# Health Benchmarks®
## Clinical Quality Indicator Specification 2008

<table>
<thead>
<tr>
<th>Client</th>
<th>HEALTH BENCHMARKS, INC. STANDARD ALGORITHM Implemented for Blue Cross Blue Shield of Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure Title</td>
<td>APPROPRIATE TREATMENT FOR CHILDREN WITH UPPER RESPIRATORY INFECTION</td>
</tr>
<tr>
<td>Disease State</td>
<td>Upper respiratory infections</td>
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<tr>
<td>Indicator Classification</td>
<td>Disease Management</td>
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<tr>
<td>Strength of Recommendation</td>
<td>B</td>
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<tr>
<td>Organizations Providing Recommendation</td>
<td>American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Society of Internal Medicine, Centers for Disease Control and Prevention, Infectious Diseases Society of America</td>
</tr>
<tr>
<td>Clinical Intent</td>
<td>To ensure that children diagnosed with nonspecific upper respiratory infections are not being inappropriately treated with antibiotics.</td>
</tr>
<tr>
<td>Physician Specialties (suggested)</td>
<td>Allergy-Immunology, Emergency Medicine, Family Practice, Geriatric Medicine, Internal Medicine, Pediatrics, Urgent Care</td>
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</table>

## Background

### Disease Burden
- The vast majority of upper respiratory infections (URIs) are caused by viruses, for which antibiotics are ineffective, yet almost 65% of patients with these conditions receive antibiotic prescriptions.[1, 2]

## Reason for Indicated Intervention or Treatment

- Antibiotics are ineffective treatments for URIs, and widespread inappropriate antibiotic utilization has led to increasing levels of antibiotic resistance.[3, 4]
- Most patients do not require antibiotic treatment as the symptoms will often resolve naturally within 1-2 weeks.[5]
- Physicians who have practiced for a short time or physicians with high patient volume are more likely to prescribe antibiotics for respiratory tract infections without proper diagnosis of the condition.[4]
- Despite attempts to reduce inappropriate antibiotic use for URI, the rate of prescriptions still remains inadequately high.[6]

## Evidence Supporting Intervention or Treatment

- A recent study of 5 health plans discovered that for 119,128 cases of URI/bronchitis in children 3 months 18 months of age, physicians prescribed antibiotics 31% of the time. Individual plan rates varied from
2%-75%.[7]

- Another recent study of 2,270 cases of acute respiratory infections in the acute care setting also found that 31% of patients were given antibiotic treatment for URI's.[8]

**Clinical Recommendations**

- The American Academy of Family Physicians through development with the Alliance Working for Antibiotic Resistance Education (AWARE) Project also advises against prescription of antibiotics for unspecified URIs.[9]

**Source**

Adapted from Healthcare Effectiveness Data and Information Set (HEDIS®) 2008 Technical Specification for Physician Measurement:

- HBI has incorporated HCPCS codes for injectable antibiotics into the denominator exclusion and the numerator.

### Denominator

**Denominator Definition**

Continuously enrolled members ages 3 months to 18 years old who were diagnosed with only a URI in an outpatient or emergency room setting during the 1 year period beginning 6 months prior to the start of the measurement year.

**Denominator Codes**

Diagnosis of URI in an outpatient or emergency department setting.

- **Acute nasopharyngitis:**
  - ICD-9 diagnosis code(s): 460.xx
- **URI:**
  - ICD-9 diagnosis code(s): 465.xx
- **Outpatient or ED setting:**
  - CPT-4 code(s): 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99281-99285, 99381-99385, 99391-99395, 99401-99404, 99411, 99412, 99420, 99429, 99499
  - UB revenue code(s): 045x, 051x, 0520-0523, 0526-0529, 077x, 0981, 0982, 0983

### Denominator Exclusion

**Denominator Exclusion Definition**

Members who filled a prescription or received an injection for an antibiotic in the 1-30 days prior to the index date or members who had a competing diagnosis 0-3 days after the index date.

**Denominator Exclusion Codes**

Prescription for an antibiotic.

- Competing diagnosis 0-3 days after the index date (inclusive of the index date).

- **Intestinal infections:**
  - ICD-9 diagnosis code(s): 001.xx-009.xx
Pertussis:
ICD-9 diagnosis code(s): 033.x

Bacterial infection unspecified:
ICD-9 diagnosis code(s): 041.9x

Lyme disease and other arthropod-borne diseases:
ICD-9 diagnosis code(s): 088.xx

Otitis media:
ICD-9 diagnosis code(s): 382.xx

Acute sinusitis:
ICD-9 diagnosis code(s): 461.x

Acute pharyngitis:
ICD-9 diagnosis code(s): 034.0, 462

Acute tonsillitis:
ICD-9 diagnosis code(s): 463

Chronic sinusitis:
ICD-9 diagnosis code(s): 473.x

Infections of the pharynx, larynx, tonsils, adenoids:
ICD-9 diagnosis code(s): 464.1x-464.3x, 474.xx, 478.21, 478.22, 478.23, 478.24, 478.29, 478.71, 478.79, 478.9

Prostatitis:
ICD-9 diagnosis code(s): 601.x

Cellulitis, mastoiditis, other bone infections:
ICD-9 diagnosis code(s): 383.xx, 681.xx, 682.x, 730.xx

Acute lymphadenitis:
ICD-9 diagnosis code(s): 683

Impetigo:
ICD-9 diagnosis code(s): 684

Skin staph infections:
ICD-9 diagnosis code(s): 686.xx

Pneumonia:
ICD-9 diagnosis code(s): 481.xx- 486.xx

Gonococcal infections and venereal diseases:
ICD-9 diagnosis code(s): 098.xx, 099.xx, V01.6, V02.7, V02.8

Syphilis:
ICD-9 diagnosis code(s): 090.xx-097.xx

Chlamydia:
ICD-9 diagnosis code(s): 078.88, 079.88, 079.98

Inflammatory diseases (female reproductive organs):
ICD-9 diagnosis code(s): 614.x, 615.x, 616.xx

Infections of the kidney:
ICD-9 diagnosis code(s): 590.xx

Cystitis or UTI:
ICD-9 diagnosis code(s): 595.xx, 599.0

Injected antibiotic.

HCPCS code(s): J0120, J0200, J0290, J0295, J0456, J0530, J0540, J0550, J0560,
J0570, J0580, J0690, J0692, J0694, J0696, J0697, J0698, J0710, J0713, J0715,
J0744, J1580, J1590, J1850, J1890, J1956, J2010, J2185, J2280, J2510, J2540, J2543, J2700, J3260, J3320, J3370

### Numerator

**Numerator Definition**

Members who did NOT fill a prescription for an antibiotic or receive an injected antibiotic 0-3 days after the index date.

*Note: This definition allows the measure to be reported as an inverted rate to facilitate a meaningful score interpretation across measures that are scored on the same scale.*

**Numerator Codes**

- Antibiotic prescription.
- Injected antibiotics.

### Physician Attribution

**Physician Attribution Description**

*If client data contains prescribing provider:*

- If member filled a prescription for an antibiotic, score the prescribing provider.
- If the member received an injected antibiotic, score the administering provider.
- If the member did not fill an antibiotic prescription or receive an injected antibiotic, score all physicians who saw the member 0-3 days after the index date.

*If client data does not contain prescribing provider:*

Score all physicians who saw the member 0-3 days after the index date.

### References


