I. Policy: Polysomnography and Sleep Studies

II. Purpose/Objective:
To provide a policy of coverage regarding Polysomnography and Sleep Studies

III. Responsibility:
A. Medical Directors
B. Medical Management

IV. Required Definitions
1. Attachment – a supporting document that is developed and maintained by the policy writer or department requiring/authoring the policy.
2. Exhibit – a supporting document developed and maintained in a department other than the department requiring/authoring the policy.
3. Devised – the date the policy was implemented.
4. Revised – the date of every revision to the policy, including typographical and grammatical changes.
5. Reviewed – the date documenting the annual review if the policy has no revisions necessary.

V. Additional Definitions
Medical Necessity or Medically Necessary means Covered Services rendered by a Health Care Provider that the Plan determines are:

a. appropriate for the symptoms and diagnosis or treatment of the Member’s condition, illness, disease or injury;
b. provided for the diagnosis, and the direct care and treatment of the Member’s condition, illness disease or injury;
c. in accordance with current standards of good medical treatment practiced by the general medical community.
d. not primarily for the convenience of the Member, or the Member’s Health Care Provider; and
e. the most appropriate source or level of service that can safely be provided to the Member. When applied to hospitalization, this further means that the Member requires acute care as an inpatient due to the nature of the services rendered or the Member’s condition, and the Member cannot receive safe or adequate care as an outpatient.

Medicaid Business Segment
Medical Necessity shall mean a service or benefit that is compensable under the Medical Assistance Program and if it meets any one of the following standards:

(i) The service or benefit will, or is reasonably expected to, prevent the onset of an illness, condition or disability.
(ii) The service or benefit will, or is reasonably expected to, reduce or ameliorate the physical, mental or development effects of an illness, condition, injury or disability.
(iii) The service or benefit will assist the Member to achieve or maintain maximum functional
capacity in performing daily activities, taking into account both the functional capacity of the Member and those functional capacities that are appropriate for members of the same age.

**DESCRIPTION:**
Polysomnography testing is used to diagnose sleep disorders. It includes the following measurements: the electrophysiologic indices of sleep staging (EEG, EOG, EMG); electromechanical indices contrasting respiratory effort with actual ventilation (chest or abdomen movement; airflow at the nose and mouth); and consequences of apneic events, including electrocardiograms and pulse oximetry.

*In the clinical guidelines of the American Academy of Sleep Medicine, there are four types of monitoring devices:*

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Comprehensive standard overnight polysomnography in a sleep center or laboratory with a sleep technician in constant attendance.</th>
<th>Minimum of 7 parameters including EEG, EOG, chin EMG, ECG or heart rate, airflow, respiratory effort, oxygen saturation</th>
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<tbody>
<tr>
<td>Type 2</td>
<td>Comprehensive, portable sleep study</td>
<td>Minimum of 7 parameters including EEG, EOG, chin EMG, ECG or heart rate, airflow, respiratory effort, oxygen saturation</td>
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<tr>
<td>Type 3</td>
<td>Modified, portable sleep apnea testing</td>
<td>Minimum of 4 parameters, including ventilation (at least 2 channels of respiratory movement, or respiratory movement and airflow), heart rate or ECG, oxygen saturation</td>
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<tr>
<td>Type 4</td>
<td>Unattended sleep testing</td>
<td>Minimum of three parameters, including oximetry</td>
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**Multiple sleep latency testing (MSLT)** involves several 20 minute nap opportunities offered at 2 hour intervals to assess an individual’s sleep tendency by measuring the number of minutes it takes the individual to fall asleep as well as the premature occurrences of REM sleep.

**INDICATIONS:**
I. Polysomnography testing may be an eligible benefit when provided in a facility based sleep study laboratory which meets **ALL** of the following criteria:
   a. The center is under the direction and control of physicians. Diagnostic testing routinely performed in sleep disorder laboratories may be covered even in the absence of direct supervision by a physician when data is interpreted by a board certified sleep specialist or physician who fulfills eligibility criteria for the sleep medicine certification exam; **and**
   b. The member is referred to the sleep center by a physician after a comprehensive sleep evaluation is completed, and the center maintains a record of the physician’s orders and comprehensive sleep evaluation; **and**
   c. The need for diagnostic testing is confirmed by medical evidence e.g. medical histories, examinations and laboratory tests; **and**
   d. Scheduling of a follow-up visit with a physician to review results is standard.

II. The Plan considers facility-based polysomnography medically necessary for **ANY** of the following:
   a. The diagnosis of sleep related breathing disorders
   b. To monitor the response to treatment or adjust treatment
   c. In combination with multiple sleep latency testing in the evaluation of suspected narcolepsy
   d. In the evaluation of sleep related behaviors that are violent or potentially injurious to the patient or others
   e. In certain atypical or unusual parasomnias

III. The Plan considers facility-based polysomnography medically necessary in **ANY** of the following:
   a. in patients with neuromuscular disorders and sleep related symptoms
   b. to assist in the diagnosis of paroxysmal arousals or other sleep disruptions thought to be seizure related
   c. in a presumed parasomnia or sleep related seizure disorder that does not respond to conventional therapy
   d. when there is a strong indication of periodic limb disorder

IV. Polysomnography for CPAP titration is medically necessary to evaluate the response to CPAP treatment in members who meet **EITHER** of the following criteria:
   - AHI greater than or equal to 15 events per hour; **or**
• AHI greater than 5 and less than 15 events per hour with documented symptoms of daytime sleepiness, impaired cognition, documented hypertension, mood disorders, ischemic heart disease or history of stroke.

V. Follow-up polysomnography or a cardiorespiratory sleep study is medically necessary in ANY of the following conditions:
   a. To evaluate the response to treatment (CPAP, oral appliances or surgical intervention)
   b. After substantial weight loss has occurred in patients on CPAP for treatment of sleep-related breathing disorders to ascertain whether CPAP is needed at the previously titrated level.
   c. After substantial weight gain has occurred in patients previously treated successfully, who are, again, symptomatic despite continued use of the CPAP, to ascertain whether pressure adjustments are needed.
   d. When clinical response is insufficient or when symptoms return despite initial response to treatment with CPAP
   e. Significant change in cardio-respiratory status, such as the development or worsening of CHF or LV dysfunction.

VI. A Multiple Sleep Latency Test (MSLT) may be considered medically necessary when documented evidence of excessive daytime somnolence exists despite the cessation of apnea or a significant decrease in AHI.

VII. The Plan considers the use of portable or unattended sleep studies medically necessary in the following circumstances:
   a. As an alternative to in-laboratory polysomnography (PSG) for the diagnosis of OSA in patients with a high pretest probability of moderate to severe OSA when no comorbidities exist that are contraindications to home/unattended testing (see exclusions); or
   b. When initiation of treatment is urgent and standard polysomnography is not readily available; or
   c. To monitor the response to non-CPAP treatments for sleep apnea.

   And all of the following study criteria are met:
   d. If the portable monitor records a minimum of airflow, respiratory effort and blood oxygenation; and.
   e. The device allows for display of raw data with the capability of manual scoring or editing of automated scoring by a qualified sleep technician/technologist; and
   f. The data is interpreted by a board certified sleep specialist or physician who fulfills eligibility criteria for the sleep medicine certification exam; and
   g. The need for diagnostic testing is confirmed by medical evidence e.g. medical histories, examinations and laboratory tests; and
   h. Scheduling of a follow-up visit with a physician to review results is standard.

LIMITATIONS:
* For the Medicare & Medicaid Business Segment Only - Additional coverage may be available through the applicable CMS mandates and/or the Coverage with Evidence Development (CED) when enrolled in a Centers for Medicare & Medicaid Services (CMS)-approved practical clinical trial.

The facility or provider must maintain documentation that it is in compliance with the criteria set by the American Sleep Disorders Association or the American Academy of Sleep Medicine. Failure to do so may result in a delay in processing of claims or denial of the claim.

The patient's medical record must contain documentation that fully supports the medical necessity and frequency for sleep studies as covered in the above policy. The documentation must include, but is not limited to, relevant medical history, physical examination and results of pertinent diagnostic tests and/or procedures.

Performance of home sleep testing is limited to FDA approved devices furnished with adequate patient instruction and support to assure successful completion and reliable results.

Home sleep testing should be performed over a period of three (3) consecutive nights to acquire quality data. The performance of home sleep testing for multiple nights will be considered as one (1) study.

EXCLUSIONS:
I. Polysomnography, cardiorespiratory sleep studies, and MSLT are NOT COVERED in the following situations:
   a. For the diagnosis of chronic insomnia;
   b. Preoperative evaluation for laser-assisted uvulopalatopharyngoplasty without clinical evidence of obstructive sleep apnea;
   c. For the diagnosis of chronic lung disease;
d. For the diagnosis of typical, uncomplicated and non-injurious parasomnia when the diagnosis is clearly delineated;

e. Documented evidence of epilepsy with no specific complaints consistent with a sleep disorder;

f. Documented evidence suggestive of periodic limb movement disorder or restless leg syndrome unless symptoms are suspected of being related to a covered indication;

g. For the diagnosis of insomnia when related to depression;

h. For the diagnosis of circadian rhythm disorders.

II. The Plan considers the use of portable monitoring **NOT medically necessary** for patients who meet ANY of the following criteria:

a. The diagnosis of OSA in patients with significant co-morbid medical conditions that may degrade the accuracy of PM, including but not limited to

   i. Severe Pulmonary Disease

   ii. Neuromuscular Disease

   iii. Congestive Heart Failure

   iv. Diagnostic evaluation of OSA in patients suspected of having other sleep disorders, including but not limited to:

   1. Central Sleep Apnea
   2. Periodic limb movement Apnea
   3. Circadian rhythm disorders
   4. Narcolepsy
   5. General Screening of Asymptomatic patients

b. Diagnostic evaluation of patients suspected of having co-morbid sleep disorders

c. Diagnostic evaluation of patients with non-specific symptoms such as, but not limited to fatigue, malaise, etc., that may stem from other medical or psychological diagnoses.

d. General screening of asymptomatic populations

III. The Plan considers the use of Home MSLT not medically necessary and **NOT COVERED**. Home MSLT testing has not been proven to be equivalent to formal MSLT performed in a facility based sleep study laboratory.

IV. The Plan considers diagnostic testing that is duplicative of previous sleep testing done by the attending physician **NOT COVERED** when there have been not significant clinical changes in the members documented medical history since the previous study.

V. The Plan considers portable diagnostic sleep studies by home health agencies or durable medical equipment providers **NOT COVERED**.

**Devices /Procedures related to diagnosis sleep apnea** – The Plan does NOT provide coverage for the following devices/procedures for the diagnosis of OSA or other sleep disorders because they are considered experimental, investigational or unproven. The current body of evidence in the peer-reviewed, published medical literature supporting the use of these devices/procedures for patients with sleep disorders is insufficient to allow adequate conclusions regarding their efficacy. (This list may not be all inclusive):

- SNAP™ Testing
- SleepStrip™
- Actigraphy (Requires Program Exception for Medicaid business segment)

**Note:** A complete description of the process by which a given technology or service is evaluated and determined to be experimental, investigational or unproven is outlined in MP 15 - Experimental Investigational or Unproven Services or Treatment.

**CODING ASSOCIATED WITH:**

The following codes are included below for informational purposes and may not be all inclusive. Inclusion of a procedure or device code(s) does not constitute or imply coverage nor does it imply or guarantee provider reimbursement. Coverage is determined by the member specific benefit plan document and any applicable laws regarding coverage of specific services. Please note that per Medicare coverage rules, only specific CPT/HCPCS Codes may be covered for the Medicare Business Segment. Please consult the CMS website at [www.cms.gov](http://www.cms.gov) or the local Medicare Administrative Carrier (MAC) for more information on Medicare coverage and coding requirements.

94660 Continuous positive airway pressure ventilation (CPAP), initiation and management

95782 Polysomnography; younger than 6 years, sleep staging with 4 or more additional parameters of sleep, attended by a technologist.
Polysomnography; younger than 6 years, 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

Sleep study, unattended, simultaneous recording; heart rate, oxygen saturation, respiratory analysis (eg, by airflow or peripheral arterial tone), and sleep time

Sleep study, unattended, simultaneous recording; minimum of heart rate, oxygen saturation, and respiratory analysis (eg, by airflow or peripheral arterial tone)

Actigraphy testing, recording, analysis, interpretation and report (minimum of 72 hours to 14 consecutive days of recording)

Multiple sleep latency or maintenance of wakefulness testing, recording, analysis and interpretation of physiological measurements of sleep during multiple trials to assess sleepiness

Sleep study, simultaneous recording of ventilation, respiratory effort, ECG or heart rate, and oxygen saturation, attended by a technologist

Sleep study, simultaneous recording of ventilation, respiratory effort, ECG or heart rate, and oxygen saturation, attended by a technologist

Sleep study, simultaneous recording of ventilation, respiratory effort, ECG or heart rate, and oxygen saturation, attended by a technologist

Sleep study, simultaneous recording of ventilation, respiratory effort, ECG or heart rate, and oxygen saturation, attended by a technologist

Sleep staging with 1-3 additional parameters of sleep, attended by a technologist

Sleep staging with 4 or more additional parameters of sleep, attended by a technologist

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

Home sleep study test (HST) with type II portable monitor, unattended; minimum of 7 channels; EEG, EOG, EMG, ECG/heart rate, airflow, respiratory effort and oxygen saturation

Home sleep study test (HST) with type III portable monitor, unattended; minimum of 4 channels: 2 respiratory movement/airflow, 1 ECG/heart rate and 1 oxygen saturation

Home sleep test (HST) with type IV portable monitor, unattended; minimum of 3 channels

Medicare Approved ICD10 Codes
G0398  Home sleep study test (HST) with type II portable monitor, unattended; minimum of 7 channels; EEG, EOG, EMG, ECG/heart rate, airflow, respiratory effort and oxygen saturation
G0399  Home sleep test (HST) with type III portable monitor, unattended; minimum of 4 channels: 2 respiratory movement/airflow, 1 ECG/heart rate and 1 oxygen saturation
G0400  Home sleep test (HST) with type IV portable monitor, unattended; minimum of 3 channels

LINE OF BUSINESS:
Eligibility and contract specific benefits, limitations and/or exclusions will apply. Coverage statements found in the line of business specific benefit document will supersede this policy. For Medicare, applicable LCD’s and NCD’s will supercede this policy. For PA Medicaid Business segment, this policy applies as written.

REFERENCES:


This policy will be revised as necessary and reviewed no less than annually.

**Devised:** 4/08

**Revised:** 9/09, 10/10 (add'l limitations, exclusion); 3/18 (remove WatchPAT exclusion)

**Reviewed:** 10/11, 10/12, 10/13; 2/14, 3/15, 3/16, 3/17, 3/19, 3/20