UVULOPALATOPHARYNGOPLASTY (UPPP)
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Policy

GEHA considers Uvulopalatopharyngoplasty (UPPP) to be considered medically necessary for the treatment of clinically significant obstructive sleep apnea syndrome (OSA) in appropriately selected adult patients who have not responded to or do not tolerate nasal continuous positive airway pressure (CPAP). Clinically significant OSA is defined as those patients who have:

- Apnea/hypopnea index (AHI) or respiratory disturbance index (RDI) greater than or equal to 15 events per hour, or
- AHI or RDI greater than or equal to 5 events and less than or equal to 14 events per hour with documented symptoms of excessive daytime sleepiness, impaired cognition, mood disorders or insomnia, or documented hypertension, ischemic heart disease, or history of stroke

GEHA considers the following procedures for the treatment of OSA to be experimental and investigational because of lack of supporting data in the peer reviewed medical literature:

- Laser-assisted Uvulopalatoplasty (LAUP)¹
- Radiofrequency Ablation of Palatal Tissues and the Tongue²
- Tongue Base Suspension³ ⁴ ⁵
- Palatal Stiffening⁶ ⁷ ⁸
- Cautery-Assisted Palatal Stiffening Operation (CAPSO)

² Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Radiofrequency volumetric tissue reduction for sleep-related breathing disorders. TEC Assessments. 2000;Volume 15, Tab 15
UPPP 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.

Uvulopalatopharyngoplasty has been found to be most reliably effective in OSA members who have adequately responded to a trial of CPAP or AutoPAP. If CPAP or AutoPAP is unsuccessful in relieving a member’s symptoms, this indicates that apnea is not due to obstruction. GEHA considers this procedure experimental and investigational for persons who do not respond to CPAP or AutoPAP because this surgical approach has not been shown to be effective in non-obstructive apnea.

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 orthognathic surgery except as specifically addressed in the GEHA coverage guideline.

Orthognathic Surgery

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.