TITLE: UVULOPALATOPHARYNGOPLASTY (UPPP or U3P) FOR OBSTRUCTIVE SLEEP APNEA/HYPOPNEA SYNDROME

EFFECTIVE DATE: November 18, 2019

This policy was developed with input from specialists in otolaryngology, dental/oral surgery, neurology and pulmonology, and endorsed by the Medical Policy Committee.

IMPORTANT INFORMATION – PLEASE READ BEFORE USING THIS POLICY
These services may or may not be covered by all Medica plans. Please refer to the member’s plan document for specific coverage information. If there is a difference between this general information and the member’s plan document, the member’s plan document will be used to determine coverage. With respect to Medicare and Minnesota Health Care Programs, this policy will apply unless these programs require different coverage. Members may contact Medica Customer Service at the phone number listed on their member identification card to discuss their benefits more specifically. Providers with questions about this Medica utilization management policy may call the Medica Provider Service Center toll-free at 1-800-458-5512.

Medica utilization management policies are not medical advice. Members should consult with appropriate health care providers to obtain needed medical advice, care and treatment.

PURPOSE
To promote consistency between reviewers in utilization management decision-making by providing the criteria that generally determine the medical necessity of uvulopalatopharyngoplasty (UPPP or U3P). The Benefit Considerations box below outlines the process for addressing the needs of individuals who do not meet these criteria.

BACKGROUND
I. Definitions
   A. **Apnea** is a cessation of airflow for 90% or greater of baseline for 10 or more seconds.
   B. **Hypopnea** as defined by the Centers for Medicare and Medicaid Services (CMS) is an abnormal respiratory event lasting at least 10 seconds with at least a 30 percent reduction in thoracoabdominal movement or airflow as compared to baseline, and with at least a 4 percent oxygen desaturation.
   C. **Apnea-Hypopnea Index (AHI)** is calculated as the number of episodes of apnea plus hypopnea per hour of sleep.
   D. **Continuous Positive Airway Pressure (CPAP) Devices** deliver air under continuous pressure through a nasal mask or face mask. This opens the airway and prevents collapse of the oropharynx that occurs during sleep by forming a pneumatic splint.
   E. **Obstructive Sleep Apnea/Hypopnea Syndrome (OSAHS)**. Epidemiologic data indicate that approximately two percent of women and four percent of men in the middle-aged work force meet the minimal diagnostic criteria for OSAHS.
      1. The syndrome is confirmed by test results that indicate the following:
         a. AHI greater than or equal to 15 events per hour confirmed by a sleep study.
         b. AHI greater than or equal to 5 and less than or equal to 14 events per hour confirmed by a sleep study and accompanied by symptoms of OSAHS, which include unexplained excessive daytime sleepiness, mood disorders, insomnia; impaired cognition, or documented hypertension, ischemic heart disease, or history of stroke.
      2. Severity of OSAHS is categorized as:
         a. Mild: AHI of 5 to 15 events per hour with intermittent arterial oxygen saturation to levels not lower than 85%. Mean oxygen saturation remains at 90% or greater.
         b. Moderate: AHI of 16 to 30 events per hour with intermittent arterial oxygen saturation to levels as low as 70%. Mean oxygen saturation remains at 90% or greater.
c. Severe: AHI greater than 30 events per hour with intermittent arterial oxygen saturation to levels below 70%. Mean oxygen saturation decreases to less than 90%.

F. Polysomnography (PSG) refers to multimodal measurement of physiologic indicators during phases of sleep. Most consensus statement definitions of facility-based polysomnography assume the measurement of at least seven parameters including measurement of brain activity, heart and respiratory function, oxygen saturation, eye movement, and movement of abdominothoracic muscles. PSGs are administered over a full night or split-night. In a split-night study, the presence and severity of sleep apnea is confirmed during the first half of the study. During the remainder of the night, positive airway pressure devices are titrated to determine therapeutic pressure levels.

G. Sleep studies are tests that record the body activity during sleep. They are used to identify sleep disorders such as sleep apnea, periodic limb movement disorder, narcolepsy, restless legs syndrome, insomnia, and nighttime behaviors like sleepwalking and REM sleep behavior disorder. An overnight in-lab sleep study (also known as a polysomnogram) is the most complete sleep evaluation for sleep apnea and other sleep disorders. A sleep study can also be performed at home with a portable diagnostic device and is called a home sleep study or a home sleep test. Home sleep studies are only useful for diagnosing obstructive sleep apnea. However, a negative home sleep test may not rule out the disorder.

H. Uvulopalatopharyngoplasty (UPPP or U3P) is a resection of the uvula, distal portion of the soft palate, posterior tonsillar pillars, and redundant lateral pharyngeal wall mucosa to create an unobstructed, widened nasopharyngeal and oropharyngeal opening. Overall long-term response to UPPP has been reported to be 41 to 52.3 percent. However, the long-term success rate of UPPP is highly variable depending upon anatomical characteristics of the upper airway and presence of comorbidities. UPPP is most successful in patients whose obstruction is limited to the retropalatal airway. In some instances, UPPP can compromise subsequent use of nasal CPAP.

II. Comments
A. OSAHS is diagnosed by facility-based PSG or home-based sleep study.
B. CPAP is the treatment of choice for OSAHS in adults. Non-compliance with CPAP has been reported to be greater than 40 percent. However, compliance has been shown to improve with patient training and support, ensuring proper fit of nasal or face masks and device types along with use of humidifiers and heaters for appropriate patients. If the patient is unable to tolerate CPAP, all alternative treatments should be explored as viable options.
C. Treatment of pediatric sleep apnea depends on the cause of the disorder, the severity of the symptoms, the risk factors involved and the age of the child.
D. The following procedures are considered investigational and are not covered by Medica:
   1. Laser-Assisted Uvulopalatoplasty (LAUP) involves use of a carbon dioxide laser to administer heat to create full-thickness trenches on the free edge of the soft palate on both sides of the uvula.
   2. Palatal implants are being evaluated for use in the treatment of obstructive sleep apnea. During the implantation procedure, three woven polyethylene cylinders are inserted in the soft palate with the intent of stiffening its structure. This stiffening is intended to change the airflow characteristics of the soft palate, which in theory should lead to a reduction in airflow obstruction and reduction in episodes of sleep apnea.
   3. Radio Frequency Volumetric Tissue Reduction (Somnoplasty, Radiofrequency ablation (RFA)) is a method of reducing submucosal tissue through the use of heat generated by a low-intensity radiofrequency signal. This process causes thermocoagulation of the soft tissue. The low temperature is purported to result in a localized thermal lesion, followed by scarring and resorption of the treated tissue.
   4. Uvulopalatoplasty (UPP or U2P) is performed using radiofrequency or laser energy (Laser-Assisted Uvulopalatoplasty [LAUP or LAUPP]). These procedures are intended to prevent airway collapse by removing soft tissue of the oropharynx.
   5. Nasal Expiratory Positive Airway Pressure consists of a small nasal valve that acts as a one-way resistor, producing expiratory resistance while leaving inspiration unaffected. Its fundamental difference from CPAP is that it provides no positive pressure to the airway during inspiration and does not require an external power source.

BENEFIT CONSIDERATIONS
1. Prior authorization is required for uvulopalatopharyngoplasty. Please see the prior authorization list for product specific prior authorization requirements.
2. Coverage may vary according to the terms of the member’s plan document.
3. AHI values greater than 40 or retrorolinguat involvement require Medical Director review.
4. The following additional treatments (i.e., surgical, laser, etc.) in conjunction with UPPP require medical director review:
   A. Tracheostomy
   B. Rhinoplasty procedure with or without septoplasty
   C. Inferior mandibular sagittal osteotomy
   D. Geniohyoid advancement
   E. Genioglossus advancement
   F. Bimaxillary advancement
   G. Base of tongue resection

5. Pediatric obstructive sleep apnea syndrome (OSAS) and criteria for surgical interventions differ from those with adult OSAHS. All requests for surgical interventions used to treat OSAS in members younger than 18 years of age require medical director review.

6. Orthognathic surgery performed in conjunction with UPPP requires medical director review.

7. The following procedures are considered investigative and therefore are not eligible for coverage:
   - Nasal Expiratory Positive Airway Pressure (Provent®) for Obstructive Sleep Apnea
   - Palatal Implants for Obstructive Sleep Apnea
   - Tongue Base Suspension Procedures for Obstructive Sleep Apnea
   - Radiofrequency Volumetric Tissue Reduction (RFVTR) for Breathing Disorders,
   - Uvulopalatoplasty for Sleep Disorders (Including Radiofrequency Uvulopalatoplasty [UP2 or UPP] and Laser-Assisted Uvulopalatoplasty [LAUP])

8. If the Medical Necessity and Coverage Criteria are met, Medica staff will authorize benefits within the limits in the member’s plan document.

9. If it appears that the Medical Necessity and Coverage Criteria are not met, the individual’s case will be reviewed by the medical director or an external reviewer. Practitioners are reminded of the appeal process in their Medica Provider Administrative Manual.

MEDICAL NECESSITY CRITERIA
The general treatment course for OSAHS includes a period of non-surgical, non-invasive therapy. Invasive or surgical treatment options are appropriate when a reasonable attempt at non-invasive treatment modalities has been ineffective.

I. Indications for uvulopalatopharyngoplasty (UPPP)
   UPPP is considered medically necessary for members 18 years of age and older with a confirmed diagnosis of OSAHS, when documentation in the medical records indicates that all of the following are met:
   A. BMI less than 40. (See APPENDIX 1 – Body Mass Index (BMI) Conversion Table)
   B. Documented history of failed CPAP after a trial of at least eight weeks OR the patient cannot tolerate CPAP.
      If the patient is unable to tolerate standard CPAP, alternative therapies such as flexible CPAP, various models of facial masks and nasal pillows should be tried prior to consideration of UPPP.
   C. Sleep study performed within the past 12 months that demonstrates one of the following:
      1. AHI between 16 and 30 and a mean oxygen saturation of less than 85 percent
      2. AHI values greater than 30 per hour.
   D. Physical Examination
      The examination must demonstrate that the uvula, distal portion of the soft palate, posterior tonsillar pillars, and redundant lateral pharyngeal wall mucosa are the only areas of anatomical obstruction, determined through studies including but not limited to nasopharyngoscopy or cephalometry.

II. Written documentation from the medical record must include all of the following:
   A. A complete summary from the most recent sleep study that includes the AHI along with the minimum and mean oxygen saturation
   B. A complete description of all trials of noninvasive medical treatments including the length and results of the trials. This should include a description of CPAP therapies tried, level of success achieved, and whether more than one CPAP modality was attempted.
   C. A complete description of the anticipated surgical treatment.

CENTERS FOR MEDICARE & MEDICAID SERVICES (CMS)
- For Medicare members, refer to the following, as applicable at: http://www.cms.hhs.gov/mcd/search.asp?
Uvulopalatopharyngoplasty (UPPP or U3P) for Obstructive Sleep Apnea/Hypopnea Syndrome

Medica Policy No. III-SUR.08

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| DOCUMENT HISTORY |
|-------------------|------------------|
| Original Effective Date | April 1998 |
| Administrative Update(s) | 05/01/2017 |

References:

**Pre-06/2016 MPC:**


06/2017 MPC:

06/2018 MPC:
No new references.

06/2019 MPC:
### Body Mass Index Table

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### Body Weight (pounds)

| BMI  | 19   | 20   | 21   | 22   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38   | 39   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 180  | 200  | 210  | 220  | 230  | 240  | 250  | 260  | 270  | 280  | 290  | 300  | 310  | 320  | 330  | 340  | 350  | 360  | 370  | 380  | 390  | 400  |
| 200  | 220  | 240  | 260  | 280  | 300  | 320  | 340  | 360  | 380  | 400  | 420  | 440  | 460  | 480  | 500  | 520  | 540  | 560  | 580  | 600  | 620  |
| 220  | 240  | 260  | 280  | 300  | 320  | 340  | 360  | 380  | 400  | 420  | 440  | 460  | 480  | 500  | 520  | 540  | 560  | 580  | 600  | 620  | 640  |
| 240  | 260  | 280  | 300  | 320  | 340  | 360  | 380  | 400  | 420  | 440  | 460  | 480  | 500  | 520  | 540  | 560  | 580  | 600  | 620  | 640  | 660  |
| 260  | 280  | 300  | 320  | 340  | 360  | 380  | 400  | 420  | 440  | 460  | 480  | 500  | 520  | 540  | 560  | 580  | 600  | 620  | 640  | 660  | 680  |
| 280  | 300  | 320  | 340  | 360  | 380  | 400  | 420  | 440  | 460  | 480  | 500  | 520  | 540  | 560  | 580  | 600  | 620  | 640  | 660  | 680  | 700  |
| 300  | 320  | 340  | 360  | 380  | 400  | 420  | 440  | 460  | 480  | 500  | 520  | 540  | 560  | 580  | 600  | 620  | 640  | 660  | 680  | 700  | 720  |
| 320  | 340  | 360  | 380  | 400  | 420  | 440  | 460  | 480  | 500  | 520  | 540  | 560  | 580  | 600  | 620  | 640  | 660  | 680  | 700  | 720  | 740  |
| 340  | 360  | 380  | 400  | 420  | 440  | 460  | 480  | 500  | 520  | 540  | 560  | 580  | 600  | 620  | 640  | 660  | 680  | 700  | 720  | 740  | 760  |

APPENDIX 1 – Body Mass Index (BMI) Conversion Table