■ Measure #331: Adult Sinusitis: Antibiotic Prescribed for Acute Sinusitis (Appropriate Use) – National Quality Strategy Domain: Efficiency and Cost Reduction

2015 PQRS OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

DESCRIPTION:
Percentage of patients, aged 18 years and older, with a diagnosis of acute sinusitis who were prescribed an antibiotic within 7 days of diagnosis or within 10 days after onset of symptoms

INSTRUCTIONS:
This measure is to be reported once for **each occurrence** for patients with acute sinusitis 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.

Measure Reporting via Registry:
ICD-9-CM/ICD-10-CM diagnosis codes, CPT codes and patient demographics are used to identify patients who are included in the measure's denominator. The listed numerator options are used to report the numerator of 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. There are no allowable performance exclusions for this measure.

DENOMINATOR:
All patients aged 18 years and older with a diagnosis of acute sinusitis

Definitions:
Acute Sinusitis/Rhinosinusitis: Up to 4 weeks of purulent nasal drainage (anterior, posterior, or both) accompanied by nasal obstruction, facial pain-pressure-fullness, or both:
Purulent nasal discharge is cloudy or colored, in contrast to the clear secretions that typically accompany viral upper respiratory infection, and may be reported by the patient or observed on physical examination
Nasal obstruction may be reported by the patient as nasal obstruction, congestion, blockage, or stuffiness, or may be diagnosed by physical examination
Facial pain-pressure-fullness may involve the anterior face, periorbital region, or manifest with headache that is localized or diffuse

Denominator Criteria (Eligible Cases):
Patients aged ≥ 18 years on date of encounter
AND
Diagnosis for acute sinusitis (ICD-9-CM) [for use 1/1/2015-9/30/2015]: 461.0, 461.1, 461.2, 461.3, 461.8, 461.9
Diagnosis for acute sinusitis (ICD-10-CM) [for use 10/01/2015-12/31/2015]: J01.00, J01.10, J01.20, J01.30, J01.40, J01.80, J01.90
AND
Patient encounter during reporting period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99281, 99282, 99283, 99284, 99285, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

NUMERATOR:
Patients prescribed any antibiotic within 7 days of diagnosis or within 10 days after onset of symptoms

Numerator Instructions: The desired performance goal is not an antibiotic prescribing rate of zero. This measure is an overall rate of all patients receiving an antibiotic.
A lower calculated performance rate for this measure indicates better clinical care or control.

Numerator Options:

Performance Met: Antibiotic regimen prescribed within 7 days of diagnosis or within 10 days after onset of symptoms **(G9286)**

OR

Performance Not Met: Antibiotic regimen **not** prescribed within 7 days of diagnosis or within 10 days after onset of symptoms **(G9287)**

RATIONALE:
Antibiotic treatment for sinusitis is indicated for some patients, but overtreatment of acute sinusitis with antibiotics is common and often not indicated. Further, treatment with antibiotics may increase patient harm and can lead to antibiotic resistance.

A Cochrane systematic review was undertaken to quantify the effectiveness of antibiotic therapy for patients diagnosed with acute sinusitis and treated in ambulatory settings. The authors concluded that antibiotics have a small benefit for improving clinical outcomes in patients with uncomplicated acute sinusitis and symptoms lasting more than seven days in a primary care setting. However, 80% of patients treated with a placebo also improved within two weeks.

CLINICAL RECOMMENDATION STATEMENTS:
The following evidence statements are quoted verbatim from the referenced clinical guidelines:

AAO-HNS Sinusitis Guideline (2007)

Observation without use of antibiotics is an option for selected adults with uncomplicated ABRS who have mild illness (mild pain and temperature < 38.3°C or 101°F) and assurance of follow-up.

Option based on double-blind randomized controlled trials with heterogeneity in diagnostic criteria and illness severity, and a relative balance of benefit and risk.

Antibiotics are not recommended for treating viral rhinosinusitis (VRS) because they are ineffective and do not relieve symptoms directly.

■ Measure #332: Adult Sinusitis: Appropriate Choice of Antibiotic: Amoxicillin Prescribed for Patients with Acute Bacterial Sinusitis (Appropriate Use) – National Quality Strategy Domain: Efficiency and Cost Reduction

2015 PQRS OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

DESCRIPTION:
Percentage of patients aged 18 years and older with a diagnosis of acute bacterial sinusitis that were prescribed amoxicillin, with or without clavulanate, as a first line antibiotic at the time of diagnosis

INSTRUCTIONS:
This measure is to be reported a minimum of **once per reporting period** for patients with acute bacterial sinusitis 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.

Measure Reporting via Registry
ICD-9-CM/ICD-10-CM diagnosis codes, CPT codes and patient demographics are used to identify patients who are included in the measure's denominator. The listed numerator options are used to report the numerator of 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 years and older with a diagnosis of acute bacterial sinusitis

Definitions:
Acute Bacterial Rhinosinusitis (ABRS):
Acute rhinosinusitis that is caused by, or is presumed to be caused by, bacterial infection. A clinician should diagnose ABRS when: (a) symptoms or signs of acute rhinosinusitis are present 10 days or more beyond the onset of upper respiratory symptoms, or (b) symptoms or signs of acute rhinosinusitis worsen within 10 days after an initial improvement (double worsening)

Denominator Criteria (Eligible Cases):
Patients aged ≥ 18 years on date of encounter
AND
Diagnosis for acute sinusitis (ICD-9-CM) [for use 1/1/2015-9/30/2015]: 461.0, 461.1, 461.2, 461.3, 461.8, 461.9
Diagnosis for acute sinusitis (ICD-10-CM) [for use 10/01/2015-12/31/2015]: J01.00, J01.10, J01.20, J01.30, J01.40, J01.80, J01.90
AND
Patient encounter during reporting period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99281, 99282, 99283, 99284, 99285, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350
AND
Sinusitis caused by, or presumed to be caused by, bacterial infection: G9364

NUMERATOR:
Patients who were prescribed amoxicillin, with or without clavulanate, as a first line antibiotic at the time of diagnosis

Numerator Options:

Performance Met:	Amoxicillin, with or without clavulanate, prescribed as a first line antibiotic at the time of diagnosis **(G9315)**
OR	
Other Performance Exclusion:	Amoxicillin, with or without clavulanate, not prescribed as first line antibiotic at the time of diagnosis for documented reason (eg, cystic fibrosis, immotile cilia disorders, ciliary dyskinesia, immune deficiency, prior history of sinus surgery within the past 12 months, and anatomic abnormalities, such as deviated nasal septum, resistant organisms, allergy to medication, recurrent sinusitis, chronic sinusitis, or other reasons) **(G9313)**
OR	
Performance Not Met:	Amoxicillin, with or without clavulanate, **not** prescribed as first line antibiotic at the time of diagnosis, reason not given **(G9314)**

RATIONALE:

The use of broad-spectrum antibiotics as first line treatment have contributed to the rising incidence of drug-resistant strains of bacteria and to increased costs.

Once antibiotics therapy is initiated due to severity and/or duration of symptoms, the goal is to choose a first-line antibiotic treatment that is efficacious, cost-effective and that results in minimal side effects. The justification for amoxicillin as first-line therapy for most patients with ABRS relates to its favorable adverse effect profile, efficacy, low cost, and narrow microbiologic spectrum.

CLINICAL RECOMMENDATION STATEMENTS:

The following evidence statements are quoted verbatim from the referenced clinical guidelines:

AAO-HNS Sinusitis Guideline (2007)

If a decision is made to treat ABRS with an antibiotic agent, the clinician should prescribe amoxicillin as first-line therapy for most adults.

Recommendation based on randomized controlled trials with heterogeneity and noninferiority design with a preponderance of benefit over harm.

IDSA Clinical Practice Guideline for Acute Bacterial Rhinosinusitis in Children and Adults (2012)

Amoxicillin-clavulanate rather than amoxicillin alone is recommended as empiric antimicrobial therapy for ABRS in adults (weak, low).

Evidence for at least 1 critical outcome from observational studies, from RCTs with serious flaws or indirect evidence.

■ Measure #333: Adult Sinusitis: Computerized Tomography (CT) for Acute Sinusitis (Overuse) – National Quality Strategy Domain: Efficiency and Cost Reduction

2015 PQRS OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

DESCRIPTION:
Percentage of patients aged 18 years and older, with a diagnosis of acute sinusitis who had a computerized tomography (CT) scan of the paranasal sinuses ordered at the time of diagnosis or received within 28 days after date of diagnosis

INSTRUCTIONS:
This measure is to be reported once for **each occurrence** for patients with acute sinusitis 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.

Measure Reporting via Registry
ICD-9-CM/ICD-10-CM diagnosis codes, CPT codes and patient demographics are used to identify patients who are included in the measure's denominator. The listed numerator options are used to report the numerator of 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 years and older with a diagnosis of acute sinusitis

Definitions:
Acute Sinusitis/Rhinosinusitis: Up to 4 weeks of purulent nasal drainage (anterior, posterior, or both) accompanied by nasal obstruction, facial pain-pressure-fullness, or both:
Purulent nasal discharge is cloudy or colored, in contrast to the clear secretions that typically accompany viral upper respiratory infection, and may be reported by the patient or observed on physical examination
Nasal obstruction may be reported by the patient as nasal obstruction, congestion, blockage, or stuffiness, or may be diagnosed by physical examination
Facial pain-pressure-fullness may involve the anterior face, periorbital region, or manifest with headache that is localized or diffuse

Denominator Criteria (Eligible Cases):
Patients aged ≥ 18 years on date of encounter
AND
Diagnosis for acute sinusitis (ICD-9-CM) [for use 1/1/2015-9/30/2015]: 461.0, 461.1, 461.2, 461.3, 461.8, 461.9
Diagnosis for acute sinusitis (ICD-10-CM) [for use 10/01/2015-12/31/2015]: J01.00, J01.10, J01.20, J01.30, J01.40, J01.80, J01.90
AND
Patient encounter during reporting period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99281, 99282, 99283, 99284, 99285, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

NUMERATOR:

Patients who had a computerized tomography (CT) scan of the paranasal sinuses ordered at the time of diagnosis or received within 28 days after date of diagnosis

Numerator Options:

Performance Met:	CT scan of the paranasal sinuses ordered at the time of diagnosis or received within 28 days after date of diagnosis **(G9349)**
OR	
Other Performance Exclusion:	CT scan of the paranasal sinuses ordered at the time of diagnosis for documented reasons (eg, persons with sinusitis symptoms lasting at least 7 to 10 days, antibiotic resistance, immunocompromised, recurrent sinusitis, acute frontal sinusitis, acute sphenoid sinusitis, periorbital cellulitis, or other medical) **(G9348)**
OR	
Performance Not Met:	CT scan of the paranasal sinuses **not** ordered at the time of diagnosis or received within 28 days after date of diagnosis **(G9350)**

RATIONALE:

Most cases of uncomplicated acute and subacute sinusitis are diagnosed clinically and should not require any imaging procedure. Sinus CT scanning is of limited value in the routine evaluation of sinusitis due to the high prevalence of abnormal imaging findings. Forty percent of asymptomatic patients and 87 percent of patients with community-acquired colds have sinus abnormalities on sinus CT. Additionally, sinus CT imaging has a high sensitivity but a low specificity for demonstrating acute sinusitis. Furthermore, CT imaging is not recommended for the diagnosis of uncomplicated sinusitis because it is not cost-effective and exposes patients to unnecessary radiation.

Sinusitis cannot be diagnosed on the basis of imaging findings alone. Findings on CT scans should be interpreted in conjunction with clinical and endoscopic findings. Up to 40% of asymptomatic adults have abnormalities on sinus CT scans, as do more than 80% of those with minor upper respiratory tract infections.

CLINICAL RECOMMENDATION STATEMENTS:

The following evidence statements are quoted verbatim from the referenced clinical guidelines:

AAO-HNS Sinusitis Guideline (2007)

Clinicians should not obtain radiographic imaging for patients who meet diagnostic criteria for acute rhinosinusitis, unless a complication or alternative diagnosis is suspected. Recommendation against based on diagnostic studies with minor limitations and a preponderance of benefit over harm.

Radiographic imaging of the paranasal sinuses is unnecessary for diagnosis in patients who already meet clinical diagnostic criteria (Table 5) for acute Rhinosinusitis Imaging modalities for the paranasal sinuses include plain film radiography, computed tomography (CT), and magnetic resonance (MR) imaging. The utility of ultrasound for diagnosis is inconclusive.

Imaging should only be considered for persons with rhinosinusitis symptoms lasting at least 7 to 10 days who have a history of recurrent symptoms or nonresponse to multiple courses of antibiotics in the past.

American College of Radiology ACR Appropriateness Criteria® For Sinonasal Disease (ACR, 2012)
Clinical Condition: Sinonasal Disease
Variant 1: Acute (<4 weeks) or subacute (4-12 weeks) uncomplicated rhinosinusitis.
Radiologic Procedure: CT paranasal sinuses without contrast

Rating: 5
Comments: Most episodes are managed without imaging, as this is primarily a clinical diagnosis. Imaging may be indicated if acute frontal sphenoid sinusitis is suspected, or if there are atypical symptoms, or if the diagnosis is uncertain.
RRL*: 0.1-1 mSv
Radiologic Procedure: MRI head and paranasal sinuses without contrast
Rating: 4
Comments: May be useful as part of a general workup for headache.
RRL*: 0 mSv
Radiologic Procedure: MRI head and paranasal sinuses without and with contrast
Rating: 2
Comments: May be useful as part of a general workup for headache.
RRL*: 0 mSv
Radiologic Procedure: CT paranasal sinuses with contrast
Rating: 2
RRL*: 0.1-1 mSv
Radiologic Procedure: CT paranasal sinuses without and with contrast
Rating: 1
RRL*: 1-10 mSv
Radiologic Procedure: X-ray paranasal sinuses
Rating: 1
RRL*: <0.1 mSv
Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate *Relative Radiation Level

■ Measure #334: Adult Sinusitis: More than One Computerized Tomography (CT) Scan Within 90 Days for Chronic Sinusitis (Overuse) – National Quality Strategy Domain: Efficiency and Cost Reduction

2015 PQRS OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

DESCRIPTION:
Percentage of patients aged 18 years and older with a diagnosis of chronic sinusitis who had more than one CT scan of the paranasal sinuses ordered or received within 90 days after date of diagnosis

INSTRUCTIONS:
This measure is to be reported at **each visit** for patients with chronic sinusitis 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.

Measure Reporting via Registry
ICD-9-CM/ICD-10-CM diagnosis codes, CPT codes and patient demographics are used to identify patients who are included in the measure's denominator. The listed numerator options are used to report the numerator of 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 years and older with a diagnosis of chronic sinusitis

Definition:
Chronic Sinusitis/Rhinosinusitis - is defined as twelve (12) weeks or longer of two or more of the following signs and symptoms: mucopurulent drainage (anterior, posterior, or both), nasal obstruction (congestion), facial pain-pressure-fullness, or decreased sense of smell AND inflammation is documented by one or more of the following findings: purulent (not clear) mucus or edema in the middle meatus or ethmoid region, polyps in nasal cavity or the middle meatus, and/or radiographic imaging showing inflammation of the paranasal sinuses.

Denominator Criteria (Eligible Cases):
Patients aged ≥ 18 years on date of encounter
AND
Diagnosis for chronic sinusitis (ICD-9-CM) [for use 1/1/2015-9/30/2015]: 473.0, 473.1, 473.2, 473.3, 473.8, 473.9
Diagnosis for chronic sinusitis (ICD-10-CM) [for use 10/01/2015-12/31/2015]: J32.0, J32.1, J32.2, J32.3, J32.4, J32.8, J32.9
AND
Patient encounter during reporting period (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

NUMERATOR:
Patients who had more than one CT scan of the paranasal sinuses ordered or received within 90 days after date of diagnosis

Numerator Instructions: A lower calculated performance rate for this measure indicates better clinical care or control. A lower percentage, with a definitional target approaching 0%, indicates appropriate use of CT in cases of chronic sinusitis (eg, not ordering more than one CT scan within 90 days after the date of diagnosis).

Numerator Options:

Performance Met:	More than one CT scan of the paranasal sinuses ordered or received within 90 days after the date of diagnosis, reason not given **(G9352)**
OR	
Other Performance Exclusion:	More than one CT scan of the paranasal sinuses ordered or received within 90 days after the date of diagnosis for documented reasons (eg, patients with complications, second CT obtained prior to surgery, other medical reasons) **(G9353)**
OR	
Performance Not Met:	One CT scan or no CT scan of the paranasal sinuses ordered within 90 days after the date of diagnosis **(G9354)**

RATIONALE:
In contrast to acute or isolated cases of sinusitis, chronic or recurrent sinusitis may benefit from additional diagnostic evaluation (eg, CT scan, nasal endoscopy) and management to corroborate a diagnosis and/or investigate for underlying causes. When endoscopic sinus surgery is considered in patients with recurrent or chronic sinusitis, a CT of the paranasal sinuses should be obtained to provide the anatomic detail necessary to guide the surgery. Multiple CT scans, however, are not indicated for chronic sinusitis patients due to risk of radiation overexposure and the fact that sinusitis cannot be diagnosed on the basis of imaging findings alone.

CLINICAL RECOMMENDATION STATEMENTS:
The following evidence statements are quoted verbatim from the referenced clinical guidelines:

AAO-HNS Sinusitis Guideline (2007)

Diagnostic Testing
The clinician should corroborate a diagnosis and/or investigate for underlying causes of chronic Rhinosinusitis and recurrent acute rhinosinusitis.

Recommendation based on observational studies with a preponderance of benefit over harm.

Radiographic Imaging
The clinician should obtain computed tomography (CT) of the paranasal sinuses in diagnosing or evaluating a patient with chronic rhinosinusitis or recurrent acute Rhinosinusitis (AAO-HNS, 2007).

Recommendation based on diagnostic and observational studies and a preponderance of benefit over harm.

American College of Radiology ACR Appropriateness Criteria®: Sinonasal Disease (ACR, 2012):
Recurrent acute or chronic rhinosinusitis (possible surgical candidate)
Radiologic Procedure: CT paranasal sinuses without contrast
Rating: 9
Comments: Consider using as a surgical planning protocol.
RRL*: 0.1-1 mSv
Radiologic Procedure: CT paranasal sinuses with contrast

Rating: 4
RRL*: 0.1-1 mSv
Radiologic Procedure: CT paranasal sinuses without and with contrast
Rating: 3
RRL*: 1-10mSv
Radiologic Procedure: MRI head and paranasal sinuses without and with contrast
Rating: 3
RRL*: 0 mSv
Radiologic Procedure: MRI head and paranasal sinuses without contrast
Rating: 2
RRL*: 0 mSv
Radiologic Procedure: X-ray paranasal sinuses
Rating: 1
Comments: May be indicated for planning frontal sinus obliteration.
RRL*: <0.1 mSv
Radiologic Procedure: SPECT paranasal sinuses
Rating: 1
RRL*: 1-10 mSv
Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate *Relative Radiation Level