



Measure Information

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

Brief Measure Information

NQF #: 1448

Corresponding Measures:

De.2. Measure Title: Developmental Screening in the First Three Years of Life

Co.1.1. Measure Steward: Oregon Health & Science University

De.3. Brief Description of Measure: The percentage of children screened for risk of developmental, behavioral and social delays using a standardized screening tool in the first three years of life. This is a measure of screening in the first three years of life that includes three, age-specific indicators assessing whether children are screened by 12 months of age, by 24 months of age and by 36 months of age.

1b.1. Developer Rationale: Pediatricians are not usually successful in identifying children with developmental delays without use of a standardized tool (Hix-Small, 2007). This measure will encourage the use of standardized tools for developmental screening, as delineated by guidelines. Children who are identified earlier are more likely to have developmental promotion activities, that can further improve the likelihood that they will be able to start school ready to learn. Demonstrated quality improvement activities such as the ABCD Screening Academy have shown that providers can feasibly and sustainably implement standardized screening, and when done so, more children are referred to Early Intervention and other services and that the kinds and types of referrals performed are more appropriate than was previously done without standardized screening

S.4. Numerator Statement: The numerator identifies children who were screened for risk of developmental, behavioral and social delays using a standardized tool. National recommendations call for children to be screened at the 9, 18, and 24- OR 30-month well visits to ensure periodic screening in the first, second, and third years of life. The measure is based on three, age-specific indicators.

Numerator 1: Children in Denominator 1 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented by their first birthday

Numerator 2: Children in Denominator 2 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented by their second birthday

Numerator 3: Children in Denominator 3 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented by their third birthday

Numerator 4: Children in Denominator 4 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented by their first, second or third birthday.

S.7. Denominator Statement: Children who meet the following eligibility requirement:

Age: Children who turn 1, 2 or 3 years of age between January 1 and December 31 of the measurement year.

Continuous Enrollment: Children who are enrolled continuously for 12 months prior to child's 1st, 2nd or 3rd birthday.

Allowable Gap No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the beneficiary may not have more than a 1-month gap in coverage (i.e., a beneficiary whose coverage lapses for 2 months (60 days) is not considered continuously enrolled.

S.10. Denominator Exclusions: None.

De.1. Measure Type: Process

S.23. Data Source: Claims, Electronic Health Records, Paper Medical Records

S.26. Level of Analysis: Population : Regional and State
IF Endorsement Maintenance – Original Endorsement Date: Aug 15, 2011 Most Recent Endorsement Date: Aug 15, 2011
IF this measure is included in a composite, NQF Composite#/title:
IF this measure is paired/grouped, NQF#/title:
De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? NA

1. Evidence, Performance Gap, Priority – Importance to Measure and Report
Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. <i>Measures must be judged to meet all subcriteria to pass this criterion and be evaluated against the remaining criteria.</i>
1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form MeasSubm_Evidence_1448_CV_2_2015.docx
1b. Performance Gap Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating: <ul style="list-style-type: none"> considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or disparities in care across population groups. 1b.1. Briefly explain the rationale for this measure (e.g., the benefits or improvements in quality envisioned by use of this measure) Pediatricians are not usually successful in identifying children with developmental delays without use of a standardized tool (Hix-Small, 2007). This measure will encourage the use of standardized tools for developmental screening, as delineated by guidelines. Children who are identified earlier are more likely to have developmental promotion activities, that can further improve the likelihood that they will be able to start school ready to learn. Demonstrated quality improvement activities such as the ABCD Screening Academy have shown that providers can feasibly and sustainably implement standardized screening, and when done so, more children are referred to Early Intervention and other services and that the kinds and types of referrals performed are more appropriate than was previously done without standardized screening 1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. (This is required for endorsement maintenance. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included). This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use. Findings from the National Survey of Children Health show that only 19.5% of children are screened in the first five years of life. Despite the evidence, the use of standardized developmental screening tools is uncommon; only about 20 percent of physicians routinely use developmental screening tests (The Commonwealth Fund, 2008). One study found that pediatricians failed to identify and refer 60 to 80 percent of children with developmental delays in a timely manner. Another study found that 68 percent of children with delays were not detected by pediatricians. Though many significant delays occur before school age, less than 50 percent of children with delays are identified before starting school -- leading to missed opportunities for treatment (Hix-Small, 2007). 1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement. http://www.nschdata.org Commonwealth Fund. Quality Matters, May 6 2008. Hix-Small, Hollie, PhD, et al. Impact of Implementing Developmental Screening at 12 and 24 Months in a Pediatric Practice Pediatrics Vol. 120 No. 2 August 2007, pp. 381-389

Council on Children With Disabilities; Section on Developmental Behavioral Pediatrics; Bright Futures Steering Committee; 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(1):405-420

The American Academy of Pediatrics, Council on Children With Disabilities, Section on Developmental and Behavioral Pediatrics, Bright Futures Steering Committee, and Medical Home Initiatives for Children With Special Needs. Identifying infants and young children with developmental disorder in the medical home: an algorithm for developmental surveillance and screening. *Pediatrics*. 2006. 118(1): 405-420.

Bethell, CD, Reuland, C, Halfon, N, Olsen, L, Schor, E., Measuring the Quality of Preventive and Developmental Services for Young Children: National Estimates and Patterns of Clinicians' Performance. *Pediatrics*. June 2004.

Pinto-martin, J, Dunkle M, Earls M, Fliedner D, Cynthia L. Developmental States of Developmental Screening: Steps to Implementation of a Successful Program. *American Journal of Public Health*. 95, 11: 1928-1932.

King T., Trandon, D, Macias, M, et al. Implementing developmental screening and referrals: Lessons learned from a national project. *Pediatrics*, V 125, No 2, Feb 2010.

Sand N, Silverstein M, Glascoe FP, et al. Pediatrician's reported practices regarding developmental screening: do guidelines work? Do they help? *Pediatrics* 2005; V116 (1): 174-179

Smith RD. The use of developmental screening tests by primary-care pediatricians. *J Pediatrics*. 1978; 93(3): 524-527.

Zuckerman KE, Boudreau AA, Lipstein EA, Kuhlthau KA, and Perrin JM. Household Language, Parent Developmental Concerns, and Child Risk for Developmental Disorder. *Academic Pediatrics*. 2009; 9(2): 97-105.

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. *(This is required for endorsement maintenance. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.*

Studies suggest income disparities exist for developmental screening. One study found that only 23 percent of low-income children receive recommended preventive and developmental services (Bethell et al, 2002). The Early Intervention Periodic Screening, Diagnosis and Treatment (EPSDT) benefit for Medicaid children includes screening at each visit, however, as of 2007, 28 states were engaged in lawsuits due to a failure to properly deliver this service (Glascoe et al, 2007). Another study found that children most at risk for school difficulty were those whose mothers had less than a high school education, those who came from single-mother families, those who had received public assistance, and those who lived in families in which the primary language was not English (High, 2008).¹ Specifically related to screening, the National Survey of Children's Health found that while improvements were needed in increasing screening for all children, significant variations existed in the rates of screening by race-ethnicity and insurance status.

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations.

Bethell et al. Partnering with parents to promote the healthy development of young children enrolled in Medicaid. New York NY: The commonwealth Fund, 2002.

Glascoe FP, PhD and Shapiro, HL, MD. Introduction to Developmental and Behavioral Screening. 2007.

<http://www.dbpeds.org/articles/detail.cfm?TextID=5>

High, Pamela C. and the Committee on Early Childhood, Adoption, and Dependent Care and Council on School Health. School Readiness. *Pediatrics* 2008;121:e1008-e1015

<http://www.nschdata.org>

Pinto-martin, J, Dunkle M, Earls M, Fliedner D, Cynthia L. Developmental States of Developmental Screening: Steps to Implementation of a Successful Program. *American Journal of Public Health*. 95, 11: 1928-1932.

King T., Trandon, D, Macias, M, et al. Implementing developmental screening and referrals: Lessons learned from a national project. Pediatrics, V 125, No 2, Feb 2010.

Sand N, Silverstein M, Glascoe FP, et al. Pediatrician's reported practices regarding developmental screening: do guidelines work? Do they help? Pediatrics 2005; V116 (1): 174-179

Smith RD. The use of developmental screening tests by primary-care pediatricians. J Pediatrics. 1978; 93(3): 524-527.

Zuckerman KE, Boudreau AA, Lipstein EA, Kuhlthau KA, and Perrin JM. Household Language, Parent Developmental Concerns, and Child Risk for Developmental Disorder. Academic Pediatrics. 2009; 9(2): 97-105.

1c. High Priority (previously referred to as High Impact)

The measure addresses:

- a specific national health goal/priority identified by DHHS or the National Priorities Partnership convened by NQF; OR
- a demonstrated high-priority (high-impact) aspect of healthcare (e.g., affects large numbers of patients and/or has a substantial impact for a smaller population; leading cause of morbidity/mortality; high resource use (current and/or future); severity of illness; and severity of patient/societal consequences of poor quality).

1c.1. Demonstrated high priority aspect of healthcare

Patient/societal consequences of poor quality

1c.2. If Other:

1c.3. Provide epidemiologic or resource use data that demonstrates the measure addresses a high priority aspect of healthcare.

List citations in 1c.4.

The American Academy of Pediatrics (AAP) defines a developmental delay as a "condition in which a child is not developing and/or achieving skills according to the expected time frame." A child that is developmentally challenged may face many barriers throughout life; these barriers are even more severe if a delay in development is not detected early. Delayed or disordered development can lead to further health and behavior problems, including failure in school and social and emotional problems.(Council on Children With Disabilities; Section on Developmental Behavioral Pediatrics; Bright Futures Steering Committee; Medical Home Initiatives for Children With Special Needs Project Advisory Committee, 2006) Approximately 12 to 18 percent of U.S. children may have a developmental and behavioral problem. However, only about two percent of children from birth to two years old receive the necessary early intervention services.(Hix-Small, Hollie, PhD, et al., 2007)

A child who is identified as having a delay in development by the time he starts school and participates in early intervention programs is more likely to graduate high school, hold a job, live independently, and avoid teen pregnancy, delinquency and violent crimes -- representing a saved cost to society of between \$30,000 and \$100,000 per child.(Glascoe FP, PhD, et al., 2007)

Studies have shown that developmental surveillance based on non-standardized clinical judgment and observation alone does not accurately identify children with delays. Therefore, national recommendations call for routine, standardized screening of children three times in the first three years (at the 9, 18 and 24-or 30-month well-visit).

1c.4. Citations for data demonstrating high priority provided in 1a.3

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

Council on Children With Disabilities; Section on Developmental Behavioral Pediatrics; Bright Futures Steering Committee; 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(1):405-420

Hix-Small, Hollie, PhD, et al. Impact of Implementing Developmental Screening at 12 and 24 Months in a Pediatric Practice Pediatrics Vol. 120 No. 2 August 2007, pp. 381-389

Glascoe FP, PhD and Shapiro, HL, MD. Introduction to Developmental and Behavioral Screening. 2007.

<http://www.dbpeds.org/articles/detail.cfm?TextID=5>

1c.5. If a PRO-PM (e.g. HRQoL/functional status, symptom/burden, experience with care, health-related behaviors), provide evidence that the target population values the measured PRO and finds it meaningful. (Describe how and from whom their input was obtained.)

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the subcriteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

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

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

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

[Primary Prevention, Screening](#)

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

<http://www.medicaid.gov/medicaid-chip-program-information/by-topics/quality-of-care/downloads/medicaid-and-chip-child-core-set-manual.pdf>

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

[This is not an eMeasure](#) Attachment:

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

[No data dictionary](#) Attachment:

S.3. For endorsement maintenance, please briefly describe any changes to the measure specifications since last endorsement date and explain the reasons.

[There have been no changes to the measure specifications. They have been improved clarifications and explanations, but no changes to the specifications. The metric is annual reviewed by stakeholders via the CHIPRA measurement process. Mathematica, who is charged with providing technical assistance to the various states across the country who are reporting or considering reporting the measure provides me annual feedback on the measure. To date, the questions/issues that have arisen have resulted in clarifications or improved wording in the measure, but no changes to the specifications or methods used to calculate the measure.](#)

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome)

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

[The numerator identifies children who were screened for risk of developmental, behavioral and social delays using a standardized tool. National recommendations call for children to be screened at the 9, 18, and 24- OR 30-month well visits to ensure periodic screening in the first, second, and third years of life. The measure is based on three, age-specific indicators.](#)

[Numerator 1: Children in Denominator 1 who had screening for risk of developmental, behavioral and social delays using a](#)

standardized screening tool that was documented by their first birthday

Numerator 2: Children in Denominator 2 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented by their second birthday

Numerator 3: Children in Denominator 3 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented by their third birthday

Numerator 4: Children in Denominator 4 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented by their first, second or third birthday.

S.5. Time Period for Data *(What is the time period in which data will be aggregated for the measure, e.g., 12 mo, 3 years, look back to August for flu vaccination? Note if there are different time periods for the numerator and denominator.)*

Twelve months - 1 year

S.6. Numerator Details *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b) IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm.*

Claims data:

The numerators identify children who were screened for risk of developmental, behavioral and social delays using a standardized tool. National recommendations call for children to be screened at the 9, 18, and 24- OR 30-month well visits to ensure periodic screening over the first three years. The measure is based on three, age-specific indicators.

Numerator 1: Children in Denominator 1 who had a claim with CPT code 96110 on or by their first birthday

Numerator 2: Children in Denominator 2 who had a claim with CPT code 96110 on or by their second birthday

Numerator 3: Children in Denominator 3 who had a claim with CPT code 96110 on or by their third birthday

Numerator 4: Children in the entire eligible population who had a claim with CPT code 96110 by their 1st, 2nd or 3rd birthday.

Claims data: CPT code 96110 (Developmental testing, with interpretation and report)

Important Note About Appropriate Use of Claims Data: This measure is anchored to standardized tools that meet four criterion specified above. States who have policies clarifying that standardized tools meeting this criterion must be used to bill for 96110 should be able to report using claims data.

Claims NOT Included in This Measure: It is important to note that modified 96110 claims [e.g. modifiers added to claim indicating standardized screening for a specific domain of development (e.g. social emotional screening via the ASQ-SE, autism screening)] should not be included as this measure is anchored to recommendations focused on global developmental screening using tools that focus on identifying risk for developmental, behavioral and social delays.

Medical Record Data:

Numerators

Numerator 1: Children in Denominator 1 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented on or by their first birthday

Numerator 2: Children in Denominator 2 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented on or by their second birthday

Numerator 3: Children in Denominator 3 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented on or by their third birthday

Numerator 4: Children in Denominator 4 who had screening for risk of developmental, behavioral and social delays using a standardized screening tool that was documented on or by their first, second or third birthday.

Documentation in the medical record must include all of the following:

- A note indicating the date on which the test was performed, and
- The standardized tool used (see below), and
- Evidence of a screening result or screening score

Tools must meet the following criteria:

- 1) Developmental domains: The following domains must be included in the standardized developmental screening tool: motor, language, cognitive, and social-emotional.
- 2) Established Reliability: Reliability scores of approximately 0.70 or above.
- 3) Established Findings Regarding the Validity:

Validity scores for the tool must be approximately 0.70 or above. Measures of validity must be conducted on a significant number of children and using an appropriate standardized developmental or social-emotional assessment instrument(s).

- 4) Established Sensitivity/Specificity: Sensitivity and specificity scores of approximately 0.70 or above.

Current tools included in the Bright Futures Recommendations and AAP Policy Statement on Developmental Screening that meet these criteria:

Ages and Stages Questionnaire (ASQ) - 2 months – 5 years

Ages and Stages Questionnaire - 3rd Edition (ASQ-3)

Battelle Developmental Inventory Screening Tool (BDI-ST) – Birth – 95 months

Bayley Infant Neuro-developmental Screen (BINS) - 3 months – 2 years

Brigance Screens-II – Birth – 90 months

Child Development Inventory (CDI) - 18 months–6 years

Infant Development Inventory – Birth – 18 months

Parents' Evaluation of Developmental Status (PEDS) – Birth – 8 years

Parent's Evaluation of Developmental Status - Developmental Milestones (PEDS-DM)

Tools NOT Included in This Measure: It is important to note that standardized tools specifically focused on one domain of development [e.g. child's socio-emotional development (ASQ-SE) or autism (M-CHAT)] are not included in the list above as this measure is anchored to recommendations focused on global developmental screening using tools that focus on identifying risk for developmental, behavioral and social delays.

S.7. Denominator Statement *(Brief, narrative description of the target population being measured)*

Children who meet the following eligibility requirement:

Age: Children who turn 1, 2 or 3 years of age between January 1 and December 31 of the measurement year.

Continuous Enrollment: Children who are enrolled continuously for 12 months prior to child's 1st, 2nd or 3rd birthday.

Allowable Gap No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the beneficiary may not have more than a 1-month gap in coverage (i.e., a beneficiary whose coverage lapses for 2 months (60 days) is not considered continuously enrolled.

S.8. Target Population Category *(Check all the populations for which the measure is specified and tested if any):*

Children

S.9. Denominator Details *(All information required to identify and calculate the target population/denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should*

be provided in an Excel or csv file in required format at S.2b)

Claims: Denominator 1: The children in the eligible population who turned 1 during the measurement year. Denominator 2: The children in the eligible population who turned 2 during the measurement year.

Denominator 3: The children in the eligible population who turned 3 during the measurement year.

Denominator 4: Total

Medical Record:

Denominator

A systematic sample of 411 drawn from the eligible population.

Denominator 1: Children from the sample who turned 1 during the measurement year.

Denominator 2: Children from the sample who turned 2 during the measurement year.

Denominator 3: Children from the sample who turned 3 during the measurement year.

Denominator 4: The entire sample.

Optional Age-Specific Oversampling

A sample of 411 will provide sufficient statistical power for states reporting a state-wide developmental screening rate for children ages 1-3. With the smaller age-specific samples, the confidence intervals around the age-specific rates will be larger. States will want to use information about developmental screening to improve screening rates. The age-specific rates will help states identify high-leverage opportunities. Some states may wish to monitor screening rates for a particular age group, or compare screening rates for a particular age group with other states, or look within an age group at subgroups, such as race/ethnicity, region or language. For these applications, the age-specific sample of 137 may be insufficient, and the state will want a larger sample to obtain statistically meaningful results. The size of the sample required depends on the use of the data, so consultation with a statistician is recommended. The following instructions guide the development of an oversample.

The eligible population, from which the original sample was drawn, should be stratified by age, and the age-specific sample drawn from within each stratum. To oversample for any age group, the State should return to the original listing of eligible children in that age group, and continue adding children to the sample until the larger sample is complete. However, the State should only include the first 137 children sampled in the rate reported to CMS.

S.10. Denominator Exclusions (Brief narrative description of exclusions from the target population)

None.

S.11. Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

NA

S.12. Stratification Details/Variables (All information required to stratify the measure results including the stratification variables, definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b)

The measure is stratified by the following ages:

By 12 months (Indicator 1)

By 24 months (Indicator 2)

By 36 months (Indicator 3)

S.13. Risk Adjustment Type (Select type. Provide specifications for risk stratification in S.12 and for statistical model in S.14-15)

No risk adjustment or risk stratification

If other:

S.14. Identify the statistical risk model method and variables (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development and testing should be addressed with measure testing under Scientific

Acceptability)

NA

S.15. Detailed risk model specifications (must be in attached data dictionary/code list Excel or csv file. Also indicate if available at measure-specific URL identified in S.1.)

Note: Risk model details (including coefficients, equations, codes with descriptors, definitions), should be provided on a separate worksheet in the suggested format in the Excel or csv file with data dictionary/code lists at S.2b.

S.15a. Detailed risk model specifications (if not provided in excel or csv file at S.2b)

S.16. Type of score:

Rate/proportion

If other:

S.17. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Higher score

S.18. Calculation Algorithm/Measure Logic (Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.)

Step 1:

Determine the denominators

From the total denominator, sort into age cohorts children who turned one, two or three years of age between January 1 and December 31 of the measurement year.

Step 2:

Determine the numerators

For each age cohort, and for the total, identify children who had a screening for developmental, behavioral, and social delays performed by their birthday as found through claims data or documented in the medical chart.

Claims Data:

Children for whom a claim of 96110 was submitted for services delivered during the measurement year.

Medical Record:

Children who had documentation in the medical record of developmental screening using a standardized validated tool during the measurement year.

Documentation must include a note indicating the standardized tool that was used, the date of screening and evidence that the tool was completed and scored.

Step 3:

Calculate the age-specific indicators (1-3) by dividing the age-specific numerator by the age-specific denominator and multiplying by 100 to get a percentage.

Step 4:

Create the overall measure of screening based on the age-specific measures.

Numerator: Numerator 1 + Numerator 2+ Numerator 3

Denominator: Total denominator

S.19. Calculation Algorithm/Measure Logic Diagram URL or Attachment (You also may provide a diagram of the Calculation Algorithm/Measure Logic described above at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

S.20. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

If a PRO-PM, identify whether (and how) proxy responses are allowed.

If administrative data are used, the entire population is used for the denominator. For hybrid measures (administrative plus chart review data sources), a random sample can be drawn. Preferred sample size would be 411.

S.21. Survey/Patient-reported data (If measure is based on a survey, provide instructions for conducting the survey and guidance on minimum response rate.)

If a PRO-PM, specify calculation of response rates to be reported with performance measure results.

S.22. Missing data (specify how missing data are handled, e.g., imputation, delete case.)

Required for Composites and PRO-PMs.

S.23. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.24.

Claims, Electronic Health Records, Paper Medical Records

S.24. Data Source or Collection Instrument (Identify the specific data source/data collection instrument e.g. name of database, clinical registry, collection instrument, etc.)

If a PRO-PM, identify the specific PROM(s); and standard methods, modes, and languages of administration.

Claims data, Medical record

S.25. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

Available at measure-specific web page URL identified in S.1

S.26. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Population : Regional and State

S.27. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Other

If other: Managed Care Organization Level/Health Plan Level

S.28. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

2a. Reliability – See attached Measure Testing Submission Form

2b. Validity – See attached Measure Testing Submission Form

1448_MeasTesting_2_2015-635593530145831750.docx

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

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

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

Generated or collected by and used by healthcare personnel during the provision of care (e.g., blood pressure, lab value, diagnosis, depression score), Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

If other:

3b. Electronic Sources

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

3b.1. To what extent are the specified data elements available electronically in defined fields? (*i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields*)

Some data elements are in defined fields in electronic sources

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources.

Developmental screening and fields that relate to whether the screen was administered, the score of the screen, and whether the provider communicated the results of the screen to the family are not currently standard fields that can be "queried" in the EMR. They are part of the model EMR format that is part of the CHIPRA demonstration project. IN working with 21 practices on assessing this, documentation was in the chart on these fields (and is required due bill 96110) but is not standardized across EMR settings. It is for this reason the specifications include medical chart reviews, but they do not include EMR based measures.

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL.

Attachment:

3c. Data Collection Strategy

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

3c.1. Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

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

The measure presented is based on the shared learnings from NCQA's development work, Ms Reuland's (while at CAHMI) technical assistance consulting to the ABCD Screening Academy, CHIPRA demonstration grantee reports, and targeted efforts focused on the measure within Oregon as part of their Performance Improvement Project focused on screening, referral and follow-up. With regard to the ABCD efforts, an executive summary of the methodologies used by each state can be found here:

http://www.nashp.org/sites/default/files/screening_academy_results.pdf. Overall, 24 states Medicaid agencies (21 state/territories in the ABCD Screening Academy and then the states in ABCD II that were not in the Screening Academy) used claims or medical chart data using similar methods to those proposed here and found the data to be valid for assessing screening sensitive to the quality improvement efforts they were conducting.

Additionally, some states have found that claims data can be inaccurate for screening that occurred in systems in which the payment is capitated (and therefore individual claims related to specific aspects of care provided are not submitted) or for health

care providers for whom screening is not paid separately (e.g. Federally Qualified Health Centers). Thus, we recommend hybrid data collections for those settings.

With regard to the CHIPRA Core measure efforts, updated summaries can be found here: <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/CHIPRA-Initial-Core-Set-of-Childrens-Health-Care-Quality-Measures.html>

Given the measure is a Core Measure, it has been annually reviewed through that process by federal CMS and through the contractor responsible for assessing any issues with the reliability and validity of the measure. This contractor is Mathematica annually. Ms. Reuland has a call with Mathematica to review any issues with the measures, based on their depth interviews with the states. There have been changes to the measure specifications based on these interviews. There have only been improvements and clarifications to the measure.

Lastly, in the Fall-Winter '14 the National Academy of State Health Policy was also contracted by federal CMS to assess this measure, determine why certain states have not reported the measure and to support efforts to enhance the reporting of the measures. Through these interviews no changes to the measure specifications were proposed. Supports to help states implement policies and documentation requirements that align with the measure were instead proposed.

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

N/A

4. Usability and Use

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

4a. Accountability and Transparency

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

4.1. Current and Planned Use

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

Planned	Current Use (for current use provide URL)
	<p>Public Reporting</p> <p>CMS - CHIPRA Quality Measure https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/child-core-set/index.html</p> <p>Payment Program</p> <p>Oregon Health Authority https://www.oregon.gov/oha/Metrics/Pages/measure-developmental.aspx</p> <p>Quality Improvement (external benchmarking to organizations) Oregon Health Authority measure-developmental.aspx States within ABCD Consortiu,</p>

	http://www.nashp.org/abcd-map/ Quality Improvement (Internal to the specific organization) States with ABCD Consortium http://www.nashp.org/abcd-map/
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4a.1. For each CURRENT use, checked above, provide:

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

1) Oregon is using the measure within a) Their state level waiver and related incentives b) Coordinated Care Incentive Metrics and c) The measures is included in the individual Patient Centered Primary Care Home Program, where practice can report it. In that way, practices have used it for QI. Included in the Appendices are summaries of the Oregon-level data.
<http://www.oregon.gov/oha/Metrics/Pages/measure-developmental.aspx>

2) Previous to the current use as a CCO Incentive metric, Oregon used the measure as part of a Performance Improvement Project for eight managed care organizations. This work, and the demonstrated validity and reliability of the metric paired with the metric being part of the CHIPRA Core Measurement set is what led to the approval of the measure for the CCO Incentive Metric noted above.

3) The Measure is a CHIPRA Core Measure. In FFY 2015 Child Core Set Report (n = 21 states) reported the measure. Attached are findings from the FY2015 that were confidentially shared by Mathematica for the NQF review as they are not publicly available. Of the 21 states reporting the measure in FY2-15, 15/21 used administrative data only and 6 used the hybrid methodology. The last report provided, also attached, was for FY 2013. In FY 2013 19 states reporting the measure for FFY 2013, 15 reported the measure for both their Medicaid and CHIP populations, 2 reported the measure for their Medicaid population only, and 2 reported the measure for their CHIP population only. In FFY 2013, 19 states reported the measure using the Child Core Set specifications, which were based on OHSU 2013 specifications. Five states used the Child Core Set specifications for all three years (FFY 2011–2013).

3) There are a number of ABCD States who continue to use the metric for internally tracking and state-level monitoring.

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

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

4b. Improvement

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

4b.1. Progress on Improvement. (Not required for initial endorsement unless available.)

Performance results on this measure (current and over time) should be provided in 1b.2 and 1b.4. Discuss:

- Progress (trends in performance results, number and percentage of people receiving high-quality healthcare)
- Geographic area and number and percentage of accountable entities and patients included

1) States Reporting as Part of CARTS. 21 States reported the metric in FY 2015. See the document "MST_CH-DEV_11182016_toColleen" for the measure findings. The mean rate reported by the states was 38.5 and the median rate was 42.3

2) The Oregon level rates overall and by CCO can be found here: <http://www.oregon.gov/oha/Metrics/Pages/measure-developmental.aspx>.

The percentage of children who were screened for the risk of developmental, behavioral and social delays continues to increased from a 2011 baseline of 21 percent to 35 percent in June 2014, an increase of 68 percent. Statewide change since 2014: +28%. The Number of CCOs that improved: 15/16. The number of CCOs achieving benchmark or improvement target: 16/16.

4b.2. If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4c. Unintended Consequences

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

4c.1. Were any unintended negative consequences to individuals or populations identified during testing; OR has evidence of unintended negative consequences to individuals or populations been reported since implementation? If so, identify the negative unintended consequences and describe how benefits outweigh them or actions taken to mitigate them.

The potential inaccuracies are often due to policy-level issues related to payment and reimbursement for developmental screening across the public and private sector.

Claims data: Screening rates may be lower than expected because providers can bill for a 96110 on the private side and/or are in a capitated payment model on the public side and don't understand the need for and value to submit a 96110 claim. Conversely, 96110 rates may also include screening using tools that can be validly billed for a 96110, but that don't meet the reliability and validity requirements for a tool that will screen for risk for developmental, behavioral and social delays.

2) Medical charts: Screening tools may not be included in the EMRs due to the complexities of building forms in the EMR for tools that are paper-completed or completed online, outside the office. The potential inaccuracies are often due to policy-level issues related to payment and reimbursement for developmental screening across the public and private sector.

Claims data: Screening rates may be lower than expected because providers can bill for a 96110 on the private side and/or are in a capitated payment model on the public side and don't understand the need for and value to submit a 96110 claim. Conversely, 96110 rates may also include screening using tools that can be validly billed for a 96110, but that don't meet the reliability and validity requirements for a tool that will screen for risk for developmental, behavioral and social delays.

2) Medical charts: Screening tools may not be included in the EMRs due to the complexities of building forms in the EMR for tools that are paper-completed or completed online, outside the office.

5. Comparison to Related or Competing Measures

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

5. Relation to Other NQF-endorsed Measures

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

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

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.
Developmental Screening -National Survey of Children's Health (#0011)

The document "[Summary_ScreeningMeasurestoNQF](#)" provides an overview of the important differences in these measures of developmental screening by data source and by denominator.

5a. Harmonization

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

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

Are the measure specifications completely harmonized?

[Yes](#)

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

[Given the hybrid methodology requires chart review, the middle age group \(Screening by 2\) was intentionally harmonized with the NCQA metric of Immunization Screening by 2. We did this given many states report this measure and do chart reviews for this measure and therefore to enhance feasibility, we aligned the middle age group with this existing measure.](#)

5b. Competing Measures

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

OR

Multiple measures are justified.

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

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

[This measure is intended for 1\) State Medicaid Agencies to use as part of CARTS reporting; 2\) Is a population based measure of continuously enrolled children 3\) Based on data source that State Medicaid/CHIP agencies have access to.](#)

[The other developmental screening measure - developed by CAHMI- has a different data source \(parent report\) and different periodicity of data collection \(National surveys are only collected in specific years\). This measure is applicable to be measured annually and using existing claims/medical chart data.](#)

Appendix

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

[Attachment Attachment: Developmental_Screening_Measure_Materials.pdf](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): [Oregon Health & Science University](#)

Co.2 Point of Contact: [Colleen, Reuland, reulandc@ohsi.edu, 503-494-0456-](#)

Co.3 Measure Developer if different from Measure Steward: [Oregon Health & Science University](#)

Co.4 Point of Contact: [Colleen, Reuland, reulandc@ohsi.edu, 503-494-0456-](#)

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

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

The NCQA Child Health MAP advised NCQA during measure development of the Physician-Level measure for which this measure is harmonized. They evaluated the way staff specified measures, assessed the content validity of measures, and reviewed field test results. As you can see from the list, the MAP consisted of a balanced group of experts, including representatives from pediatricians, family physicians, researchers, Medicaid CHIP offices and health plans.

NCQA Child Health MAP:

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

Secondly, states/consultants from the ABCD community participated in a conference call review of the measure, which included staff from the National Academy of State Health Policy. Below is a list of persons that attended the call and/or gave written comments to the Ms. Reuland and what state they were from:

Mary Alice Lee, CT
Chris Kus, NY
Linda Dann, MI
Jenny Salesa, MI
Sonni Vierling, IA
Mary Noel, MT
Maude Holt, Washington DC
Molly Carpenter, VI
Julie Doetsch, IL
Laura McGuinn, OK
Trish Blake, CO
Viki Brant, AL
Carole Lannon, OH
Kevin Stanford, OH
Harvey Doremus, OH
Kim Elliot, AZ
Kathy Mayfield-Smith, SC
William Golden, AK
Molly Emmons, OR
Patrician Mack, IL
Kristi Plotner, MS
Russell Frank, VT
Eileen Bennet, CO
Mary Lundtke, MI
Margaret Bennett, NJ
Lillian Garcia, AZ
Suzanne Yockelson (Consultant- UCI)
Amy Fine (Health Policy/Program Consultant- Washington DC)
Anita Berry, IL

Mary Timmerman, AL
Juanona Brewster, IL
Michelle Urban, WI
Patrician Hagan, CT
Vicky Hosey, IL
Sheena Olson, AK
Gina Robinson, CO
Kim Davis Allen, AL
Theresa Thomas, AL
Sandra Watson, IL
Susan Castellano, MN
Charles Gallia, OR
Norma Everret, Nemours

Thus, our measures are the result of consensus from a broad and diverse group of stakeholders.

3) Lastly, given the measure is a Core Measure, it has been annually reviewed through that process by federal CMS and through the contractor responsible for assessing any issues with the reliability and validity of the measure. This contractor is Mathematica. Ms. Reuland has a call with Mathematica to review any issues with the measures, based on their depth interviews with the states. There have been changes to the measure specifications based on these interviews. There have only been improvements and clarifications to the measure.

4) Fall-Winter '14 the National Academy of State Health Policy was also contracted by federal CMS to assess this measure, determine why certain states have not reported the measure and to support efforts to enhance the reporting of the measures. Through these interviews no changes to the measure specifications were proposed. Supports to help states implement policies and documentation requirements that align with the measure were instead proposed.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2010

Ad.3 Month and Year of most recent revision:

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

Ad.5 When is the next scheduled review/update for this measure?

Ad.6 Copyright statement: Copyright established in November 7, 2013 to the Oregon Pediatric Improvement Partnership at Oregon Health and Science University. The copyright is 2010- Oregon Pediatric Improvement Partnership at Oregon Health and Science University

Ad.7 Disclaimers: NA

Ad.8 Additional Information/Comments: NA