



Measure Fact Sheet – The AHRQ-CMS Pediatric Quality Measures Program (PQMP)

Measure: Developmental Screening Follow-up: Follow-up Referral Tracking

Measure Developer: Pediatric Measurement Center of Excellence (PMCoE)

Numerator	Denominator	Exclusions	Data Source(s)
Patients whose primary care clinician received feedback from the follow-up care clinician within 6 months of the date that referral for follow-up care was made.	All patients aged 6 months to 36 months who received a referral for developmental delay follow-up care or evaluation.	Patients who were referred for follow-up services but did not continue care in the medical home where diagnosed.	Electronic health record (EHR); paper medical record.

Measure Importance

According to the Centers for Disease Control and Prevention (CDC), 13 percent of children in the United States have developmental or behavioral disabilities.¹ However, according to the U.S. Department of Education, fewer than half of children who have developmental delays are identified prior to starting school.²

Practices that successfully tracked referrals found that many families do not follow through with referrals, and families often do not understand where they are being referred or the reason for referral. Tracking of referrals leads to better communication with local referral resources, and tracking led some practices to conclude that more children are being identified and linked to services as feedback on eligibility status of the referred children informs practices about their screening success.³

Evidence Base for the Focus of the Measure

The American Academy of Pediatrics (AAP) policy statement, Identifying Infants and Young Children with Developmental Disorders in the Medical Home: an Algorithm for Developmental Surveillance and Screening,⁴ describes the importance of early identification and treatment of children with neurodevelopmental and behavioral problems to their well-being and development. In addition, the following clinical recommendation statement is taken verbatim from the AAP policy statement referenced above:



“If a child is found to have a developmental delay (disease etiology does not need to be defined), the child should be identified by the medical home for appropriate chronic-condition management and regular monitoring and entered into the practice’s children and youth with special health care needs registry. Children should also be referred to community-based family support services such as respite care, parent-to-parent programs, and advocacy organizations.”⁴

Advantages of the Measure

- This measure is specified for construction in electronic health records (EHRs).
- This measure has also been specified to be constructed to assess performance through manual chart review.
- This measure enhances the developmental screening measure in the CHIPRA initial core set, fulfilling the critically important referral/follow-up component of screening.
- This measure is publicly available for noncommercial use.

Levels of Aggregation Applicable to the Measure

This measure is intended for aggregation and comparison at the State, regional, payment model, health plan, provider, and practice levels.

Reliability and Validity of the Measure

- Pilot reliability testing of the eMeasure was conducted in 20 randomly sampled patient records with a completed developmental screen between July 2011 and April 2014. Patients were selected from practices and early intervention programs in 13 counties in Pennsylvania and New Jersey.
- Parallel forms reliability eMeasure testing was performed at one site, and a total of 224 developmental screens were abstracted both electronically and manually. Reliability was assessed by comparing the eMeasure output with the results of abstraction of documentation from the same charts.
- Manual chart abstractions were performed in the primary care networks of four hospitals in the Chicago area. A chart abstraction tool and algorithm were developed and disseminated to sites. A total of 141 charts were reviewed, with each chart being reviewed by two research nurses. Reliability and validity were assessed.
- Reliability of the measure for manual chart abstraction was assessed by evaluating agreement between the two nurse abstractors’ assessments of each of the measure’s elements and assessment of measure performance.
- Validity was assessed through direct assessment of the fields for each of the measure elements and their use in the EHR.

- The face validity of the measure was assessed by an expert technical panel of key stakeholders and through a public comment and was determined to have both understandability and face validity for key developmental screening follow-up stakeholders.⁷

Measure Testing

- Feasibility of the eMeasure requires that all of the elements of the measure are available in structured, queryable fields and that these fields are used for routine documentation. Feasibility testing was conducted in the primary care networks of the Chicago Pediatric Quality and Safety Consortium (CPQSC), which comprises five Chicago-area hospitals: Advocate Lutheran General Children's Hospital, Advocate Christ Hope Children's Hospital, John H. Stroger Cook County Hospital, Mt. Sinai Children's Hospital, and Robert and Anne Lurie Children's Hospital. A Data Element Table (DET) tool was used to assess the sites' EHR systems, which include Epic, Cerner, and Allscripts TouchWorks.
- Feasibility was also assessed in a customized electronic system used by practices and early intervention programs in 13 counties in Pennsylvania and New Jersey and a North Carolina private pediatric practice with a customized EHR based on eClinicalWorks.
- Reliability and validity were assessed in a customized electronic system with coverage extending across practices and early intervention programs in 13 counties in Pennsylvania and New Jersey and a North Carolina private pediatric practice with a customized EHR based on eClinicalWorks.

Selected Results from Tests of the Measure

- Feasibility testing indicated that while many demographic data elements are currently captured in structured data fields in the EHR, some important data elements required to calculate this measure as an eMeasure often are not available in structured fields in the EHR; therefore, this measure is not currently feasible as an eMeasure in those EHR systems. However, these elements are documented and available in the paper and electronic medical records; therefore, this measure is feasible for manual chart abstraction.
- A customized EHR system was determined to have all of the measure elements in structured, queryable fields and able to construct a measure report to assess clinical performance using this eMeasure. Through detailed review of the results and reliability testing and comparison with manual chart review, it was determined that 33 percent of patients had some feedback and met the measure criteria. Approximately 50 percent of referrals were to an external source and were not consistently available or searchable in the electronic system.
- Approximately, 16.5 percent of charts contained the necessary data in structured fields to construct the eMeasure. An additional 16.5 percent of charts met the measure through manual chart review.
- Reasons that patient records did not meet the measure included: no documentation of referral feedback from internal or external providers, referral feedback was not received within the 6-month window, and documented contact with related providers was not a result of the screening visit recommendations.

- Parallel forms reliability eMeasure testing indicated that in one site, while the eMeasure was technically feasible, clinicians were not using the available structured, queryable fields for the measure elements required for construction of the eMeasure. Therefore, the eMeasure was not implementable at that site at this time, but it would be feasible with clinician documentation workflow changes.

Caveats

- Use of the eMeasure is limited to sites where the EHR includes all of the measure elements in structured, queryable fields and where routine documentation of the relevant clinical information is done in these structured, queryable fields.
- There is a possibility that missing data or ambiguous information stored in a provider's EHR will lead to calculation errors and low performance on the measure.
- Workflow modifications or changes to the site's EHR system may be necessary in order to calculate the measure.

More Information

- AHRQ: CHIPRAqualitymeasures@ahrq.hhs.gov
- PMCOE: Lisa Krams, lkrams@asp.org; Ramesh Sachdeva, rsachdeva@aap.org
- Coming soon: Link to measure details on the AHRQ Web site.

For more information about the PQMP, visit www.ahrq.gov/chipra.

Notes

¹Boulet SL, Boyle CA, Schieve LA. Health care use and functional impact of developmental disabilities among US children, 1997-2005. *Arch Pediatr Adolesc Med* 2009; 163(1):19-26.

²U.S. Department of Education, Office of Special Education Programs [Internet], Data Analysis System (DANS), Part C Child Count, 1997-2006.

³Medical Home Initiatives for Children with Special Needs Project Advisory Committee. The medical home. *Pediatrics* 2002; 110:1 (Reaffirmed in 2008) .

⁴American Academy of Pediatrics. Identifying infants and young children with developmental disorders in the medical home: an algorithm for developmental surveillance and screening. *Pediatrics* 2006; 118(1):405-20.

⁵The topic, language, specifications, and results were reviewed by a 21-member Expert Workgroup comprising a wide range of stakeholders including pediatricians, family physicians, State Medicaid agencies, physician assistants, Early Intervention, Head Start, child/adolescent psychologists, ABCD programs, neurologists, patient-family members, and researchers. The Expert Workgroup technical panel was solicited for feedback on importance, relevance, understandability, and usability throughout the development process. Further, using the networks of Expert Workgroup members, this measure was put through a Public Comment period and feedback on the variables above as well as additional general feedback was requested.

The Children's Health Insurance Program Reauthorization Act (CHIPRA) called for establishment of a Pediatric Quality Measures Program (PQMP) as a follow-up to identifying the initial core set of children's health care quality measures. This fact sheet was produced by the Agency for Healthcare Research and Quality (AHRQ), based on information provided by the AHRQ-CMS Pediatric Measurement Center of Excellence (PMCoE), which was funded by an AHRQ/CMS grant as a CHIPRA Center of Excellence. A listing of all submitted PQMP Centers of Excellence can be found at www.ahrq.gov/CHIPRA. All measures are publicly available for noncommercial use.



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