MEDICAL COVERAGE POLICY	
SERVICE:	**Obstructive Sleep Apnea: Diagnosis and Treatment**
Policy Number:	**110**
Effective Date:	**8/01/2020**
Last Review:	**06/25/2020**
Next Review Date:	**06/25/2021**

Important note:
Unless otherwise indicated, this policy will apply to all lines of business.
Even though this policy may indicate that a particular service or supply may be considered medically necessary and thus covered, this conclusion is not based upon the terms of your particular benefit plan. Each benefit plan contains its own specific provisions for coverage and exclusions. Not all benefits that are determined to be medically necessary will be covered benefits under the terms of your benefit plan. You need to consult the Evidence of Coverage (EOC) or Summary Plan Description (SPD) to determine if there are any exclusions or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and your plan of benefits, the provisions of your benefits plan will govern. However, applicable state mandates will take precedence with respect to fully insured plans and self-funded non-ERISA (e.g., government, school boards, church) plans. Unless otherwise specifically excluded, Federal mandates will apply to all plans. With respect to Medicare-linked plan members, this policy will apply unless there are Medicare policies that provide differing coverage rules, in which case Medicare coverage rules supersede guidelines in this policy. Medicare-linked plan policies will only apply to benefits paid for under Medicare rules, and not to any other health benefit plan benefits. CMS's Coverage Issues Manual can be found on the CMS website. Similarly, for Medicaid-linked plans, the Texas Medicaid Provider Procedures Manual (TMPPM) supersedes coverage guidelines in this policy where applicable.

SERVICE: Obstructive Sleep Apnea: Diagnosis and Treatment.

PRIOR AUTHORIZATION: Diagnostic testing for obstructive sleep apnea does **NOT** require prior authorization. Some interventions DO require prior authorization.

POLICY: Please review the plan's EOC (Evidence of Coverage) or Summary Plan Description (SPD) for coverage details.

For Medicare plans, please refer to appropriate Medicare LCD (Local Coverage Determination). If there is no applicable LCD, use the criteria set forth below.

For Medicaid plans, please confirm coverage as outlined in the Texas Medicaid TMPPM.

Diagnostic testing for suspected Obstructive Sleep Apnea (OSA) may be considered medically necessary and a covered benefit for individuals with a history suggestive of the disorder when the following steps have been taken and documented:

1. History and physical examination documenting sleep related symptoms and perhaps upper airway anatomic findings. Significant medical conditions, medical findings, medications, allergies, and personal habits which may affect sleep status (e.g. alcohol consumption, caffeine consumption, psychiatric condition, sleep habits, depression screening) should be considered. Sleep related symptoms and appropriate indications include:
    a. Adults:
        i. Loud/intense snoring, witnessed apnea, or nocturnal gasping/choking associated with awakening and excessive daytime sleepiness.
        ii. Suspected narcolepsy when a multiple sleep latency test (MSLT) is planned.
        iii. Suspected idiopathic central nervous system hypersomnia when a MSLT is planned.
        iv. Suspected periodic limb movement disorder.
        v. To assist with the diagnosis of paroxysmal arousals thought to be seizure related when other evaluation has proven inconclusive.
        vi. To assist in the evaluation of parasomnias.
        vii. Suspected REM sleep behavior disorder.
    b. Children:
        i. To differentiate between primary snoring and pathological snoring.

ii. To evaluate excessive daytime sleepiness, cor-pulmonale, failure to thrive or unexplained polycythemia.
iii. To assist with the diagnosis of paroxysmal arousals thought to be seizure related when other evaluation has proven inconclusive.
iv. To assist in the evaluation of parasomnias.
v. Suspected REM sleep behavior disorder.

2. A sleep evaluation questionnaire (e.g. the Berlin questionnaire) or a sleepiness scale (e.g. Epworth) should have been completed.
3. Potential therapeutic options and any compliance issues should have been discussed, and the sleep laboratory should determine the individual education needs of the patient and provide that education.
4. Follow-up studies may be indicated as follows;
    a. Adults; SWHP may consider a follow-up Polysomnography (PSG) medically necessary after the diagnosis of OSA when one of the following criteria are met;
        i. Lack of clinical improvement after surgery for OSA,
        ii. Following placement of an oral appliance,
        iii. Initial titration with CPAP when medically unable to be done as part of a split night study or with auto-titrating CPAP, or
        iv. CPAP re-titration for persistent/worsening symptoms, significantly increased BMI, or suspicion of inadequate pressure.
    b. Children;
        i. Persistent/worsening symptoms,
        ii. Significant weight loss, or
        iii. Periodic reevaluation of titration settings for children using CPAP when indicated by growth-related change.

SWHP may consider the use of home PSG in place of facility-based testing when the following criteria are met:

1. 6 years of age and older, **AND**
2. Must be supervised by a practitioner with board certification in sleep medicine, **AND**
3. Performed in conjunction with a complete and comprehensive sleep evaluation, **AND**
4. Used as an alternative to standard PSG for diagnosing OSA in patients with a high pretest probability of moderate to severe OSA, **AND**
5. Used with auto-titrating equipment to titrate CPAP if indicated.

A home PSG is not appropriate for the diagnosis of OSA in patients with significant comorbidity that may degrade the accuracy of the test (e.g., CHF). It is also not appropriate for the diagnosis of OSA in patients with coexisting sleep disorders of other types.

Home sleep study devices at a minimum must record airflow, respiratory effort, and blood oxygenation. Types 2, 3, and 4 may be covered;

Type 2 – includes a minimum of seven parameters
Type 3 – includes a minimum of 4 parameters, including two channels for respiration and one channel for cardiac monitoring
Type 4 – includes a minimum of 3 parameters, including pulse oximetry.

The treatment of OSA (in addition to weight loss, sleep positioning, abstinence from alcohol and certain medications) may be considered medically necessary and a covered benefit when one of the following criteria are met:

1. Apnea/Hypopnea Index (AHI) > 5/hour and symptoms/co-morbidities such as daytime sleepiness, impaired neurocognitive function, mood disorder, insomnia, or cardiovascular disease. The cardiovascular disease may include one of the following:
    a) Documented history of stroke; *or*
    b) Documented hypertension (systolic blood pressure greater than 140 mm Hg and/or diastolic blood pressure greater than 90 mm Hg); *or*
    c) Documented ischemic heart disease
2. AHI > 15/hour.

Covered treatment modalities may include:

1. Continuous positive airway pressure (CPAP).
2. Bilevel positive airway pressure (BIPAP) or auto-titrating CPAP (should be tried if CPAP is not tolerated).
3. Mandibular Advancement Devices (MAD) or oral appliances (custom made/fit, not over the counter).
4. Upper airway surgery (usually only indicated for mild to moderate OSA after failure of more conservative measures, unless a readily apparent obstructing lesion is present) , including;
    a. Uvulopalatopharyngoplasty (UPPP).
    b. Mandibular-Maxillary Advancement (MMA) osteotomies (orthognathic surgery).
5. **FOR MEDICARE LINES ONLY**, the use of hypoglossal nerve stimulation, e.g. Inspire Upper Airway Stimulation system, involving an implantable device, for the treatment of obstructive sleep apnea (OSA). For criteria see LCD L35396. **For ALL other lines of business this intervention has been deemed investigational, experimental or unproven.**

EXCLUSIONS:

1. Actigraphy for the diagnosis of OSA as it is considered experimental/investigational.
2. Laser assisted uvulopalatopharyngoplasty (LAUPPP) for the treatment of OSA, as it is considered experimental/investigational.
3. Radiofrequency Tissue Volume Reduction (RFTVR) for the treatment of OSA, as it is considered experimental/investigational.
4. Pillar Palatal Implant System for the treatment of OSA, as it is considered experimental/investigational.
5. Repose Tongue and Hyoid Suspension System for the treatment of OSA, as it is considered experimental/investigational.
6. Oral appliances are considered experimental and investigational for treatment of upper airway resistance syndrome (UARS).
7. Oral appliances for snoring (e.g., Snore Guard) are considered not medically necessary treatment of disease, as snoring is not considered a disease.
8. Procedures to stabilize lateral wall of nasal vestibule (Latera®) is considered investigational and not medically necessary because of a lack of clinical trials demonstrating efficacy.

OVERVIEW: This policy considers various diagnostic and treatment options for obstructive sleep apnea. Snoring, without obstructive sleep apnea, is not a disease and thus the treatment of snoring is not considered medically necessary and is not a covered benefit.

Obstructive sleep apnea (OSA) affects approximately five percent of the adult population and consists of irregular and abnormal respiratory patterns during sleep (apneas and hypopneas), daytime symptoms due to sleep disruption, and signs of disturbed sleep (e.g. snoring, restlessness, and snorts). Risk factors for OSA include obesity, craniofacial abnormalities, upper airway soft tissue redundancy, loud snoring, heredity, smoking, nasal congestion, and diabetes mellitus. Snoring and daytime sleepiness are common presentations for OSA. Polysomnography (PSG) is the preferred diagnostic study when OSA is suspected. The treatment options available for OSA include positive airway pressure, oral appliances, and surgery. Untreated OSA is associated with potential accidents due to excessive daytime sleepiness, hypertension, pulmonary hypertension, cardiovascular problems, and in severe cases an increased risk of all-cause mortality.

The American Academy of Sleep Medicine (AASM) has proposed that four levels be used to classify the complexity of recording technology used for the diagnosis of sleep-related breathing disorders. Level I is a full-night, in-laboratory polysomnography (PSG), where there is a minimum of seven parameters measured, including electroencephalogram (EEG), electro-oculogram (EOG), chin electromyogram (EMG), and electrocardiogram (ECG), as well as monitors for airflow, respiratory effort, and oxygen saturation, and there is also a technician in constant attendance. Level II studies are essentially the same, except that the ECG can be replaced by a heart rate monitor and a technician is not in constant attendance. Level III is a cardiorespiratory study in which a minimum of four parameters must be measured, including ventilation (at least two channels of respiratory movement, or respiratory movement and airflow), heart rate or ECG, and oxygen saturation. Ventilation in this case is measured with at least two channels of respiratory movement or of airflow.

Full-night, attended, in-laboratory Polysomnography (PSG) is considered the gold-standard diagnostic test for OSA. It involves monitoring the patient during a full night's sleep. Split-night, attended, in-laboratory PSG is similar, except the diagnostic portion of the study is performed during the first part of the night only. Those patients who are diagnosed with OSA during the first part of the night and choose positive airway pressure therapy should have their positive airway pressure device titrated during the second part of the evening. Testing is only covered in centers which are certified by the American Academy of Sleep Medicine.

Home PSG devices for unattended use have been developed over the past few years and are an acceptable alternative to laboratory testing for individuals with a high pre-test probability of moderate to severe OSA. However, they should not be used in patients who have medical conditions that predispose them to non-OSA sleep related breathing disorders (e.g., heart failure) or in whom another sleep disorder is suspected.

MANDATES: There are no mandated benefits or regulatory requirements for SWHP to provide coverage for these services.

CMS: There are three publications applicable to this policy;

1. NCD for Sleep Testing for Obstructive Sleep Apnea (OSA) (240.4.1), March 3, 2009

2. NCD for Continuous Positive Airway Pressure (CPAP) Therapy for Obstructive Sleep Apnea (OSA) (240.4), March 13, 2008
3. Novitas LCD for Outpatient Sleep Studies LCD L35050.

Generally, Medicare allows coverage for OSA testing and treatment with CPAP as outlined above. In addition, Medicare allows sleep testing devices which measure three or more channels that include actigraphy, oximetry, and peripheral arterial tone. Home testing is not covered for persons with co-morbidities, other sleep disorders, or for asymptomatic screening.

CODES:

Important note:

CODES: Due to the wide range of applicable diagnosis codes and potential changes to codes, an inclusive list may not be presented, but the following codes may apply. Inclusion of a code in this section does not guarantee that it will be reimbursed, and patient must meet the criteria set forth in the policy language.

CPT Codes:	42145 Palatopharyngoplasty (e.g. uvulopalatopharyngoplasty, uvulopharyngoplasty) 94660 CPAP, initiation and management 95800 Sleep study, unattended; heart rate, oxygen saturation, respiratory analysis, sleep time 95801 Sleep study, unattended; heart rate, oxygen saturation, respiratory analysis 95806 Sleep study, unattended; heart rate, oxygen saturation, respiratory airflow, respiratory effort 95807 Sleep study; ventilation, respiratory effort, ECG, oxygen saturation, attended 95808 Polysomnography; sleep staging with 1-3 additional parameters, attended 95810 Polysomnography; sleep staging with 4 or more additional parameters, attended 95811 Polysomnography; sleep staging with 4 or more additional parameters, with initiation of CPAP, attended 95803* Actigraphy testing, 72 hours to 14 days 0466T - hypoglossal nerve stimulation system
HCPCS Codes	G0398 Home sleep study, type II monitor, unattended G0399 Home sleep study, type III monitor, unattended G0400 Home sleep study, type IV monitor, unattended E0601 CPAP device E0485 Oral appliance prefabricated E0486 Oral appliance, custom fabricated S8262 Mandibular repositioning device S2080 Laser assisted uvulopalatoplasty**
CPT Not Covered:	41512 Tongue base suspension, permanent suture technique 41530 Submucosal ablation of the tongue base, radiofrequency, 1 or more sites, per session
HCPCS Not Covered	C9727 Insertion of implants into the soft palate; minimum of 3 implants C9749 Repair of nasal vestibular lateral wall stenosis with implant(s)
ICD10 codes:	E66.2 Obesity Hypoventilation Syndrome F10.182 Sleep DSO of Alcohol F10.282 Sleep DSO of Alcohol F10.982 Sleep DSO of Alcohol F11.182 Sleep DSO of Opioid F11.282 Sleep DSO of Opioid F11.982 Sleep DSO of Opioid F13.182 Sleep DSO of Anxiety

	F13.282 Sleep DSO of Anxiety F13.982 Sleep DSO of Anxiety F14.182 Sleep DSO of Cocaine F14.282 Sleep DSO of Cocaine F14.982 Sleep DSO of Cocaine F15.182 Sleep DSO of Stimulants F15.282 Sleep DSO of Stimulants F15.982 Sleep DSO of Stimulants F51.01 - F51.9 Sleep DSO G47.10 - G47.19 Hypersomnia G47.30 - G47.39 Sleep Apnea G47.411 - G47.59 Narcolepsy and Parasomnia G47.61 Periodic Limb Movement Disorder/Other Sleep DSO G47.69 Periodic Limb Movement Disorder/Other Sleep DSO G47.8 Other Sleep Disorder G47.9 Other Sleep Disorder G25.81 RLS R40.0 Somnloence

* Only covered for Medicare
** Not covered by Medicare

POLICY HISTORY:

Status	Date	Action
New	12/1/2010	New policy
Reviewed	11/23/2011	Reviewed.
Reviewed	10/4/2012	Reviewed.
Reviewed	07/11/2013	No changes
Reviewed	05/22/2014	No changes
Reviewed	05/28/2015	No changes
Reviewed	06/09/2016	CMS update
Reviewed	05/16/2017	Updated coverage language
Reviewed	04/17/2018	Minor updates. Clarified PA.
Reviewed	07/25/2019	No changes
Reviewed	04/22/2020	Added coverage for 0466T (Inspire)
Reviewed	06/25/2020	Added language to use across all LOBs

REFERENCES: The following scientific references were utilized in the formulation of this medical policy. SWHP will continue to review clinical evidence surrounding sleep disorder testing and may modify this policy at a later date based upon the evolution of the published clinical evidence. Should additional scientific studies become available and they are not included in the list, please forward the reference(s) to SWHP so the information can be reviewed by the Medical Coverage Policy Committee (MCPC) and the Quality Improvement Committee (QIC) to determine if a modification of the policy is in order.

1. UpToDate OnLine 18.2, 2010. Overview of Obstructive Sleep Apnea in Adults. www.uptodate.com.
2. UpToDate OnLine 18.2, 2010. Clinical Presentation and Diagnosis of Obstructive Sleep Apnea in adults. www.uptodate.com.
3. UpToDate OnLine 18.2, 2010. Management of Obstructive Sleep Apnea in Adults. www.uptodate.com.
4. UpToDate OnLine 18.2, 2010. Initiation of Positive Airway Pressure Therapy for Obstructive Sleep Apnea in Adults. www.uptodate.com.

5. UpToDate OnLine 18.2, 2010. Oral Appliances in the Treatment of Obstructive Sleep Apnea in Adults. www.uptodate.com.
6. CMS NCD for Sleep Testing for Obstructive Sleep Apnea (OSA) (240.4.1), March 3, 2009.
7. CMS NCD for Continuous Positive Airway Pressure (CPAP) Therapy for Obstructive Sleep Apnea (OSA) (240.4), March 13, 2008.
8. TrailBlazer LCD for Polysomnography and Sleep Studies – 4F – 76AB – R11, April 14, 2009, LCD ID 3314
9. The new AASM criteria for scoring hypopneas: impact on the apnea hypopnea index.
10. Ruehland WR, Rochford PD, O'Donoghue FJ, Pierce RJ, Singh P, Thornton AT.
11. Sleep. 2009 Feb 1;32(2):150-7
12. Clinical guidelines for the manual titration of positive airway pressure in patients with obstructive sleep apnea. Kushida CA, Chediak A, Berry RB, Brown LK, Gozal D, Iber C, Parthasarathy S, Quan SF, Rowley JA; Positive Airway Pressure Titration Task Force; American Academy of Sleep Medicine.J Clin Sleep Med. 2008 Apr 15;4(2):157-71.
13. Practice parameters for the use of autotitrating continuous positive airway pressure devices for titrating pressures and treating adult patients with obstructive sleep apnea syndrome: an update for 2007. An American Academy of Sleep Medicine report.
14. Morgenthaler TI, Aurora RN, Brown T, Zak R, Alessi C, Boehlecke B, Chesson AL Jr, Friedman L, Kapur V, Maganti R, Owens J, Pancer J, Swick TJ; Standards of Practice Committee of the AASM; American Academy of Sleep Medicine.
15. Sleep. 2008 Jan 1;31(1):141-7.
16. Clinical guidelines for the use of unattended portable monitors in the diagnosis of obstructive sleep apnea in adult patients. Portable Monitoring Task Force of the American Academy of Sleep Medicine. Collop NA, Anderson WM, Boehlecke B, Claman D, Goldberg R, Gottlieb DJ, Hudgel D, Sateia M, Schwab R; Portable Monitoring Task Force of the American Academy of Sleep Medicine.
17. J Clin Sleep Med. 2007 Dec 15;3(7):737-47.
18. Practice parameters for the clinical evaluation and treatment of circadian rhythm sleep disorders. An American Academy of Sleep Medicine report. Morgenthaler TI, Lee-Chiong T, Alessi C, Friedman L, Aurora RN, Boehlecke B, Brown T, Chesson AL Jr, Kapur V, Maganti R, Owens J, Pancer J, Swick TJ, Zak R; Standards of Practice Committee of the American Academy of Sleep Medicine Sleep. 2007 Nov 1;30(11):1445-59. Review. Erratum in: Sleep. 2008 Jul 1;31(7):table of contents.