SINUSITIS MEASURES GROUP OVERVIEW

2016 PQRS OPTIONS FOR MEASURES GROUPS:

2016 PQRS MEASURES IN SINUSITIS MEASURES GROUP:
#130  Documentation of Current Medications in the Medical Record
#131  Pain Assessment and Follow-Up
#226  Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention
#331  Adult Sinusitis: Antibiotic Prescribed for Acute Sinusitis (Overuse)
#332  Adult Sinusitis: Appropriate Choice of Antibiotic: Amoxicillin With or Without Clavulanate Prescribed for Patients with Acute Bacterial Sinusitis (Appropriate Use)
#333  Adult Sinusitis: Computerized Tomography (CT) for Acute Sinusitis (Overuse)

INSTRUCTIONS FOR REPORTING:

- It is not necessary to submit the measures group-specific intent G-code for registry-based submissions. However, the measures group-specific intent G-code has been created for registry only measures groups for use by registries that utilize claims data.

G9463: I intend to report the Sinusitis Measures Group

- Report the patient sample method:
  **20 Patient Sample Method via registries:** 20 unique patients (a majority of which must be Medicare Part B FFS patients) meeting patient sample criteria for the measures group during the reporting period (January 1 through December 31, 2016).

- Patient sample criteria for the Sinusitis Measures Group are patients aged ≥ 18 years with a specific diagnosis of sinusitis and accompanied by a specific patient encounter:

  **One of the following diagnosis codes indicating acute sinusitis:**
  **ICD-10-CM:** J01.00, J01.01, J01.10, J01.11, J01.20, J01.21, J01.30, J01.31, J01.40, J01.41, J01.80, J01.90

  **Accompanied by:**

  **One of the following patient encounter codes:** 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

- To satisfactorily report the Sinusitis Measures Group requires reporting a numerator option on all applicable measures, for each patient within the eligible professional’s patient sample, a minimum of once during the reporting period.

- Only patients with acute sinusitis are included in this measures group.

- When reporting measure #131, the documented follow-up plan must be related to the presence of pain, example: “Patient referred to pain management specialist for back pain” or “Return in two weeks for reassessment of pain”.

- Measure #332 need only be reported if sinusitis caused by, or presumed to be caused by, bacterial infection (G9364) and antibiotic regimen prescribed (G9498) or equivalents.
• Instructions for qualifying numerator option reporting for each of the measures within the Sinusitis Measures Group are displayed on the next several pages. The following composite Quality Data Code (QDC) has been created for registries that utilize claims data. This QDC may be reported in lieu of individual QDCs when all quality clinical actions for all applicable measures within the group have been performed.

**Composite QDC G9464:** All quality actions for the applicable measures in the Sinusitis Measures Group have been performed for this patient

• This measures group contains one or more inverse measures. An inverse measure is a measure that represents a poor clinical quality action as meeting performance for the measure. For these measures, a lower performance rate indicates a higher quality of clinical care. Composite codes for measures groups that contain inverse measures are only utilized when the appropriate quality clinical care is given.

• The composite code for this measures group may be reported when codes in the summary table below are applicable for reporting of each measure within the measures group.

**Table 13 - QDC Options**

<table>
<thead>
<tr>
<th>Measure</th>
<th>QDC options for acceptable use of the composite QDC</th>
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<tbody>
<tr>
<td>#130</td>
<td>G8427</td>
</tr>
<tr>
<td>#131</td>
<td>G8730 or G8731</td>
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<tr>
<td>#226</td>
<td>4004F or 1036F</td>
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<tr>
<td>#331*</td>
<td>G9287</td>
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<tr>
<td>#332</td>
<td>G9315</td>
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<tr>
<td>#333*</td>
<td>G9350</td>
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*Indicates an inverse measure

• Measure Group Reporting Calculations:

Measures groups containing a measure with a 0% performance rate will not be counted as satisfactorily reporting the measures group. The recommended clinical quality action must be performed on at least one patient for each applicable measure within the measures group reported by the eligible professional.

Performance exclusion QDCs are not counted in the performance denominator. If the eligible professional submits all performance exclusion QDCs, the performance rate would be 0/0 (null) and would be considered satisfactorily reporting.

If a measure within a measures group is not applicable to a patient, the patient would not be counted in the performance denominator for that measure (e.g., Preventive Care Measures Group - Measure #39: Screening for Osteoporosis for Women Aged 65-85 Years of Age would not be applicable to male patients according to the patient sample criteria). If the measure is not applicable for all patients within the sample, the performance rate would be 0/0 (null) and would be considered satisfactorily reporting.

When a lower rate indicates better performance, such as Measure #331, a 0% performance rate will be counted as satisfactorily reporting (100% performance rate would not be considered satisfactorily reporting).

• **NOTE:** The detailed instructions in this specification apply exclusively to the reporting and analysis of the included measures under the measures group option.
Measure #130 (NQF 0419): Documentation of Current Medications in the Medical Record – National Quality Strategy Domain: Patient Safety

DESCRIPTION:
Percentage of visits for patients aged 18 years and older for which the eligible professional attests to documenting a list of current medications using all immediate resources available on the date of the encounter. This list must include ALL known prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements and must contain the medications’ name, dosage, frequency and route of administration.

NUMERATOR:
Eligible professional attests to documenting, updating or reviewing a patient’s current medications using all immediate resources available on the date of encounter. This list must include ALL known prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements and must contain the medications’ name, dosages, frequency and route of administration.

Definitions:
Current Medications – Medications the patient is presently taking including all prescriptions, over-the-counters, herbals and vitamin/mineral/dietary (nutritional) supplements with each medication’s name, dosage, frequency and administered route.
Route - Documentation of the way the medication enters the body (some examples include but are not limited to: oral, sublingual, subcutaneous injections, and/or topical).
Not Eligible - A patient is not eligible if the following reason is documented:
- Patient is in an urgent or emergent medical situation where time is of the essence and to delay treatment would jeopardize the patient’s health status.

NUMERATOR NOTE: The eligible professional must document in the medical record they obtained, updated, or reviewed a medication list on the date of the encounter. Eligible professionals reporting this measure may document medication information received from the patient, authorized representative(s), caregiver(s) or other available healthcare resources. G8427 should be reported if the eligible professional documented that the patient is not currently taking any medications.

Numerator Options:
Performance Met: Eligible professional attests to documenting in the medical record they obtained, updated, or reviewed the patient’s current medications (G8427)
OR
Other Performance Exclusion: Eligible professional attests to documenting in the medical record the patient is not eligible for a current list of medications being obtained, updated, or reviewed by the eligible professional (G8430)
OR
Performance Not Met: Current list of medications not documented as obtained, updated, or reviewed by the eligible professional, reason not given (G8428)
Measure #131 (NQF 0420): Pain Assessment and Follow-Up -- National Quality Strategy Domain: Communication and Care Coordination

DESCRIPTION:
Percentage of visits for patients aged 18 years and older with documentation of a pain assessment using a standardized tool(s) on each visit AND documentation of a follow-up plan when pain is present

NUMERATOR:
Patient visits with a documented pain assessment using a standardized tool(s) AND documentation of a follow-up plan when pain is present

Definitions:
- **Pain Assessment** - Documentation of a clinical assessment for the presence or absence of pain using a standardized tool is required. A multi-dimensional clinical assessment of pain using a standardized tool may include characteristics of pain; such as: location, intensity, description, and onset/duration.
- **Standardized Tool** – An assessment tool that has been appropriately normed and validated for the population in which it is used. Examples of tools for pain assessment, include, but are not limited to: Brief Pain Inventory (BPI), Faces Pain Scale (FPS), McGill Pain Questionnaire (MPQ), Multidimensional Pain Inventory (MPI), Neuropathic Pain Scale (NPS), Numeric Rating Scale (NRS), Oswestry Disability Index (ODI), Roland Morris Disability Questionnaire (RMDQ), Verbal Descriptor Scale (VDS), Verbal Numeric Rating Scale (VNRS) and Visual Analog Scale (VAS).
- **Follow-Up Plan** – A documented outline of care for a positive pain assessment is required. This must include a planned follow-up appointment or a referral, a notification to other care providers as applicable OR indicate the initial treatment plan is still in effect. These plans may include pharmacologic and/or educational interventions.
- **Not Eligible** – A patient is not eligible if one or more of the following reason(s) is documented:
  - Severe mental and/or physical incapacity where the person is unable to express himself/herself in a manner understood by others. For example, cases where pain cannot be accurately assessed through use of nationally recognized standardized pain assessment tools
  - Patient is in an urgent or emergent situation where time is of the essence and to delay treatment would jeopardize the patient’s health status

**NUMERATOR NOTE:** The standardized tool used to assess the patient’s pain must be documented in the medical record (exception: A provider may use a fraction such as 5/10 for Numeric Rating Scale without documenting this actual tool name when assessing pain for intensity).

**Numerator Options:**

**Performance Met:**
- Pain assessment documented as positive using a standardized tool AND a follow-up plan is documented (G8730)

**OR**

**Performance Met:**
- Pain assessment using a standardized tool is documented as negative, no follow-up plan required (G8731)

**OR**

**Other Performance Exclusion:**
- Pain assessment NOT documented as being performed, documentation the patient is not eligible for a pain assessment using a standardized tool (G8442)
| OR | **Other Performance Exclusion:** | Pain assessment documented as positive, follow-up plan not documented, documentation the patient is not eligible (G8939) |
| OR | **Performance Not Met:** | No documentation of pain assessment, reason not given (G8732) |
| OR | **Performance Not Met:** | Pain assessment documented as positive using a standardized tool, follow-up plan not documented, reason not given (G8509) |
**Measure #226 (NQF 0028): Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention – National Quality Strategy Domain: Community/Population Health**

**DESCRIPTION:**
Percentage of patients aged 18 years and older who were screened for tobacco use one or more times within 24 months **AND** who received cessation counseling intervention if identified as a tobacco user

**NUMERATOR:**
Patients who were screened for tobacco use at least once within 24 months **AND** who received tobacco cessation intervention if identified as a tobacco user

**Definitions:**
- **Tobacco Use** – Includes use of any type of tobacco.
- **Tobacco Cessation Intervention** – Includes brief counseling (3 minutes or less), and/or pharmacotherapy.

**NUMERATOR NOTE:** In the event that a patient is screened for tobacco use and identified as a user but did not receive tobacco cessation intervention report 4004F with 8P.

**Numerator Options:**

- **Performance Met:**
  - Patient screened for tobacco use AND received tobacco cessation intervention (counseling, pharmacotherapy, or both), if identified as a tobacco user (4004F)

- **OR**
  - **Performance Met:**
    - Current tobacco non-user (1036F)

- **OR**
  - **Medical Performance Exclusion:**
    - Documentation of medical reason(s) for not screening for tobacco use (eg, limited life expectancy, other medical reasons) (4004F with 1P)

- **OR**
  - **Performance Not Met:**
    - Tobacco screening OR tobacco cessation intervention not performed, reason not otherwise specified (4004F with 8P)

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

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

Numerator Instructions:
INVERSE MEASURE - A lower calculated performance rate for this measure indicates better clinical care or control. The “Performance Not Met” numerator option for this measure is the representation of the better clinical quality or control. Reporting that numerator option will produce a performance rate that trends closer to 0%, as quality increases. For inverse measures a rate of 100% means all of the denominator eligible patients did not receive the appropriate care or were not in proper control, and therefore an inverse measure at 100% does not qualify for reporting purposes, however any reporting rate less than 100% does qualify.

Numerator Options:

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

OR

Other Performance Exclusion: Antibiotic regimen prescribed within 10 days after onset of symptoms for documented medical reason (G9505)

OR

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

**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

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

**Definition:**
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).

**Numerator Options:**

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**Performance Met:**
Amoxicillin, with or without clavulanate, prescribed as a first line antibiotic at the time of diagnosis (G9315)

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**Other Performance Exclusion:**
Amoxicillin, with or without clavulanate, not prescribed as first line antibiotic at the time of diagnosis for documented reason (e.g., 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)

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**Performance Not Met:**
Amoxicillin, with or without clavulanate, not prescribed as first line antibiotic at the time of diagnosis, reason not given (G9314)
**Measure #333: Adult Sinusitis: Computerized Tomography (CT) for Acute Sinusitis (Overuse) -- National Quality Strategy Domain: Efficiency and Cost Reduction**

**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

**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 Instructions:**
INVERSE MEASURE - A lower calculated performance rate for this measure indicates better clinical care or control. The “Performance Not Met” numerator option for this measure is the representation of the better clinical quality or control. Reporting that numerator option will produce a performance rate that trends closer to 0%, as quality increases. For inverse measures a rate of 100% means all of the denominator eligible patients did not receive the appropriate care or were not in proper control, and therefore an inverse measure at 100% does not qualify for reporting purposes, however any reporting rate less than 100% does qualify.

**Definition:**
**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

**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 (e.g., 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)
SINUITIS MEASURES GROUP RATIONALE AND CLINICAL RECOMMENDATION STATEMENTS

MEASURE #130 – DOCUMENTATION OF CURRENT MEDICATIONS IN THE MEDICAL RECORD

RATIONALE:
In the American Medical Association’s (AMA) Physician's Role in Medication Reconciliation (2007), critical patient information, including medical and medication histories, current medications the patient is receiving and taking, and sources of medications, is essential to the delivery of safe medical care. However, interruptions in the continuity of care and information gaps in patient health records are common and significantly affect patient outcomes. Consequently, clinical judgments may be based on incomplete, inaccurate, poorly documented or unavailable information about the patient and his or her medication.

As identified by The Agency for Healthcare Research and Quality in the National Healthcare Disparities report (2013), "different providers may prescribe medications for the same patient. Patients are responsible for keeping track of all their medications, but medication information can be confusing, especially for patients on multiple medications. When care is not well coordinated and some providers do not know about all of a patient's medications, patients are at greater risk for adverse events related to drug interactions, overdosing, or underdosing."

In addition, providers need to periodically review all of a patient's medications to ensure that they are taking what is needed and only what is needed. Medication reconciliation has been shown to reduce both medication errors and adverse drug events (Whittington & Cohen, 2004).

Medication safety efforts have primarily focused on hospitals; however, the majority of health care services are provided in the outpatient setting where two-thirds of physician visits result in writing at least one prescription (Stock et al., 2009). Chronically ill patients are increasingly being treated as outpatients, many of whom take multiple medications requiring close monitoring (Nassaralla et al., 2007).

Adverse drug events (ADE) prove to be more fatal in outpatient settings (1 of 131 outpatient deaths) than in hospitals (1 of 854 inpatient deaths) (Nassaralla et al., 2007). According to the first study to utilize nationally-representative data to examine annual rates of ADEs in the ambulatory care setting "Adverse Drug events in U.S. Adult Ambulatory Medical Care," ADE rates increase with age, adults 25-44 years old had a rate of 1.3 per 10,000 person per year, those 45-64 had a rate of 2.2 per 10,000 per year, and those 65 years and older had the highest rate, at 3.8 ADEs per 10,000 persons per year. This study estimates that 13.5 million ADE related visits occurred between 2005-2007, estimating that approximately 4.5 million ambulatory ADE visits occur each year. These 4.5 million visits are associated with approximately 400,000 hospitalizations annually. According to the Institute of Medicine (IOM), in the US, as many as 98,000 deaths per year are attributable to preventable adverse events that occur in the hospitals setting with annual costs of between $17 billion and $29 billion. (Sarkar et al., 2011)

Additionally, findings of The Commonwealth Fund (2010) studies identified 11% to 28% of the 4.3 million visit related ADEs (VADE) in 2001 might have been prevented with improved systems of care and better patient education, yielding an estimate of 473,000 to 1.2 million potentially preventable VADEs annually and potential cost-savings of $946 million to $2.4 billion.

According to the AMA's published report, The Physician's Role in Medication Reconciliation, the rate of medication errors during hospitalization was estimated to be 52 per 100 admissions, or 70 per 1,000 patient days in 2005. Emerging research suggests the scope of medication-related errors in ambulatory settings is as extensive as or more extensive than during hospitalization. Ambulatory visits result in a prescription for medication 50 to 70% of the time. One study estimated the rate of ADEs in the ambulatory setting to be 27 per 100 patients. It is estimated that between 2004 and 2005, in the United States 701,547 patients were treated for ADEs in emergency departments and 117,318 patients were hospitalized for injuries caused by an ADE. Individuals aged 65 years and older are more likely than any other population group to require treatment in the emergency department for ADEs. (AMA, 2007).
A Systematic Review on "Prevalence of Adverse Drug Events in Ambulatory Care" finds that "In the ambulatory care setting, adverse drug events (ADEs) have been reported to occur at a rate of 25%. Approximately 39% of these ADEs were preventable. Since many ADEs are associated with medication errors, and thus potentially preventable, understanding the nature of medication errors in ambulatory care settings can direct attention toward improvement of medication safety in ambulatory care." Data extracted and synthesized across studies indicated the median preventable ADE rates in ambulatory care-based studies were 16.5%. (Tache et al., 2011).

The Agency for Healthcare Research and Quality's (AHRQ) National's Healthcare Disparities Report (2011) identified the rate of adverse drug events (ADE) among Medicare beneficiaries in ambulatory settings 50 per 1,000 person-years. In 2005, AHRQ reported data on adults age 65 and over who received potentially inappropriate prescription medicines in the calendar year, by race, ethnicity, income, education, insurance status, and sex. The disparities were identified as follows: older Asians were more likely than older Whites to have inappropriate drug use (20.3% compared with 17.3%); Older Hispanics were less likely than older non-Hispanic Whites to have inappropriate drug use (13.5% compared with 17.6%); Older women were more likely than older men to have inappropriate drug use (20.2% compared with 14.3%); there were no statistically significant differences by income or education.

Weeks et al. (2010) noted fragmented medication records across the health care continuum, inaccurate reporting of medication regimens by patients, and provider failure to acquire all of the necessary elements of medication information from the patient or record, present significant obstacles to obtaining an accurate medication list in the ambulatory care setting. Because these obstacles require solutions demonstrating improvements in access to information and communication, the Institute of Medicine and others have encouraged the incorporation of IT solutions in the medication reconciliation process. In a survey administered to office-based physicians with high rates of EMR use, Weeks et al. found there is an opportunity for universal medication lists utilizing health IT.

CLINICAL RECOMMENDATION STATEMENTS:
The Joint Commission's 2015 Ambulatory Care National Patient Safety Goals guide providers to maintain and communicate accurate patient medication information. Specifically, the section "Use Medicines Safely NPSG.03.06.01" states the following: "Maintain and communicate accurate patient medication information. The types of information that clinicians use to reconcile medications include (among others) medication name, dose, frequency, route, and purpose. Organizations should identify the information that needs to be collected to reconcile current and newly ordered medications and to safely prescribe medications in the future." (Joint Commission, 2015, retrieved at: Joint Commission's 2015 Ambulatory Care National Patient Safety Goals guide).

The National Quality Forum's 2010 update of the Safe Practices for Better Healthcare, states healthcare organizations must develop, reconcile, and communicate an accurate patient medication list throughout the continuum of care. Improving the safety of healthcare delivery saves lives, helps avoid unnecessary complications, and increases the confidence that receiving medical care actually makes patients better, not worse. Every healthcare stakeholder group should insist that provider organizations demonstrate their commitment to reducing healthcare error and improving safety by putting into place evidence-based safe practices.

The AMA’s published report, The Physician’s Role in Medication Reconciliation, identified the best practice medication reconciliation team as one that is multidisciplinary and—in all settings of care—will include physicians, pharmacists, nurses, ancillary health care professionals and clerical staff. The team’s variable requisite knowledge, skills, experiences, and perspectives are needed to make medication reconciliation work as safely and smoothly as possible. Team members may have access to vital information or data needed to optimize medication safety. Because physicians are ultimately responsible for the medication reconciliation process and subsequently accountable for medication management, physician leadership and involvement in all phases of developing and initiating a medication reconciliation process or model is important to its success.
MEASURE #131 – PAIN ASSESSMENT AND FOLLOW-UP
RATIONALE:
Chronic pain is defined as pain without biological values that has persisted beyond the normal time and despite the usual customary efforts to diagnose and treat the original condition and injury. If a patient’s pain has persisted for six weeks (or longer than the anticipated healing time), a thorough evaluation for the course of the chronic pain is warranted (ICSI, 2013).

Chronic pain affects approximately 100 million adults in the USA. (Gaskin, 2012). It is clear the enormous pain-related costs represent both a great challenge and an opportunity in terms of improving the quality and cost-effectiveness of care (Mayday Fund, 2009).

Research also shows gender differences in the experience and treatment of pain. Most chronic pain conditions are more prevalent among women; however, women’s pain complaints tend to be poorly assessed and undertreated (Green, 2003; Chronic Pain Research Alliance 2011, Weimer 2013). Although women may have higher baseline pain, differences in pain levels may not persist at one month (Peterson, 2012).

A growing body of research reveals even more extensive gaps in pain assessment and treatment among racial and ethnic populations, with minorities receiving less care for pain than non-Hispanic whites (Burgess, 2013; Green, 2003; Green, 2007; Green et al., 2011; Todd et al., 2004; Todd et al., 2007). Differences in pain care occur across all types of pain (e.g., acute, chronic, cancer-related) and medical settings (e.g., emergency departments and primary care) (Green, 2003; Green, 2007; Todd et al., 2007). Even when income, insurance status and access to health care are accounted for, minorities are still less likely than whites to receive necessary pain treatments (Green, 2003; Green, 2007; Paulson et al., 2007). Black race is associated with neighborhood socio-economic status (SES) and race plays a role in pain outcomes beyond SES (Green, 2012).

“When assessing and treating pain, practitioner sex, race, age, and duration of experience were all significantly associated with pain management decisions. These findings suggest that pain assessment and treatment decisions may be impacted by the health care providers’ demographic characteristics, effects which may contribute to pain management disparities.” (Bartley et al., 2015).

“A standard minimum pain assessment for back-pain patients should integrate pain intensity (e.g. VAS/NRS), pain affect (e.g. five-point VRS) and pain-related disability. Depending on more detailed research questions, more sophisticated questionnaires on pain affect (e.g. MPQ), coping strategies and fear-avoidance behavior should be used. This allows for a more comprehensive assessment of pain and factors influencing pain perception.” (Haefeli M., Elfering, A., 2005).

The American Pain Foundation (2009) identified pertinent facts related to the impact of pain as follows:

- Approximately 76.5 million Americans suffer from pain.
- Pain affects more Americans than diabetes, heart disease and cancer combined. It is the number one reason people seek medical care.
- Uncontrolled pain is a leading cause of disability and diminishes quality of life for patients, survivors, and their loved ones. It interferes with all aspects of daily activity, including sleep, work, social and sexual relations.
- Under-treated pain drives up costs – estimated at $100 billion annually in healthcare expenses, lost income, and lost productivity– extending length of hospital stays, as well as increasing emergency room trips and unplanned clinic visits.
- Medically underserved populations endure a disproportionate pain burden in all health care settings.
- Disparities exist among racial and ethnic minorities in pain perception, assessment, and treatment for all types of pain, whether chronic or acute.
The Institute Of Medicine’s (IOM) *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education and Research* (2011) report suggests that chronic pain rates will continue to increase as a result of:

- More Americans will experience a disease in which chronic pain is associated (diabetes, cardiovascular disease, etc.).
- Increase in obesity which is associated with chronic conditions that have painful symptoms.
- Progress in lifesaving techniques for catastrophic injuries for people who would have previously died leads to a group of young people at risk for lifelong chronic pain.
- Surgical patients are at risk for acute and chronic pain.
- The public has a better understanding of chronic pain syndromes and new treatments and therefore may seek help when they may not have sought help in the past.

There are no current estimates of the total cost of poorly controlled pain in today’s dollars. Viewed from the perspective of health care inflation at levels of more than 40% during the past decade (President’s Council of Economic Advisors, 2009), the cost of health care due to pain is estimated to be between $261 to $300 billion. The value of lost productivity based on estimates of days of work missed is $11.6 to 12.7 billion, hours of work lost is 95.2 to $96.5 billion and lower wages is $190.6 to $226.3 billion.

**CLINICAL RECOMMENDATION STATEMENTS:**

Chronic pain assessment should include determining the mechanisms of pain through documentation of pain location, intensity, quality and onset/duration; functional ability and goals; and psychological/social factors such as depression or substance abuse.

A patient-centered, multifactorial, comprehensive care plan is necessary; one that includes biopsychosocial factors, as well as spiritual and cultural issues. It is important to have an interdisciplinary team approach which includes the primary care physician and specialty areas of psychology and physical rehabilitation.

The Institute for Clinical Systems Improvement (ICSI, 2013) Assessment and Management of Chronic Pain Guideline, Sixth Edition is based on a very broad foundation of evidence addressing a wide range of clinical conditions. It was chosen because it addresses the key factors of the comprehensive plan of care which incorporates self-management and active input from the patient and primary care clinician, pain assessment outcomes and referral to a pain medicine specialist or pain medicine specialty clinic.

The Institute for Clinical Systems Improvement (ICSI, 2012) Adult Acute and Sub-acute Low Back Pain guideline provides guidelines for physical therapists for low back pain assessment criteria, reducing or eliminating imaging for diagnosis of non-specific low back pain in patients 18 years and older, first-line treatment which emphasizes patient education and a core treatment plan that includes encouraging activity, use of heat, no imaging, cautious and responsible use of opioids, anti-inflammatory and analgesic over-the-counter medications and return to work assessment, advising patients with acute or subacute low back pain to stay active and the use of opioids.

Low Back Pain: Clinical Guidelines Linked to the International Classification of Functioning, Disability, and Health from the Orthopedic Section of the American Physical Therapy Association (Delitto, 2012) provides evidence to classify musculoskeletal conditions, specify interventions and identify appropriate outcome measures.

“Initial physical therapy management was not associated with increased health care costs or utilization of specific services following a new primary care LBP consultation” (Fritz, 2013, p. 1).

Anchored numerical scales are recommended for tracking routine progress, particularly pain interference with important activities. Regional or condition functional outcome scales should be routinely used at baseline and periodic follow-ups. More frequent follow-up is recommended with higher frequency care. (Washington State Department of Labor and Industries, 2014)
MEASURE #226 – PREVENTIVE CARE AND SCREENING: TOBACCO USE: SCREENING AND CESSION INTERVENTION
RATIONALE:
This measure is intended to promote adult tobacco screening and tobacco cessation interventions for those who use tobacco products. There is good evidence that tobacco screening and brief cessation intervention (including counseling and/or pharmacotherapy) is successful in helping tobacco users quit. Tobacco users who are able to stop smoking lower their risk for heart disease, lung disease, and stroke.

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

All patients should be asked if they use tobacco and should have their tobacco use status documented on a regular basis. Evidence has shown that clinic screening systems, such as expanding the vital signs to include tobacco use status or the use of other reminder systems such as chart stickers or computer prompts, significantly increase rates of clinician intervention. (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

All physicians should strongly advise every patient who smokes to quit because evidence shows that physician advice to quit smoking increases abstinence rates. (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

Minimal interventions lasting less than 3 minutes increase overall tobacco abstinence rates. Every tobacco user should be offered at least a minimal intervention, whether or not he or she is referred to an intensive intervention. (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

The combination of counseling and medication is more effective for smoking cessation than either medication or counseling alone. Therefore, whenever feasible and appropriate, both counseling and medication should be provided to patients trying to quit smoking. (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

Clinicians should encourage all patients attempting to quit to use effective medications for tobacco dependence treatment, except where contraindicated or for specific populations for which there is insufficient evidence of effectiveness (ie, pregnant women, smokeless tobacco users, light smokers, and adolescents). (Strength of Evidence = A) (U.S. Department of Health and Human Services. Public Health Service, 2008)

The USPSTF recommends that clinicians ask all adults about tobacco use and provide tobacco cessation interventions for those who use tobacco products. (A Recommendation) (U.S. Preventive Services Task Force, 2009)

MEASURE #331 - ADULT SINUSITIS: ANTIBIOTIC PRESCRIBED FOR ACUTE SINUSITIS (OVERUSE)
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:
Clinicians should distinguish presumed acute bacterial rhinosinusitis (ABRS) from acute rhinosinusitis caused by viral upper respiratory infections and non-infectious conditions. A clinician should diagnose ABRS when (a) symptoms or signs of acute rhinosinusitis (purulent nasal drainage accompanies nasal obstruction, facial pain-pressure-fullness, or both) persist without evidence of improvement for at least 10 days 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).

Strong recommendation based on diagnostic studies with minor limitations and a preponderance of benefit over harm.

The purpose of this statement is to emphasize the importance of differentiating acute bacterial rhinosinusitis (ABRS) from acute rhinosinusitis (ARS) caused by viral upper respiratory infections to prevent unnecessary treatment with antibiotics. Distinguishing presumed bacterial vs. viral infection is important because antibiotic therapy is inappropriate for the latter.

A quality improvement opportunity addressed by this guideline key action statement is the avoidance of inappropriate use of antibiotics for presumed viral infections. More than one in five antibiotics prescribed in adults are for sinusitis, making it the fifth most common diagnosis responsible for antibiotic therapy.

**MEASURE #332 - APPROPRIATE CHOICE OF ANTIBIOTIC: AMOXICILLIN WITH OR WITHOUT CLAVULANATE PRESCRIBED FOR PATIENTS WITH ACUTE BACTERIAL SINUSITIS (APPROPRIATE USE)**

**RATIONALE:**

The rationale for antibiotic therapy of ABRS is to eradicate bacterial infection from the sinuses, hasten resolution of symptoms, and enhance disease-specific quality of life. Antibiotic therapy should be efficacious, cost-effective, and result in minimal side effects.

The justification for amoxicillin as first-line therapy for most patients with ABRS relates to its safety, efficacy, low cost, and narrow microbiologic spectrum. Consideration to prescribing amoxicillin-clavulanate for adults with ABRS is given to those at a high risk of being infected by an organism resistant to amoxicillin. Factors that would prompt clinicians to consider prescribing amoxicillin-clavulanate instead of amoxicillin include:

- Situations in which bacterial resistance is likely (e.g. antibiotic use in the past month; close contact with treated individuals, health care providers, or a health care environment; failure of prior antibiotic therapy; breakthrough infection despite prophylaxis; close contact with a child in a daycare facility; smoker or smoker in the family; high prevalence of resistant bacteria in community)
- Presence of moderate to severe infection (e.g. moderate to severe symptoms of ABRS; protracted symptoms of ABRS; frontal or sphenoidal sinusitis, history of recurrent ABRS)
- Presence of comorbidity or extremes of life (e.g. comorbid conditions including diabetes; chronic cardiac, hepatic, or renal disease; immunocompromised patient; age greater than 65 years)

The use of high-dose amoxicillin with clavulanate is recommended for adults with ABRS who are at a high risk of being infected with an amoxicillin-resistant organism. High-dose amoxicillin is preferred over standard-dose amoxicillin primarily to cover penicillin non susceptible (PNS) S. pneumoniae. This risk exists in those from geographic regions with high endemic rates (>10%) of invasive PNS S. pneumoniae, those with severe infection (e.g., evidence of systemic toxicity with fever of 39°C (102°F) or higher, and threat of suppurative complications), age >65 years, recent hospitalization, antibiotic use within the past month, or those who are immunocompromised.

**CLINICAL RECOMMENDATION STATEMENTS:**

The following evidence statements are extracted from the referenced clinical guidelines:
If a decision is made to treat ABRS with an antibiotic agent, the clinician should prescribe amoxicillin with or without clavulanate as first-line therapy for most adults.

*Recommendation based on randomized controlled trials with heterogeneity and non-inferiority design with a preponderance of benefit over harm.*

The purpose of this statement is to promote prescribing of antibiotics with known efficacy and safety for ABRS and to reduce prescribing of antibiotics with potentially inferior efficacy because of more limited coverage of the usual pathogens that cause ABRS in adults. A secondary goal is to promote cost-effective antibiotic therapy for ABRS. A quality improvement opportunity addressed by this guideline key action statement is discouraging initial prescribing of antibiotics other than amoxicillin, with or without clavulanate, that may have low efficacy or have comparable efficacy but more adverse events.

**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 FOR ACUTE SINUSITIS (OVERUSE)**

**RATIONALE:**
Most cases of uncomplicated acute and sub-acute 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 recommendation statements are extracted from the referenced clinical guidelines:

**AAO-HNS Sinusitis Guideline (2015)**

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 imaging) based on diagnostic studies with minor limitations and a preponderance of benefit over harm for not obtaining imaging.*

The purpose of this statement is to emphasize that clinicians should not obtain radiographic imaging for patients presenting with uncomplicated acute rhinosinusitis (ARS) to distinguish ABRS from VRS, unless a complication or alternative diagnosis is suspected.

Radiographic imaging of the paranasal sinuses is unnecessary for diagnosis in patients who already meet clinical diagnostic criteria (Table 4) for ABRS. Sinus involvement is common in documented viral URIs, making it impossible to distinguish ABRS from VRS based solely on imaging studies. Moreover, clinical criteria may have a comparable
diagnostic accuracy to sinus radiography, and radiography is not cost-effective regardless of baseline sinusitis prevalence.

When a complication of ABRS or an alternative diagnosis is suspected, imaging studies may be obtained. Complications of ABRS include orbital, intracranial, or soft tissue involvement. Alternative diagnoses include malignancy and other non-infectious causes of facial pain. Radiographic imaging may also be obtained when the patient has modifying factors or comorbidities that predispose to complications, including diabetes, immune compromised state, or a past history of facial trauma or surgery.

A quality improvement opportunity addressed by this guideline key action statement is avoiding costly diagnostic tests that do not improve diagnostic accuracy yet expose the patient to unnecessary radiation.

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