



# Avoidance of Antibiotic Treatment for Acute Bronchitis/Bronchiolitis (AAB) and Appropriate Treatment for Upper Respiratory Infection (URI)

Learn how to improve your HEDIS<sup>1</sup> rates. This tip sheet gives key details about the Avoidance of Antibiotic Treatment for Acute Bronchitis/Bronchiolitis and Appropriate Treatment for Upper Respiratory Infection measures, eligibility, codes, best practices, exclusions and antibiotic medications. The goal is to reduce unnecessary use of antibiotics.



## Measure<sup>2</sup>

The measures calculate the percentage of episodes for patients three months of age and older with a diagnosis of one or more of the following, which did not result in an antibiotic dispensing event.

- **Acute bronchitis/bronchiolitis; or**
- **Upper respiratory infection**

They are both reported as an inverted rate. A higher rate indicates appropriate treatment (i.e., the proportion of episodes that did not result in an antibiotic prescribing event).

## Eligible patients<sup>2</sup>

<b>Ages</b>	Three months and older as of the episode date.
<b>Episode date</b>	The date of service for any outpatient, phone, observation or emergency department visits, e-visit or virtual check-in (during the measurement year) with a diagnosis of acute bronchitis/bronchiolitis or upper respiratory infection.
<b>Intake period</b>	The intake period captures eligible episodes of treatment. It includes a 12-month window that begins on July 1 of the year prior to the measurement year and ends on June 30 of the measurement year.

<sup>1</sup>HEDIS – Healthcare Effectiveness Data and Information Set.

<sup>2</sup>NCQA’s HEDIS Measurement Year 2023 Volume 2: Technical Specifications for Health Plans, Washington, D.C., 2022

**ICD-10  
diagnosis  
codes**

Acute bronchitis/bronchiolitis	Upper respiratory infection
J20.3, J20.4, J20.5, J20.6, J20.7, J20.8, J20.9, J21.0, J21.1, J21.8, J21.9	J00, J06.0, J06.9

**Best  
practices**

- Discourage the use of antibiotics for routine treatment of uncomplicated acute bronchitis or URI, unless clinically indicated. It may be helpful to refer to their illness as a ‘chest cold’ or viral upper respiratory infection in patient communications, if appropriate.
- If you are treating a patient for another condition or illness, document the other diagnosis code on the claim.
- If prescribing an antibiotic for a bacterial infection, use the diagnosis code for the bacterial infection and/or comorbid condition.
- If a patient is requesting antibiotics for their condition, educate the patient on the difference between bacterial and viral infections.
  - Introduce the concept of antibiotic resistance. Antibiotic resistance is one of the most urgent threats to the public’s health. Antimicrobial resistance happens when germs like bacteria and fungi develop the ability to defeat the drugs designed to kill them. That means the germs are not killed and continue to grow<sup>3</sup>.
  - Emphasize that it is important to use the right antibiotic for the right condition and take them as prescribed.
- Educate the patient and their family to recognize the signs and symptoms of worsening infection and sepsis, and to know when to seek medical care.
- Offer the patient symptomatic relief, as needed, such as cough suppressants, nonsteroidal anti-inflammatory drugs (NSAIDs), multi-symptom over-the-counter (OTC) medications, and possibly bronchodilators (if there is any bronchospasm). The Centers for Disease Control and Prevention (CDC) has a ‘Symptom Relief Prescription Pad’ that can be used for this purpose. It can be downloaded at: <https://bit.ly/3L5doAh> or use the QR code on the right.
- If a patient tries to insist on an antibiotic, form a plan with the patient, such as watchful waiting or delayed prescribing. Encourage the patient to call or return to the office if new symptoms occur, or if the condition has not improved in the time you recommend.



<sup>3</sup> Be Antibiotics Aware Partner Toolkit, Centers for Disease Control and Prevention, “Messages about Antimicrobial Resistance” at <https://www.cdc.gov/antibiotic-use/week/toolkit.html>.

**Best practices, continued**

- Use resources available for providers and patients to learn other strategies for effective antibiotic stewardship:
  - Robert Wood Johnson Foundation – Practice for real-life conversations with patients about antibiotics using virtual simulations: [www.conversationsforhealth.com/antibiotics](http://www.conversationsforhealth.com/antibiotics) or use the QR code on the right.
  - Centers for Disease Control and Prevention (CDC) Be Antibiotics Aware Partner Toolkit: <https://www.cdc.gov/antibiotic-use/week/toolkit.html> or use the QR code on the right.



**Exclusions**

For patient visits where the following events are in evidence, the patient would be excluded from the measure.

- Onset of illness where the patient had a claim/encounter with diagnosis for a comorbidity during the 12 months prior to or on the onset of the illness.
- The diagnoses for comorbidity include, but are not limited to:

Chronic obstructive pulmonary disease (COPD)	HIV
Comorbid conditions	HIV type 2
Disorders of the immune system	Malignant neoplasms
Emphysema	Other malignant neoplasm of skin

- A visit or observation (outpatient, phone, virtual or e-visit, observation visit, or emergency department), with a diagnosis of upper respiratory infection that resulted in an inpatient stay.
- Patients in hospice or using hospice services any time during the measurement year.
- Patients who died any time during the measurement year.
- A negative medication history. The following criteria must be met:
  - A period of 30 days prior to the episode date, when the patient had no pharmacy claims for new or refill prescriptions for a listed antibiotic drug.
  - No prescriptions were dispensed to the patient more than 30 days prior to the episode date and are active on the episode date.
- Patients who had a claim/encounter with any competing diagnosis, including pharyngitis, where a new or refill prescription for an antibiotic medication was dispensed 30 days prior to the episode date or had a competing diagnosis on or three days after the episode date.

**Exclusion codes**

The exclusions, comorbidities and competing diagnoses for AAB and URI are too numerous to list. Please visit the National Institutes of Health (NIH) National Library of Medicine Value Set Authority Center at <https://vsac.nlm.nih.gov/welcome> for a complete list.

Below are competing codes for acute bronchitis/bronchiolitis and upper respiratory infection.

Diagnosis	Diagnosis ICD-10 code
Acute sinusitis	J01.80, J01.90
Acute tonsillitis	J03.81, J03.90, J03.91
Bacterial pneumonia	J13, J14, J15.211, J15.212, J15.3, J15.4, J15.7, J15.9, J16.0, J16.8, J18.0, J18.1, J18.8, J18.9
Chronic sinusitis	J32
Otitis media	H66, H67
Pharyngitis	J02.0, J02.8, J02.9
Streptococcal tonsillitis	J03.00, J03.01, J03.80

*(continued)*

**AAB antibiotic medication table<sup>2</sup>, also used for URI conditions per the HEDIS specifications.**

Description	Prescription		
<b>Aminoglycosides</b>	<ul style="list-style-type: none"> <li>• Amikacin</li> <li>• Gentamicin</li> </ul>	<ul style="list-style-type: none"> <li>• Streptomycin</li> <li>• Tobramycin</li> </ul>	
<b>Aminopenicillins</b>	<ul style="list-style-type: none"> <li>• Amoxicillin</li> </ul>	<ul style="list-style-type: none"> <li>• Ampicillin</li> </ul>	
<b>Beta-lactamase inhibitors</b>	<ul style="list-style-type: none"> <li>• Amoxicillin-clavulanate</li> <li>• Ampicillin-sulbactam</li> </ul>	<ul style="list-style-type: none"> <li>• Piperacillin-tazobactam</li> </ul>	
<b>First-generation cephalosporins</b>	<ul style="list-style-type: none"> <li>• Cefadroxil</li> <li>• Cefazolin</li> </ul>	<ul style="list-style-type: none"> <li>• Cephalexin</li> </ul>	
<b>Fourth-generation cephalosporins</b>	<ul style="list-style-type: none"> <li>• Cefepime</li> </ul>		
<b>Lincomycin derivatives</b>	<ul style="list-style-type: none"> <li>• Clindamycin</li> </ul>	<ul style="list-style-type: none"> <li>• Lincomycin</li> </ul>	
<b>Macrolides</b>	<ul style="list-style-type: none"> <li>• Azithromycin</li> <li>• Clarithromycin</li> </ul>	<ul style="list-style-type: none"> <li>• Erythromycin</li> </ul>	
<b>Miscellaneous antibiotics</b>	<ul style="list-style-type: none"> <li>• Aztreonam</li> <li>• Chloramphenicol</li> <li>• Daptomycin</li> </ul>	<ul style="list-style-type: none"> <li>• Linezolid</li> <li>• Metronidazole</li> <li>• Quinupristin-dalfopristin</li> </ul>	<ul style="list-style-type: none"> <li>• Vancomycin</li> </ul>
<b>Natural penicillins</b>	<ul style="list-style-type: none"> <li>• Penicillin G benzathine-procaine</li> <li>• Penicillin G potassium</li> </ul>	<ul style="list-style-type: none"> <li>• Penicillin G procaine</li> <li>• Penicillin G sodium</li> </ul>	<ul style="list-style-type: none"> <li>• Penicillin V potassium</li> <li>• Penicillin G benzathine</li> </ul>
<b>Penicillinase resistant penicillins</b>	<ul style="list-style-type: none"> <li>• Dicloxacillin</li> </ul>	<ul style="list-style-type: none"> <li>• Nafcillin</li> </ul>	<ul style="list-style-type: none"> <li>• Oxacillin</li> </ul>
<b>Quinolones</b>	<ul style="list-style-type: none"> <li>• Ciprofloxacin</li> <li>• Gemifloxacin</li> </ul>	<ul style="list-style-type: none"> <li>• Levofloxacin</li> <li>• Moxifloxacin</li> </ul>	<ul style="list-style-type: none"> <li>• Ofloxacin</li> </ul>
<b>Rifamycin derivatives</b>	<ul style="list-style-type: none"> <li>• Rifampin</li> </ul>		
<b>Second-generation cephalosporin</b>	<ul style="list-style-type: none"> <li>• Cefaclor</li> <li>• Cefotetan</li> </ul>	<ul style="list-style-type: none"> <li>• Cefoxitin</li> <li>• Cefprozil</li> </ul>	<ul style="list-style-type: none"> <li>• Cefuroxime</li> </ul>
<b>Sulfonamides</b>	<ul style="list-style-type: none"> <li>• Sulfadiazine</li> </ul>	<ul style="list-style-type: none"> <li>• Sulfamethoxazole-trimethoprim</li> </ul>	
<b>Tetracyclines</b>	<ul style="list-style-type: none"> <li>• Doxycycline</li> </ul>	<ul style="list-style-type: none"> <li>• Minocycline</li> </ul>	<ul style="list-style-type: none"> <li>• Tetracycline</li> </ul>
<b>Third-generation cephalosporins</b>	<ul style="list-style-type: none"> <li>• Cefdinir</li> <li>• Cefixime</li> <li>• Cefotaxime</li> </ul>	<ul style="list-style-type: none"> <li>• Cefpodoxime</li> <li>• Ceftazidime</li> <li>• Ceftriaxone</li> </ul>	
<b>Urinary anti-infectives</b>	<ul style="list-style-type: none"> <li>• Fosfomycin</li> <li>• Nitrofurantoin</li> </ul>	<ul style="list-style-type: none"> <li>• Nitrofurantoin (monohydrate/macrocrystals) Trimethoprim</li> </ul>	