



**BlueCross BlueShield
of Vermont**

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Corporate Medical Policy

Sleep Disorders Diagnosis and Treatment

File name: Sleep Disorders Diagnosis and Treatment

Origination: 8/00

Last Review: 10/07

Next Review: 10/2008

Effective Date: 2/18/08

Description

Sleep apnea syndrome is a breathing disorder characterized by the cessation of breathing for at least ten seconds, which occurs repetitively throughout the night and may be accompanied by hypoxia and hypercapnia; hypopnea is a reduction but not cessation of air exchange. Apnea may occur as a result of failure of respiratory drive (central apnea), obstruction of the upper airway (obstructive apnea), or a mixed pattern (mixed apnea) during sleep.

The initial evaluation of patients suspected of having sleep apnea syndrome should include a thorough medical and sleep history (including family or bed partner observations), and a physical examination including laboratory serologic testing, and possibly a detailed sleep log and/or psychological testing. A component of this evaluation should be a calculation of the Epworth sleepiness scale, a popular, quick, and easy self-administered questionnaire that asks patients their likelihood of falling asleep in 8 situations ranked from 0 (would never doze) to 3 (high chance of dozing). The numbers are then added together to give a global score between 0 and 24. A value of 10 or below is generally considered normal. The 8 situations are as follows:

1. Sitting and reading
2. Watching TV
3. Sitting inactive in a public place, i.e., theater
4. As a passenger in a car for 1 hour without a break
5. Lying down to rest in the afternoon when circumstances permit
6. Sitting and talking with someone
7. Sitting quietly after lunch without alcohol
8. In a car, while stopped for a few minutes in traffic

If there is a high suspicion of sleep apnea syndrome after evaluating a patient, a sleep study may be indicated to establish a diagnosis.

Sleep studies or polysomnographs refer to the collective process of monitoring and recording physiologic data during sleep. They are scored according to how many times per hour the patient stops breathing for more than 10 seconds (apnea), or significantly decreases the air exchange in breathing (hypopnea). The total number of apneas and hypopneas per hour of sleep is referred to as the apnea-hypopnea index (AHI) or respiratory disturbance index (RDI). A RDI of 5 or greater indicates that the patient may have sleep apnea. An RDI of 5 – 15 or 10 – 20 indicates mild, 20 – 30 indicates moderate, and over 30 indicates severe obstructive sleep apnea. It is estimated that 1 – 5% of adult females and 1 – 15% of adult males have obstructive sleep apnea.

Medical treatments of an RDI>5 include weight loss, positioning instruction, and oral appliances. On average, a 10% weight loss produces an improvement of 50% in the respiratory disturbance index (RDI). Oral appliances act by holding the mandible and tongue forward during sleep. While this does not result in a cure, it can reduce the RDI. Some studies show a reduction rate of 50% in the RDI, however compliance remains a problem for these services.

Patients with a RDI greater than five may require the use of various devices that maintain positive air pressure in the upper airway to keep it open during sleep. These pressure devices include continuous positive airway pressure (CPAP), bi-level positive airway pressure (BiPAP) and auto-adjusting positive airway pressure (APAP).

Some patients with sleep apnea may need surgery. Although several surgical procedures are used to increase the size of the airway, none of them are completely successful or without risks. More than one procedure may need to be tried before the patient realizes any benefits.

Policy

Benefits are subject to all terms, limitations and conditions of the subscriber contract.

For New England Health Plan (NEHP) members an approved referral authorization is required for all durable medical equipment (DME).

Polysomnography, Multiple Sleep Latency Testing (MLST), CPAP, BiPAP, APAP, Uvulopalatopharyngoplasty, (UPPP), and oral appliances require prior approval by the Plan.

The Plan provides benefits for sleep apnea and breathing related sleep disorders diagnosis and treatment when treatment is determined to be medically necessary because the medical criteria and guidelines shown below are met.

When service or procedure is covered

Polysomnography CPT 95807 – 95810 (requires prior approval)

Currently, polysomnography (PSG), which requires an overnight stay in a sleep laboratory, is the optimum test for diagnosing sleep apnea. It includes evaluation of sleep staging, airflow and ventilatory effort, arterial oxygen saturation, electrocardiogram (single lead), body position, eye movement (electro-oculogram), and periodic limb movements (e.g., anterior tibialis EMG to assess sleep-associated leg movements). Determined from the collective data are total sleep time, sleep latency, arousals after sleep onset, time spent in non Rapid Eye Movement (REM) and REM sleep, central and obstructive sleep apneas, and the severity of sleep apnea syndrome (SAS) in terms of the apneas and/or hypopneas per hour. Only one polysomnogram is needed to confirm a diagnosis of SAS. A CPAP Titration Study CPT 95811 may be required to adjust the nasal CPAP device. When the diagnosis of obstructive sleep apnea can be established during the first half of the night, the CPAP Titration Study should be performed during the second half of the night in a “split-night study”. It is imperative that someone with expertise in sleep disorders interprets a sleep study since an accurate diagnosis is crucial to avoid under-treatment or over-treatment of patients.

Polysomnography may be considered medically necessary for the diagnosis of sleep apnea or narcolepsy if any one of the absolute indications is present, or if two or more of the relative indications are present.

Absolute Indications (any one criterion):

- Witnessed sleep apnea

- Daytime severe hypersomnolence such as falling asleep while engaged in specific activities such as talking, driving, or operating equipment where somnolence would appear grossly abnormal (Epworth Sleepiness Scale > 10)
- Unexplained hypertension or arrhythmia associated with pronounced snoring or restlessness
- An approved multiple sleep latency test (MSLT) for narcolepsy if the PSG was not done in the recent (less than 90 days) past
- CPAP titration in proven sleep apnea
- Unexplained seizure-like activity in children during sleep

Relative Indications (any two or more criteria)

- Mild daytime hypersomnolence such as involuntarily falling asleep reading or watching television (Epworth Sleepiness Scale 5 – 10)
- Obesity (BMI 30 or higher and/or neck circumference greater than 17 inches)
- Personality changes
- Strong family history of obstructive sleep apnea (three or more affected first or second degree relatives)
- New onset poor judgment, work related problems, intellectual deterioration, memory impairment, cognitive impairment
- Evidence of disordered sleep including loud, cyclic snoring, restlessness, thrashing, morning headaches, limb twitching, or frequent nocturnal awakenings
- Sleepwalking and night terrors in children
- Secondary (onset after age 10) enuresis associated with apparent hypersomnolence
- Potentially dangerous behavior for the patient or bed partner
- Polycythemia

Multiple Sleep Latency Testing (MSLT) CPT 95805 (requires prior approval)

A multiple sleep latency test involves repeated measurement of sleep latency, which is the time to the onset of sleep. The test is performed in the daytime under standardized and controlled conditions following quantified nocturnal sleep. Usually two to six tests are performed, one testing every two hours, to measure daytime sleep tendency. A mean latency of five minutes or less indicates severe excessive sleepiness.

Criteria for MSLT:

- Sudden, brief (about 15 minutes) sleep attacks that may occur during any type of activity; or
- Cataplexy – sudden loss of muscle tone involving specific small muscle groups or generalized muscle weakness that may cause the person to slump to the floor, unable to move, often associated with emotional reactions and sometimes confused with a seizure disorder; or
- Sleep paralysis – a generalized flaccidity of muscles with full consciousness in the transition zone between sleep and waking; or
- Hypnagogic hallucinations, visual or auditory, which may precede sleep or occur during the sleep attack.

- Epworth greater than 10 with a normal PSG. MSLT to be done within 90 days of PSG to evaluate for idiopathic hypersomnolence or hypersomnia

Treatment of Obstructive Sleep Apnea (OSA)

- Treatment is based upon the severity of symptoms; sleep study (PSG) findings, and specific patient attributes. Comprehensive treatment must address the underlying cause.
- Emphasis must be given to weight loss in obese patients and cessation of smoking if applicable. Other treatments should not be delayed pending weight loss.
- Nasal CPAP is nearly 100% effective.
- Treatment may be considered medically necessary for an Apnea-Hypopnea (respiratory distress) Index (AHI or RDI) of five or higher.
- Treatment is not considered medically necessary for snoring alone. However, treatment may be considered medically necessary for significant daytime somnolence (Epworth >5) associated with a normal RDI but a snoring arousal index of 10 or higher.
- Oxygen supplementation may be required.
- BiPAP may be required if patients have accompanying hypoventilation or require high pressures.

Relief of obstruction

- Oral appliances CPT codes E0485-E0486 (require prior approval)
 - May be indicated for mild to moderate sleep apnea
 - May be medically necessary for Upper Airway Resistance Subtype (UARS) if PSG documented snoring is followed by frequent arousals and/or decrease in oxygen saturation by 5% or more
- Nasal decongestants or steroids
- Surgery as indicated based upon patient anatomy for patients who have failed weight loss and CPAP or BiPAP
 - Tonsillectomy and/or adenoidectomy
 - Nasal septoplasty (if indicated)
 - Uvulopalatopharyngoplasty (UPPP CPT code 42145) may be considered medically necessary only for patients with obstructive sleep apnea who meet the CPAP criteria and who have failed CPAP treatment. UPPP requires prior approval. Under individual consideration, UPPP may be considered a covered benefit when it is associated with other elective oropharyngeal surgery and prior approval is obtained.
 - Hyoid suspension, surgical modification of the tongue, and/or maxillofacial surgery including mandibular or maxillary advancement surgery for patients with obstructive sleep apnea and objective documentation of hypopharyngeal obstruction who have not responded or do not tolerate CPAP.
 - Tracheostomy may be medically necessary for severe sleep apnea not manageable by other interventions

CPAP Titration Study CPT 95811 (does not require prior approval)

A CPAP Titration Study (CPT 95811) may be considered medically necessary to establish or re-establish the level of CPAP required to optimize respiratory support for members who have approval for CPAP. CPAP Titration Studies do not require prior approval.

CPAP, BiPAP, or APAP (require prior approval)

CPAP (E0601) may be considered medically necessary for:

- Patients in whom polysomnography has documented sleep disordered breathing, with an RDI (respiratory disturbance index) of greater than fifteen, or
- Patients in whom polysomnography has documented sleep disordered breathing, with an RDI (respiratory disturbance index) of greater five and any of the following associated symptoms:
 - Excessive daytime sleepiness
 - Impaired cognition
 - Mood disorders
 - Insomnia
 - Documented hypertension
 - Ischemic heart disease
 - History of stroke
- Patients who do not have sleep apnea, but who have restrictive lung disease and documented desaturation at night, requiring nocturnal ventilation
- Under individual consideration APAP may be allowed in selective patients in lieu of repeated CPAP titration when the attending sleep center physician indicates that, in his/her opinion the member would be a suitable candidate for this approach based upon member's knowledge, behavior, and health status..

BiPAP (E0470-E0471) and APAP (E0601) may be considered medically necessary in patients with clinically significant obstructive sleep apnea AND who have failed a prior trial of CPAP

A heater and humidifier may be considered medically necessary for use with CPAP, BiPAP, or APAP, and should be provided during the initial trial period and with the rental to purchase agreement.

CPAP/BIPAP supplies including face mask are included in the initial rental to purchase.

Replacement of the mask A7030 may be considered medically necessary if the member is not able to tolerate CPAP during this period. In this case replacement of the face mask during the rental period may be authorized on an exception basis and would require prior approval.

If the above medical necessity criteria are met, a 90 day rental trial of CPAP/BIPAP will be authorized. In order to consider benefits beyond the 90 day rental trial the Plan requires a report from the CPAP/BIPAP machine demonstrating the hours of usage from the device itself or from the Smartcard in order to evaluate compliance. The date the CPAP/BIPAP was set up and the date of the compliance report must also be submitted with the hours of usage information. Rental to purchase will be authorized if compliance is greater than or equal to 4 hours per night 6 nights per week. If compliance is less than this, reevaluation and counseling by the sleep specialist is required to ensure that the equipment is properly fitted and being used properly and that the member has a full understanding of the medical necessity of treatment and the risks of undertreatment. Following this evaluation an additional 30 day trial will be authorized.

When service or procedure may not be covered

Unattended polysomnography is considered not medically necessary.

CPAP/BIPAP supplies build separately during the rental period.

CPAP: When there is persistent noncompliance with CPAP despite reevaluation and counseling by the sleep physician and the member continues to use CPAP less than 4 hours per night, 6 days per week additional rental to purchase will not be authorized without consultation with an otolaryngologist and/or oral surgeon to consider other treatment options.

When a diagnosis of obstructive sleep apnea (OSA) has been established, a repeat polysomnography CPT code 95810 is considered not medically necessary. However, if a member with known OSA still meets criteria for a PSG following surgery for OSA, a CPAP titration would be considered medically necessary and does not require prior approval. If, in this setting, the symptoms are due to unrelated causes and a CPAP titration is initiated but not completed due to an absence of OSA, retrospective prior approval for the PSG in lieu of the attempted CPAP titration would be considered medically necessary.

Polysomnography is not medically necessary in the evaluation of snoring in the absence of other symptoms suggesting sleep apnea.

Polysomnography is not medically necessary in the evaluation of obesity in the absence of other symptoms suggesting sleep apnea

Multiple Sleep Latency Testing (MSLT) is not medically necessary in the diagnosis of sleep apnea except where required to establish a diagnosis of narcolepsy.

Portable Home Polysomnography is considered investigational.

Topographic Electroencephalogram (EEG) mapping is considered investigational in the diagnosis and/or management of sleep apnea

Infant Apnea Monitoring is distinct from sleep apnea syndrome and is covered under a separate policy. Refer to the home apnea monitor policy

Information required (if plan approval required)

Clinical summary or office notes that contain sufficient clinical information to determine medical necessity based upon above criteria.

For CPAP, BiPAP, and APAP the polysomnogram report is required

The Plan may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Billing and Coding/Physician Documentation Information

See Attachment I.

Vermont Eligible Providers

Allopathic Physicians (M.D.)
Osteopathic Physicians (D.O.)
Durable Medical Equipment (DME) providers

Definitions

Apnea-hypopnea index (AHI) or Respiratory disturbance index (RDI) - the total number of apneas and hypopneas per hour of sleep.

Central Sleep Apnea – (CSA) occurs when the brain fails to send the appropriate signals to the breathing muscles to initiate respirations. CSA is less common than obstructive sleep apnea.

Continuous positive airway pressure (CPAP) In this procedure, the patient wears a mask over the nose during sleep, and pressure from an air blower forces air through the nasal passages. The air pressure is adjusted so that it is just enough to prevent the throat from collapsing during sleep. The pressure is constant and continuous.

Hypopnea is defined as either a 33% reduction in airflow for at least 10 seconds or a 4% or greater decrease in oxygen saturations while the patient is still breathing.

Polysomnography is a test that records a variety of body functions during sleep, such as the electrical activity of the brain, eye movement, muscle activity, heart rate, respiratory effort, airflow, and blood oxygen levels. These tests are used both to diagnose sleep apnea and to determine its severity.

Multiple Sleep Latency Test (MSLT) measures the speed of falling asleep.

Obstructive Sleep Apnea - (OSA) is caused by a blockage of the airway, usually when the soft tissue in the rear of the throat collapses and closes during sleep.

Tracheostomy is used in persons with severe, life-threatening sleep apnea. In this procedure, a small hole is made in the windpipe and a tube is inserted into the opening.

Uvulopalatopharyngoplasty (UPPP) is a procedure used to remove excess tissue at the back of the throat (tonsils, uvula, and part of the soft palate).

Policy Implementation/Update information

9/2000, 12/02, added TVHP medical director to signature, removed applies to section, reformatted added when services are covered and not covered sections

8/03 updated resources & added definitions and new HCPC codes with the establishment of absolute and relative criteria based upon literature review, research, and BCBSVT Specialty Advisory Committee consensus including Vermont sleep specialty physicians from network community hospitals and tertiary care centers.

Reviewed 11/05 clinical information regarding CPAP/BIPAP compliance was added.

Reviewed 12/06 – 01/07 incorporating feedback from Vermont network sleep specialty physicians and updated BCBSA Medical Policy. Epworth sleepiness scale added to policy.

This policy was reviewed and approved by the BCBSVT Clinical Advisory Committee in March 2007.

12/07 revised with 2 more relative indications added to criteria and criteria for repeat PSG added. To be reviewed by the CAC 1/08.

Scientific background and Reference Resources

Blue Cross Blue Shield Association Medical Policy Reference Manual 11/96, 12/02, 04/05 with updated literature review in July, 2005.

Blue Cross Blue Shield of North Carolina 7/02

TEC Assessment 5/96

<http://www.sleepfoundation.org/publications/sleepap.html> Sleep Apnea

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Approved by BCBSVT and TVHP Medical Directors:

Stephen E. Perkins, M.D. (BCBSVT) and Frank Provato, M.D. (TVHP) Date Approved:

ATTACHMENT I
Sleep Disorders Diagnosis and Treatment

Code Type	Code Number	Brief Description	Special Instructions
CPT	42145	Uvulopalatopharyngoplasty	Requires Prior Approval
CPT	95805	Multiple Sleep Latency Test	Requires Prior Approval
CPT	95806	Sleep Study, unattended	Not Covered
CPT	95807	Sleep Study, attended	Requires Prior Approval
CPT	95808 – 95810	Polysomnogram, attended	Requires Prior Approval
CPT	95811	CPAP Titration Study	Prior Approval not required
ICD-9-P	89.17	Polysomnogram	Requires Prior Approval
ICD-9-P	93.90	CPAP & BiPAP	Prior Approval not required for Hospital Use
ICD-9	780.09	Somnolence	
ICD-9	789.51	Sleep Apnea with Insomnia	
ICD-9	780.53	Sleep Apnea with Hypersomnolence	
ICD-9	780.57	Sleep Apnea, Unspecified	
ICD-9	347	Cataplexy and Narcolepsy	
HCPCS	A7027 - A7030	Face Mask and mask supplies for CPAP	One Face Mask is considered inclusive to initial rental of CPAP. Replacement face mask is covered when required, Prior Approval is not required unless the purchase price is greater than \$250.00. For GE members prior approval is not required unless purchase price is greater than \$1,000.00
HCPCS	A7031 – A7039 A7044 – A7046	CPAP Supplies	Included with rental. Authorized for reimbursement only after purchase of CPAP, BiPAP, or APAP Prior Approval is not required unless the purchase price is greater than \$250.00. For GE members prior approval is not required unless purchase price is greater than \$1,000.00
HCPCS	E0470 – E0471	BiPAP Devices	Requires Prior Approval
HCPCS	E0472	BiPAP with tracheostomy tube	Prior Approval not required
HCPCS	E0485 – E0486	Oral Appliance for Sleep Apnea	Requires Prior Approval
HCPCS	E0561 – E0562	Humidifier w/ or w/o Heater for CPAP, BiPAP, and APAP	No prior approval required for rental to purchase when obtained with initial approval for the CPAP/BIPAP rental and purchase. Replacement of heater/humidifier does not require Prior Approval unless purchase price is greater than \$250.00. For GE members prior approval is not required unless purchase price is greater than is greater than \$1,000.00
HCPCS	E0601	CPAP or APAP Device	Requires Prior Approval