

Quality ID #116 (NQF 0058): Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis – National Quality Strategy Domain: Efficiency and Cost Reduction

**2018 OPTIONS FOR INDIVIDUAL MEASURES:**

**REGISTRY ONLY**

**MEASURE TYPE:**

Process

**DESCRIPTION:**

The percentage of adults 18–64 years of age with a diagnosis of acute bronchitis who were not prescribed or dispensed an antibiotic prescription

**INSTRUCTIONS:**

This measure is to be submitted at **each occurrence** of acute bronchitis during the performance period. This measure may be submitted by eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

**Measure Submission:**

The listed denominator criteria is used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions allowed by the measure. The quality-data codes listed do not need to be submitted for registry-based submissions; however, these codes may be submitted for those registries that utilize claims data.

**DENOMINATOR:**

All patients aged 18 through 64 years of age with an outpatient, observation or emergency department (ED) visit with a diagnosis of acute bronchitis during the measurement period

***DENOMINATOR NOTE:** To determine eligibility, look for any of the listed antibiotic drugs below in the 30 days prior to the visit with the acute bronchitis diagnosis. As long as there are no prescriptions for the listed antibiotics during this time period, the patient is eligible for denominator inclusion. Do not include observation or ED visits that result in an inpatient admission. An observation or ED visit results in an inpatient admission when the observation or ED date of service and the admission date for the inpatient stay are one calendar day apart or less.*

*\*Signifies that this CPT Category I code is a non-covered service under the Medicare Part B Physician Fee Schedule (PFS). These non-covered services should be counted in the denominator population for registry-based measures.*

**Denominator Criteria (Eligible Cases):**

Patients 18 through 64 years of age on date of encounter

**AND**

Diagnosis for acute bronchitis (ICD-10-CM): J20.3, J20.4, J20.5, J20.6, J20.7, J20.8, J20.9

**AND**

Patient encounter during the performance period (CPT or HCPCS): 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99217, 99218, 99219, 99220, 99281, 99282, 99283, 99284, 99285, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, 99381, 99382, 99383, 99384, 99385, 99386, 99387, 99391, 99392, 99393, 99394, 99395, 99396, 99397, 99401, 99402, 99403, 99404, 99411, 99412, 99420, 99429, 99455, 99456, G0402, G0438, G0439, G0463\*, T1015\*

**AND NOT**

**DENOMINATOR EXCLUSIONS:**

Observation or ED visits that result in an inpatient admission

**OR**

Documentation of medical reason(s) for prescribing or dispensing antibiotic (e.g., intestinal infection, pertussis, bacterial infection, Lyme disease, otitis media, acute sinusitis, acute pharyngitis, acute tonsillitis, chronic sinusitis, infection of the pharynx/larynx/tonsils/adenoids, prostatitis, cellulitis/mastoiditis/bone infections, acute lymphadenitis, impetigo, skin staph infections, pneumonia, gonococcal infections/venereal disease (syphilis, chlamydia, inflammatory diseases [female reproductive organs]), infections of the kidney, cystitis/UTI, acne, HIV disease/asymptomatic HIV, cystic fibrosis, disorders of the immune system, malignancy neoplasms, chronic bronchitis, emphysema, bronchiectasis, extrinsic allergic alveolitis, chronic airway obstruction, chronic obstructive asthma, pneumoconiosis and other lung disease due to external agents, other diseases of the respiratory system, and tuberculosis: G9712

**OR**

Patients who use hospice services any time during the measurement period: G9713

**NUMERATOR:**

Patients who were not prescribed or dispensed antibiotics on or within 3 days of the initial date of service

**Numerator Instructions:** For performance, the measure will be calculated as the number of patient encounters where antibiotics were neither prescribed nor dispensed on or within 3 days of the episode for acute bronchitis over the total number of encounters in the denominator (patients aged 18 through 64 years with an outpatient, observation or ED visit for acute bronchitis). A higher score indicates appropriate treatment of patients with acute bronchitis (e.g., the proportion for whom antibiotics were not prescribed or dispensed on or three days after the encounter).

**Antibiotic Medications**

Description	Prescription
Aminoglycosides	Amikacin Tobramycin Gentamicin Kanamycin Streptomycin
Aminopenicillins	Amoxicillin Ampicillin
Antipseudomonal penicillins	Piperacillin
Beta-lactamase inhibitors	Amoxicillin-clavulanate Ampicillin- sulbactam Piperacillin-tazobactam Ticarcillin-clavulanate
First-generation cephalosporins	Cefadroxil Cephalexin Cefazolin
Fourth-generation cephalosporins	Cefepime
Ketolides	Telithromycin
Lincomycin derivatives	Clindamycin Lincomycin
Macrolides	Azithromycin Clarithromycin Erythromycin stearate Erythromycin Erythromycin ethylsuccinate Erythromycin lactobionate

Description	Prescription	
Miscellaneous antibiotics	Aztreonam Chloramphenicol Vancomycin Dalfopristin-quinupristin Linezolid	Daptomycin Metronidazole Erythromycin-sulfisoxazole
Natural penicillins	Penicillin G sodium benzathine-procaine Penicillin G potassium Penicillin G procaine	Penicillin V potassium Penicillin G benzathine
Penicillinase resistant penicillins	Dicloxacillin Oxacillin	Nafcillin
Quinolones	Ciprofloxacin Gemifloxacin Ofloxacin	Levofloxacin Moxifloxacin Norfloxacin Moxifloxacin
Rifamycin derivatives	Rifampin	
Second generation cephalosporin	Cefaclor Cefotetan Cefprozil	Cefoxitin Cefuroxime
Sulfonamides	Sulfadiazine	Sulfamethoxazole-trimethoprim
Tetracyclines	Doxycycline Tetracycline	Minocycline
Third generation cephalosporins	Cefdinir Cefditoren Cefpodoxime Cefixim	Cefotaxime Ceftibuten Ceftriaxone Ceftazidime
Urinary anti-infectives	Fosfomycin Nitrofurantoin macrocrystals Trimethoprim	Nitrofuantoin Nitrofurantoin macrocrystals-monohydrate

**Numerator Options:**  
***Performance Met:*** Antibiotic neither prescribed nor dispensed (4124F)  
***Performance Not Met:*** Antibiotic prescribed or dispensed (4120F)

## **RATIONALE:**

Antibiotics are commonly misused and overused for a number of viral respiratory conditions where antibiotic treatment is not clinically indicated. (Scott J.G., D. Cohen, B. Diccio-Bloom, 2001) About 80 percent of antibiotics prescribed for acute respiratory infections in adults are unnecessary, according to CDC prevention guidelines. In adults, antibiotics are most often (65–80 percent) prescribed for acute bronchitis, despite its viral origin. The misuse and overuse of antibiotics contributes to antibiotic drug resistance, which is of public health concern due to the diminished efficacy of antibiotics against bacterial infections, particularly in sick patients and the elderly. (Austin D.J.,

Kristinsson, R.M. Anderson, 1999, Patterson, JE, 2001, Cohen ML, 1992, Lipsitch M, 2001)

A HEDIS measure that highlights inappropriate antibiotic prescribing in adults for a common respiratory condition will help to raise awareness among clinicians and patients about inappropriate antibiotic use. Antibiotics are most often inappropriately prescribed in adults with acute bronchitis. This measure builds on an existing HEDIS measure targeting inappropriate antibiotic prescribing for children with upper respiratory infection (common cold), where antibiotics are also most often inappropriately prescribed. (Chandran R., 2001, Gonzales R., J.F. Steiner, et al, 1999)

## **CLINICAL RECOMMENDATION STATEMENTS:**

Clinical guidelines do not support antibiotic treatment of otherwise healthy adults with acute bronchitis due to the viral origin of acute bronchitis. Patients with chronic bronchitis, COPD or other chronic comorbidity may be treated with antibiotics and are therefore excluded from the measure denominator. (Gonzales R., D.C. Malone, J.H. Maselli, et al, 2001)

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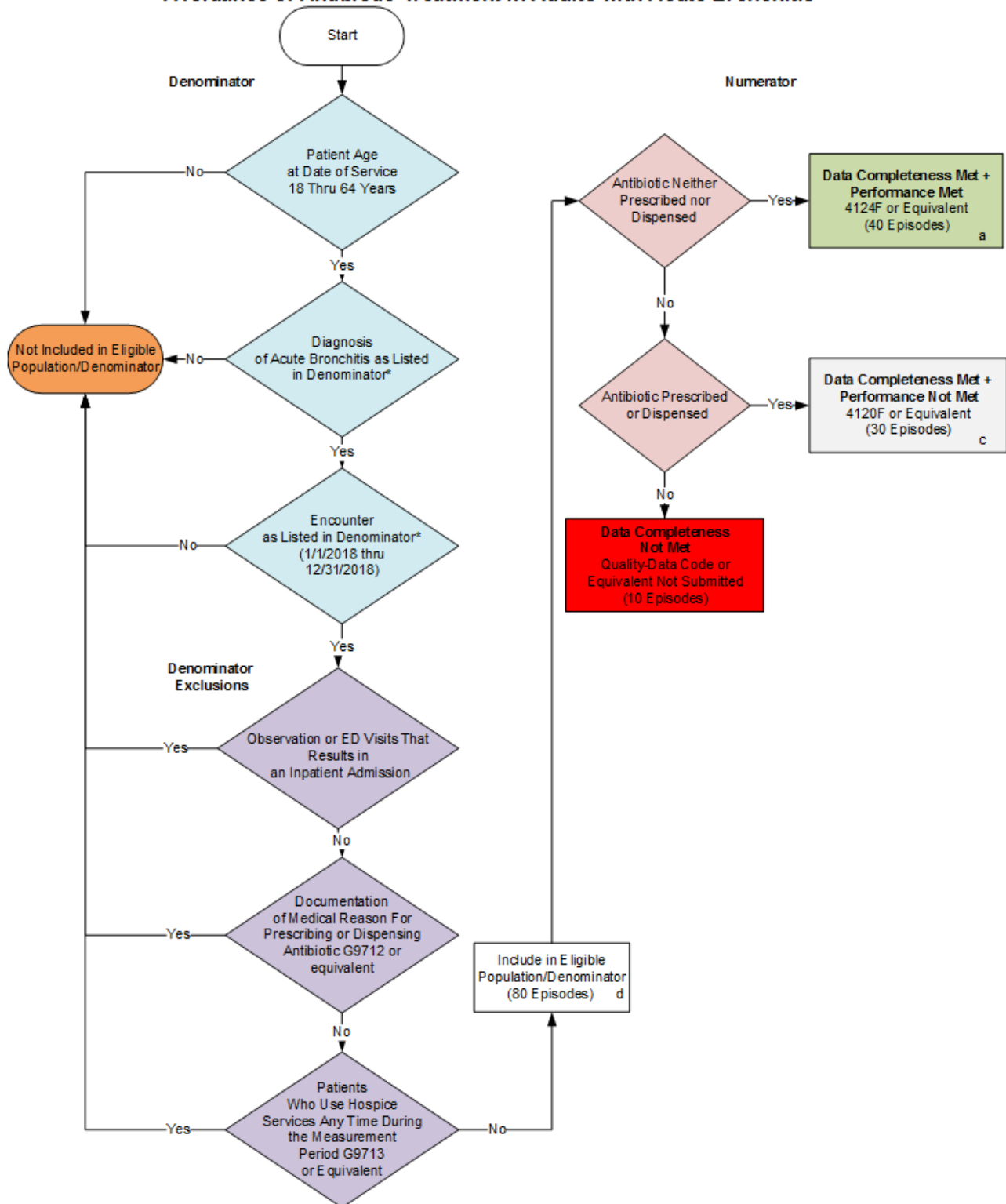
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**2018 Registry Flow for Quality ID #116 NQF #0058:  
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis**



\*See the posted Measure Specification for specific coding and instructions to submit this measure.

NOTE : Submission Frequency: Episode

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**2018 Registry Flow for Quality ID #116 NQF #0058:  
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SAMPLE CALCULATIONS:

**Data Completeness=**

$$\frac{\text{Performance Met (a=40 episodes) + Performance Not Met (c=30 episodes)}}{\text{Eligible Population / Denominator (d=80 episodes)}} = \frac{70 \text{ episodes}}{80 \text{ episodes}} = 87.50\%$$

**Performance Rate=**

$$\frac{\text{Performance Met (a=40 episodes)}}{\text{Data Completeness Numerator (70 episodes)}} = \frac{40 \text{ episodes}}{70 \text{ episodes}} = 57.14\%$$

\*See the posted Measure Specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Episode

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## 2018 Registry Flow for Quality ID

### #116 NQF #0058: Avoidance of Antibiotic Treatment for Adults with Acute Bronchitis

Please refer to the specific section of the specification to identify the denominator and numerator information for use in submitting this Individual Specification. This flow is for registry data submission.

1. Start with Denominator
2. Check Patient Age:
  - a. If Age equal to 18 thru 64 years of age on Date of Service equals No during the Measurement Period, do not include in Eligible Patient Population. Stop Processing.
  - b. If Age equal to 18 thru 64 years of age on Date of Service equals Yes during the Measurement Period, proceed to Check Patient Diagnosis.
3. Check Patient Diagnosis:
  - a. If Diagnosis of Acute Bronchitis as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
  - b. If Diagnosis of Acute Bronchitis as Listed in the Denominator equals Yes, proceed to Check Encounter Performed.
4. Check Encounter Performed:
  - a. If Encounter as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
  - b. If Encounter as Listed in the Denominator equals Yes, proceed to Check observation or ED visits that result in an Inpatient Admission.
5. Check observation or ED visits that result in an inpatient admission:
  - a. If observation or ED visits that result in an Inpatient Admission equals No, proceed to Check Documentation of Medical Reason for Prescribing or Dispensing Antibiotic.
  - b. If observation or ED visits that result in an Inpatient Admission equals Yes, do not include in Eligible Patient Population. Stop Processing.
6. Check Documentation of Medical Reason for Prescribing or Dispensing Antibiotic:
  - a. If Documentation of Medical Reason for Prescribing or Dispensing Antibiotic equals No, proceed to Check Patients Who Use Hospice Services Any Time During the Measurement Period.
  - b. If Documentation of Medical Reason for Prescribing or Dispensing Antibiotic equals Yes, do not include in Eligible Patient Population. Stop Processing.
7. Check Patients Who Use Hospice Services Any Time During the Measurement Period:
  - a. If Patients Who Use Hospice Services Any Time During the Measurement Period equals No, include in the Eligible Population.
  - b. If Patients Who Use Hospice Services Any Time During the Measurement Period equals Yes, do not include in Eligible Patient Population. Stop Processing.
8. Denominator Population:

- a. Denominator Population is all Eligible Patients in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 episodes in the Sample Calculation.
9. Start Numerator
10. Check Antibiotic Neither Prescribed Nor Dispensed:
- a. If Antibiotic Neither Prescribed Nor Dispensed equals Yes, include in Data Completeness Met and Performance Met.
  - b. Data Completeness Met and Performance Met letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 40 episodes in the Sample Calculation.
  - c. If Antibiotic Neither Prescribed Nor Dispensed equals No, proceed to Antibiotic Prescribed or Dispensed.
11. Check Antibiotic Prescribed or Dispensed:
- a. If Antibiotic Prescribed or Dispensed equals Yes, include in the Data Completeness Met and Performance Not Met.
  - b. Data Completeness Met and Performance Not Met letter is represented as Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 30 episodes in the Sample Calculation.
  - c. If Antibiotic Prescribed or Dispensed equals No, proceed to Data Completeness Not Met.
12. Check Data Completeness Not Met:
- a. If Data Completeness Not Met equals No, Quality Data Code or equivalent not submitted. 10 episodes have been subtracted from the Data Completeness Numerator in the Sample Calculation.

**SAMPLE CALCULATIONS:**

**Data Completeness=**

$$\frac{\text{Performance Met (a=40 episodes) + Performance Not Met (c=30 episodes)}}{\text{Eligible Population / Denominator (d=80 episodes)}} = \frac{70 \text{ episodes}}{80 \text{ episodes}} = 87.50\%$$

**Performance Rate=**

$$\frac{\text{Performance Met (a=40 episodes)}}{\text{Data Completeness Numerator (70 episodes)}} = \frac{40 \text{ episodes}}{70 \text{ episodes}} = 57.14\%$$