Obstructive Sleep Apnea:
Sleep apnea is characterized by an interruption of breathing during sleep, due to extra or loose tissue in the upper airway that collapses into the air passage with the effort of inhalation. This is often linked to obesity and decreased muscle tone due to aging. When the airway becomes blocked, a drop in blood oxygen content can occur, which is detected by the brain causing the patient to wake just enough to tighten the airway muscles and allow breathing to resume. This may occur several hundred times in one night. Obstructive sleep apnea can cause many symptoms, such as depression, irritability, sexual dysfunction, learning and memory difficulties, and falling asleep while at work or driving. When OSA is suspected by the above symptoms, including a positive Epworth Sleepiness Score, a polysomnogram (PSG) study is often required for definitive diagnosis.

OSA Treatments:
Treatments for OSA include various non-surgical methods, including oral appliances, continuous positive airway pressure (CPAP) therapy, and a variety of surgical treatments. Oral appliances are custom fitted devices placed into the mouth to reposition the patient’s jaw or tongue during sleep to reduce the occurrence of obstructive sleep apnea. Several types of over-the-counter devices are available, but only a custom fitted device can assure the most effective intervention for this type of device. Fitting for an oral appliance is a painless and easy procedure where a medical professional makes a mold or takes measurements of the inside of the mouth. The device is then custom made and worn by the patient nightly. These devices are very similar to orthodontic retainers or sports mouth guards. Patients may find them uncomfortable but easy to use and usually the discomfort is temporary. Side effects of these devices may include excess salivation, headache, and skin irritation.
Continuous Positive Airway Pressure (CPAP) is the most common and effective treatment for sleep apnea. During sleep, the patient wears a mask over the nose attached to an air compressor that forces air through the nasal passages, opening the back of the throat. In OSA, tissues in the upper airway, including the tongue, soft palate and nasal passages sag and block the airway. The pressurized air in CPAP forces the tissues in the upper airway out of the way, allowing normal breathing to occur during sleep. Variations of the CPAP device, including auto-CPAP, BiPAP and DPAP, adjust the airflow to the needs of the patient. Some side effects that may occur include discomfort, nasal irritation and drying, facial skin irritation, abdominal bloating, mask leaks, sore eyes, and headaches. CPAP prevents airway closure while in use, but apnea episodes return when CPAP is stopped or if it is used improperly.

Uvulopalatopharyngoplasty (UPPP):

Uvulopalatopharyngoplasty is used to treat OSA by enlarging the oropharynx; it is considered medically necessary for OSA members who meet the criteria for CPAP, but who are intolerant to CPAP. The requirement for, and quantification of CPAP requires a polysomnogram. The medical records must document that the member has attempted CPAP before considering surgery.

Uvulopalatopharyngoplasty (UPPP) is considered medically necessary if ALL of the following (1-3) are present:

A. Documented obstructive sleep apnea with apnea-hypopnea index (AHI) meeting the following parameters:
   1. UPPP as sole procedure: with AHI >15 and <40, OR AHI 10-15 with one or more of the conditions listed below:
      a. Hypertension; or
      b. Cardiac arrhythmias predominately during sleep; or
      c. Pulmonary hypertension; or
      d. Documented ischemic heart disease; or
      e. Impaired cognition or mood disorders; or
      f. History of stroke; or
      g. Excessive daytime sleepiness, as documented by either a score of greater than 10 on the Epworth Sleepiness Scale or inappropriate daytime napping, (e.g., during driving, conversation or eating) or sleepiness that interferes with daily activities.

OR

2. UPPP as part of a planned staged or combined surgery aimed at also relieving retrolingual obstruction, (e.g., genioglossal advancement, hyoid myotomy and suspension): AHI >15, OR AHI 10-15 with one or more of the conditions listed below:
   a. Hypertension; or
   b. Cardiac arrhythmias predominately during sleep; or
c. Pulmonary hypertension; or

d. Documented ischemic heart disease; or

e. Impaired cognition or mood disorders; or

f. History of stroke; or

g. Excessive daytime sleepiness, as documented by either a score of greater than 10 on the Epworth Sleepiness Scale or inappropriate daytime napping, (e.g., during driving, conversation or eating) or sleepiness that interferes with daily activities.

AND

B. CPAP (continuous positive airway pressure) has been tried with well-supported follow-up and clearly failed or is not tolerated AND

C. Pre-operative evaluation including fiberoptic endoscopy suggests retro-palatal narrowing is the primary source of airway obstruction if UPPP is the sole procedure or a contributing source of airway obstruction if part of a planned staged or combined surgery aimed at also relieving retrolingual obstruction.

**Pediatric Obstructive Sleep Apnea Syndrome (OSAS): Tonsillectomy and Adenoidectomy:**

IEHP considers tonsillectomy and adenoidectomy medically necessary for treatment of obstructive sleep apnea in children. Childhood OSAS is usually associated with adenotonsillar hypertrophy, and the available medical literature suggests that the majority of cases are amenable to and will benefit from tonsillectomy and adenoidectomy. Neither UPPP nor LPP is indicated in the primary treatment of OSAS.

**Lateral Pharyngoplasty (LPP):**

Lateral pharyngoplasty was originally developed to treat obstructive sleep apnea syndrome (OSAS). The procedure is a variant of/similar to uvulopalatopharyngoplasty (UPPP). LPP utilization in other than obstructive sleep apnea syndrome is not supported by current medical literature or standard medical community practice. Lateral Pharyngoplasty is considered experimental and investigational as a treatment for recurrent throat infections, including tonsillitis, and for indications other than OSAS.

**Uvulectomy and Laser Assisted Uvuloplasty (LAUP):**

Cold knife uvulectomy and laser assisted uvuloplasty (LAUP, laser uvulectomy) are considered experimental and investigational for OSA because they have not been shown to be as effective as UPPP for this indication. However, IEHP may consider these procedures medically necessary, upon individual case review, for members with severe OSA who have other medical conditions that make them unable to undergo UPPP and have failed a trial of CPAP or the use of an oral appliance or device. Uvulectomy is considered experimental and investigational as a treatment for recurrent throat infections and for all other indications.

**Somnoplasty and Coblation:**

IEHP considers radiofrequency ablation of the tongue base, uvula or soft palate (Somnoplasty) or of the nasal passages and soft palate (Coblation) experimental and investigational as a treatment
for obstructive sleep apnea because there is inadequate scientific evidence to validate the effectiveness of these procedures for this indication.

**Jaw Realignment Surgery:** (i.e., hyoid myotomy and suspension, mandibular osteotomy, genioglossal advancement).

IEHP considers jaw realignment surgery medically necessary for persons who fail other treatment approaches for OSA.

**Effective Date:** November 29, 2007

**Reviewed Annually:** November 11, 2015

**Bibliography:**

4. Blue Cross of California Medical Policy Bulletin: Treatment for Obstructive Sleep Apnea in Adults, Med. 00054 (rev. date 02/05/07)

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