Measure #116: Inappropriate Antibiotic Treatment for Adults with Acute Bronchitis

DESCRIPTION:
Percentage of adults aged 18 through 64 years with a diagnosis of acute bronchitis who were not prescribed or dispensed an antibiotic prescription on or within 3 days of the initial date of service

INSTRUCTIONS:
This measure is to be reported at each visit for acute bronchitis during the reporting period. This measure may be reported by clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

This measure is reported using CPT Category II codes:
ICD-9 diagnosis codes, CPT E/M service codes, and patient demographics (age, gender, etc.) are used to identify patients who are included in the measure's denominator. CPT Category II codes are used to report the numerator of the measure.

When reporting the measure, submit the listed ICD-9 diagnosis codes, CPT E/M service codes, and the appropriate CPT Category II code OR the CPT Category II code with the modifier. The modifier allowed for this measure is: 1P- medical reasons.

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 patients for whom antibiotics were neither prescribed nor dispensed on or within 3 days of the initial date of service over the number of patients in the denominator (patients aged 18 through 64 years with 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 initial date of service).
>
> Numerator Coding:

Table 1A: The antibiotics listed below are considered antibiotics for the purposes of this measure.

Description	Prescription		
5-aminosalicylates	sulfasalazine		
Amebicides	metronidazole		
Aminoglycosides	amikacin gentamicin	kanamycin neomycin	streptomycin tobramycin
Aminopenicillins	amoxicillin	ampicillin	
Antipseudomonal penicillins	piperacillin	ticarcillin	
Beta-lactamase inhibitors	amoxicillin-clavulanate	piperacillin-tazobactam	ticarcillin-clavulanate

	ampicillin-sulbactam		
First generation cephalosporins	cefadroxil cefazolin	cephalexin cephradine	
Fourth generation cephalosporins	cefepime		
Ketolides	telithromycin		
Lincomycin derivatives	clindamycin	lincomycin	
Macrolides	azithromycin clarithromycin	erythromycin erythromycin ethylsuccinate	erythromycin lactobionate erythromycin stearate
Miscellaneous antibiotics	aztreonam chloramphenicol dalfopristin-quinupristin	daptomycin erythromycin-sulfisoxazole linezolid	metronidazole
Sulfamethoxazole-trimethoprim DS	doxycycline	sulfamethoxazole-trimethoprim	vancomycin
Natural penicillins	penicillin G benzathine-procaine penicillin G potassium	penicillin G procaine penicillin G sodium	penicillin V potassium
Penicillinase resistant penicillins	dicloxacillin	nafcillin	oxacillin
Quinolones	ciprofloxacin gatifloxacin gemifloxacin	levofloxacin lomefloxacin moxifloxacin	Norfloxacin ofloxacin sparfloxacin
Rifamycin derivatives	rifampin		
Second generation cephalosporin	cefaclor cefotetan	cefoxitin cefprozil	cefuroxime loracarbef
Sulfonamides	sulfadiazine sulfamethoxazole-trimethoprim		sulfisoxazole
Tetracyclines	doxycycline	minocycline	tetracycline
Third generation cephalosporins	cefdinir cefixime cefoperazone	cefotaxime ceftazidime	ceftibuten ceftriaxone
Urinary anti-infectives	fosfomycin nitrofurantoin nitrofurantoin macrocrystals	nitrofurantoin macrocrystals-monohydrate trimethoprim	

Antibiotic not Prescribed or Dispensed
CPT II 4124F: Antibiotic neither prescribed nor dispensed

OR

Antibiotic Prescribed or Dispensed for Medical Reasons
Append a modifier (1P) to CPT Category II code 4120F to report documented circumstances that appropriately exclude patients from the denominator.

- 1P: Documentation of medical reason(s) for prescribing or dispensing antibiotic

OR

Antibiotic Prescribed or Dispensed
CPT II 4120F: Antibiotic prescribed or dispensed

DENOMINATOR:
All patients aged 18 through 64 years with a diagnosis of acute bronchitis

Denominator Coding:
An ICD-9 diagnosis code for acute bronchitis and a CPT E/M service code are required to identify patients for denominator inclusion.
ICD-9 diagnosis codes: 466.0
AND
CPT E/M service codes: 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99217, 99218, 99219, 99220, 99241, 99242, 99243, 99244, 99245, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

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. Dicicco-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., K.G. 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)