Quality ID #66: Appropriate Testing for Children with Pharyngitis
- National Quality Strategy Domain: Efficiency and Cost Reduction
- Meaningful Measure Area: Appropriate Use of Healthcare

2020 COLLECTION TYPE:
MIPS CLINICAL QUALITY MEASURES (CQMS)

MEASURE TYPE:
Process – High Priority

DESCRIPTION:
Percentage of children 3-18 years of age who were diagnosed with pharyngitis, ordered an antibiotic and received a group A streptococcus (strep) test for the episode

INSTRUCTIONS:
This measure is to be submitted once for each occurrence of pharyngitis during the performance period. Claims data will be analyzed to determine unique occurrences. This measure is intended to reflect the quality of services provided for the primary management of patients with pharyngitis who were dispensed an antibiotic. This measure may be submitted by Merit-based Incentive Payment System (MIPS) eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

Measure Submission Type:
Measure data may be submitted by individual MIPS eligible clinicians, groups, or third party intermediaries. The listed denominator criteria are used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions as allowed by the measure. The quality-data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third party intermediaries that utilize this modality for submissions; however, these codes may be submitted for those third party intermediaries that utilize Medicare Part B claims data. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

DENOMINATOR:
Children 3 - 18 years of age who had an outpatient or emergency department (ED) visit with a diagnosis of pharyngitis during the measurement period and an antibiotic ordered on or three days after the visit

Denominator Instruction:
To determine eligibility, look for any of the listed antibiotic drugs below in the 30 days prior to the visit with the pharyngitis diagnosis. As long as there are no prescriptions for the listed antibiotics during this time period, the patient is eligible for denominator inclusion.

DENOMINATOR NOTE: *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 MIPS CQMs.

Denominator Criteria (Eligible Cases):
Patients aged 3 to 18 years on date of encounter
AND
Diagnosis for pharyngitis (ICD-10-CM): J02.0, J02.8, J02.9, J03.00, J03.01, J03.80, J03.81, J03.90, J03.91
AND

AND
Prescribed or dispensed antibiotic: G8711

AND NOT
DENOMINATOR EXCLUSIONS:
Patients who use hospice services any time during the measurement period: G9702
OR
Children who are taking antibiotics in the 30 days prior to the diagnosis of pharyngitis: G9703
OR
Children with a competing diagnosis for Upper Respiratory Infection within three days of diagnosis of pharyngitis (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, or 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 or UTI): G2097

### Table 1 - Antibiotic Medications

<table>
<thead>
<tr>
<th>Description</th>
<th>Prescription</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminopenicillins</td>
<td>Amoxicillin</td>
</tr>
<tr>
<td></td>
<td>Ampicillin</td>
</tr>
<tr>
<td>Beta-lactamase inhibitors</td>
<td>Amoxicillin-clavulanate</td>
</tr>
<tr>
<td>First generation cephalosporins</td>
<td>Cefadroxil</td>
</tr>
<tr>
<td></td>
<td>Cephalexin</td>
</tr>
<tr>
<td></td>
<td>Cefazolin</td>
</tr>
<tr>
<td>Folate antagonist</td>
<td>Trimethoprim</td>
</tr>
<tr>
<td>Lincomycin derivatives</td>
<td>Clindamycin</td>
</tr>
<tr>
<td>Macrolides</td>
<td>Azithromycin</td>
</tr>
<tr>
<td></td>
<td>Erythromycin ethylsuccinate</td>
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<tr>
<td></td>
<td>Clarithromycin</td>
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<tr>
<td></td>
<td>Erythromycin lactobionate</td>
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<tr>
<td></td>
<td>Erythromycin</td>
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<tr>
<td></td>
<td>Erythromycin stearate</td>
</tr>
<tr>
<td>Miscellaneous antibiotics</td>
<td>Erythromycin-sulfisoxazole</td>
</tr>
<tr>
<td>Natural penicillins</td>
<td>Penicillin G potassium</td>
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<tr>
<td></td>
<td>Penicillin V potassium</td>
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<tr>
<td></td>
<td>Penicillin G sodium</td>
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<tr>
<td>Penicillinase-resistant penicillins</td>
<td>Dicloxacillin</td>
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<tr>
<td>Quinolones</td>
<td>Ciprofloxacin</td>
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<tr>
<td></td>
<td>Moxifloxacin</td>
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<tr>
<td></td>
<td>Levofloxacin</td>
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<tr>
<td></td>
<td>Ofloxacin</td>
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<tr>
<td>Second generation cephalosporins</td>
<td>Cefaclor</td>
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<tr>
<td></td>
<td>Cefuroxime</td>
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<tr>
<td></td>
<td>Cefprozil</td>
</tr>
<tr>
<td>Sulfonamides</td>
<td>Sulfamethoxazole-trimethoprim</td>
</tr>
<tr>
<td>Description</td>
<td>Prescription</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Tetracyclines</td>
<td>Doxycycline</td>
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<tr>
<td></td>
<td>Tetracycline</td>
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<tr>
<td></td>
<td>Minocycline</td>
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<tr>
<td>Third generation cephalosporins</td>
<td>Cefdinir</td>
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<td></td>
<td>Ceftibuten</td>
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<tr>
<td></td>
<td>Cefixime</td>
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<td></td>
<td>Cefditoren</td>
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<tr>
<td></td>
<td>Cefpodoxime</td>
</tr>
<tr>
<td></td>
<td>Ceftriaxone</td>
</tr>
</tbody>
</table>

**NUMERATOR:**

Children with a group A streptococcus test in the 7-day period from 3 days prior through 3 days after the diagnosis of pharyngitis

**Numerator Instruction:**

A higher score indicates appropriate treatment of children with pharyngitis (e.g., the proportion for whom antibiotics were prescribed with an accompanying step test).

**Numerator Options:**

**Performance Met:**

Group A Strep Test Performed (3210F)

**OR**

**Performance Not Met:**

Group A Strep Test not Performed, reason not otherwise specified (3210F with 8P)

**RATIONALE:**

Group A streptococcal bacterial infections and other infections that cause pharyngitis (which are most often viral) often produce the same signs and symptoms (Shulman et al., 2012). The American Academy of Pediatrics, the Centers for Disease Control and Prevention, and the Infectious Diseases Society of America all recommend a diagnostic test for Strep A to improve diagnostic accuracy and avoid unnecessary antibiotic treatment (Linder et al. 2005).

Estimated economic costs of pediatric streptococcal pharyngitis in the United States range from $224 million to $539 million per year, including indirect costs related to parental work losses. At a higher level, the economic cost of antibiotic resistance vary but have extended as high as $20 billion in excess direct healthcare costs, with additional costs to society for lost productivity as high as $35 billion a year (2008 dollars) (Roberts et al. 2009).

**CLINICAL RECOMMENDATION STATEMENTS:**

Infectious Disease Society of America (2012)

The Infectious Diseases Society of America (IDSA) “recommends swabbing the throat and testing for GAS pharyngitis by rapid antigen detection test (RADT) and/or culture because the clinical features alone do not reliably discriminate between GAS and viral pharyngitis except when overt viral features like rhinorrhea, cough, oral ulcers, and/or hoarseness are present”

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2020 Clinical Quality Measure Flow for Quality ID #66:
Appropriate Testing for Children with Pharyngitis

Disclaimer: Refer to the measure specification for specific coding and instructions to submit this measure.

Start

Denominator

Patients Aged 2 Years or 13 Years or Older on Date of Encounter

No

Diagnosis for Pharyngitis as Listed in Denominator

No

Encounter as Listed in Denominator (1/1/2020 thru 12/31/2020)

No

Antibiotic Prescribed or Dispensed G2711 or Equivalent

No

Denominator Exclusions

Yes

Children Who Are Taking Antibiotics in the 30 Days Prior to the Diagnosis of Pharyngitis G2702 or Equivalent

No

Patients Who Used Hospital Services Any Time During the Measurement Period G2702 or Equivalent

Yes

Children Who Are Taking Antibiotics in the 30 Days Prior to the Diagnosis of Pharyngitis G2702 or Equivalent

No

Numerator

Children with a competing diagnosis for Upper Respiratory Infection within three days of diagnosis of Pharyngitis G2997 or Equivalent

Yes

Not Included in Eligible Population/Denominator

No

Include in Eligible Population/Denominator (90 episodes)

Data Completeness Met: Performance Not Met CPT10 or Equivalent (20 episodes)

Group A Simple Tonsil and Test Performed

Yes

Data Completeness Met: Performance Not Met CPT10 or Equivalent (20 episodes)

Group A Simple Tonsil and Test Not Performed, Reason Not Otherwise Specified

Yes

Data Completeness Met: Data Must Have Code or Equivalent not submitted (10 episodes)

SAMPLE CALCULATION:

Data Completeness -
Performance Met (20 episodes) = Performance Not Met (50 episodes) Eligible Population / Denominator (70 episodes) = 70 episodes = 94.43%

Performance Rate -
Performance Met (70 episodes) = 70 episodes = 74.43%

Data Completeness Number of 70 episodes = 70 episodes

* See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Episode
2020 Clinical Quality Measure Flow Narrative for Quality ID #66:
Appropriate Testing for Children with Pharyngitis

Disclaimer: Refer to the measure specification for specific coding and instructions to submit this measure.

1. Start with Denominator

2. Check Patient Age:
   a. If Patients Aged 3 to 18 Years on Date of Encounter equals No during the measurement period, do not include in Eligible Population. Stop Processing.
   b. If Patients Aged 3 to 18 Years on Date of Encounter equals Yes during the measurement period, proceed to check Patient Diagnosis.

3. Check Patient Diagnosis:
   a. If Diagnosis of Pharyngitis as Listed in the Denominator equals No, do not include in Eligible Population. Stop Processing.
   b. If Diagnosis of Pharyngitis 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 Population. Stop Processing.
   b. If Encounter as Listed in the Denominator equals Yes, proceed to check Antibiotic Prescribed or Dispensed.

5. Check Antibiotic Prescribed or Dispensed:
   a. If Antibiotic Prescribed or Dispensed equals No, do not include in Eligible Population. Stop Processing.
   b. If Antibiotic Prescribed or Dispensed equals Yes, proceed to check Patients Who Use Hospice Services Any Time During the Measurement Period.

6. 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 Yes, do not include in Eligible Population. Stop Processing.
   b. If Patients Who Use Hospice Services Any Time During the Measurement Period equals No, proceed to check Children Who Are Taking Antibiotics in the 30 Days Prior to the Diagnosis of Pharyngitis.
7. Check Children Who Are Taking Antibiotics in the 30 Days Prior to the Diagnosis of Pharyngitis:
   a. If Children Who Are Taking Antibiotics in the 30 Days Prior to the Diagnosis of Pharyngitis equals Yes, do not include in Eligible Population. Stop Processing.
   b. If Children Who Are Taking Antibiotics in the 30 Days Prior to the Diagnosis of Pharyngitis equals No, proceed to check Children With a Competing Diagnosis for Upper Respiratory Infection within Three Days of Diagnosis of Pharyngitis.

8. Check Children With a Competing Diagnosis for Upper Respiratory Infection within Three Days of Diagnosis of Pharyngitis:
   a. If Children With a Competing Diagnosis for Upper Respiratory Infection within Three Days of Diagnosis of Pharyngitis equals Yes, do not include in Eligible Population. Stop Processing.
   b. If Children With a Competing Diagnosis for Upper Respiratory Infection within Three Days of Diagnosis of Pharyngitis equals No, include in Eligible Population.

9. Denominator Population:
   a. Denominator Population is all Eligible Episodes 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.

10. Start Numerator

11. Check Group A Streptococcus Test Performed:
   a. If Group A Streptococcus Test Performed 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 50 episodes in the Sample Calculation.
   c. If Group A Streptococcus Test Performed equals No, proceed to check Group A Streptococcus Test Not Performed, Reason Not Otherwise Specified.

12. Check Group A Streptococcus Test Not Performed, Reason Not Otherwise Specified:
   a. If Group A Streptococcus Test Not Performed, Reason Not Otherwise Specified equals Yes, include in 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 20 episodes in the Sample Calculation.
   c. If Group A Streptococcus Test Not Performed, Reason Not Otherwise Specified equals No, proceed to check Data Completeness Not Met.

13. Check Data Completeness Not Met:
a. If Data Completeness Not Met, the Quality Data Code or equivalent was not submitted. 10 episodes have been subtracted from the Data Completeness Numerator in the Sample Calculation.

**Sample Calculations:***

\[
\text{Data Completeness} = \frac{\text{Performance Met (≥50 episodes)} - \text{Performance Not Met (≥20 episodes)}}{\text{Eligible Population / Denominator (≥80 episodes)}} = \frac{70 \text{ episodes}}{80 \text{ episodes}} = 87.56\%
\]

**Performance Rate:**

\[
\text{Performance Rate} = \frac{\text{Performance Met (≥50 episodes)}}{\text{Data Completeness Numerator (70 episodes)}} = \frac{50 \text{ episodes}}{70 \text{ episodes}} = 71.43\%
\]