

## Sinus Surgery

### (Functional Endoscopic Sinus Surgery and Balloon Sinuplasty)

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**Last Review Date:** 08/22/2018

**Effective Date:** 08/22/2018

**Dates Reviewed:** 10/2015, 06/2017, 08/2018

**Developed By:** Medical Necessity Criteria Committee

#### I. Description

Chronic sinusitis is an inflammatory disorder of the sinonasal mucosa. Surgical treatment should only be attempted after failure of conservative treatment (i.e. analgesics, saline irrigation, intranasal glucocorticoids, oral decongestants, and antibiotics for bacterial infections).

Functional endoscopic sinus surgery (FESS) is a minimally invasive technique in which sinus air cells and sinus ostia are opened using a rigid fiberoptic endoscope. Three factors are crucial in the normal physiologic functioning of the sinuses: a patent ostiomeatal complex, normal mucociliary transport, and normal quantity and quality of secretions. Disruption of at least one of these factors can predispose a patient to inflammation and infection of the sinuses. FESS attempts to address the patency issue in patients with medically refractory chronic rhinosinusitis.

FESS is moderately effective for the treatment of allergic fungal sinusitis, chronic polyposis, mucocele, recurrent sinusitis aggravating pulmonary disease, sinus cysts and tumors, and uncomplicated rhinosinusitis. It has not been proven as effective treatment for allergic rhinitis.

Balloon sinuplasty is used as a treatment for ostial narrowing of the paranasal sinuses. Under direct vision or fluoroscopy, a thin catheter is inserted into the narrowed ostium, then a balloon is inflated under pressure to enlarge the opening by stretching the mucous membrane and creating a small bony fracture. Balloon sinuplasty has been developed as a less invasive alternative to functional endoscopic sinus surgery

For adults with chronic sinusitis unresponsive to medical management, balloon sinuplasty or balloon ostial dilation is a procedure developed over the past decade in which the frontal, sphenoid, or maxillary sinus ostium is dilated using a balloon catheter. The procedure does not include surgical removal of tissue and can be performed in the office setting under local anesthesia. While noninvasive dilation of sinus ostial obstruction may be an effective means of providing sinus drainage in some patients with recalcitrant chronic sinusitis, isolated frontal, maxillary, or sphenoid sinus disease that may be amenable to such therapy is probably uncommon. The goals of surgery for chronic sinusitis

extend beyond simply enlarging an ostial opening, and include removal of inflamed tissue and bone; surgical endoscopy and pathology are used to aid in diagnosis. A registry of 1036 adult patients who received 3276 procedures had, at an average follow-up of 40 weeks, a revision rate of 1.3%. Although 95.2% of patients improved, the authors stated that the study was not prospective or controlled, and it did not provide a comparative analysis of outcomes for sinus disease categorized by clinical staging. An observational study of 82 adults (with 313 ostial dilations) found that there was significant improvement in symptom scores and medication use at 1-year follow-up. The authors noted that the study had two structural limitations: symptom scores that were dependent upon patient recall and thus subject to bias, and lack of a control group to assess for placebo effect or other variables that could confound the outcomes. An observational study of 59 adults (with 107 ostial dilations) found, at 2-year follow-up, that there was significant improvement in symptom scores, although the authors noted the potential for a self-reporting bias to contribute to the improvement in symptom scores. A single-center study of 45 consecutive patients with chronic rhinosinusitis originally scheduled to undergo functional endoscopic sinus surgery who elected balloon sinuplasty of the frontal, maxillary, or sphenoid sinuses noted a failure rate of 65%, leading to the study's early cessation. A randomized double-blind study of 32 adult patients (50 sinuses) that compared sinuplasty with or without functional endoscopic sinus surgery to a Draf 1 procedure (complete removal of the anterior ethmoid cells and uncinat process surrounding the frontal recess to the frontal ostium) found, at 12-month follow-up, that both groups had significant improvement in symptom and radiologic extent of chronic rhinosinusitis scores. Additional larger, controlled studies were recommended. Cohort studies and randomized controlled trials have shown that balloon sinuplasty can result in long-term improvement in sinus symptoms and is not inferior to functional endoscopic sinus surgery.

For children with chronic sinusitis unresponsive to medical management, evidence is insufficient, conflicting, or poor and demonstrates an incomplete assessment of net benefit vs harm; additional research is recommended. A prospective study of 30 children (56 sinuses) with chronic rhinosinusitis who failed medical therapy and underwent balloon sinuplasty reported that 51 of 56 sinuses were successfully dilated, as validated by nasal endoscopy and fluoroscopy. No short-term or long-term postoperative results were reported. The authors concluded that although the procedure is attractive in children because there is no bone or tissue removal, there are concerns about radiation exposure during fluoroscopy. A follow-up study of 32 children, of which 24 completed the 52-week follow-up, reported that 12 patients had significant improvement in Sino-Nasal-5 scores, 7 had moderate improvement, 2 had mild improvement, 1 had no improvement, and 2 had worsening. Additional studies comparing balloon sinuplasty with other treatment modalities were recommended. An observational study of 31 pediatric patients with chronic rhinosinusitis who failed medical therapy compared balloon sinuplasty and ethmoidectomy to functional endoscopic sinus surgery and reported that, at a mean follow-up of 9 months, there was no significant difference in overall improvement in sinus symptoms. Larger, long-term studies were recommended to more accurately identify patients who would benefit from the procedures as well as to determine if balloon sinuplasty alone would provide a better outcome as compared with functional endoscopic sinus surgery.

## II. Criteria: CWQI HCS-0024

A. Sinus surgery is requested for 1 or more of the following:

- a. **Functional endoscopic sinus surgery (FESS)** is indicated for **1 or more** of the following:
- i. Allergic fungal rhinitis with **ALL** of the following:
    1. Eosinophilic mucus
    2. Evidence of IgE-mediated hypersensitivity, as indicated by **1 or more** of the following:
      - a. Elevated total IgE level
      - b. Sensitivity to fungus evident on allergen skin test or in vitro test
    3. Nasal airway obstruction symptoms
    4. Positive findings on CT scan (eg, bony erosion or thinning, partial or complete opacification)
    5. Positive fungal smear or culture of sinus drainage
  - ii. Chronic sinus polyposis that has not responded adequately to 1 or more months of medical treatment (*e.g. nasal steroids, antibiotics*)
    1. Mucocele
    2. Odontogenic sinusitis
    3. Recurrent sinusitis that triggers or aggravates pulmonary disease (*e.g. asthma, cystic fibrosis*)
    4. Suppurative complication of *sinusitis* (*e.g. subperiosteal abscess, brain abscess*)
    5. Symptomatic sinus osteoma, as seen on imaging
    6. Tumor, suspected or seen on imaging, physical examination, or endoscopy
  - iii. Uncomplicated rhinosinusitis and **ALL** of the following:
    1. Abnormal findings from diagnostic evaluation, including **1 or more** of the following:
      - a. Mucocele
      - b. Negative CT scan but significant disease found on nasal endoscopy
      - c. Obstruction or active infection on CT scan
      - d. Obstructive symptoms due to polyposis
    2. Inadequate response to maximal therapy that included **ALL** of the following:
      - a. Allergy assessment
      - b. Trial of 2 or more antibiotic courses
      - c. Trial of nasal steroids
    3. Significant rhinosinusitis, as indicated by **1 or more** of the following:
      - a. Chronic rhinosinusitis that interferes with lifestyle
      - b. Four or more documented episodes of acute rhinosinusitis in 1 year.
- b. **Sinus ostial dilation with a balloon (balloon sinuplasty)** is indicated with **ALL** of the following;
- i. Chronic rhinosinusitis of the sinus to be dilated is confirmed on CT scan. The CT scan finding of chronic rhinosinusitis included **1 or more** of the following:
    1. Mucosal thickening
    2. Bony remodeling
    3. Bony thickening, or
    4. Sinus opacification
    5. Air fluid levels
    6. Obstruction or narrowing of the ostiomeatal complex

- ii. Patient has **1 or more** of following documented symptoms persisting for 12 weeks:
  1. Anterior or posterior mucopurulent nasal discharge
  2. Nasal obstruction
  3. Facial pain, pressure, and fullness
  4. Decreased or lost sense of smell
- iii. Balloon sinuplasty is limited to the frontal, maxillary or sphenoid sinuses
- iv. Balloon sinuplasty is performed either as a stand-alone procedure or as part of functional endoscopic sinus surgery (FESS)
- v. Balloon sinuplasty is performed in patients older than 12 years of age whose symptoms persist longer than 12 weeks despite medical therapy with **1 or more** of the following:
  1. Nasal lavage
  2. Antibiotic therapy for greater than or equal to 2-4 weeks
  3. Intranasal corticosteroids for greater than or equal to 4 weeks
- c. Balloon sinuplasty is **NOT** requested for the treatment of nasal polyps or tumors. There is insufficient evidence in the medical literature to support the safety and effectiveness for treatment of nasal polyps or tumors.
- d. Balloon sinuplasty is **NOT** requested for children 12 years of age or younger. There is insufficient evidence in the medical literature to support the safety and effectiveness of balloon sinuplasty in the treatment of rhinosinusitis in children.

### III. Information Submitted with the Prior Authorization Request:

1. Chart notes documenting symptoms and previous conservative treatment failures
2. Imaging studies
3. Laboratory reports

### IV. CPT or HCPC codes covered:

Codes	Description
31237	Nasal/sinus endoscopy, surgical; with biopsy, polypectomy or debridement (separate procedure)
31238	Nasal/sinus endoscopy, surgical; with control of nasal hemorrhage
31239	Nasal/sinus endoscopy, surgical; with dacryocystorhinostomy
31240	Nasal/sinus endoscopy, surgical; with concha bullosa resection
31253	Nasal/sinus endoscopy, surgical with ethmoidectomy; total (anterior and posterior), including frontal sinus exploration, with removal of tissue from frontal sinus, when performed
31254	Nasal/sinus endoscopy, surgical; with ethmoidectomy, partial (anterior)
31255	Nasal/sinus endoscopy, surgical; with ethmoidectomy, total (anterior and posterior)
31256	Nasal/sinus endoscopy, surgical, with maxillary antrostomy

31257	Nasal/sinus endoscopy, surgical with ethmoidectomy; total (anterior and posterior), including sphenoidotomy
31259	Nasal/sinus endoscopy, surgical with ethmoidectomy; total (anterior and posterior), including sphenoidotomy, with removal of tissue from sphenoid sinus
31267	Nasal/sinus endoscopy, surgical, with maxillary antrostomy; with removal of tissue from maxillary sinus
31276	Nasal/sinus endoscopy, surgical with frontal sinus exploration, with or without removal of tissue from frontal sinus
31287	Nasal/sinus endoscopy, surgical, with sphenoidotomy
31288	Nasal/sinus endoscopy, surgical, with sphenoidotomy; with removal of tissue from the sphenoid sinus
31290	Nasal/sinus endoscopy, surgical, with repair of cerebrospinal fluid leak; ethmoid region
31291	Nasal/sinus endoscopy, surgical, with repair of cerebrospinal fluid leak; sphenoid region
31292	Nasal/sinus endoscopy, surgical; with medial or inferior orbital wall decompression
31293	Nasal/sinus endoscopy, surgical; with medial orbital wall and inferior orbital wall decompression
31294	Nasal/sinus endoscopy, surgical; with optic nerve decompression
31295	Nasal/sinus endoscopy, surgical; with dilation of maxillary sinus ostium (eg, balloon dilation), transnasal or via canine fossa
31296	Nasal/sinus endoscopy, surgical; with dilation of frontal sinus ostium (eg, balloon dilation)
31297	Nasal/sinus endoscopy, surgical; with dilation of sphenoid sinus ostium (eg, balloon dilation)
31298	Nasal/sinus endoscopy, surgical; with dilation of frontal and sphenoid sinus ostia (eg, balloon dilation)

## VI. Annual Review History

Review Date	Revisions	Effective Date
10/28/2015	New Moda criteria adopted from MCG <sup>®</sup> guidelines for Functional Endoscopic Sinus Surgery and Sinuplasty	02/01/2016
06/28/2017	Review: Upgraded to new template, changed policy and added criteria to approve balloon sinuplasty	07/01/2017
8/2018	Annual Review- updated from MCG <sup>™</sup> 22 <sup>nd</sup> Edition guidelines for FESS; added new CPT codes- added ICD-10 codes; added additional indication for balloon sinuplasty	08/22/2018

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- MCG™ Functional Endoscopic Sinus Surgery, 22<sup>nd</sup> Edition, A-0185

### Appendix 1 – Applicable ICD-10 diagnosis codes:

Codes	Description
J32.0	Chronic maxillary sinusitis
J32.1	Chronic frontal sinusitis
J32.3	Chronic sphenoidal sinusitis
J32.4	Chronic pansinusitis
J32.8	Other chronic sinusitis
J32.9	Chronic sinusitis, unspecified

### Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determination (NCD) and Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. They can be found at: <http://www.cms.gov/medicare-coverage-database/search/advanced-search.aspx>. Additional indications may be covered at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD):

Jurisdiction(s): 5, 8	NCD/LCD Document (s):

**NCD/LCD Document (s):**

**Medicare Part B Administrative Contractor (MAC) Jurisdictions**

Jurisdiction	Applicable State/US Territory	Contractor
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC