Eye Care and Ear, Nose, and Throat Conditions: Off-Cycle Measure Review 2017

TECHNICAL REPORT

September 21, 2017

This report is funded by the Department of Health and Human Services under contract HHSM-500-2012-00009I Task Order HHSM-500-T0008.

NATIONAL QUALITY FORUM

Contents

Executive Summary **3**
Introduction **4**
Consensus Development Process Off-Cycle Activities 4
EENT Measure Evaluation **4**
Table 1. EENT 2017 Off-Cycle Measure Evaluation Summary 4
Comments Received Prior to Committee Evaluation 4
Summary of Measure Evaluation 5
Comments Received After Committee Evaluation 6
Appendix A: Details of Measure Evaluation **7**
Endorsed Measure 7
2811 Acute Otitis Media – Appropriate First-Line Antibiotics 7
Measure Not Endorsed 11
2640 Otitis Media with Effusion - Antibiotics Avoidance 11
Appendix B: EENT Portfolio – Use in Federal Programs **14**
Appendix C: Project Standing Committee and NQF Staff **16**
Appendix D: Measure Specifications **18**
2811 Acute Otitis Media - Appropriate First-Line Antibiotics 18
Appendix E: Related and Competing Measures **21**
Appendix F: Pre-Evaluation Comments **22**

Eye Care and Ear, Nose, and Throat Conditions: Off-Cycle Measure Review 2017

TECHNICAL REPORT

Executive Summary

The NQF Eye Care and Ear, Nose, and Throat Conditions (EENT) Standing Committee oversees the EENT measure portfolio. This oversight function includes evaluating both newly submitted and previously endorsed measures against NQF's measure evaluation criteria, identifying gaps in the measurement portfolio, providing input on how the portfolio should evolve, and serving on any ad hoc, off-cycle, or expedited projects in the EENT topic area. When not involved in the more traditional endorsement project activities, which usually include evaluation of 20-25 measures over a seven-month timeframe, the Committee is available for "off-cycle" activities. These can include any of the actions noted above, but are accomplished through an abbreviated format (e.g., evaluation of fewer measures over a shorter timeframe, quarterly web-based meetings to discuss various measurement issues).

This report summarizes the Committee's spring 2017 off-cycle activity: evaluating two newly submitted measures against NQF's standard evaluation criteria. One measure was endorsed:

- 2811 Acute Otitis Media – Appropriate First-Line Antibiotics

One measure was not endorsed:

- 2640 Otitis Media with Effusion – Antibiotics Avoidance

Brief summaries of the measures reviewed in this off-cycle evaluation are included in the body of the report; detailed summaries of the Committee's discussion and ratings of the criteria for each measure are in Appendix A.

Introduction

Consensus Development Process Off-Cycle Activities

Volunteer, multistakeholder committees are a key component of NQF's Consensus Development Process (CDP), and thus the success of the process is due in large part to the participation of its committee members. In 2013, NQF began transitioning to the use of standing committees for CDP projects. These standing committees oversee NQF's various measure portfolios. This oversight function includes evaluating both newly submitted and previously endorsed measures against NQF's measure evaluation criteria, identifying gaps in the measurement portfolio, providing feedback on how the portfolio should evolve, and serving on any ad hoc or expedited projects in their designated topic areas.

When not involved in the more traditional endorsement project activities, which usually include evaluation of 20-25 measures over a seven-month timeframe, the Committee is available for "off-cycle" activities. These can include any of the actions noted above, as well as other activities such as serving as clinical or technical experts for other standing bodies (e.g., Measure Applications Partnership or cross-cutting measurement areas), collaborating with measure developers on gap filling, and participating in thoughtful discussion and activities on prospecting for new measures and addressing strategic measurement issues in the topic area. Typically, these off-cycle activities will be conducted via quarterly, two-hour web meetings or conference calls for each standing committee, as needed.

EENT Measure Evaluation

On March 14, 2017, the EENT Standing Committee evaluated two new eMeasures against NQF's standard evaluation criteria.

Table 1. EENT 2017 Off-Cycle Measure Evaluation Summary

	Maintenance	New	Total
Measures under consideration	0	2	2
Endorsed measure	0	1	1
Measure not endorsed	0	1	1
Reasons for not endorsing	Importance – N/A Scientific Acceptability – N/A Overall – N/A Competing Measure – N/A	Importance – 0 Scientific Acceptability – 1 Overall – 0 Competing Measure – 0	

Comments Received Prior to Committee Evaluation

NQF solicits comments on endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF solicits comments prior to the evaluation of the measures via an online tool located on the project webpage. For this evaluation cycle, the pre-evaluation comment period was open from February 15 to March 1, 2017. NQF received two pre-evaluation comments (Appendix F).

All submitted comments were provided to the Committee prior to its deliberations during the off-cycle webinar.

Summary of Measure Evaluation

The following brief summaries of the measure evaluation highlight the major issues that the Committee considered. Details of the Committee's discussion and ratings of the criteria for each measure are in included in Appendix A.

Endorsed

2811 Acute Otitis Media – Appropriate First-Line Antibiotics (Children's Hospital of Philadelphia Pediatric Quality Measures Program Center of Excellence): Endorsed

Description: The proportion of encounters at which antibiotics prescribed to patients aged 2 months to 12 years for Acute Otitis Media (AOM) conform to the AAP/AAFP recommendation for first-line use of amoxicillin; **Measure Type**: Process; **Level of Analysis**: Facility, Clinician: Group/Practice, Clinician: Individual; **Setting of Care**: Clinician Office/Clinic, Other, Urgent Care - Ambulatory; **Data Source**: Other

Many children experience ear infections and clinicians often prescribe antibiotics for this condition, even though ear infections frequently resolve without use of antibiotics. Clinical guidelines specifically recommend "narrow-spectrum antibiotics" as first-line therapy when antibiotics are used. This newly submitted eMeasure assesses the proportion of encounters at which antibiotics prescribed to patients aged 2 months to 12 years for acute otitis media (AOM) conform to the guideline recommendation for first-line use of narrow-spectrum antibiotics. Data from six academic medical centers from 2009-2016 indicate that approximately one-third of clinicians inappropriately prescribe broad-spectrum antibiotics for AOM. This measure is not currently in use, although the developer has suggested its use for the Medicaid and Children's Health Insurance Program (CHIP). The Committee agreed that reducing inappropriate use of antibiotics prescribed is a high priority, as it promotes antibiotic resistance, incurs unnecessary costs, and contributes to avoidable antibiotic-related side effects. The Committee recommended this measure for endorsement.

Not Endorsed

2640 Otitis Media with Effusion - Antibiotics Avoidance (Children's Hospital of Philadelphia Pediatric Quality Measures Program Center of Excellence): Not Endorsed

Description: The proportion of encounters with a diagnosis of Otitis Media with Effusion (OME) made at age 2 months to 12 years, where patients were not prescribed systemic antimicrobials; **Measure Type**: Process; **Level of Analysis**: Facility, Clinician : Group/Practice, Clinician: Individual, Integrated Delivery System; **Setting of Care**: Clinician Office/Clinic, Other, Urgent Care - Ambulatory; **Data Source**: Other

Research has shown that antibiotic therapy provides no benefit for children diagnosed with otitis media with effusion (OME). This newly developed eMeasure assesses the proportion of encounters with a diagnosis of OME made at age 2 months to 12 years, where patients were not prescribed systemic antimicrobials. This measure has been specified to assess performance of individual clinicians, group practices, and facilities in the clinician office/clinic and urgent care settings. Data provided by the developer indicate an average performance rate of 85 percent. The Committee noted the declining rate

of OME diagnosis and the relatively high performance rate for the measure and ultimately did not reach consensus on opportunity for improvement. The Committee also expressed concerns with the difficulty of diagnosing otitis media with effusion and that some providers might miscode OME as AOM. After a lengthy discussion, the Committee agreed that the measure did not pass the reliability subcriterion and did not recommend the measure for endorsement.

Staff Note: The Committee's discussion regarding the ability to diagnose OME is more appropriate within the context of validity rather than reliability. The developer provided some information relevant to this discussion under the validity subcriterion. NQF asked the Committee to re-vote on reliability on the June 13, 2017 post-comment call, basing its rating on clarity of specifications and results of reliability testing, and to consider the question of diagnosis accuracy and the data provided by the developer in a discussion on validity.

During the June 13, 2017 post-comment call, the Committee re-voted on reliability, passing the measure on this subcriterion. However, after a lengthy discussion, the Committee did not pass the measure on the validity subcriterion, again expressing concerns with the difficulty of diagnosing OME and concerns that providers might miscode OME as AOM. Thus, the Committee did not recommend the measure for endorsement.

Comments Received After Committee Evaluation

After the Committee evaluated the two measures, NQF solicited comments on the draft report via an online tool from April 27 to May 30, 2017. During this period, NQF did not receive any comments.

Appendix A: Details of Measure Evaluation

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

Endorsed Measure

2811 Acute Otitis Media – Appropriate First-Line Antibiotics

Submission | Specifications

Description: The proportion of encounters at which antibiotics prescribed to patients aged 2 months to 12 years for Acute Otitis Media (AOM) conform to the AAP/AAFP recommendation for first-line use of amoxicillin.

Numerator Statement: Eligible encounters at which patients were prescribed amoxicillin, in conformance with the AAP/AAFP recommendation that this drug be the first-line antibiotic choice for AOM.

Note that this measure is structured for feasibility and scalability over large populations, and does n

ot by design account for individual patient characteristics such as detailed history of drug hypersensitivity, prior response of AOM to antibiotics, or comorbidities, such as immunodeficiency, requiring changes in antibiotic selection. As a result, performance should not be assessed with the expectation of a "perfect" outcome of 100% amoxicillin usage. Nonetheless, results over 90% should be readily achieved in most care contexts. The prevalence of penicillin allergy has been previously reported at =5% (Borch, JE et al. Basic Clin Pharmacol Toxicol. 2006 , PMID 16623858; Meng et al., Ann Allergy Asthma Immunol 2016, PMID 27613461), and our examination of electronic health records for a large pediatric health system yielded a similar figure (4.5%). The prevalence of the most common indications for antibiotic prophylaxis are ca.1% (e.g. sickle cell disease ~0.25% in the African American population, pediatric cancer 0.3%, and urinary tract infection with vesicoureteral reflux 0.5-2%).

The utility of the measure for benchmarking across similar entities, or for detection of trends over time, is not affected by these factors, which are expected to remain relatively constant.

Denominator Statement: All patients aged 2 months through 12 years with a diagnosis of Acute Otitis Media (AOM), an antibiotic prescribed at the current visit, and no antibiotic prescription in the prior 30 days.

Exclusions: Diagnosis of alternate, co-occurring infection for which antibiotics are typically indicated will be excluded (as specified in S.11. Denominator Exclusion Details).

Adjustment/Stratification: No risk adjustment or risk stratification Measure validity is not dependent on stratification, but an organization may consider stratifying by socio demographic factors in order to assess disparities in care provided for Acute Otitis Media.

Level of Analysis: Facility, Clinician : Group/Practice, Clinician : Individual

Setting of Care: Clinician Office/Clinic, Other, Urgent Care - Ambulatory

Type of Measure: Process

Data Source: Other

Measure Steward: The Children's Hospital of Philadelphia Pediatric Quality Measures Program Center of Excellence

STANDING COMMITTEE MEETING [03/14/2017]

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

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

1a. Evidence: H-7; M-3; L-0; I-0 1b. Performance Gap: H-7; M-3; L-0; I-0**;**

Rationale:

- To support the measure, the developer provided a 2013 American Academy of Pediatrics recommendation based on grade B evidence for use of amoxicillin for acute otitis media (AOM) when a decision to treat with antibiotics has been made and the child has not received amoxicillin in the past 30 days or the child does not have concurrent purulent conjunctivitis or the child is not allergic to penicillin.
- Based on data from 106,728 visits documented in the Children´s Hospital of Philadelphia's electronic health records from 2009-2014, the provider-level "mean failure rate" reported by the developer was 34.80%, meaning that, on average, providers prescribed an appropriate antibiotic for AOM less than two-thirds of the time.

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

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

2a. Reliability: H-5; M-5; L-0; I-0 2b. Validity: H-0; M-10; L-0; I-0

Rationale:

- The developer clarified that the use of amoxicillin, penicillin, or ampicillin would be appropriate and thus "meet" the measure, and that there is no penalty in the measure in the event that the clinician decides not to prescribe an antibiotic at all. The Committee requested the developer update the numerator statement to be consistent throughout the submission (i.e., include penicillin and ampicillin in addition to amoxicillin).
- The Committee asked if patients with an allergy to penicillin are excluded from the measure. The developer clarified that they are not excluded because EHR data allow for that level of specificity. The developer also noted that, per the literature, the true rate of allergy to amoxicillin and penicillin is approximately 5%. The Committee noted that this means that achieving a 100% performance rate for the measure will not be possible.
- The Committee questioned whether or not a provider must have at least five encounters to be eligible for the measure. The developer confirmed this specification, noting that limiting the measure to providers with more than five eligible encounters in the measurement time period will not exclude many providers because of the disease prevalence.
- The Committee requested clarification on the timeframe of the measure, which was not specified in the submission. The developer responded that the timeframe was not specified because it is context dependent (e.g., if measure is used for provider benchmarking, a longer timeframe will allow greater discriminate ability; in contrast, if used for quality improvement, then a shorter timeframe might be appropriate.) The Committee accepted this rationale.
- The developer conducted score-level reliability testing for the three levels of analysis specified for the measure. Results indicate an average reliability of >0.94 for all three levels of analysis. These results are based on data for January 2009-June 2016 from 6 academic pediatric health systems, 2,940 clinicians and 186 practices, and 3 EHR systems.

- The Committee questioned whether children with bacterial conjunctivitis would be excluded from the measure. The developer said that they would, but noted that it is not a highly-prevalent diagnosis.
- The Committee questioned the generalizability of the testing results, given that testing was conducted on data from academic centers. The developer noted that the literature suggests that appropriate prescribing of antibiotics for AOM is higher in academic centers and therefore expects that the results presented reflect better performance than would be expected in non-academic settings.
- Although the developer provided some data element validity testing results, these were based on data from only one EHR system and thus do not meet NQF requirements for eMeasures. To demonstrate score-level validation (based on data from multiple EHRs), the developer hypothesized, and were able to show, that measure results within individual providers/departments would vary less across time than measure results between providers/departments, given the lack of external influences that would affect results across time.
- The Committee asked for clarification regarding the standard code for medication, where 10% of values were missing in the testing data. The developer explained that medications can be recorded in different ways in EHRs and that the standardized coding system (RxNorm) had missing values for 10% of the encounters in their testing data. For testing, the developer used other information in the EHR to determine prescribed medications for those encounters where RxNorm was missing; if using RxNorm exclusively, those encounters would be ineligible and not included in the measure.

---

3. Feasibility: H-2; M-8; L-0; I-0

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

Rationale:

- The Committee agreed the measure is feasible for implementation, as all data elements used for the measure are in defined fields in EHRs.

---

4. Usability and Use: H-4; M-6; L-0-; I-0

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

Rationale:

- This measure is currently not in use. The planned use is to include the measure in a public reporting program for children enrolled in Medicaid and Children's Health Insurance Program (CHIP).
- Committee members noted that making a diagnosis for AOM is less problematic than for OME.

Steering Committee Recommendation for Endorsement: Y-10; N-0

---

6. Public and Member Comment: April 27-May 30, 2017

- No post-meeting comments received.

7. Consensus Standards Approval Committee (CSAC) Vote: Yes (July 11-12, 2017)

- Decision: Ratified for endorsement

8. Appeals

- No appeals received.

Measure Not Endorsed

2640 Otitis Media with Effusion - Antibiotics Avoidance

Submission

Description: The proportion of encounters with a diagnosis of Otitis Media with Effusion (OME) made at age 2 months to 12 years, where patients were not prescribed systemic antimicrobials.

Numerator Statement: Eligible encounters at which a systemic antibiotic was not prescribed.

Denominator Statement: Outpatient encounters at which Otitis Media with Effusion is diagnosed, but at which common conditions for which antibiotics are indicated are not diagnosed. It is expected that a small fraction of patients with rare non-OME indications for antibiotic usage will not be identified by the specified exclusion criteria, but these will be rare cases, and will not alter the measure score significantly in most practice contexts. Of note, however, applicability may be limited in specific practice environments in which a large proportion of patients seen have immune deficiencies requiring chronic antibiotic use (e.g. immunology or hematology/oncology clinics).

Exclusions: Diagnosis at the visit of common childhood infection for which antibiotics are frequently indicated.

Adjustment/Stratification: No risk adjustment or risk stratification Measure validity is not dependent on stratification, but an organization may consider stratifying by sociodemographic factors in order to assess disparities in care provide in Otitis Media with Effusion.

Level of Analysis: Facility, Clinician : Group/Practice, Clinician : Individual, Integrated Delivery System

Setting of Care: Clinician Office/Clinic, Urgent Care - Ambulatory

Type of Measure: Process

Data Source: Other

Measure Steward: The Children's Hospital of Philadelphia Pediatric Quality Measures Program Center of Excellence

STANDING COMMITTEE MEETING [03/14/2017]

1. Importance to Measure and Report: Consensus Not Reached on the Importance criterion.

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

1a. Evidence: H-10; M-0; L-0; I-0; 1b. Performance Gap: H-0; M-6; L-4; I-0**;**

Rationale:

- The developer provided a clinical practice guideline recommendation against using systemic antibiotics for treating Otitis Media with Effusion (OME). The recommendation, graded as “strong” and supported by grade A evidence, is published in two peer-reviewed publications: The Pediatrics Journal (2004) and Otolaryngology Head and Neck Surgery (2016).
- Based on data from 36,060 visits documented in the Children´s Hospital of Philadelphia’s electronic health records from 2009-2014, the provider-level “mean failure rate” reported by the developer was 15.05% and the facility-level rate was 11.42%.
    - Committee members questioned the meaning of the 15% mean failure rate. The developer clarified that for providers the average provider-level performance rate for the measure is approximately 85%, meaning that, on average, providers prescribed an

antibiotic 15% of the time when the patient had a diagnosis of OME but no other conditions that might require antibiotics.

- The Committee noted that the performance rate (85%) was relatively high, and questioned the ability to improve performance. The developer noted that approximately 25% of providers included in their testing data are achieving 100%, suggesting it is possible for other providers to do so.
- Members questioned whether there were any differences in performance for particular population subgroups (e.g., ethnicity, race, sex, and socioeconomic status). The developers reported finding relatively small, but statistically significant, differences in provider-level performance between racial/ethnic groups and those with varying insurance status/type. However, they did not provide the data from these analyses.
- Several Committee members questioned the need for this measure, noting the decrease in the incidence of OME over the past several years. However, the developer noted that otitis media is "the primary driver of antibiotic prescriptions" in their dataset.

---

2. Scientific Acceptability of Measure Properties: <u>The measure does not meet the Scientific Acceptability criteria</u>

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

2a. Reliability: Initial vote: H-0; M-2; L-8; I-0;

Re-vote on post-comment call: H-7; M-4; L-0; I-0 2b. Validity: Vote on post-comment call: H-1; M-5; L-5; I-X

<u>Rationale</u>:

- The developer conducted score-level reliability testing for the three levels of analysis specified for the measure. Results indicate an average reliability of >0.96 for all three levels of analysis. These results are based on data for January 2009-June 2016 from 6 academic pediatric health systems, 704 clinicians and 207 practices, and 3 EHR systems.
- Committee members had a lengthy discussion regarding the difficulty in accurately diagnosing Otitis Media with Effusion. Several members expressed concern that providers may miscode OME as Acute Otitis Media (AOM) if they have decided to prescribe antibiotics. The developer agreed that accurate diagnosis is a problem, but pointed out that the measure is designed to assess prescription of antibiotics when the clinician has diagnosed as OME.
- After much discussion, the Committee agreed that the measure did not pass the reliability subcriterion and did not recommend the measure for endorsement.

During the March 2017 call, the Committee failed to pass the measure on the Reliability criterion, although its primary concerns centered on diagnostic accuracy and potential of miscoding OME as AOM. However, these concerns more appropriately apply under the Validity subcriterion than the Reliability subcriterion. Therefore, NQF staff directed the Committee to re-vote on the Reliability criterion during the June 2017 post-comment call, this time basing its rating on clarity of specifications and results of reliability testing. During the post-comment call:

- The Committee agreed that the measure specifications were complete and unambiguous. Members also agreed that the average reliability estimates provided by the developer (>0.96 for all three levels of analysis) indicated sufficient ability to differentiate between providers.
- The developer described data element validity testing for the measure, noting that for the 225 records from one EHR system that were examined, testing results indicated a sensitivity of 90 percent and specificity of 92 percent.

- The Committee had a robust discussion regarding the potential of miscoding OME as AOM if they have decided to prescribe antibiotics. The developer agreed that the potential of miscoding was possible, but reminded the Committee of the AOM measure (#2811) that promotes use of narrow-spectrum antibiotics when diagnosing as AOM. The developer reiterated that the OME measure is meant to discourage use of antibiotics when the diagnosis is coded as OME, not to discern whether the diagnosis was accurate or not. Ultimately, however, the Committee agreed that the difficulty in accurately diagnosing OME, along with the potential for mis-coding the diagnosis, invalidates the measure and did not pass the measure on the validity subcriterion
- The Committee suggested the developer work with American Academy of Otolaryngology – Head and Neck Surgery, the developer of NQF #0657 – Otis Media with Effusion: Systemic Anitmicrobials – Avoidance of Inappropriate Use (paper measure) for future development.

---

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

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

Rationale:

---

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

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

Rationale:

---

5. Related and Competing Measures

Steering Committee Recommendation for Endorsement: Not Recommended

---

6. Public and Member Comment: April 27-May 30, 2017

- No post-meeting comments received

---

7. Consensus Standards Approval Committee (CSAC) Vote: No (July 11-12, 2017)

Decision: Not recommended for endorsement

Appendix B: EENT Portfolio – Use in Federal Programs

NQF #	Title	Federal Programs: Finalized as of June 2015
0002	Appropriate Testing for Children with Pharyngitis	Meaningful Use (EHR Incentive Program) - Eligible Professionals; Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0055	Comprehensive Diabetes Care: Eye Exam (Retinal) Performed (NCQA)	Meaningful Use (EHR Incentive Program) - Eligible Professionals; Medicare Part C Plan Rating; Medicare Shared Savings Program; Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0069	Appropriate Treatment for Children With Upper Respiratory Infection (URI)	Meaningful Use (EHR Incentive Program) - Eligible Professionals; Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0086	Primary Open Angle Glaucoma: Optic Nerve Evaluation	Meaningful Use (EHR Incentive Program) - Eligible Professionals; Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0087	Age-Related Macular Degeneration: Dilated Macular Examination	Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0088	Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy	Meaningful Use (EHR Incentive Program) - Eligible Professionals; Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0089	Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care	Meaningful Use (EHR Incentive Program) - Eligible Professionals; Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0563	Primary Open-Angle Glaucoma: Reduction of Intraocular Pressure by 15% or Documentation of a Plan of Care	Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0564	Complications within 30 Days Following Cataract Surgery Requiring Additional Surgical Procedures	Meaningful Use (EHR Incentive Program) - Eligible Professionals; Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0565	Cataracts: 20/40 or Better Visual Acuity within 90 Days Following Cataract Surgery	Meaningful Use (EHR Incentive Program) - Eligible Professionals; Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program

NQF #	Title	Federal Programs: Finalized as of June 2015
0566	Age-Related Macular Degeneration (AMD): Counseling on Antioxidant Supplement	Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0653	Acute Otitis Externa: Topical therapy	Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
0654	Acute Otitis Externa: Systemic Antimicrobial Therapy – Avoidance of Inappropriate Use	Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program
1354	Hearing Screening Prior to Hospital Discharge (EHDI-1a)	Hospital Inpatient Quality Reporting; Meaningful Use (EHR Incentive Program) - Hospitals, CAHs
1536	Cataracts: Improvement in Patient's Visual Function within 90 Days Following Cataract Surgery	Ambulatory Surgical Center Quality Reporting; Hospital Outpatient Quality Reporting; Physician Feedback; Physician Quality Reporting System (PQRS); Value-Based Payment Modifier Program

Appendix C: Project Standing Committee and NQF Staff

STANDING COMMITTEE

Daniel Merenstein, MD (Co-Chair)
Georgetown University Medical Center
Washington, DC

Kathleen Yaremchuk, MD, MSA (Co-Chair)
Henry Ford Health System
Detroit, Michigan

Tamala Bradham, PhD, CCC-A
Vanderbilt University Medical Center
Nashville, Tennessee

Matthew Carnahan, MD, MS
Kaiser Permanente
Santa Rosa, California

Scott Friedman, MD
Florida Retina Consultants
Lakeland, Florida

David Keller, MD
University of Colorado School of Medicine
Aurora, Colorado

Richard Madonna, OD
SUNY College of Optometry
Haverstraw, New York

John McClay, MD
American Academy of Pediatrics
Dallas, Texas

Vaishali Patel, PharmD, MS
Allergan Inc.
Irvine, California

Todd Rambasek, MD
ENT & Allergy Health Services
North Olmsted, Ohio

Andrew Schachat, MD
Cleveland Clinic
Cleveland, Ohio

Joshua Stein, MD, MS
University of Michigan
Ann Arbor, Michigan

Michael Stewart, MD, MPH
Weill Cornell Medical College New York
New York, New York

Steven Strode, MD, MEd, MPH, FAAFP
AR Disability Determination Services
Little Rock, Arkansas

Jacquelyn Youde, AuD, CCC-A
Healthcare Performance Partners, a MedAssets Company
Nashville, Tennessee

NQF STAFF

Helen Burstin, MD, MPH
Chief Scientific Officer

Elisa Munthali, MPH
Acting Senior Vice President, Quality Measurement

Marcia Wilson, PhD, MBA
Former Senior Vice President, Quality Measurement

Karen Johnson, MS
Senior Director

Shaconna Gorham, MS, PMP
Senior Project Manager

Appendix D: Measure Specifications

2811 Acute Otitis Media - Appropriate First-Line Antibiotics

STEWARD

The Children's Hospital of Philadelphia Pediatric Quality Measures Program Center of Excellence

DESCRIPTION

The proportion of encounters at which antibiotics prescribed to patients aged 2 months to 12 years for Acute Otitis Media (AOM) conform to the AAP/AAFP recommendation for first-line use of amoxicillin.

TYPE

Process

DATA SOURCE

Other Electronic Health Records

No data collection instrument provided Attachment AOM_VSAC_ValueSets.xls

LEVEL

Facility, Clinician : Group/Practice, Clinician : Individual

SETTING

Clinician Office/Clinic, Other, Urgent Care - Ambulatory Emergency Department

NUMERATOR STATEMENT

Eligible encounters at which patients were prescribed amoxicillin, in conformance with the AAP/AAFP recommendation that this drug be the first-line antibiotic choice for AOM.

Note that this measure is structured for feasibility and scalability over large populations, and does not by design account for individual patient characteristics such as detailed history of drug hypersensitivity, prior response of AOM to antibiotics, or comorbidities, such as immunodeficiency, requiring changes in antibiotic selection. As a result, performance should not be assessed with the expectation of a “perfect” outcome of 100% amoxicillin usage. Nonetheless, results over 90% should be readily achieved in most care contexts. The prevalence of penicillin allergy has been previously reported at =5% (Borch, JE et al. Basic Clin Pharmacol Toxicol. 2006 , PMID 16623858; Meng et al., Ann Allergy Asthma Immunol 2016, PMID 27613461), and our examination of electronic health records for a large pediatric health system yielded a similar figure (4.5%). The prevalence of the most common indications for antibiotic prophylaxis are ca.1% (e.g. sickle cell disease ~0.25% in the African American population, pediatric cancer 0.3%, and urinary tract infection with vesicoureteral reflux 0.5-2%).

The utility of the measure for benchmarking across similar entities, or for detection of trends over time, is not affected by these factors, which are expected to remain relatively constant.

NUMERATOR DETAILS

Encounters meeting eligibility criteria (see denominator statement) at which the prescribed antibiotic is amoxicillin, ampicillin, or penicillin.

DENOMINATOR STATEMENT

All patients aged 2 months through 12 years with a diagnosis of acute otitis media (AOM), an antibiotic prescribed at the current visit, and no antibiotic prescription in the prior 30 days.

DENOMINATOR DETAILS

Outpatient encounters (including office/clinic, emergency department, and urgent care but not including ambulatory surgery centers) meeting all of the following criteria:

1. Patient age two months through 155 months, inclusive, on date of visit;
2. Outpatient encounter(s), using criteria appropriate to the source system. These criteria may include system-specific encounter type codes, department or clinic identifiers, or E&M codes indicative of outpatient clinical service (e.g. where CPT4 codes are used to define encounter types, the following list might be included: 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99255, 99281, 99282, 99283, 99284, 99285, 99381, 99382, 99383, 99384, 99391, 99392, 99393, 99394);
3. Diagnosis at the visit of Acute Otitis Media (AOM), as specified in the value set noted above for systems using ICD-9-CM, ICD-10-CM, or SNOMED-CT as their diagnostic terminology;
4. Antibiotic prescription recorded at the visit

EXCLUSIONS

Diagnosis of alternate, co-occurring infection for which antibiotics are typically indicated will be excluded (as specified in S.11. Denominator Exclusion Details).

EXCLUSION DETAILS

Diagnosis of common non-AOM infection for which antibiotics are frequently indicated, as specified in the value set noted above for source systems using ICD-9-CM, ICD-10-CM, or SNOMED-CT as their diagnostic terminology. These codes were chosen based on established prevalence of childhood infections, as well as analysis of most common diagnoses co-occurring with antibiotic prescription in a large pediatric care network.

RISK ADJUSTMENT

No risk adjustment or risk stratification

STRATIFICATION

Measure validity is not dependent on stratification, but an organization may consider stratifying by socio demographic factors in order to assess disparities in care provided for Acute Otitis Media.

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

1. Specify the desired time period for evaluation

2. Identify all eligible denominator encounters within the specified time period for the entity being measured;

3. For each encounter in the denominator set, add to the numerator if the encounter meets numerator inclusion criteria;

4. Compute (count of numerator encounters) / (count of denominator encounters)

COPYRIGHT / DISCLAIMER

N/A

Appendix E: Related and Competing Measures

No related and competing measures for 2811 *Acute Otitis Media – Appropriate First-Line Antibiotics* were identified.

Appendix F: Pre-Evaluation Comments

Comments received as of March 1, 2017.

Topic	Commenter	Comment
2811 Acute Otitis Media – Appropriate First-Line Antibiotics	American Academy of Otolaryngology-Head and Neck Surgery	The AAO-HNSF would like to point out to the EENT Standing Committee that the measure assesses amoxicillin use as first line therapy for patients aged 2 months through 12 years; however, the American Academy of Pediatrics Clinical Practice Guideline, Diagnosis and Management of Acute Otitis Media, includes separate recommendations for patients up to 23 months, and patients over 24 months of age. While amoxicillin is the recommended antibiotic for acute otitis media, it is an option for children 6-23 months of age with non-severe unilateral AOM, and is an option for children 24 months of age and older with non-severe bilateral *or* unilateral AOM in the American Academy of Pediatrics guideline (Key Action Statements 3C, 3D). Because the denominator for #2811 specifies all patients aged 2 months through 12 years with a diagnosis of acute otitis media (AOM), an antibiotic prescribed at the current visit, and no antibiotic prescription in the prior 30 days, we believe that any guideline-adherent instances of watchful waiting in patients with non-severe AOM would be appropriately excluded from the denominator.
2640 Otitis Media with Effusion - Antibiotics Avoidance	American Academy of Otolaryngology-Head and Neck Surgery	While the exceptions are somewhat different, #2640 Otitis Media with Effusion - Antibiotics Avoidance e-measure is very similar to NQF 0657 - Otitis Media with Effusion: Systemic Antimicrobials - Avoidance of Inappropriate Use, which has already been endorsed, and is stewarded by the AAO-HNSF. The AAO-HNSF encourages harmonization between these two measures before #2640 is further considered for endorsement.

National Quality Forum
1030 15th St NW, Suite 800
Washington, DC 20005
http://www.qualityforum.org

ISBN 978-1-68248-062-5