Obstructive Sleep Apnea Surgical Treatment

Date of Origin: 07/2002 **Last Review Date: 02/22/2023** **Effective Date: 04/01/2023**

Dates Reviewed: 04/2003, 06/2004, 06/2005, 06/2006, 06/2007, 07/2008, 03/2009, 12/2009, 03/2011, 05/2011, 03/2012, 01/2013, 01/2014, 01/2015, 03/2017, 03/2018, 03/2019, 02/2020, 03/2021, 02/2022, 03/2023

Developed By: Medical Necessity Criteria Committee

I. Description

Airway obstruction during sleep is a commonly recognized problem. Obstructive sleep apnea (OSA) is the most common breathing related sleep disorder. OSA is characterized by repetitive episodes of airway obstruction due to the collapse and obstruction of the upper airway during sleep. In patients with OSA, the normal pharyngeal narrowing is accentuated by anatomic factors, such as a short neck, elongated palate and uvula, large tonsils and redundant lateral pharyngeal wall mucosa. The hallmark symptom of OSA is excessive snoring. The snoring abruptly ceases during the apneic episodes and during a brief awakening period and then resumes when the patient falls asleep again.

When noninvasive treatment such as continuous positive airway pressure (CPAP) fails to adequately treat OSA or is not tolerated by the patient, surgical intervention may be warranted. The most common form of surgical management in treating OSA is an uvulopalatopharyngoplasty (UPPP). UPPP involves resection of the mucosa and submucosa of the soft palate, tonsillar fossa, and the lateral aspect of the uvula. The UPPP enlarges the oropharynx but cannot correct obstructions in the hypopharynx. Other minimally invasive surgical procedures have been investigated as treatments for OSA; however, inadequate data exists to establish long-term effectiveness.

II. Criteria: CWQI HCS-0054

A. Moda Health will cover Uvulopalatopharyngoplasty (UPPP) to plan limitations when **ALL** of the following criteria are met:
   a. The patient has **1 or more** of the following indications:
      i. Moderate to severe obstructive sleep apnea diagnosed by a sleep study within the past two years prior to any proposed surgery
      ii. Narrowing or collapse of retropalatal region
      iii. Apnea Hypopnea Index (AHI) ≥ 15
      iv. AHI between 5 and 14 with **1 or more** of the following:
         1. Excessive daytime sleepiness
         2. Insomnia

3. Impaired cognition
4. Mood disorders
5. Documented hypertension
6. Ischemic heart disease
7. History of stroke

b. Patient must have completed medical therapy with **ALL** of the following:
    i. Adequate response to CPAP therapy but unable to tolerate CPAP device (inability to relieve symptoms with CPAP or autoPAP indicates apnea not due to obstruction)
    ii. Maximal treatment of underlying disease
    iii. Other appropriate non-invasive therapy
    iv. Oral Appliance with **1 or more** of the following results:
        1. Failure to improve symptoms
        2. Intolerance of device
        3. Device inappropriate given patient's anatomy
    v. Weight not an issue or weight loss tried and failed in obese patients
c. Excessive daytime sleepiness that is not explained by other etiologic factors.
d. The requested procedure does NOT include lingual or pharyngeal tonsillectomy as they are considered experimental and investigation for the treatment of OSA. A tonsillectomy is considered an integral part of the UPPP and is NOT separately billable.
e. Any surgical procedure for simple snoring in the absence of OSA is considered NOT medically necessary and not included in the request.
f. The request does NOT include radiofrequency volumetric tissue ablation of the soft palate, uvula, tongue base, or of the nasal passages, turbinates and/or soft palate (Somnoplasty™ or Coblation) as they are considered investigational and not covered by Moda Health
g. The request does NOT include **ALL** of the following investigational procedures:
    i. The Repose System, a minimally invasive technique involving tongue base suspension
    ii. Injection Snoreplasty; an injection of sclerosing agent into the soft palate
    iii. Palatal stiffening procedure including but not limited to:
        1. Cautery-assisted palatal stiffening operation (CAPSO); or
        2. Palatal implant (Pillar™ Palatal Implant System)
    iv. Transpalatal Advancement Pharyngoplasty
    v. Laser-assisted uvulopalatopharyngoplasty (LAUP)

B. Moda Health considers hypoglossal nerve stimulation (e.g. Inspire upper airway system, Inspire II system) medically necessary for treatment of **moderate to severe** obstructive sleep apnea (OSA) when ALL of the following requirements are met:
    a. Member is 18 years of age or older; **and**
    b. BMI is less than 32 kg/m^2; **and**
    c. A sleep study is performed within 24 months of first consultation for Inspire implant, **and**
    d. Apnea hypopnea index (AHI) is 15-65 events per hour; **and**
    e. Member has predominantly obstructive events (described as central and mixed apneas less than or equal to 25% of total AHI); **and**
    f. Absence of complete concentric collapse at the soft palate level as seen on a drug induced sleep endoscopic (DISE) procedure; **and**
    g. Member has no other anatomical findings that would compromise performance of device

C. Hypoglossal nerve neurostimulation is considered NOT medically necessary for all other indications
D. Non-FDA approved hypoglossal nerve stimulation devices considered experimental and investigational for treatment of adult obstructive sleep apnea include **ALL** of the following (not an inclusive list);
    a. Apnex Hypoglossal Nerve Stimulation (HGNS) system
    b. Aura6000 Neurostimulation system
    c. Wellstar upper airway stimulation implant
    d. ImThera's Targeted Hypoglossal Neurostimulation Therapy

III. Information Submitted with the Prior Authorization Request:

1. Sleep study interpretation
2. CPAP trial results
3. Medical records from treating provider documenting all non-invasive treatment and co-morbid conditions.

IV. Applicable CPT or HCPC codes covered:

Codes	Description
42140	Uvulectomy, excision of uvula
42145	Palatopharyngoplasty (e.g. uvulopalatopharyngoplasty, uvulopharyngoplasty)
64582	Open implantation of hypoglossal nerve neurostimulator array, pulse generator, and distal respiratory sensor electrode or electrode array
64583	Revision or replacement of hypoglossal nerve neruostimulator array and distal respiratory sensor electrode or electrode array, including connection to an existing pulse generator
64584	Removal of hypoglossal nerve neurostimulator array, pulse generator, and distal respiratory sensor electrode or electrode array

V. CPT or HCPC codes NOT covered:

Codes	Description
41512	Tongue base suspension, permanent suture technique
41530	Submucosal ablation of the tongue base, radiofrequency, one or more sites, per session
C9727	Insertion of implants into the soft palate; minimum of 3 implants
S2080	Laser-assisted uvulopalatoplasty (LAUP)
42160	Destruction of lesion, palate or uvula (thermal, cryo, or chemical)
42890	Limited pharyngectomy
30801	Ablation, soft tissue of inferior turbinates, unilateral or bilateral any method (eg, electrocautery, radiofrequency ablation, or tissue volume reduction); superficial
30802	Intramural
42950	Pharyngoplasty (plastic or reconstructive operation on pharynx) (for Palatal stiffening procedure and Transpalatal advancement pharyngoplasty)

VI. Annual Review History

Review Date	Revisions	Effective Date
01/2013	Annual Review: Added table with review date, revisions, and effective date. Added Dr. Engrav's signature instead of Dr. Mills	01/23/2013
01/2014	Annual Review: Changed 1,e, iv – from mandibular repositioning or tongue-retaining appliance to oral appliance	01/22/2014
01/2015	Annual Review: Added 1.g regarding tonsillectomy E/I for OSA and included in the UPPP – not separately billable.	01/28/2015
03/2017	Annual Review: Updated to new template, changed failed medical treatment to completed	03/22/2017
03/2018	Annual Review: Formatting changes only	03/28/2018
03/27/2019	Annual Review: No changes	04/01/2019
02/2020	Annual Review: No changes	03/01/2020
03/2021	Annual Review: No content changes	04/01/2021
09/2021	Update: Added coverage indications for hypoglossal nerve stimulation	10/01/2021
02/2022	Annual Review: Added new codes, no content change	03/01/2022
03/2023	Annual Review: Updated age requirement at 18 years or older to align with evidence-based research studies	04/01/2023

VII. References

1. American Academy of Otolaryngology (AAO) Website. Accessed May 27, 2004.on March 24, 2012 at: www.entnet.org
2. American Academy of Otolaryngology Head and Neck Surgery. 2000 Clinical Indicators Compendium.
3. Epworth Sleepiness Scale. University of Maryland medical Center. (2011). Accessed on February 25, 2011.
4. Friedman M, Ibrahim H, Joseph NJ. Staging of obstructive sleep apnea/hypopnea syndrome: a guide to appropriate treatment. Laryngoscope. 2004 March; 114(3):454-9.
5. Han S, Kern RC. Laser-assisted uvulopalatoplasty in the management of snoring and obstructive sleep apnea syndrome. Miverva Med. 2004 Aug; 95(4):337-45.
6. Hensley N, Ray C. Sleep apnoea. In: BMJ Clinical Evidence. London, UK: BMJ Publishing Group; May 2008.
7. Li KK. Surgical management of obstructive sleep apnea. Clinics in Chest Medicine. 2003: 24(2).
8. Loube DI. Technologic advances in the treatment of obstructive sleep apnea syndrome. Chest 1999; 116(5): 1426-33.
9. Masood A, Phillips B. Radiofrequency ablation for sleep-disordered breathing. Curr Opin Pulm Med. 2001:7(6): 404-406.
10. Medicare Guidelines for Treatment of Obstructive Sleep Apnea. Medicare Part B Policy 2002.13.
11. Sundaram S, Bridgman SA, Lim J, Lasseron TJ. Surgery for obstructive sleep apnea. Cochrane Database Syst Rev. 2005 Oct; (4):CD001004.
12. Physician Advisors