

Corporate Medical Policy

Surgical Treatment of Snoring and Obstructive Sleep Apnea Syndrome

Description of Procedure or Service

Palatopharyngoplasty refers to several surgical approaches for management of the upper airway, including uvulopalatopharyngoplasty (UPPP), uvulopharyngoplasty (UPP), uvulopalatal flap, expansion sphincter pharyngoplasty, lateral pharyngoplasty, palatal advancement pharyngoplasty and relocation pharyngoplasty. UPPP, one of the most commonly chosen approaches, involves surgical resection of the mucosa and submucosa of the soft palate, tonsillar fossa, and the lateral aspect of the uvula. The amount of tissue removed is individualized for each patient as determined by the potential space and width of the tonsillar pillar mucosa between the 2 palatal arches. The UPPP enlarges the oropharynx but cannot correct obstructions in the hypopharynx. Thus, patients who fail UPPP may be candidates for additional procedures, depending on the site of obstruction.

Background

Uvulopalatopharyngoplasty has been found to be most reliably effective in obstructive sleep apnea (OSA) members who have adequately responded to a trial of continuous positive airway pressure (CPAP or auto-adjusting CPAP (AutoPAP)). If CPAP or AutoPAP is unsuccessful in relieving a member's symptoms, this may indicate that apnea is not due to obstruction. Thus, this surgical approach has not been shown to be effective in non-obstructive apnea for persons who do not respond to CPAP or AutoPAP.

Uvulopalatopharyngoplasty (UPPP): The largest of the reviewed studies of UPPP (n=95) was in a randomized trial that evaluated UPPP versus nonsurgical treatment with a mandibular advancement device. This trial provides limited evidence that the mandibular advancement device is more effective than UPPP. Patients randomized to the device had statistically significant improvements in apnea index, apnea-hypopnea index, and blood oxygen saturation, relative to patients randomized to UPPP; however, 38% of patients in the device treatment group were lost to follow-up or withdrew from the study due to noncompliance before 4 years of follow-up were completed.

Another randomized trial of UPPP was conducted as part of two parallel, randomized studies in which patients were assigned to CPAP (n=44) or UPPP (n=32) by a team of medical experts. Patients were then randomized to treatment or no treatment. Although the results of this study suggest that UPPP and CPAP reduced symptoms of sleep apnea, the design of this study prevents direct comparison of results obtained with UPPP versus CPAP. Considering only the UPPP arm of the trial, this procedure was found to provide statistically significant improvements in daytime sleepiness and snoring but not in decreases in blood oxygen saturation levels during sleep.

One other randomized trial of UPPP met the criteria for detailed review and it compared UPPP with lateral pharyngoplasty for obstructive sleep apnea-hypopnea syndrome (OSAHS). This study found that lateral pharyngoplasty provided statistically significant improvements in daytime sleepiness and apnea-

hypopnea index compared with UPPP; however, it was small (n=27) and involved only a mean 8 months follow-up.

Uvulopalatoplasty (UPP): Only three studies of UPP met the criteria for detailed review, a retrospective nonrandomized comparative study, a prospective case series, and a retrospective study. Outcome measures in these studies varied and included apnea index, blood oxygen saturation during sleep, daytime sleepiness, and snoring. In the nonrandomized comparative study, 63 patients with OSAHS underwent UPP or UPPP; patients with redundant pharyngeal folds were assigned to UPPP. Patients also underwent ablation of any redundant tonsillar tissue. Results of this study suggest that, when proper patient selection criteria are used, UPP and UPPP provide comparable improvements in daytime sleepiness and snoring. Snoring intensity decreased 67% after either treatment; however, daytime sleepiness decreased only 31% after UPP and only 33% after UPPP. The reviewed prospective and retrospective case series evaluating UPP do not provide conclusive evidence that this procedure is effective since they were uncontrolled. Although the larger of these two case series (n=76) reported that daytime sleepiness disappeared or decreased markedly for 66% of patients, the benefits of UPP seemed to diminish somewhat over time. In addition, the smaller case series reported that less than half of patients who underwent UPP had a > 50% improvement in apnea index

Regulatory Status

There are no regulatory specifics to note relevant to coverage of the titled procedures. However, there are several regulated therapies associated with surgical management of upper airway symptoms which may be mentioned in this coverage policy.

Benefit 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.

Coverage for orthognathic surgery is only eligible in accord with the member's benefit brochure which allows for the surgery only for the following conditions:

- Severe sleep apnea only after conservative treatment of sleep apnea has failed; or
- Cleft palate and Pierre Robin Syndrome.

Policy Statement

GEHA will provide coverage for palatopharyngoplasty procedures, including uvulopalatopharyngoplasty or uvulopalatoplasty, when determined to be medically necessary because the medical criteria and guidelines as documented below have been demonstrated.

For non-surgical treatment of obstructive sleep apnea, refer to GEHA's clinical coverage policy for obstructive sleep apnea at geha.com.

When Palatopharyngoplasty/Uvulopalatopharyngoplasty is covered:

- GEHA considers Uvulopalatopharyngoplasty (UPPP) or uvulopalatoplasty (UPP) medically necessary for the treatment of clinically significant (moderate to severe) obstructive sleep apnea syndrome or upper airway resistance syndrome (UARS) in patients who have tried and failed a good faith effort at treatment with continuous positive airway pressure (CPAP) or bilevel positive airway pressure (BiPAP) and whose physical examination shows obstruction at the palatal level.

Clinically significant OSA is defined as those patients who have:

- An apnea/hypopnea index (AHI) or respiratory disturbance index (RDI) of > 15 per hour, or
- An AHI or RDI of > 5 per hour in a patient with excessive daytime sleepiness or unexplained hypertension.

Clinically significant UARS is defined as greater than 10 alpha EEG respiratory arousals per hour. The presence of abnormally negative intrathoracic pressures (i.e., more negative than -10 cm) in conjunction with the EEG arousals supports the diagnosis. Measurement of intrathoracic pressures requires the use of an esophageal manometer as an adjunct to a polysomnogram. Objective evidence of hypopharyngeal obstruction is documented by either fiberoptic endoscopy or cephalometric radiographs.

- Uvulopalatopharyngoplasty may also be indicated in order to enhance CPAP or BiPAP effectiveness in patients who have tried and failed a good faith effort at pressure support.

When Palatopharyngoplasty/Uvulopalatopharyngoplasty is not covered:

GEHA considers the following procedures for the treatment of OSA to be experimental:

- Adult Lingual or Pharyngeal Tonsillectomy as an isolated procedure
- Trans-palatal Advancement Pharyngoplasty
- Expansion Sphincteroplasty
- Lateral Pharyngoplasty
- Laser-assisted Uvulopalatoplasty (LAUP)
- Radiofrequency Ablation of Palatal Tissues and the Tongue
- Tongue Base Suspension or Reduction
- Palatal Stiffening
- Cautery-Assisted Palatal Stiffening Operation (CAPSO)

- Palatal Implants
- Implantable Hypoglossal Nerve Stimulators
- Somnoplasty and Coblation
- Uvulectomy
- Injection snoreplasty
- All “minimally invasive” surgical procedures for OSA not specifically identified as covered above

Policy Guidelines

Conservative measures must have been tried and failed prior to considering surgical management for OSA or Upper Airway Resistance Syndrome. Conservative medical therapy, when appropriate to the clinical situation, may include: weight loss, avoidance of alcohol, sedatives and caffeine consumption—especially before bedtime, allowing adequate sleep time, body position during sleep (side versus back), oral appliances, positive airway pressure devices and medically supervised smoking cessation programs.

GEHA considers positive airway pressure (e.g., CPAP, BiPAP) as the treatment of choice for obstructive sleep apnea based upon current medical practice standards. For this reason the general rule is that a good faith effort at positive pressure must be tried and failed prior to coverage of surgical treatment. Surgery is to be reserved for patients who have not responded to appropriate medical alternatives.

Physician documentation

For any request for prior review of a surgical procedure, current polysomnogram data (including the initial sleep study, any CPAP titration data, and any other studies such as MSLT that have been performed) must be submitted for review with the supporting medical record documentation. Generally, the sleep study upon which approval is requested must be less than 18 months old.

Polysomnography data must include a summary with, at minimum, the following information:

- Total sleep time for the study;
- Total RDI or AHI for the study;
- Average and lowest recorded oxygen saturation;
- For any desaturations below 90%, the length of time at the abnormally low saturation level or range;
- Obstructive event indices for supine and non-supine positions, along with total sleep time spent supine;
- Periodic leg movement (PLM) index;
- A summary table of the polysomnogram results and titration data for all devices used.

A polysomnogram that does not distinguish between supine and non-supine obstructive events, to the extent that any possible positional predisposition to obstruction can be determined, may not be sufficient to support a request for surgery or pressure therapy; GEHA reserves the authority to seek

clarifying information. GEHA may also require a repeat polysomnogram to support any request for additional surgical therapy after an approved surgical therapy based on an initial polysomnogram.

Scientific references

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Policy implementation and updates

2/2018 Revised to include expanded title and additional clarity around pre-surgical management of OSA.

2/2019 Changed name to reflect surgical procedures for snoring and OSA. Aligned with OSA clinical coverage policy for experimental and investigational technology.