSHCN.

The level and complexity of special needs, as measured by how many of the 5 domains of the screener that children qualify on, also presents evidence for the impact on burden of consequences of chronic conditions. For instance, CSHCN who qualify on 4 of the 5 screener domains have families who are 5 times more likely to have to provide 11 or more hours of care per week and live in families that are 3 times as likely to have a family member who had to cut back and stop working to provide care for children. Half of the families had to decrease employment due to child's condition CSHCN with functional limitation group.

Use of health care for CSHCN compared to non-CSHCN:
Four times the number of hospitalizations (89 vs. 22 discharges per 1000)
Spent more than 7 times as many days in hospitals (370 vs. 49 days per 1000)
Although CSHCN account for less than 16% of the child population,
they accounted for more than half (52.5%) of children's hospital days
More than twice as many physician visits annually (4.35 vs. 1.75)
Seven times as many non-physician visits (2.17 vs. 0.30) on an annual basis
More than 5 times the number of prescribed medications per year (6.94 vs. 1.22)
Used substantially more home health provider days on an annual basis
(1.73 vs. 0.002); approximately 87% of home health care days were accounted for by CSHCN.

Along with increased use of services among CSHCN, there is a corresponding increased rate of unmet care and services among CSHCN are reported. According to the 2005/2006 National Survey of Children with Special Health Care Needs 16.1% of CSHCN have at least one unmet need for specific health care services and 21.1% of CSHCN needed a referral for specialist care and services but had difficulty getting it. 34.5% of CSHCN reported not receiving family-centered care.

Medical expenditure for CSHCN compared to non-CSHCN:
Total health care expenditures 3 times more ($2099 versus $628).
Hospital care expenses 4 times higher ($361 versus $96),
Physician services expenses more than double the amount ($406 versus $150),
Six times greater non-physician services expenses ($144 versus $24).
Average expenditures on prescribed medications 10 times higher ($340 versus $34) and home health expenses were much greater than those of other children.
Average expenditures for "other" medical services were about twice those for other children ($37 versus $16).

Families of CSHCN are 2 to 3 times more likely to have high out-of-pocket expenses (>$1000 per year, >5% of family income). Children in households with incomes less than 200% FPL spent about 164% more of their family's income on health care and those living in households with incomes between 200% and 400% of the FPL spent about 46% more than their counterparts in households with incomes at or above 400% of the FPL.

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Medical expenditures for CSHCN who qualify on 4 of the 5 screener domains are more than 5 times those of CSHCN who qualify on only one screening criterion.

Newacheck, P.W. and Kim, S.E.A (2005) National Profile of Health Care Utilization and Expenditures for Children With Special Health Care Needs. Archives Pediatrics Adolescents Medicine , 159:10-17

van Dyck, P. C., Kogan, M. D., McPherson, M. G., Weissman, G.R., Newacheck, P.W. (2004). Prevalence and characteristics of children with special health care needs. Archives Pediatrics Adolescents Medicine, 158, 884-890.

Bramlett, M.D., Read, D., Bethell, C., Blumberg, S.J. (2009) Differentiating Subgroups of Children with Special Health Care Needs by Health Status and Complexity of Health Care Needs. Matern Child Health J. 13:151-163

1c.2-3. Type of Evidence: Other Population-Based Research

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):**

1c.6 Method for rating evidence:

1c.7 Summary of Controversy/Contradictory Evidence:

1c.8 Citations for Evidence (*other than guidelines***):** Bethell, C. D., Read, D., Neff, J., Blumberg, S. J., Stein, R., Sharp, V. and Newacheck, P. W. Comparison of the Children with Special Health Care Needs Screener to the Questionnaire for Identifying Children with Chronic Conditions—revised. Ambulatory Pediatrics. 2002; 2 (1): 49–57. http://www.ncbi.nlm.nih.gov/pubmed/11888438
Bethell, C. D., Read, D., Stein, R. E. K., Blumberg, S. J., Wells, N. and Newacheck, P. W. Identifying children with special health needs: development and evaluation of a short screening instrument. Ambulatory Pediatrics. 2002; 2 (1): 38–48. http://www.ncbi.nlm.nih.gov/pubmed/11888437
van Dyck, P. C., Kogan, M. D., McPherson, M. G., Weissman, G.R. and Newacheck, P.W. Prevalence and characteristics of children with special health care needs. Archives of Pediatrics & Adolescents Medicine. 2004; 158: 884–890. http://www.ncbi.nlm.nih.gov/pubmed/15351754
Davidoff, A. J. Identifying children with special health care needs in the National Health Interview Survey: a new resource for policy analysis. Health Services Research. 2004; 39(1), 53– 71. http://www.ncbi.nlm.nih.gov/pubmed/14965077
Bethell, C., Read, D. and Blumberg, S.J. What is the prevalence of children with special health care needs? Toward an understanding of variations in findings and methods across three national surveys Maternal and Child Health Journal. 2008; 12:1–14. http://www.ncbi.nlm.nih.gov/pubmed/17566855
Read, D., Bethell, C., Blumberg, S.J., Abreu, M. and Molina, C. An evaluation of the linguistic and cultural validity of the Spanish language version of the Children with Special Health Care Needs Screener. Maternal and Child Health Journal. 2007; 11(6):568-85. http://www.ncbi.nlm.nih.gov/pubmed/17562154
Carle, A.C., Blumberg, S.J. and Poblenz, C. Internal psychometric properties of the Children with Special Health Care Needs Screener. Academic Pediatrics. 2010; Epub. http://www.ncbi.nlm.nih.gov/pubmed/20227936
Bramlett, M.D., Read, D., Bethell, C. and Blumberg, S.J. Differentiating subgroups of children with special health care needs by health status and complexity of health care needs. Maternal and Child Health Journal. 2009; 13:151-163. http://www.ncbi.nlm.nih.gov/pubmed/18386168

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**

1c.10 Clinical Practice Guideline Citation:
1c.11 National Guideline Clearinghouse or other URL:

1c.12 **Rating of strength of recommendation** (*also provide narrative description of the rating and by whom*)**:** 1c.13 **Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: 1c.14 **Rationale for using this guideline over others:**	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 **Do you have a web page where current detailed measure specifications can be obtained?** S.2 **If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 **Numerator Statement** (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Children with an ongoing health condition or special health care need. 2a.2 **Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*)**:** Encounter or point in time. 2a.3 **Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:** In order to meet the CSHCN Screener criteria for having a chronic condition or special health care need the following numerator inclusion criteria should be met: 1. Child experiences one of five different health consequences: -Use or need of prescription medication. -Above average use or need of medical, mental health or educational services. -Functional limitations compared with others of same age. -Use or need of specialized therapies (OT, PT, speech, etc.). -Treatment or counseling for emotional or developmental problems. 2. The above mentioned consequence results from a physical, developmental, behavioral, emotional or any other health condition lasting or expected to last for at least 12 months.	
2a.4 **Denominator Statement** (*Brief, text description of the denominator - target population being measured*)**:** Children age 0-17 years 2a.5 **Target population gender:** Female, Male 2a.6 **Target population age range:** Children age 0-17 years 2a.7 **Denominator Time Window** (*The time period in which cases are eligible for inclusion in the denominator*)**:**	**2a-specs** **C☐** **P☐** **M☐** **N☐**

Denominator window is a fixed point in time

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
Children age 0-17 years

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** Excluded from denominator if child does not fall in target population age range of 0-17 years

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
If child is older than 17 years of age, excluded from denominator.

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
No stratification is required.

When the CSHCN Screener measure was administered in its most recent form, in the 2007 National Survey of Children´s Health, the survey included a number of child demographic variables that allow for stratification of the findings by possible vulnerability:
- Age
- Gender
- Geographic location- State, HRSA Region, National level Rural Urban Commuter Areas (RUCA)
- Race/ethnicity
- Health insurance- type, consistency
- Primary household language
- Household income
- Type of Special Health Care Need

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Weighted score/composite/scale
2a.20 Interpretation of Score: Better quality = Lower score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
A filter item is asked for each of the following health consequences:
-Use or need of prescription medication.
-Above average use or need of medical, mental health or educational services.
-Functional limitations compared with others of same age.
-Use or need of specialized therapies (OT, PT, speech, etc.).
-Treatment or counseling for emotional or developmental problems.

If the answer to any of the five health consequences is YES, then two follow up questions are asked (one for the treatment or counseling item):
1) Is the health consequence due to any medical, behavioral or other health condition? (Note: this is not asked of the treamtent/counseling question since the language about emotional, behavioral or health condition is already included in that item)
2) If the answer to the above question is YES, then a final question is asked
about whether the condition has lasted or is expected to last for at least 12 months.

Final scoring: A child must meet all three criteria within one domain in order to be classified as having a special health care need. For example, a child would have a special health care need if the child uses prescription medication, for a health/medical/behavioral condition that has lasted/is expected to last at least 12 months (YES on all three items).

Children can qualify as having a special health care need on more than one domain.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)*:

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
Best guideline to follow is the survey methodology used in the 2007 National Survey of Children´s Health.

The goal of the NSCH sample design was to generate samples representative of populations of children within each state. An additional goal of the NSCH was to obtain state-specific sample sizes that were sufficiently large to permit reasonably precise estimates of the health characteristics of children in each state.

To achieve these goals, state samples were designed to obtain a minimum of 1,700 completed interviews. The number of children to be selected in each National Immunization Survey (NIS) estimation area was determined by allocating the total of 1,700 children in the state to each National Immunization Survey (NIS) estimation area within the state in proportion to the total estimated number of households with children in the NIS estimation area. Given this allocation, the number of households that needed to be screened in each NIS estimation area was calculated using the expected proportion of households with children under 18 years of age in the area. Then, the number of telephone numbers that needed to be called was computed using the expected working residential number rate, adjusted for expected nonresponse.

A total of 91,642 interviews were completed from April 2007 to July 2008 for the 2007 National Survey of Children´s Health. A random-digit-dialed sample of households with children less than 18 years of age was selected from each of the 50 states and the District of Columbia. One child was randomly selected from all children in each identified household to be the subject of the survey. The respondent was a parent or guardian who knew about the child's health and health care.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Survey: Patient

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*)**:**
2007 National Survey of Children´s Health; 2005/06 National Survey of Children with Special Health Care Needs

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/slaits/nsch07/1a_Survey_Instrument_English/NSCH_Questionnaire_052109.pdf

2a.29-31 Data dictionary/code table web page URL or attachment: URL
http://nschdata.org/Viewdocument.aspx?item=519

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Population: national, Population: regional/network, Population: states

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Other Applies to any care setting in which child receives care. Can stratify by usual source of care.

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Other Patient Experience

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*: The first pretest phase of the NS-CSHCN used two different batteries of questions to screen households to identify CSHCN: CSHCN Screener and Questionnaire for Identifying Children with Chronic Conditions-Revised Version (QuICCH-R). A total of 1,284 households with children from eight states were screened by telephone, resulting in the completion of 2,420 child-level

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screening interviews, 445 special-needs interviews between March 3 and May 30, 2000.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
Cognitive testing was conducted to test reliability and interpretability of questions across population.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
Prevalence of CSHCN identified by the Screener and QuICCH-R were similar with high (90%) agreement. However, QuICCH-R identified more children as having special health care needs than Screener including the children whose special health care need status was less certain. Based on the pretest results, the CSHCN Screener does not appear to miss or leave out children which specific types of medical, behavioral, or other health conditions. The Screener does not appear to fail to identify children with more serious diagnoses and conditions requiring extensive use of health care services.
Numerous additional documents and statistics are available for this validated measure.

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*: The CSHCN Screener was tested in 17,985 samples of the second round of pretest of NS-CSHCN ("National Sample") and 3,894 samples of children enrolled in Medicaid managed care through the Temporary Aid to Needy Families ("Medicaid Managed Care Sample") and 1,550 samples of children receiving SSI benefits ("SSI sample") in Washington State. The Medicaid Managed care sample and SSI sample were drawn from the CAHPS survey samples.

2c.2 Analytic Method *(type of validity & rationale, method for testing)*:
Cognitive testing was conducted with parents of children ages 0-17 years (interviews conducted over the phone with residential households).

2c.3 Testing Results *(statistical results, assessment of adequacy in the context of norms for the test conducted)*:
In summary, the CSHCN Screener identified numbers of children commensurate with other epidemiological studies of special health care needs. The screener did not systematically exclude categories of children according to the type and/or severity of their health conditions, and exhibited a high level of agreement with other methods.

Good internal psychometric properties of responses to the CSHCN Screener and minimal random measurement error of the Screener was identified on the study used data 2005-2006 NS_CSHCN (e.g., Cronbach's coefficient a level >.80).

A Spanish language version was validated through 2001 NS-CSHCN. Nineteen cognitive interviews were conducted resulting in 37 children screened for special health care needs. Eight interviews took place in Portland, OR; the rest were conducted in Boston, MA. All participating parents were the mothers of children screened during the interviews. Cognitive interviews with parents did not identify any linguistic or cultural deficiencies in the Spanish translation of the CSHCN Screener.

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2d. Exclusions Justified

2d.1 Summary of Evidence supporting exclusion(s):

2d.2 Citations for Evidence:

2d.3 Data/sample *(description of data/sample and size)*:

2d.4 Analytic Method *(type analysis & rationale)*:

2d.5 Testing Results *(e.g., frequency, variability, sensitivity analyses)*:

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2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: **2e.3 Testing Results** *(risk model performance metrics)*: **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** C☐ P☐ M☐ N☐ NA ☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: **2g.2 Analytic Method** *(type of analysis & rationale)*: **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*:	**2g** C☐ P☐ M☐ N☐ NA ☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	**2** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** In use **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** *(If used*	**3a** C☐ P☐ M☐ N☐

in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years)**:** U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The Health and Well-Being of Children: A Portrait of States and the Nation 2007. Chartbook based on data from the 2007 National Survey of Children's Health. http://mchb.hrsa.gov/nsch07/index.html 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*)**:** The Data Resource Center websites have been accessed more than 18 million times since 2006. Thousands of state and national researchers, MCH providers and analysts use the data to report valid children's health data. Healthy People 2010 uses items from the national surveys, and several more are slated to be added into Healthy People 2020. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)***:** Focus groups were held with numerous stakeholder groups—family advocates, clinicians, Title V leaders, researchers—to obtain feedback on report formats. The Child and Adolescent Health Measurement Initiative led the focus groups and developed reports in accordance with a general consumer information framework. Additional focus groups were held when preparing data and reports for display on the Data Resource Center website. The Data Resource Center executive committee also reviewed report formats for interpretability and applicability. 3a.5 **Methods** *(e.g., focus group, survey, QI project)***:** Focus groups 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)***:**	
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐

	N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Survey	4a C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.**	4b C☐ P☐ M☐ N☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No 4c.2 **If yes, provide justification.**	4c C☐ P☐ M☐ N☐ NA ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**	4d C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** Items are well understood and easy to implement. Items yield very low levels of missing values, don't know or refused answers. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Item is public domain and there is no cost associated with its use. 4e.3 **Evidence for costs:** 4e.4 **Business case documentation:**	4e C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	4
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	4 C☐ P☐ M☐ N☐

RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y** ☐ **N** ☐ **A** ☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau, Oregon Health & Science University, 707 SW Gaines Street, Portland, Oregon, 97239

Co.2 Point of Contact
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-

Measure Developer If different from Measure Steward
Co.3 Organization
Maternal and Child Health Bureau, Parklawn Building Room 18-05, 5600 Fishers Lane, Rockville, Maryland, 20857

Co.4 Point of Contact
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-

Co.5 Submitter If different from Measure Steward POC
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-, Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau

Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
The Maternal and Child Health Bureau convenes a Technical Expert Panel (TEP) comprised of dozens of health services researchers, survey methodology experts, and clinical health experts on children´s health to develop items for the National Survey of Children´s Health. In addition, members of the National Center for Health Statistics are included in item construction and measure development. The TEP participates in all aspects of measure development.

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 2003
Ad.7 Month and Year of most recent revision: 01, 2009
Ad.8 What is your frequency for review/update of this measure? Updated every 2 years when a new NSCH or NS-CSHCN is developed
Ad.9 When is the next scheduled review/update for this measure? 01, 2011

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1338 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Children with Special Health Care Needs (CSHCN) who are Screened Early and Continuously for Emerging Conditions
De.2 **Brief description of measure***:* Children with Special Health Care Needs (CSHCN) receiving both preventive medical and dental care during the past 12 months
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Timeliness De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	C Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 12 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	D Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** 1a.4 **Citations for Evidence of High Impact:** Child and Adolescent Health Measurement Initiative. 2005/06 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent Health website. www.cshcndata.org	1a C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** Children with special health care needs still require preventive care. Preventive and well-care visits allow for further assessment and early identification of emerging conditions. 1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:** 1b.3 **Citations for data on performance gap:**	1b C☐ P☐ M☐ N☐

1b.4 Summary of Data on disparities by population group: **1b.5 Citations for data on Disparities:**	
1c. Outcome or Evidence to Support Measure Focus **1c.1 Relationship to Outcomes** (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** **1c.2-3. Type of Evidence:** **1c.4 Summary of Evidence** (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:** **1c.5 Rating of strength/quality of evidence (***also provide narrative description of the rating and by whom***):** **1c.6 Method for rating evidence:** **1c.7 Summary of Controversy/Contradictory Evidence:** **1c.8 Citations for Evidence (***other than guidelines***):** **1c.9 Quote the Specific guideline recommendation (***including guideline number and/or page number***):** **1c.10 Clinical Practice Guideline Citation:** **1c.11 National Guideline Clearinghouse or other URL:** **1c.12 Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)***:** **1c.14 Rationale for using this guideline over others:**	**1c** **C☐** **P☐** **M☐** **N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	

S.1 Do you have a web page where current detailed measure specifications can be obtained?
S.2 If yes, provide web page URL:

2a. Precisely Specified

2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:**
Percentage of children who are screened early and continuously for emerging conditions

2a.2 Numerator Time Window (*The time period in which cases are eligible for inclusion in the numerator*)**:**
Questions are anchored to previous 12 months

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:**
For a child to be included in the numerator of being screened early and continuously for emerging conditions, criteria from the following must be met:
-Child received some or all preventive medical care
-Child received some or all preventive dental care

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*)**:**
Children with special health care needs (CSHCN) age 0-17 years

2a.5 Target population gender: Female, Male
2a.6 Target population age range: Children with Special Health Care Needs age 0-17 years

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator*)**:**
Denominator window is a fixed point in time

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*)**:**
Children with special health care needs (CSHCN) age 0-17 years

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population*)**:** Excluded from denominator if child does not fall in target population age range of 0-17 years and/or does not have special health care needs.

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*)**:**
If child is older than 17 years of age, excluded from denominator.
CSHCN are defined by the standardized and validated CSHCN Screener. The screener is administered at the beginning of the survey and all remaining items in the survey are only asked regarding a child with special health care needs.

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*)**:**
No stratification is required.

The CSHCN Screened Early and Continuously for Emerging Conditions measure is currently being administered in the 2009/10 National Survey of Children with Special Health Care Needs, which includes a number of child demographic variables that allow for stratification of the findings by possible vulnerability:
- Age
- Gender
- Geographic location- State, HRSA Region, National level Rural Urban Commuter Areas (RUCA)
- Race/ethnicity
- Health insurance- type, consistency
- Primary household language
- Household income
- Type of Special Health Care Need

2a-specs
C ☐
P ☐
M ☐
N ☐

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Questions C4Q05_1, C4Q05_1a, C4Q05_1c, C4Q05_31, C4Q05_31a, C4Q05_31c all included in this measure.

To receive numerator of child having early and continuous screening for emerging conditions:
-Child received some or all preventive medical care (at least one preventive visit in past 12 months)
-Child received some or all preventive dental care (at least one preventive visit in past 12 months)

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
Although the most recent version of the measure is currently in development and still undergoing data collection in the 2009/2010 NS-CSHCN, the best guideline to follow is the survey methodology used in the 2005/2006 National Survey of Children with Special Health Care Needs (NS-CSHCN), as the two surveys are overall very similar. The NS-CSHCN first uses the sampling frame generated in the process of data collection for the National Immunization Survey (NIS). Once it is determined whether a child is present in the household and whether or not they are age eligible for the NIS, it is then determined whether the child may also be eligible for the NS-CSHCN.

The goal of the NS-CSHCN sample design was to generate samples representative of populations of children with special health care needs within each state. An additional goal of the NS-CSHCN was to obtain state-specific sample sizes that were sufficiently large to permit reasonably precise estimates of the health characteristics of CSHCN in each state.

To achieve these goals, state samples were designed to obtain a minimum of 750 completed interviews. The number of children to be selected in each NIS estimation area was determined by allocating the total of 750 CSHCN in the state to each NIS estimation area within the state in proportion to the total estimated number of households with children in the NIS estimation area. Given this allocation, the number of households that needed to be screened in each NIS estimation area was calculated using the expected proportion of households with children under 18 years of age in the area. Then, the number of telephone numbers that needed to be called was computed using the expected working residential number rate, adjusted for expected nonresponse.

A total of 40,723 interviews were completed from April 2005 to February 2007 for the 2005/2006 National Survey of Children with Special Health Care Needs. A random-digit-dialed sample of households with children less than 18 years of age was selected from each of the 50 states and the District of Columbia. All children residing in the household under 18 years of age were screened for special health care needs using the validated CSHCN Screener. If more than one child in the household was identified with special needs, only one child with special health care needs was randomly selected to be the subject of the survey. The respondent was a parent or guardian who knew about the child's health and health care.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Survey: Patient

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
2009/2010 National Survey of Children with Special Health Care Needs

2a.26-28 Data source/data collection instrument reference web page URL or attachment:

2a.29-31 Data dictionary/code table web page URL or attachment:

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Population: national, Population: regional/network, Population: states

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Other Applies to any care setting in which child receives care. Can stratify by usual source of care.

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Other Patient Experience

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*:

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
Cognitive testing was conducted to test reliability and interpretability of questions across population.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
The Maternal and Child Health Bureau leads the development of the NSCH and NS-CSHCN survey and indicators, in collaboration with the National Center for Health Statistics (NCHS) and a national technical expert panel. The expert panel includes representatives from other federal agencies, state Title V leaders, family organizations, and child health researchers, and experts in all fields related to the surveys (adolescent health, family and neighborhoods, early childhood and development etc.). Previously validated questions and scales are used when available. Extensive literature reviewing and expert reviewing of items is conducted for all aspects of the survey. Respondents' cognitive understanding of the survey questions is assessed during the pretest phase and revisions made as required. All final data components are verified by NCHS and DRC/CAHMI staff prior to public release. Face validity is conducted in comparing results with prior years of the survey and/or results from other implementations of items. No specific reliability results are available for this measure. Please contact the CAHMI if quantitative measures are needed.

2b C☐ P☐ M☐ N☐

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)*:

2c.2 Analytic Method *(type of validity & rationale, method for testing)*:
Cognitive testing was conducted with parents of children ages 0-17 years (interviews conducted over the phone with residential households).

2c.3 Testing Results *(statistical results, assessment of adequacy in the context of norms for the test conducted)*:
Please see the references section for peer-reviewed articles which have used these items. Peer-reviewed papers generally undertake their own validity testing in order to meet strict peer review standards. See also Reliability Testing Results above.

2c C☐ P☐ M☐ N☐

2d. Exclusions Justified

2d.1 Summary of Evidence supporting exclusion(s):

2d.2 Citations for Evidence:

2d.3 Data/sample *(description of data/sample and size)*:

2d C☐ P☐ M☐ N☐ NA☐

2d.4 **Analytic Method** *(type analysis & rationale)*: 2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:	
2e. Risk Adjustment for Outcomes/ Resource Use Measures 2e.1 **Data/sample** *(description of data/sample and size)*: 2e.2 **Analytic Method** *(type of risk adjustment, analysis, & rationale)*: 2e.3 **Testing Results** *(risk model performance metrics)*: 2e.4 **If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** C☐ P☐ M☐ N☐ NA☐
2f. Identification of Meaningful Differences in Performance 2f.1 **Data/sample from Testing or Current Use** *(description of data/sample and size)*: 2f.2 **Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: 2f.3 **Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods 2g.1 **Data/sample** *(description of data/sample and size)*: 2g.2 **Analytic Method** *(type of analysis & rationale)*: 2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*:	**2g** C☐ P☐ M☐ N☐ NA☐
2h. Disparities in Care 2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: 2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**

3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** Testing not yet completed **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children with Special Health Care Needs Chartbook 2005–2006. Rockville, Maryland: U.S. Department of Health and Human Services, 2008. http://mchb.hrsa.gov/cshcn05/ **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*)**:** The Data Resource Center websites have been accessed more than 18 million times since 2006. Thousands of state and national researchers, MCH providers and analysts use the data to report valid children's health data. Healthy People 2010 uses items from the national surveys, and several more are slated to be added into Healthy People 2020. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)***:** **3a.5 Methods** *(e.g., focus group, survey, QI project)***:** Focus Groups **3a.6 Results** *(qualitative and/or quantitative results and conclusions)***:**	**3a** **C☐** **P☐** **M☐** **N☐**
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?**	**3b** **C☐** **P☐** **M☐** **N☐** **NA☐**
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** **C☐** **P☐** **M☐** **N☐** **NA☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** **C☐** **P☐** **M☐**

	N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Survey	4a C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.** No- measure still in development. The questionnaire with the measure specifications isn't available yet due to potential final changes from MCHB, but we will provide the electronic version of the questionnaire once it is finalized.	4b C☐ P☐ M☐ N☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No 4c.2 **If yes, provide justification.**	4c C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**	4d C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** 4e.3 **Evidence for costs:** 4e.4 **Business case documentation:**	4e C☐ P☐ M☐ N☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	4
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	4 C☐ P☐ M☐

	N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited** ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y**☐ **N**☐ **A**☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
Child and Adolescent Health Measurement Initiative on behalf of the Maternal and Child Health Bureau, Oregon Health & Science University, 707 SW Gaines Street, Portland, Oregon, 97239

Co.2 Point of Contact
Christina, Bethell, Ph.D., MPH, MBA, bethellc@ohsu.edu, 503-494-1892-

Measure Developer If different from Measure Steward
Co.3 Organization
Maternal and Child Health Bureau, Parklawn Building Room 18-05, 5600 Fishers Lane, Rockville, Maryland, 20857

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Co.5 Submitter If different from Measure Steward POC
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Co.6 Additional organizations that sponsored/participated in measure development

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.
The Maternal and Child Health Bureau convenes a Technical Expert Panel (TEP) comprised of dozens of health services researchers, survey methodology experts, and clinical health experts on children´s health to develop items for the National Survey of Children´s Health. In addition, members of the National Center for Health Statistics are included in item construction and measure development. The TEP participates in all aspects of measure development.

Ad.2 If adapted, provide name of original measure:
Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 2005
Ad.7 Month and Year of most recent revision: 01, 2009
Ad.8 What is your frequency for review/update of this measure? Updated every 4 years when a new NS-CSHCN is developed
Ad.9 When is the next scheduled review/update for this measure? 01, 2013

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 08/30/2010

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1373 **NQF Project:** Child Health Quality Measures 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Children with Special Health Care Needs whose Parents Report Participating in Shared Decision-Making in Child´s Care
De.2 **Brief description of measure***:* Measures whether parent is actively engaged as a partner by health care providers in CSHCN´s care
1.1-2 **Type of Measure:** Process De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Patient-centered De.6 **Consumer Care Need:** Staying healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** Proprietary measure A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of measure submission A.4 **Measure Steward Agreement attached:**	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and	**B**

update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	C Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** No, testing will be completed within 12 months D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	D Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	Eval Rating
(for NQF staff use) Specific NPP goal:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** 1a.4 **Citations for Evidence of High Impact:**	1a C☐ P☐ M☐ N☐
1b. Opportunity for Improvement 1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** 1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:** 1b.3 **Citations for data on performance gap:** 1b.4 **Summary of Data on disparities by population group:**	1b C☐ P☐ M☐ N☐

1b.5 Citations for data on Disparities:	
1c. Outcome or Evidence to Support Measure Focus **1c.1 Relationship to Outcomes** (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** **1c.2-3. Type of Evidence:** **1c.4 Summary of Evidence** (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:** **1c.5 Rating of strength/quality of evidence (***also provide narrative description of the rating and by whom***):** **1c.6 Method for rating evidence:** **1c.7 Summary of Controversy/Contradictory Evidence:** **1c.8 Citations for Evidence (***other than guidelines***):** **1c.9 Quote the Specific guideline recommendation (***including guideline number and/or page number***):** **1c.10 Clinical Practice Guideline Citation:** **1c.11 National Guideline Clearinghouse or other URL:** **1c.12 Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF*)**:** **1c.14 Rationale for using this guideline over others:**	**1c** **C☐** **P☐** **M☐** **N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	**2a-specs** **C☐** **P☐** **M☐**
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the*	

target population, e.g. target condition, event, or outcome): The percentage of children with special health care needs whose parents/guardians feel they are engaged as partners in making decisions about their child´s care 2a.2 **Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*): Encounter, point in time--anchored to prior 12 months 2a.3 **Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*): During the past 12 months, how often did doctors or other health care providers… • Discuss with you the range of options to consider for his/her health care or treatment? • Encourage you to ask questions or raise concerns? • Make it easy for you to ask questions or raise concerns • Consider and respect what health care and treatment choices you thought would work best for him/her Never, Rarely, Sometimes, Usually or Always	N☐
2a.4 **Denominator Statement** (*Brief, text description of the denominator - target population being measured*): Denominator includes all children with special health care needs 0-17 years of age. 2a.5 **Target population gender:** Female, Male 2a.6 **Target population age range:** Children age 0-17 years 2a.7 **Denominator Time Window** (*The time period in which cases are eligible for inclusion in the denominator*): Encounter, point in time 2a.8 **Denominator Details** (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions*): Children 0-17 years with special health care needs (CSHCN).	
2a.9 **Denominator Exclusions** (*Brief text description of exclusions from the target population*): Children age 0-17 years who are not identified as having special health care needs are excluded. 2a.10 **Denominator Exclusion Details** (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions*): Children over 17 years are excluded from the denominator. CSHCN are defined by the standardized and validated CSHCN Screener. The screener is administered at the beginning of the survey and all remaining items in the survey are only asked regarding a child with special health care needs.	
2a.11 **Stratification Details/Variables** (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions*):	
2a.12-13 **Risk Adjustment Type:** No risk adjustment necessary 2a.14 **Risk Adjustment Methodology/Variables** (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method*): No stratification is required. The Shared Decision Making measure is currently being administered in the 2009/10 National Survey of Children with Special Health Care Needs, which includes a number of child demographic variables that allow for stratification of the findings by possible vulnerability: • Age • Gender • Geographic location- State, HRSA Region, National level Rural Urban Commuter Areas (RUCA) • Race/ethnicity • Health insurance- type, consistency	

• Primary household language • Household income • Type of Special Health Care Need 2a.15-17 **Detailed risk model available Web page URL or attachment:**	
2a.18-19 **Type of Score:** Rate/proportion 2a.20 **Interpretation of Score:** Better quality = Higher score 2a.21 **Calculation Algorithm (***Describe the calculation of the measure as a flowchart or series of steps***):**	
2a.22 **Describe the method for discriminating performance** *(e.g., significance testing)***:**	
2a.23 **Sampling (Survey) Methodology** *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:	
2a.24 **Data Source (***Check the source(s) for which the measure is specified and tested)***:** Survey: Patient 2a.25 **Data source/data collection instrument (***Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):** 2009/2010 National Survey of Children with Special Health Care Needs 2a.26-28 **Data source/data collection instrument reference web page URL or attachment:** 2a.29-31 **Data dictionary/code table web page URL or attachment:** 2a.32-35 **Level of Measurement/Analysis** (*Check the level(s) for which the measure is specified and tested)* Population: national, Population: regional/network, Population: states 2a.36-37 **Care Settings (***Check the setting(s) for which the measure is specified and tested)***:** Other applies to any care setting in which child receives care. Can stratify by usual source of care 2a.38-41 **Clinical Services** (*Healthcare services being measured, check all that apply*) Other patient experience	
TESTING/ANALYSIS	
2b. Reliability testing 2b.1 **Data/sample** *(description of data/sample and size)***:** 2b.2 **Analytic Method** *(type of reliability & rationale, method for testing)***:** 2b.3 **Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)***:**	**2b** C☐ P☐ M☐ N☐
2c. Validity testing 2c.1 **Data/sample** *(description of data/sample and size)***:** 2c.2 **Analytic Method** *(type of validity & rationale, method for testing)***:** 2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)***:**	**2c** C☐ P☐ M☐ N☐

2d. Exclusions Justified **2d.1 Summary of Evidence supporting exclusion(s):** **2d.2 Citations for Evidence:** **2d.3 Data/sample** *(description of data/sample and size)*: **2d.4 Analytic Method** *(type analysis & rationale)*: **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:	**2d** C☐ P☐ M☐ N☐ NA☐
2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: **2e.3 Testing Results** *(risk model performance metrics)*: **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** C☐ P☐ M☐ N☐ NA☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: **2g.2 Analytic Method** *(type of analysis & rationale)*: **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*:	**2g** C☐ P☐ M☐ N☐ NA☐
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific*	**2**

Acceptability of Measure Properties?	
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	**2** **C☐** **P☐** **M☐** **N☐**
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	**Eval Rating**
3a. Meaningful, Understandable, and Useful Information 3a.1 **Current Use:** Testing not yet completed 3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*)**:** 3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) 3a.4 **Data/sample** *(description of data/sample and size)***:** 3a.5 **Methods** *(e.g., focus group, survey, QI project)***:** 3a.6 **Results** *(qualitative and/or quantitative results and conclusions)***:**	**3a** **C☐** **P☐** **M☐** **N☐**
3b/3c. Relation to other NQF-endorsed measures 3b.1 **NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** **C☐** **P☐** **M☐** **N☐** **NA☐**
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 5.1 **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:**	**3c** **C☐** **P☐** **M☐** **N☐** **NA☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met?	**3**

Rationale:	**C☐ P☐ M☐ N☐**
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	**Eval Rating**
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Survey	**4a** **C☐ P☐ M☐ N☐**
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.** No- measure still in development. The questionnaire with the measure specifications isn't available yet due to potential final changes from MCHB, but we will provide the electronic version of the questionnaire once it is finalized.	**4b** **C☐ P☐ M☐ N☐**
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** **4c.2 If yes, provide justification.**	**4c** **C☐ P☐ M☐ N☐ NA☐**
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.**	**4d** **C☐ P☐ M☐ N☐**
4e. Data Collection Strategy/Implementation **4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** **4e.2 Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** **4e.3 Evidence for costs:** **4e.4 Business case documentation:**	**4e** **C☐ P☐ M☐ N☐**
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met?	**4**

Rationale:	C☐ P☐ M☐ N☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	Time-limited ☐
Steering Committee: Do you recommend for endorsement? **Comments:**	Y☐ N☐ A☐

CONTACT INFORMATION

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Ad.3-5 If adapted, provide original specifications URL or attachment

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.6 Year the measure was first released: 2009
Ad.7 Month and Year of most recent revision: 01, 2010
Ad.8 What is your frequency for review/update of this measure? Updated every 4 years when a new NS-CSHCN is developed
Ad.9 When is the next scheduled review/update for this measure? 01, 2013

Ad.10 Copyright statement/disclaimers:

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 08/30/2010