

## Medical Coverage Policy | Minimally Invasive Surgery for Snoring



**EFFECTIVE DATE:** 06|01|2015

**POLICY LAST UPDATED:** 05|19|2015

### OVERVIEW

Obstructive sleep apnea (OSA) is characterized by repetitive episodes of upper airway obstruction due to the collapse and obstruction of the upper airway during sleep. This policy addresses minimally invasive surgical approaches being evaluated for OSA in adults.

### MEDICAL CRITERIA

Not applicable

### PRIOR AUTHORIZATION

Not applicable

### POLICY STATEMENT

#### BlueCHiP for Medicare

Tongue base suspension procedures are medically necessary for BlueCHiP for Medicare members, all other minimally invasive surgeries for the treatment of snoring and obstructive sleep apnea are considered not medically necessary as there is insufficient peer-reviewed scientific literature that demonstrates that the procedure/service is effective.

Medicare policy is developed separately from BCBSRI policy. Medicare policy incorporates consideration of governmental regulations from the Centers for Medicare and Medicaid Services (CMS), such as national coverage determinations or local coverage determinations. In addition to benefit differences, CMS may reach different conclusions regarding the scientific evidence than does BCBSRI. Medicare and BCBSRI policies may differ. However, BlueCHiP for Medicare members must be offered, at least, the same services that Medicare offers.

#### Commercial Products

Minimally invasive surgeries and tongue base suspension procedures for the treatment of snoring and obstructive sleep apnea are considered not medically necessary as there is insufficient peer-reviewed scientific literature that demonstrates that the procedure/service is effective.

### COVERAGE

Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage or Subscriber Agreement for limitations of benefits/coverage when services are not medically necessary.

### BACKGROUND

**Note:** This policy does not address Uvulopalatopharyngoplasty (UPPP). Laser-assisted uvulopalatoplasty (LAUP) should not be confused with UPPP.

Obstructive sleep apnea (OSA) is characterized by repetitive episodes of upper airway obstruction due to the collapse and obstruction of the upper airway during sleep. In patients with OSA, the normal pharyngeal narrowing may be accentuated by anatomic factors, such as a short, fat “bull” neck, elongated palate and uvula, and large tonsillar pillars with redundant lateral pharyngeal wall mucosa. In addition, OSA is associated with obesity. OSA may also be associated with a variety of craniofacial abnormalities, including micrognathia,

retrognathia, or maxillary hypoplasia. Obstruction anywhere along the upper airway can result in apnea. Therefore, OSA is associated with a heterogeneous group of anatomic variants producing obstruction.

The hallmark symptom of OSA is excessive daytime sleepiness, and the typical clinical sign of OSA is snoring, which can abruptly cease and be followed by gasping associated with a brief arousal from sleep. The snoring resumes when the patient falls back to sleep, and the cycle of snoring/apnea/arousal may be repeated as frequently as every minute throughout the night. Sleep fragmentation associated with the repeated arousal during sleep can lead to impairment of daytime activity.

Minimally invasive surgical approaches being evaluated for OSA in adults include the following:

**Laser-assisted Uvulopalatoplasty (LAUP):** LAUP is an outpatient alternative that has been proposed as a treatment of snoring with or without associated OSA. In this procedure, superficial palatal tissues are sequentially reshaped using a carbon dioxide laser. The extent of the surgery is typically different than standard UPPP, since only part of the uvula and associated soft-palate tissues are reshaped. The procedure, as initially described, does not remove or alter tonsils or lateral pharyngeal wall tissues. The patient undergoes from 3 to 7 sessions at 3- to 4-week intervals. One purported advantage of LAUP is that the amount of tissue ablated can be titrated such that the treatment can be discontinued once snoring is eliminated. LAUP cannot be considered an equivalent procedure to the standard UPPP, with the laser simply representing a surgical tool that the physician may opt to use. LAUP is considered a unique procedure, which raises its own issues of safety and, in particular, effectiveness.

**Radiofrequency Ablation (RFA) of Palatal Tissues and the Tongue:** RFA of the soft palate is similar in concept to LAUP, although a different energy source is used. Radiofrequency is used to produce thermal lesions within the tissues rather than using a laser to ablate the tissue surface, which may be painful. For this reason, RFA appears to be growing in popularity as an alternative to LAUP. In some situations, radiofrequency of the soft palate and base of tongue are performed together as a multilevel procedure.

**Tongue Base Suspension:** In this procedure, the base of the tongue is suspended with a suture that is passed through the tongue and then fixated with a screw to the inner side of the mandible, below the tooth roots. The aim of the suspension is to make it less likely for the base of the tongue to prolapse during sleep.

**Palatal Stiffening:** Palatal stiffening procedures include insertion of palatal implants, injection of a sclerosing agent (snoreplasty), or a cautery-assisted palatal stiffening operation (CAPSO). The CAPSO procedure uses cautery to induce a midline palatal scar designed to stiffen the soft palate to eliminate excessive snoring. The palatal implant device is a cylindrical-shaped segment of braided polyester filaments that is permanently implanted submucosally in the soft palate.

There is a great range of severity of OSA, with symptoms ranging from snoring only to severe excessive daytime sleepiness or hypertension. If OSA is considered mild (AHI between 5 and 15) and snoring is the only manifestation, intervention is considered not medically necessary.

Four RCTs, rated as high quality, were identified for laser-assisted palatoplasty (LAUP) and radiofrequency ablation (RFA). Study results were mixed and inconclusive for apnea/hypopnea index (AHI), and showed no benefit on daytime sleepiness or quality of life.

An RCT from 2009 compared efficacy and side effects of 2 tongue-based procedures (RFA or tongue-base suspension) when combined with UPPP in patients with moderate-to-severe sleep apnea (AHI  $\geq 15$ ). (15) Patients with a BMI of 35 kg/m<sup>2</sup> or greater were excluded. Although interpretation of results is limited by the lack of a control group treated with UPPP alone, success rates for the combined procedures (defined as an  $\geq 50\%$  reduction and final AHI  $< 15$ ) were 51% to 57%, respectively. BMI was the main predictor of success, with success rates of only 10% to 12.5% in patients with a BMI between 30 and  $< 35$  kg/mg<sup>2</sup>. Morbidity was higher with the tongue suspension procedure.

The literature on palatal implants consists of 3 randomized controlled trials and additional case series with medium-term follow-up. Evidence from sham-controlled trials shows a statistically significant but modest reduction in AHI and improvement in lowest oxygen saturation compared to placebo, with limited effects on daytime sleepiness. Additional study is needed to determine whether there is a defined subset of patients who might benefit from this procedure. Studies with longer-term follow-up are also needed to evaluate the potential for extrusion of the implants at longer time intervals.

Minimally invasive surgical procedures have limited efficacy in patients with mild-to-moderate OSA and have not been shown to improve AHI or excessive daytime sleepiness in adult patients with moderate-to-severe OSA. These are considered not medically necessary as there is no proven efficacy.

### **CODING**

The following code is considered medically necessary for BlueCHiP for Medicare members only. For Commercial products it is considered not medically necessary.

**41512**

### **BlueCHiP for Medicare and Commercial Products**

The following codes are considered not medically necessary:

**42299**

**41530**

**S2080**

### **RELATED POLICIES**

Preauthorization via Web-Based Tool for Procedures

### **PUBLISHED**

Provider Update, July 2015

Provider Update, September 2013

Provider Update, August 2012

Provider Update, December 2011

Provider Update, August 2010

Provider Update, May 2009

Policy Update, June 2008

### **REFERENCES**

1. Balk EM, Moorthy D, Obadan NO et al. *Diagnosis and Treatment of Obstructive Sleep Apnea in Adults. Comparative Effectiveness Review No. 32 (Prepared by Tufts Evidence-based Practice Center under Contract No. 290-2007-100551) AHRQ Publication No. 11-EHC052-EF*. Rockville MD: Agency for Healthcare Research and Quality Jul 2011.
2. Franklin KA, Anttila H, Axelsson S et al. Effects and side-effects of surgery for snoring and obstructive sleep apnea--a systematic review. *Sleep* 2009; 32(1):27-36.
3. Ferguson KA, Heighway K, Ruby RR. A randomized trial of laser-assisted uvulopalatoplasty in the treatment of mild obstructive sleep apnea. *Am J Respir Crit Care Med* 2003; 167(1):15-9.
4. Woodson BT, Steward DL, Weaver EM et al. A randomized trial of temperature-controlled radiofrequency, continuous positive airway pressure, and placebo for obstructive sleep apnea syndrome. *Otolaryngol Head Neck Surg* 2003; 128(6):848-61.
5. Larrosa F, Hernandez L, Morello A et al. Laser-assisted uvulopalatoplasty for snoring: does it meet the expectations? *Eur Respir J* 2004; 24(1):66-70.
6. Stuck BA, Sauter A, Hormann K et al. Radiofrequency surgery of the soft palate in the treatment of snoring. A placebo-controlled trial. *Sleep* 2005; 28(7):847-50.
7. Vicini C, Dallan I, Campanini A et al. Surgery vs ventilation in adult severe obstructive sleep apnea syndrome. *Am J Otolaryngol* 2010; 31(1):14-20.

8. Kuhle S, Urschitz MS, Eitner S et al. Interventions for obstructive sleep apnea in children: a systematic review. *Sleep Med Rev* 2009; 13(2):123-31.
9. Friedman M, Wilson M, Lin HC et al. Updated systematic review of tonsillectomy and adenoidectomy for treatment of pediatric obstructive sleep apnea/hypopnea syndrome. *Otolaryngol Head Neck Surg* 2009; 140(6):800-8.
10. Costa DJ, Mitchell R. Adenotonsillectomy for obstructive sleep apnea in obese children: a meta-analysis. *Otolaryngol Head Neck Surg* 2009; 140(4):455-60.
11. Farrar J, Ryan J, Oliver E et al. Radiofrequency ablation for the treatment of obstructive sleep apnea: a meta-analysis. *Laryngoscope* 2008; 118(10):1878-83.
12. Back LJ, Liukko T, Rantanen I et al. Radiofrequency surgery of the soft palate in the treatment of mild obstructive sleep apnea is not effective as a single-stage procedure: A randomized single-blinded placebo-controlled trial. *Laryngoscope* 2009; 119(8):1621-7.

**CLICK THE ENVELOPE ICON BELOW TO SUBMIT COMMENTS**

This medical policy is made available to you for informational purposes only. It is not a guarantee of payment or a substitute for your medical judgment in the treatment of your patients. Benefits and eligibility are determined by the member's subscriber agreement or member certificate and/or the employer agreement, and those documents will supersede the provisions of this medical policy. For information on member-specific benefits, call the provider call center. If you provide services to a member which are determined to not be medically necessary (or in some cases medically necessary services which are non-covered benefits), you may not charge the member for the services unless you have informed the member and they have agreed in writing in advance to continue with the treatment at their own expense. Please refer to your participation agreement(s) for the applicable provisions. This policy is current at the time of publication; however, medical practices, technology, and knowledge are constantly changing. BCBSRI reserves the right to review and revise this policy for any reason and at any time, with or without notice. Blue Cross & Blue Shield of Rhode Island is an independent licensee of the Blue Cross and Blue Shield Association.

