Corporate Medical Policy
Obstructive Sleep Apnea Sleep Testing

Description of Service
There are multiple methods of testing available to diagnose obstructive sleep apnea (OSA). The method used is influenced by symptom severity, comorbid condition status and other patient-centric factors.

Policy Statement
GEHA will provide coverage for the diagnosis and medical management of obstructive sleep apnea in members with symptoms suggestive of OSA when it is determined to be medically necessary because the medical criteria and guidelines as documented below have been demonstrated.

When Testing for Obstructive Sleep Apnea (OSA) is covered

A. Home sleep testing (HST): no preauthorization is required
B. The patient is less than 18 years old: no preauthorization is required
C. Initial in-lab sleep study following postoperative hypoglossal nerve stimulator insertion (CPT 95810)
D. Attended sleep study (polysomnography) exams are considered medically necessary in adult patients (18 years or older) who are at moderately high risk for obstructive sleep apnea (OSA), with the following:
   1. Evidence of daytime sleepiness (not explained by other factors) and/or
   2. Witnessed apneas; and
The presence of any one of the following conditions that inhibit the accuracy of an HST (home sleep study):

   1. Underlying neuromuscular disease such as myasthenia gravis, amyotrophic lateral sclerosis, muscular dystrophy, or CVA with residual respiratory impairment
   2. Moderate to Severe pulmonary disease such as COPD as demonstrated by PFT documentation (P02 < 60 on room air or a PCO2 > 45)
   3. Severe congestive heart failure manifested by a LVEF < 40% or moderate to severe diastolic failure on echocardiogram
   4. Periodic limb movement Disorder (PLMD) (not associated with another disorder such as sleep disordered breathing)
   5. Central apneas previously diagnosed and documented on prior sleep study demonstrating 50% of total respiratory events are central in nature.
   6. Documentation that the patient is mentally or physically impaired to an extent that they, nor their capable aide/caregiver, are capable of operating the HST equipment.
7. HST has been attempted and is negative, inconclusive, or technically inadequate (report submitted for review)
8. Body Mass Index (BMI) greater than 45
9. Obesity hypoventilation syndrome
10. Parasomnias
11. Narcolepsy
12. Severe insomnia
13. Epilepsy
14. Chronic opioid use

E. Multiple sleep latency testing (MSLT) is considered medically necessary for the evaluation of suspected narcolepsy or idiopathic hypersomnia when other sleep disorders have been ruled out by PSG. The MSLT should be performed when an individual is in a fully rested state, during their normal wake hours, and not experiencing sleepiness due to inadequate prior sleep. The MSLT always follows an in-lab PSG (95810) or full night titration (95811) during which the individual’s sleep adequacy is objectively measured. The MSLT should not be performed after a split night study (CPT code 95811).

F. Split-night study:
Split-night study is appropriate if the following 3 criteria are met:

1. An AHI of > 15 is documented during a > 2 hours of diagnostic sleep study and
2. CPAP titration will be carried out for > 3 hours and
3. Criteria is met for an in-lab study

G. Attended Positive Airway Pressure Titration
When an individual meets the above criteria for an attended nocturnal polysomnography sleep study, the following are medically necessary:

1. A split-night sleep study, performed in a healthcare facility or laboratory setting, for diagnosis and PAP titration
2. A full night study for PAP titration, when a split-night sleep study is inadequate or not feasible and the individual has a confirmed diagnosis of OSA
3. To titrate CPAP in persons diagnosed with clinically significant OSA for whom in-laboratory NPSG was medically necessary, but who were unable to undergo a split-night study because they had an insufficient AHI (less than 15) during the first two hours of an attended NPSG; or
4. To titrate CPAP in persons with clinically significant OSA for whom in-laboratory NPSG was medically necessary, and who underwent a split-night study that did not abolish the vast majority of obstructive respiratory events; or
5. To monitor results from CPAP in persons with OSA who have persistent significant symptoms (disturbed sleep with significant arousals) despite documented AHI less than 5 on CPAP and documented compliance with CPAP (CPAP used for 70 percent of nights for four or more hours per night, for two or more months); or
6. To confirm diagnosis of obstructive sleep apnea prior to surgical modifications of the upper airway.

H. Repeat Testing
Repeat attended full-channel nocturnal polysomnography, performed in a health care facility or laboratory setting, as well as repeat PAP titration, is medically necessary for certain individuals who
have persistent or new symptoms, despite documented appropriate current treatment or PAP therapy (e.g., equipment failure, improper mask fit, pressure leaks, unsuccessful titration, inadequate pressure and medical problems including nasal congestion have been addressed and appropriately managed).

**When in-lab Polysomnography is Not Covered**

GEHA considers the following not medically necessary:

1. Failure to meet the above criteria for obstructive sleep apnea testing
2. PAP-NAP (95807-52)
3. MSLT and MWT for OSA not meeting criteria for narcolepsy

**Policy Guidelines**

According to the American Sleep Disorders Association (ASDA) (1997), split-night study NPSG is indicated for patients with an AHI greater than 40 events/hour during the first 2 hours of a diagnostic NPSG. Split-night studies may also be considered for patients with an AHI of 20 to 40 events/hour, based on clinical observations, such as the occurrence of obstructive respiratory events with a prolonged duration or in association with severe oxygen desaturation. Split-night studies require the recording and analysis of the same parameters as a standard diagnostic NPSG. Accepted guidelines provide that the diagnostic portion of a split-night study should be at least 2 hours duration. A minimum of 3 hours sleep is preferred to adequately titrate CPAP after this treatment is initiated.

Following a standard diagnostic NPSG, the available literature indicates that OSA patients should receive CPAP titration to specify the lowest CPAP level, which abolishes obstructive apneas, hypopneas, and snoring in all sleep positions and sleep stages. On occasion, an additional full-night CPAP titration NPSG may also be required following split-night study if the split-night NPSG did not allow for the abolishment of the vast majority of obstructive respiratory events or prescribed CPAP treatment does not control clinical symptoms. Alternatively, persons diagnosed with portable monitoring may be prescribed an auto-titrating positive airway pressure device (APAP) that does not require attended titration.

According to guidelines from the American Academy of Sleep Medicine (Chesson et al, 1997), polysomnography with video recording and additional EEG channels in an extended bilateral montage may be indicated to assist with the diagnosis of paroxysmal arousals or other sleep disruptions that are thought to be seizure related when the initial clinical evaluation and results of a standard EEG are inconclusive.

Accepted guidelines indicate that nocturnal pulse oximetry alone is not appropriately used as a case finding or screening method to rule out OSA. Pulse oximetry, when used alone, has not been shown to have an adequate negative predictive value to rule out OSA i.e., all patients with symptoms suggestive of OSA would require polysomnography regardless of whether the pulse oximetry was positive or negative.

CMS finds that the evidence is sufficient to determine that the results of the sleep tests identified below can be used by a beneficiary’s treating physician to diagnose OSA:

1. Type I PSG is covered when used to aid the diagnosis of OSA in beneficiaries who have clinical signs and symptoms indicative of OSA if performed attended in a sleep lab facility.
2. A type II or type III sleep testing device is covered when used to aid the diagnosis of OSA in beneficiaries who have clinical signs and symptoms indicative of OSA if performed unattended in or out of a sleep lab facility, or attended in a sleep lab facility.

3. A type IV sleep testing device measuring 3 or more channels, one of which is airflow, is covered when used to aid the diagnosis of OSA in beneficiaries who have signs and symptoms indicative of OSA if performed unattended in or out of a sleep lab facility, or attended in a sleep lab facility.

**Background**

**Definitions:**

**Actigraphy:** A measurement of physical activity, typically via a wrist-worn movement sensor, employed to estimate sleep and wakefulness based on relative levels of physical inactivity and activity.

**Apnea:** The cessation of airflow (≥90% decrease in airflow compared to baseline) lasting at least 10 seconds. Apneas are classified as obstructive, central or mixed based on the pattern of respiratory effort. An obstructive Apnea is associated with continued or increased inspiratory effort throughout the entire period of absent airflow. A central Apnea is associated with absent inspiratory effort throughout the entire period of absent airflow. Mixed Apneas are associated with absent inspiratory effort in the initial portion of the event, followed by resumption of inspiratory effort in the second portion of the event (AASM Scoring Manual, 2020).

**Apnea Hypopnea Index (AHI):** The number of Apneas plus the number of Hypopneas, times 60, divided by total sleep time (AASM Scoring Manual, 2020).

**Central Disorders of Hypersomnolence:** Sleep disorders in which the primary complaint is daytime sleepiness not caused by disturbed nocturnal sleep or misaligned circadian rhythms (ICSD-3, 2014).

**Central Sleep Apnea (CSA):** A condition in which a person stops breathing during sleep because the brain temporarily stops sending signals to the muscles that control breathing (Eckert et al., 2007).

**Chronic Pulmonary Disease (CPD):** A method of categorizing the severity of lung function impairment based on forced expiratory volume (FEV1) % predicted. Severity of any spirometric abnormality based on the forced expiratory volume in one second (FEV1).

**Circadian Rhythm:** Circadian rhythms are near-24-hour biological rhythms that exist in all living organisms. The internal circadian clock is synchronized to the 24-hour light-dark cycle (ICDS-3, 2014).

**Circadian Rhythm Sleep-Wake Disorders:** Sleep disorders caused by alterations of the circadian timekeeping system, its entrainment mechanisms or a misalignment of the endogenous Circadian Rhythm and the external environment (ICDS-3, 2014).

**Epworth Sleepiness Scale (ESS):** The ESS is an 8-item questionnaire which is used to determine the level of a person’s daytime sleepiness. The ESS is based on an individual’s assessment of the likelihood of falling asleep in certain situations commonly encountered in daily life. See the following website for further information: http://epworthsleepinessscale.com/about-the-ess/.
Excessive Sleepiness [Somnolence, Hypersomnia, Excessive Daytime Sleepiness (EDS)]: Sleepiness that occurs in a situation when an individual would usually be expected to be awake and alert (Littner et al., 2005).

Home Sleep Apnea Testing: The use of unattended diagnostic studies to assess for OSA without the determination of sleep stage. The term specifies the condition being assessed (i.e., sleep Apnea) by current technology without implying that “sleep” quality, staging or time are determined. Not all such studies are performed at home; however, that is where the vast majority of individuals undergo these tests (AASM Style Guide, 2015). Also referred to as out-of-center sleep testing or portable monitoring.

Hypersomnia (Excessive Sleepiness): A disorder characterized by Excessive Sleepiness (e.g., idiopathic Hypersomnia) (ICSD-3, 2014).

Hypersonolence: Excessive Sleepiness during the normal wake period (ICSD-3, 2014).

Hypopnea: An abnormal respiratory event lasting at least 10 seconds associated with at least a 30% reduction in airflow and with at least a 3% decrease in oxygen saturation from pre-event baseline or the event is associated with an arousal (AASM Scoring Manual, 2020).

Insomnia: A persistent difficulty with sleep initiation, duration, consolidation or quality that occurs despite adequate opportunity and circumstances for sleep, and results in some form of daytime impairment (ICSD-3, 2014).

Maintenance of Wakefulness Test (MWT): A daytime sleep study that measures the ability to stay awake for a defined period of time (Littner et al., 2005).

Multiple Sleep Latency Test (MSLT): A daytime sleep study that measures physiological sleep tendency under standardized conditions in the absence of external alerting factors (Littner et al., 2005).

Narcolepsy: A condition in which a person experiences excessive daytime sleepiness and may fall asleep at unexpected times, such as during work, school or driving. Narcolepsy type 1 is characterized by excessive daytime sleepiness, cataplexy and/or low or absent cerebrospinal fluid hypocretin-1 levels (ICSD-3, 2014). Narcolepsy type 2 is characterized by excessive daytime sleepiness, without cataplexy, with unmeasured or normal cerebrospinal fluid hypocretin-1 levels (ICSD-3, 2014).

Obesity Hypoventilation Syndrome (OHS): A breathing disorder characterized by obesity (BMI > 30 kg/m2) and daytime hypercapnia (arterial PaCO2 > 45 mm Hg) that cannot be fully attributed to an underlying cardiopulmonary or neurologic disease. The condition leads to low oxygen levels and too much carbon dioxide in the blood (ICSD-3, 2014).

Obstructive Sleep Apnea (OSA): The American Academy of Sleep Medicine (AASM) defines Obstructive Sleep Apnea as a sleep related breathing disorder that involves a decrease or complete halt in airflow despite an ongoing effort to breathe. OSA severity is defined as:

Mild for AHI or RDI ≥ 5 and < 15
Moderate for AHI or RDI ≥ 15 and ≤ 30
Severe for AHI or RDI > 30/hr
**PAP-Nap:** PAP-Nap is a daytime, abbreviated cardio-respiratory sleep study for individuals who experience anxiety about starting PAP therapy or are having problems tolerating PAP therapy. The test combines psychological and physiological treatments into one procedure and includes mask and pressure desensitization, emotion-focused therapy to overcome aversive emotional reactions, mental imagery to divert attention from mask or pressure sensations and physiological exposure to PAP therapy during a 100-minute nap period (Krakow et al., 2008).

**Parasomnia:** Parasomnias are undesirable physical events or experiences that occur during entry into sleep, within sleep or during arousal from sleep. They may occur during non-rapid eye movement sleep, rapid eye movement sleep (REM) or during transitions to and from sleep. Parasomnias encompass abnormal sleep related complex movements, behaviors, emotions, perceptions, dreams and autonomic nervous system activity. They are clinical disorders because of the resulting injuries, sleep disruption, adverse health effects and untoward psychosocial effects (ICSD-3, 2014). Also, see RBD.

**Periodic Limb Movement Arousal Index (PLMAI):** The number of PLMS associated with an arousal, times 60, divided by total sleep time (AASM Scoring Manual, 2020).

**Periodic Limb Movement Disorder (PLMD):** A sleep disorder characterized by periodic episodes of repetitive, highly stereotyped limb movements that occur during sleep, in conjunction with clinical sleep disturbance or fatigue that cannot be accounted for by another primary sleep disorder or other etiology (ICSD-3, 2014).

**Periodic Limb Movement Index (PLMI):** The number of PLMS, times 60, divided by total sleep time (AASM Scoring Manual, 2020).

**Periodic Limb Movements of Sleep (PLMS):** Movements of the limbs during sleep occurring with a specified frequency, duration and amplitude (AASM Scoring Manual, 2020).

**Polysomnogram:** A laboratory-based sleep study that uses multiple channels to record a wide range of physiological information, including brain activity, eye movements, body movements, breathing and heart rate (American Thoracic Society, 2015).

**Positive Airway Pressure (PAP):** A PAP device is an air pump (fan-driven or turbine system) that draws in external, filtered air and delivers pressurized airflow to keep an individual’s airway open. PAP devices are divided into four basic types depending on their pressure delivery system:

- **Continuous Positive Airway Pressure (CPAP):** Delivers a steady, fixed flow of air pressure on inhalation
- **Bilevel Positive Airway Pressure (BPAP):** Delivers a higher flow of air pressure on inhalation than exhalation
- **Autotitrating Positive Airway Pressure (APAP):** Automatically changes the flow of air pressure (CPAP or BPAP) based on an individual’s breathing patterns
- **Adaptive Servoventilation (ASV):** Uses a servocontroller to automatically adjust the flow of air pressure by breath-by-breath analysis to maintain a steady minute ventilation (Kushida et al., 2008).

**Rapid Eye Movement Sleep Behavior Disorder (RBD):** A Parasomnia characterized by abnormal behaviors emerging during REM sleep that may cause injury or sleep disruption (ICSD-3, 2014).
**Respiratory Disturbance Index (RDI):** The number of Apneas plus the number of Hypopneas plus the number of Respiratory Effort-Related Arousals, times 60, divided by total sleep time (AASM Scoring Manual, 2020).

**Respiratory Effort-Related Arousal (RERA):** A sequence of breaths characterized by increasing respiratory effort, inspiratory flattening in the nasal pressure or PAP device flow channel or an increase in end-tidal PCO2 (children) leading to an arousal from sleep. Respiratory Effort-Related Arousals do not meet criteria for Hypopnea and have a minimum duration of at least 10 seconds in adults or the duration of at least two breaths in children (AASM Scoring Manual, 2020).

**Respiratory Event Index (REI):** Total number of respiratory events scored, times 60, divided by Monitoring Time. The REI is used for HSAT and is a surrogate for AHI (AASM Scoring Manual, 2020).

**Restless Legs Syndrome (RLS)/Willis-Ekbom Disease:** RLS is a sensorimotor disorder characterized by a complaint of a strong, irresistible urge to move the limbs. This urge to move is often, but not always, accompanied by other uncomfortable sensations felt deep inside the limbs or by a feeling that is difficult or impossible to describe. Although the legs are most prominently affected, these sensations may occur in the arms as well (ICSD-3, 2014).

Obstructive sleep apnea is a disorder that is characterized by obstructive apneas and hypopneas caused by repetitive collapse of the upper airway during sleep. Risk Factors for OSA include patients with all 4 of the following symptoms and are considered to be at high risk for OSA: habitual snoring; observed apneas; excessive daytime sleepiness; and a body mass index (BMI) > 35. If there is no sleep partner to determine witnessed apneas, then factors such as age, neck size, and gender can be considered.

Excessive daytime sleepiness and other factors suggestive of sleep apnea may be subjective and are assessed by questionnaires such as the Epworth Sleepiness Scale (ESS). The sleep fragmentation associated with repeated sleep disruption can lead to impairment of daytime activity. Adult patients with OSA associated daytime somnolence are thought to be at higher risk for vehicular accidents while OSA in children may result in neurocognitive impairment and behavioral problems.

OSA can also affect the cardiovascular and pulmonary systems. OSA can lead to episodic hypoxemia, alveolar hypoventilation, hypercapnia, and acidosis. This is associated with hypertension, cardiac arrhythmias, pulmonary hypertension, and systolic hypertension.

In 2012 Rosen et al published results from the Home PAP study, reported that a home-based strategy for diagnosis and treatment of OSA was non-inferior to in-laboratory PSG. Home PAP was an independently funded multicenter trial of 373 patients with a high pretest probability of moderate severe OSA. Patients were randomized to diagnosis with limited channel portable sleep studies (airflow, respiratory effort, oxygen saturation, electrocardiogram, and body position) and titration with APAP, or to laboratory-based PSG with CPAP titration. Repeat in-lab PSG was required in 11.1% of patients while the technical failure rate in the home arm, requiring in-lab PSG, was 21.4%. The 2 strategies were similar for acceptance of CPAP therapy, titration pressures, effective titrations, time to treatment, and improvement in ESS scores. Kuna et al conducted a non-inferiority trial that compared home testing with a type 3 portable monitor followed by at least 3 nights of APAP versus in-laboratory titration and testing in 296 patients. Patients with an AHI of 15 or more on home monitoring were scheduled for 4- to 5-day APAP titration, while patients with an AHI of less than 15 per hour on home monitoring underwent in-laboratory PSG. Improvement in ESS, Center for Epidemiologic Studies Depression Scale,
Mental Component Summary of the 12-Item Short-Form Health (SF-12), and Functional Outcomes of Sleep Questionnaire (FOSQ) was similar for home-based and hospital based treatment, meeting non-inferiority parameters. Bruyneel and Skomro have also found outcomes to be similar between home diagnosis and treatment in comparison with hospital-based diagnosis (HST) and treatment titration when both strategies are supervised by a sleep medicine specialist. In addition, use of unattended home PSG has also been reported as an alternative to in-lab PSG for patients with comorbidities.

Stepnowsky et al. (2004) examined the nightly variability of AHI in a retrospective comparison of 3 sequential nights of testing performed in the home in 1091 patients who were referred for diagnostic testing of sleep-disordered breathing (SDB). Based on night 1, approximately 90% of patients were classified consistently with "AHI-high" (the highest AHI measured across the 3 nights) using an AHI threshold of 5. However, 10% were misclassified on night 1 relative to the highest AHI level. The authors concluded that there is little, if any, significant nightly change in SDB in the home environment.

The results of these clinical studies demonstrate, that night-to-night variability in home sleep testing is comparable to laboratory-based PSG and that a single night testing can correctly diagnose OSA in the majority of patients with a high pretest-probability of OSA.

In a randomized controlled study involving 102 patients with suspected OSA, Skomro et al. (2010) compared a home-based diagnostic and therapeutic strategy for OSA with in-laboratory PSG and CPAP titration (using mostly split-night protocol). Subjects in the home monitoring arm underwent 1 night of level three testing followed by 1 week of auto-CPAP therapy (Auto-Set) and 3 weeks of fixed-pressure CPAP based on the 95% pressure derived from the auto-CPAP device. After 4 weeks of CPAP therapy, there were no significant differences in daytime sleepiness (ESS), sleep quality, quality of life, blood pressure and CPAP adherence.

Prescribed split-night studies with those in full-night patients, matched 1:2 using an AHI of +/-15% and Epworth score of +/-3 units. There were no differences between the groups in long-term CPAP use, median nightly CPAP use, post-treatment Epworth scores and frequency of nursing interventions/clinic visits required. The median time from referral to treatment was less for the split-night patients than for full-night patients.

Collen et al. (2010) evaluated 400 consecutive patients presenting for follow-up 4-6 weeks after initiating CPAP therapy. Among the patients, 267 and 133 underwent split- and dual-night studies, respectively. The mean number of days between diagnosis and titration in the dual-night group was 80.5 days. There was no difference in therapeutic adherence between groups as measured by percentage of nights used (78.7% vs 77.5%; p = 0.42), hours per night used (3.9 vs 3.9; p = 0.95), or percentage of patients using CPAP for >4 hours per night for >70% of nights (52.9% vs 51.8%; p = 0.81). There was no difference in use after adjusting for severity of disease. The authors concluded that split-night PSG does not adversely affect short-term CPAP adherence in patients with OSA.

The following codes are for reference purposes only and do not imply that the service is covered or non-covered under the member’s benefit policy. Applicable codes may include but are not limited to:

<table>
<thead>
<tr>
<th>CPT/ HCPCS Codes</th>
<th>Definitions</th>
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<tbody>
<tr>
<td>95805</td>
<td>Considered not medically necessary for OSA. Multiple sleep latency or maintenance of wakefulness testing, recording, analysis and interpretation</td>
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Origination Date: Dec 2016          Peer Reviewed: May 2021          Next Review Date: May 2022
of physiological measurements of sleep during multiple trials to assess sleepiness

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<th>Code</th>
<th>Description</th>
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<tr>
<td>95806</td>
<td>Unattended Sleep study, unattended, simultaneous recording of, heart rate, oxygen saturation, respiratory airflow, and respiratory effort (eg, thoracoabdominal movement)</td>
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<tr>
<td>95807</td>
<td>NONCOVERED Sleep study, simultaneous recording of ventilation, respiratory effort, ECG or heart rate, and oxygen saturation, attended by a technologist (monitored for at least six hours)</td>
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<tr>
<td>95807-95806 modifier 52 PAP-NAP</td>
<td>Considered Investigational/Experimental due to insufficient evidence of safety and efficacy</td>
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<td>95808</td>
<td>Polysomnography; any age, sleep staging with 1-3 additional parameters of sleep, attended by a technologist</td>
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<tr>
<td>95810</td>
<td>Polysomnography; age 6 years or older, sleep staging with 4 or more additional parameters of sleep, attended by a technologist</td>
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<tr>
<td>95811</td>
<td>Polysomnography; age 6 years or older, sleep staging with 4 or more additional parameters of sleep, with initiation of continuous positive airway pressure therapy or bi-level ventilation, attended by a technologist</td>
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**Acronym Legend:**

- AASM – American Academy of Sleep Medicine
- AHI – Apnea/Hypopnea Index
- APAP – Automatic Positive Air Pressure
- BMI – Body Mass Index
- CPAP – Continuous Positive Air Pressure
- CSA – Central Sleep Apnea
- ECG – Electro Cardio Gram
- ESS – Epworth Sleepiness Scale
- HST – Home Sleep Test
- MSLT – Multiple Sleep Latency Test
- MWT – Maintenance of Wakefulness Test
- NREM – Non Rapid Eye Movement
- OSA – Obstructive Sleep Apnea
- PAP-NAP – Positive Air Pressure - NAP
- PLM – Periodic Limb Movement
PSG – Polysomnography (Sleep exam)
RCT – Randomized Clinical Trials
RDI – Respiratory Disturbance Index
REI – Respiratory Event Index
REM – Rapid Eye Movement
RERA – Respiratory Effort-Related Arousal
STOP-BANG -- Snoring, Tired, Observed, Pressure, Body Mass Index, Age, Neck Size, Gender

**Scientific References**


Epstein LJ; Kristo D; Strollo PJ; Friedman N; Malhotra A; Patil SP; Ramar K; Rogers R; Schwab RJ; Weaver EM; Weinstein MD. Clinical guideline for the evaluation, management and long-term care of obstructive sleep apnea in adults. J Clin Sleep Med 2009; 5(3):263-276


Kotecha, Bhik T., and Andy C. Hall. Role of surgery in adult obstructive sleep apnea. Sleep medicine reviews 18.5 (2014): 405-413.


**Policy implementation and updates**

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>Dec 2019</td>
<td>Background with supporting evidence added. Updated referencing. Clarification of benefit application language. No changes in benefit coverage.</td>
</tr>
<tr>
<td>June 2020</td>
<td>Updated references and medical coding. No change in benefit coverage.</td>
</tr>
<tr>
<td>April 2021</td>
<td>Added inclusive criteria for in-lab polysomnography; Added attended PAP titration and repeat testing criteria; added medical terminology definitions to background</td>
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