

## Evidence Based Guideline

### Aerosolized Antibiotics as a Treatment of Chronic Sinusitis

**File Name:** aerosolized\_antibiotics\_as\_a\_treatment\_of\_chronic\_sinusitis  
**Origination:** 2/2010  
**Last CAP Review:** 2/2011  
**Next CAP Review:** Not applicable  
**Last Review:** 2/2011

**Active guideline, no longer scheduled for routine literature review.**

#### Description of Procedure or Service

---

The use of aerosolized antibiotics has been proposed as a method to deliver medications directly to the infected sinus tissues as a treatment for patients who have chronic sinusitis or acute exacerbations of chronic sinusitis. This therapy involves suspending small particles of antibiotics in solution. A device called a nebulizer is then used to create a vapor of this solution which is inhaled through the nose.

Chronic sinusitis is defined as a group of disorders characterized by inflammation of the mucosa of the nose and paranasal sinuses of at least 12 consecutive weeks' duration. Clinical signs include purulent drainage, and various imaging studies (i.e., plain film radiography, computed tomography, magnetic resonance imaging) may reveal polyps, edema, erythema, or granulation tissue of the sinuses. Chronic sinusitis may be associated with asthma, allergies, dental disease, polyposis, cystic fibrosis, and immunodeficiency syndromes. It is assumed that bacteria contribute to the pathophysiology of chronic sinusitis, but their exact contribution is still unclear. For example, chronic sinusitis probably represents a continuous spectrum of pathophysiologies ranging from a purely infectious etiology to noninfectious or allergic inflammation. In addition, it is possible that the presence of bacterial colonization may aggravate a noninfectious inflammation. Conventional treatment for chronic sinusitis includes various combinations of oral antibiotics, decongestants, mucolytics, and topical corticosteroids. Endoscopic sinus surgery to improve the ventilation within the osteomeatal complex may be offered to those patients who fail medical management. After endoscopic sinus surgery, the sinus ostia are patent and communicate with the nasal cavity, thus offering an opportunity to deliver aerosolized antibiotics topically to the sinus cavities. The use of aerosolized antibiotics has been studied in patients who have had endoscopic sinus surgery, both those with persistent symptoms of chronic sinusitis and those with acute exacerbations of underlying chronic sinusitis. In the latter group the presence of a mucopurulent discharge permits culturing and selection of antibiotic based on culture results. Aerosolized antibiotics as a treatment for chronic sinusitis without prior endoscopic surgery has not been studied.

In June 2006, the LC® Star Reusable Nebulizer with Nasal Adapter (PARI Innovative Manufacturers, Inc.) was cleared for marketing by the U.S. Food and Drug Administration (FDA) through the 510(k) process. The FDA determined that this device was substantially equivalent to existing devices for the inhalation treatment of aerosolized medications.

Aerosolized antibiotics are not commercially available, but may be provided by a compounding pharmacy.

**\*\*\*Note: This Evidence Based Guideline is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

# Aerosolized Antibiotics as a Treatment of Chronic Sinusitis

## Evidence Based Guideline for Aerosolized Antibiotics as a Treatment of Chronic Sinusitis

---

Not applicable.

### Medical Evidence regarding Aerosolized Antibiotics as a Treatment of Chronic Sinusitis indicates it is not recommended in the following situations

---

Aerosolized antibiotics are not recommended as a treatment of chronic sinusitis or acute exacerbations of chronic sinusitis.

The data on use of aerosolized antibiotics for chronic sinusitis are very limited. Two small randomized controlled trials with patients who had chronic sinusitis after endoscopic sinus surgery suggest no benefit. There are no comparative studies of oral antibiotics with aerosolized antibiotics for patients with acute exacerbations of chronic sinusitis after endoscopic sinus surgery. No published studies were identified that included patients with chronic sinusitis who did not have endoscopic surgery. Thus, use of aerosolized antibiotics in the treatment of sinusitis is not recommended because its impact on clinical outcomes is not known.

### Benefits Application

---

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

### Billing/Coding/Physician Documentation Information

---

This guideline may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at [www.bcbsnc.com](http://www.bcbsnc.com). They are listed in the Category Search on the Medical Policy search page.

*Applicable codes: There is no specific code for this service. Aerosolized antibiotics are delivered with a nebulizer, which may be identified with the HCPCS code E0575.*

### Scientific Background and Reference Sources

---

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.65, 9/10/09.

Senior Medical Director review - 1/6/2010.

### Policy Implementation/Update Information

---

- 2/2/2010 New Evidence Based Guideline issued. Aerosolized antibiotics are not recommended as a treatment of chronic sinusitis or acute exacerbations of chronic sinusitis. (pmo)
- 6/22/10 Policy Number(s) removed (amw)
- 7/6/2010 Specialty Matched Consultant Advisory Panel review 5/24/10. No change to guideline statement. (adn)

# Aerosolized Antibiotics as a Treatment of Chronic Sinusitis

3/15/11 Specialty Matched Consultant Advisory Panel review 2/23/2011. No changes to criteria. Evidence Based Guideline status changed to Active Archive, no longer scheduled for routine literature review. (adn)

---

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.