Acute Sinusitis

Overview

This document addresses the management of acute sinusitis in adults and children, defined as patients 3 years of age or older at the end of the report period. All ambulatory and emergency room episodes of acute sinusitis during the report period were identified; intervention measures were then applied to all eligible acute sinusitis episodes. An acute sinusitis episode was excluded if there was a claim identifying hospitalization or outpatient surgery with any diagnosis during the acute sinusitis event or the initiating acute sinusitis encounter occurred during the first 60 days or last 10 days of the report period. An acute sinusitis episode was also excluded is there was evidence of recurrent sinusitis, defined as a claim for acute sinusitis during the time period 60 days through the day prior to the initiating acute sinusitis encounter. Finally, patients were excluded from the acute sinusitis condition if they had any of the following diagnosis: ear/nose/throat (ENT) congenital and acquired anomalies, chronic sinusitis, organ transplantation, leukemia, cystic fibrosis, immunodeficiency other than HIV/AIDS, and malignant neoplasm of the head and neck.

Care Pattern

CP-I 9000002 **Patient(s) treated with an antibiotic for acute sinusitis that received a first line antibiotic.**

Most cases of acute sinusitis diagnosed in ambulatory care are caused by viral pathogens; symptoms resolve without antibiotic treatment in most cases (1-3). Antibiotics should be reserved for those patients that have failed conservative therapy, present with signs and symptoms of a more severe illness, or have complications of acute sinusitis (3).

Recent guidelines from the Sinus and Allergy Health Partnership separate patients into two categories: those with mild symptoms who have not received an antibiotic within the past 4-6 weeks and those with mild disease who have received antibiotics in the last 4-6 weeks or have moderate disease regardless of recent antibiotic exposure (2). When antibiotic therapy is initiated, any one of the following antibiotics is recommended for these two categories: amoxicillin, amoxicillin/clavulanate, cefpodoxime proxetil, cefuroxime axetil, cefdinir, ceftriaxone; in addition, a respiratory fluoroquinolone (e.g., levofloxacin) can be used in adults (2,4,5). In patients allergic to penicillin, a respiratory fluoroquinolone or trimethoprim-sulfamethoxazole (TMP/SMX) is an acceptable alternative (1-5). Alternatives to these first line agents may be necessary when patients are allergic to penicillins, cephalosporins, fluoroquinolones, and TMP/SMX, there are concerns about intolerance or adverse events, or there are other unique clinical situations.

Macrolides are not recommended for first line therapy (2,4). There is an increasing prevalence of macrolide resistance to bacteria that often cause sinusitis. Although it is tempting to consider macrolides for patients with β-lactam allergies, bacteriologic failure rates of 20% to 25% are possible, and more effective agents are typically available (2,4).

Given the limitations of claims data, it is not possible to reliably identify patients for whom second line agents may be necessary. This measure identifies patients that received any antibiotic during the time period 10 days prior to the initiating acute sinusitis encounter through 10 days after the initiating encounter where the <u>first</u> antibiotic prescribed was one of the following: amoxicillin, amoxicillin/clavulanate, cefpodoxime proxetil, cefuroxime axetil, cefdinir, ceftriaxone, levofloxacin, or TMP/SMX**.**

Patients were excluded from this measure if they had any of the following co-existing illnesses not covered by our recommended first line antibiotics: pneumonia, bronchitis, bronchiectasis, otitis media, pharyngitis, tonsillitis, adenoiditis, or other ear/nose/throat (ENT) infections. Also, patients were excluded if they received an antibiotic during the time period 60 days prior to the initiating acute sinusitis encounter through 11 days prior to the initiating encounter, increasing the likelihood of infection with a resistant bacteria.

1. *Brook I, Gooch WM, Jenkins SG, et al. Medical Management of Acute Bacterial Sinusitis: Recommendations of a Clinical Advisory Committee on Pediatric and Adult Sinusitis. Ann Otol Rhinol Laryngol 2000;109:1-20.*
2. *Sinus and Allergy Health Partnership. Antimicrobial treatment guidelines for acute bacterial rhinosinusitis. Otolaryngol Head and Neck 2004;130(suppl 1):S1-S45.*

3. *Institute for Clinical Systems Improvement (ICSI). Health Care Guideline: Diagnosis and Treatment of Respiratory Illness in Children and Adults (Released January 2008). Accessed October26, 2009. URL:http://www.icsi.org.*
4. *Poole, MD, Portugal LG. Treatment of rhinosinusitis in the outpatient setting. AJM 2005;188(7A):45S-50S.*
5. *Marple BF, Brunton S, Ferguson BJ. Acute bacterial rhinosinusitis: A review of U.S. treatment guidelines. Otolaryngol Head and Neck 2006;135:341-348.*

CP-C

9000004 Patient(s) that had a sinus computerized axial tomography (CT) or magnetic resonance imaging (MRI) test.

A sinus imaging test, including sinus xray, sinus computerized axial tomography (CT), or sinus magnetic resonance imaging (MRI), is not recommended for the diagnosis of uncomplicated acute sinusitis (1-3). A sinus CT or MRI should be reserved for patients that do not responded adequately to antibiotic therapy, have multiple recurrent infections, or may have a structural abnormality (2,3). This measure identifies patients that had a sinus CT or MRI test during the time period 10 days prior to the initiating acute sinusitis encounter through 10 days after the initiating encounter.

1. *Sinus and Allergy Health Partnership. Antimicrobial treatment guidelines for acute bacterial rhinosinusitis.*
Otolaryngol Head and Neck 2004;130(suppl 1):S1-S45.
2. *Brook I, Gooch WM, Jenkins SG, et al. Medical Management of Acute Bacterial Sinusitis: Recommendations of a Clinical Advisory Committee on Pediatric and Adult Sinusitis. Ann Otol Rhinol Laryngol 2000;109:1-20.*
3. *Institute for Clinical Systems Improvement (ICSI). Health Care Guideline: Diagnosis and Treatment of Respiratory Illness in Children and Adults (Released January 2008). Accessed October 26, 2009. URL:http://www.icsi.org.*