Benefit Coverage:
Covered Benefit for lines of business including: Health Benefits Exchange (HBE), Rite Care (MED), Children with Special Needs (CSN), Substitute Care (SUB), Rhody Health Partners (RHP), Rhody Health Expansion (RHE), Rhody Health Options (RHO) Unity, Rhody Health Options (MMP)

Excluded from Coverage: Extended Family Planning (EFP)

Approval is based on review of the medical necessity documentation.

Description
Polysomnography is a diagnostic test for obstructive sleep apnea (OSA), a disorder characterized by repetitive episodes of apnea or reduced inspiratory airflow due to upper airway obstruction during sleep. During polysomnography, the patient sleeps while connected to a variety of monitoring devices that record physiologic variables.

Polysomnography is considered the gold standard diagnostic test when it is performed overnight in a sleep laboratory with a technologist in attendance. In some patients, the diagnostic evaluation may be performed at home without a technician in attendance. Polysomnography is distinguished from sleep studies by the inclusion of sleep staging. Sleep staging assesses the arousals from sleep and determines the frequency of apneas and hypopneas. An example of a sleep study (without staging) is the Multiple Sleep Latency Test for suspected narcolepsy.

Sleep apnea can be further categorized as obstructive (most common), central, and complex. AHI (Apnea-Hypopnea Index) is an index used to assess the severity of sleep apnea based on the total number of complete cessations (apnea) and partial obstructions (hypopnea) of breathing occurring per hour of sleep. These pauses in breathing must last for 10 seconds and are associated with a decrease in oxygenation of the blood. Respiratory Disturbance Index (RDI) is the total number of events (e.g., apneas, hypopneas and RERAs (respiratory effort related arousals)) per hour of sleep. OSA severity is defined as Mild for AHI or RDI > 5 and <15, Moderate for AHI or RDI > 15 and <30 and severe for AHI or RDI >30.

Coverage Determination
Neighborhood Health Plan of Rhode Island (Neighborhood) covers polysomnography and sleep studies as a clinical option when determined medically necessary by the Medical Management Department. Prior authorization is required for the facility based polysomnography or sleep study.

Criteria
It would be expected that the provider has a discussion with the patient about the treatment of OSA to determine whether the patient is a good candidate for CPAP/BPAP.

Home/Unattended polysomnography or sleep studies are covered when all the following criteria are met.

1. Type II or Type III home sleep test used. (Type II: Comprehensive, portable sleep study, minimum of 7 parameters including EEG, EOG, chin EMG, ECG/heart rate, airflow, respiratory effort, oxygen saturation; Type III: Modified portable sleep apnea testing – minimum of 4 parameters including ventilation(2 respiratory movement/airflow), ECG/heart rate, oxygen saturation). Sleep studies using...
devices that do not provide measurement of the AHI and oxygen saturation are not considered medically necessary because they do not provide sufficient information to prescribe treatment. Examples include the Biancamed Sleep Minder, SNAP testing with fewer than three channels and the SleepImage Sleep Quality Screeneer

2. Adult ≥ 18 years
3. High pretest probability of OSA with an Epworth Sleepiness Scale score of at least 10 and 3 of the following symptoms – habitual snoring, observed apneas, wakes choking and gasping for air, morning headaches, excessive daytime sleepiness, body mass index >35, failed lifestyle modifications for symptoms relief, (reduced alcohol consumption, weight loss)
4. The test shall be interpreted by a physician qualified to read full sleep studies. (Board Certified in Sleep Medicine, have completed the necessary training requirements to take the exam in sleep medicine or active staff membership of a sleep center or laboratory accredited by the American Academy of Sleep Medicine (AASM) or the Joint Commission)
5. The testing is done in conjunction with a comprehensive sleep evaluation by a physician as described in #4.

A repeat Home Sleep Study would be considered medically necessary in circumstances where the initial study was technically inadequate (equipment malfunction, lead displacement).

Auto-titrating continuous positive airway pressure devices are considered medically necessary when used in the self-adjusting mode for unattended treatment or in an unattended way in the home, to determine a fixed CPAP treatment pressure for patients with continued OSA without significant co-morbidities. Positive home sleep studies requiring CPAP titration must use Auto-titrating continuous positive airway pressure devices (APAP). In facility CPAP titration is not considered medically necessary after home sleep studies because the member would not have met the criteria for in facility testing.

Criteria for Pediatric in facility polysomnography

Attended Full Channel Nocturnal Polysomnography (NPSG)/Laboratory(Facility) Sleep Testing (LST) is covered when one the following criteria are met – Prior authorization is required

1. High pretest probability of OSA - A thorough sleep and medical history must be submitted including sleep/wake schedule, difficulties initiation or maintaining sleep (bed time routine), daytime accompaniments (pre-sleep activities), abnormal movements or behavior during sleep, interventions/strategies trialed and results, medications used and results, and if possible a sleep log and
2. Current literature supports performing polysomnography in children/adolescents with snoring and symptoms/signs of OSA. Adenotonsillectomy is usually the first line of therapy in patients with adenotonsillar hypertrophy with proven OSA. Therefore, sleep studies will be approved in pediatric patients with adenotonsillar hypertrophy prior to surgery. Sleep studies will also be approved for suspicion of OSA (snoring and symptoms/signs of OSA) when there is minimal
adenotonsillar tissue or when adenotonsillectomy is contraindicated or when symptoms of OSA remain after surgery or

3. Suspicion of complex sleep disorder such as narcolepsy, parasomnias, periodic limb movement disorder. Polysomnography is not indicated for evaluation of difficulty initiating or maintaining sleep (insomnia), circadian rhythm disorders, uncomplicated parasomnias, restless legs syndrome, bruxism, behaviorally based sleep problems, chronic lung disease or depression.

Criteria for Adult in facility polysomnography

1. High pretest probability of OSA with an Epworth Sleepiness Scale score of at least 10 and three of the following symptoms – habitual snoring, observed apneas, wakes choking and gasping for air, morning headaches, excessive day time sleepiness body mass index >35, failed lifestyle modifications for symptoms relief (weight loss, reduced alcohol consumption, weight loss) AND
2. Cardiac disease including congestive heart failure (NYHA Class 3 or 4), uncontrolled persistent arrhythmia, pulmonary hypertension, recent (6months) myocardial infarction or
3. Chronic Pulmonary disease including COPD requiring oxygen, lung disease not controlled by medical therapy, obesity hypoventilation syndrome or
4. Neurologic disorders including previous cerebrovascular accident/TIA, nocturnal seizures, Parkinson’s disease, amyotrophic lateral sclerosis, neurodegenerative disorders resulting in muscular weakness or cognitive impairment (patient unable to perform home sleep study) or
5. Suspicion of complex sleep disorder such as narcolepsy, parasomnias, periodic limb movement disorder. (Polysomnography is not indicated for evaluation of difficulty initiating or maintaining sleep (insomnia), circadian rhythm disorders, uncomplicated parasomnias, restless legs syndrome, bruxism, behaviorally based sleep problems, or depression) or
6. Member lacks mobility or dexterity to use the HST equipment safely at home or
7. BMI ≥ 50 or
8. Suspicion of central sleep apnea – symptoms of CSA (daytime sleepiness, insomnia, morning headaches, nocturnal angina, witnessed apneas) and risk factors for CSA (heart failure, Cerebrovascular accident, use of long acting opioid).

A repeat supervised facility polysomnography (must meet the criteria listed above) may be considered medically necessary if one of the criteria is met: Prior authorization is required.

1. To assess the continued need for CPAP for example if there is a change in weight or surgical correction of OSA
2. To confirm the presence of OSA in patients before they undergo upper airway surgery for snoring or OSA
3. To assess patients who are not doing well with APAP or have a failure of resolution of symptoms or recurrence with fixed CPAP
4. To assess whether positive airway pressure treatment settings needs to be changed.
5. If the split night NPSG did not allow for the abolishment of the vast majority of obstructive respiratory events
CPAP Titration performed in a health care facility is medically necessary if done as part of a split night study (see below) or in patients who have met the above criteria for attended full channel nocturnal polysomnography studies and have been diagnosed with OSA as determined by either of the following:

- The split night was not feasible because the CPAP titration portion was insufficient or the AHI in the first two hours of testing was less than 20
- Follow up in patients with persistent or new symptoms despite current CPAP treatment.

A split night study in the facility setting is appropriate if the following criteria are satisfied during a facility based test. The initial request for a facility based test must have been approved as per the criteria above. Prior authorization is required.

1. The Apnea Hypopnea Index (AHI) is greater than 40 in the first 2 hours of the diagnostic sleep study. It may be considered for an AHI of 20 to 40/hour based on clinical judgment.
2. The polysomnography documents that CPAP eliminates or nearly eliminates the respiratory events during rapid eye movement (REM) and non-REM sleep, including REM sleep with the patient in the supine position
3. CPAP titration is carried out for more than 3 hours because respiratory events can worsen as the night progresses.

Exclusions

1. Home testing is excluded for:
   - General screening of asymptomatic populations or low risk patients
   - Co-morbidities listed as requiring nocturnal polysomnography
2. Actigraphy is not proven for evaluation of sleep related breathing disorders
3. Multiple sleep latency testing (MSLT) and the maintenance of wakefulness test are unproven for the evaluation and diagnosis of obstructive sleep apnea
4. Auto-titrating positive airway pressure (APAP) is not recommended to diagnose OSA.
5. Repeat in facility polysomnography for initial negative sleep studies will not be covered within one year from the initial study.
6. Pediatric Behavioral disorders

*For More information on Coding please reference the Authorization Quick Reference Guide

**CMP Number:** 057

**CMP Cross Reference:**
References:

Agency for Healthcare Research and Quality National Guideline Clearinghouse – Guideline Summary NGC-7517 Clinical guideline for the evaluation, management and long-term care of obstructive sleep apnea in adults.


Centers for Medicare & Medicaid Services (CMS). (03/03/09). Decision Memo for Sleep Testing for Obstructive Sleep Apnea (OSA) CAG 00405N. http://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=227&ver=11&NcaName=Sleep+Testing+for+Obstructive+Sleep+Apnea+(OSA)&CoverageSelection=National&KeyWord=sleep+testing&KeyWordLookUp=Title&KeyWordSearchType=And&bc=gAAAACAAEAAA&

Morales et al. (11/2012). In-home, self-assembled sleep studies are useful in diagnosing sleep apnea in the elderly. Sleep 2012 Nov 1;35(11):1491-501


Rosen et al. (06/12). A Multisite Randomized Trial of Portable Sleep Studies and Positive Airway Pressure Auto-titration verses Laboratory-Based Polysomnography for the Diagnosis and Treatment of Obstructive Sleep Apnea: The HomePAP study. Sleep. 2012 June 1; 35(6): 757-767

Tedeschi et al. (10/08) Home Unattended Portable Monitoring and AutoCPAP titration in patients with high risk for Moderate to Severe OSA Respir Care 2012 Oct 8


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