Polysomnography and Sleep Studies

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Line(s) of Business: HMO; PPO; QUEST Integration
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Section: Medicine
Place(s) of Service: Hospital; Sleep Laboratory, Home

I. Description
Polysomnography (PSG) conducted in a facility includes the continuous monitoring of physiologic activity that occurs during sleep. A sleep technologist measures and records brain activity using electroencephalography (EEG), eye movements using electro-oculography (EOG), and musculoskeletal activity using electromyography (EMG). Monitoring differentiates sleep from wakefulness and measures sleep stages. It is medically indicated to diagnose sleep-related disorders.

PSG is usually performed overnight during anticipated hours of sleep. It is the simultaneous recording of ventilation, respiratory effort, electrocardiogram or heart rate, and oxygen saturation, attended or unattended by a technologist.

A home sleep study takes place without the assistance of a sleep technologist however the measurements used to diagnose obstructive sleep apnea (OSA) are obtained through proper use of the equipment. After patient evaluation by a physician, a home-based sleep study may be prescribed when OSA is suspected and there are no contraindications as outlined below.

II. Criteria/Guidelines
A. A facility-based PSG is covered (subject to Limitations/Exclusions and Administrative Guidelines) when the following criteria are met:
   1. The patient has had a face-to-face clinical evaluation by the treating physician prior to the study to assess for sleep related breathing disorders. The evaluation should include, at a minimum, the following:
      a. Signs and symptoms of sleep disordered breathing; or
      b. Comorbid conditions, e.g., hypertension, heart disease, stroke; and
   2. The patient (of any age) has observed apneas during sleep or has at least two of the following indications:
      a. Habitual and disruptive snoring
      b. Gasping or choking episodes while sleeping
      c. Unexplained pathological daytime sleepiness and/or nonrestorative sleep.
      d. Obesity with BMI of 30 or more
e. Craniofacial abnormality or upper airway soft tissue abnormalities e.g., adenotonsillar hypertrophy, lateral peritonsillar narrowing, high arched/narrow hard palate, retrognathia, macroglossia, increased neck circumference (17 inches in men, 16 inches in women), modified Mallampati score of 3 or 4, nasal abnormalities, e.g., polyps, deviation, valve abnormalities, turbinate hypertrophy

f. At least two or more of the following:
   i. Stroke
   ii. Coronary artery disease
   iii. Congestive heart failure
   iv. Unexplained cor pulmonale
   v. Unexplained pulmonary hypertension
   vi. Polycythemia
   vii. Essential or treatment refractory hypertension
   viii. Hypothyroidism

g. For children (age 18 or younger) who do not meet the above criteria, one of the following indications is met in addition to criterion II.A.2.a, b, c or d:
   i. Attention deficit disorder with hyperactivity
   ii. Nocturnal enuresis
   iii. Hypertrophy of tonsils and/or adenoids

3. PSG is performed in a hospital-based sleep laboratory or free-standing sleep laboratory meeting must meet the following requirements:
   a. Hospital-based sleep laboratory falls within the purview of The Joint Commission accreditation for its institution;
   b. Free-standing sleep laboratory is accredited by the American Association of Sleep Medicine (AASM) (http://www.aasmnet.org). With regard to accreditation, HMSA requires the following:
      i. If a provider is in the process of seeking accreditation, HMSA requires a letter of acknowledgement of payment from the AASM written to the sleep laboratory under consideration for accreditation.
      ii. To continue servicing HMSA members, the sleep laboratory must complete the process of accreditation within one year.
      iii. Re-accreditation is required according to the standards of the AASM. Providers are responsible for keeping their accreditation current.

4. PSG is interpreted by a sleep medicine specialist who is board certified by American Board of Sleep Medicine (ABSM) or the American Board of Medical Specialties (ABMS).

5. PSG is performed with the intent to complete the study with titration of positive airway pressure (PAP) i.e., CPT code 95811. CPT code 95810 is only allowable when the sleep study does not demonstrate events consistent with sleep apnea or PAP titration cannot be completed for unforeseen reasons as documented in the PSG report. Examples include, but are not limited to, the following:
   a. Insufficient total sleep time;
   b. Criteria for obstructive sleep apnea met late in study with insufficient sleep time left for positive airway pressure (PAP) titration;
   c. PAP trial attempted but not tolerated by patient.
6. A facility based PSG for PAP titration following a home study that is diagnostic for OSA is covered for the following indications:
   a. There is significant nocturnal oxygen desaturation during a home diagnostic sleep study as indicated by ANY of the following results of the initial sleep study
      i. Oxygen saturation is less than 80 percent for greater than one percent of recording or sleep time
      ii. Oxygen saturation is less than 90 percent for greater than 22 percent of recording or sleep time
   b. A comorbid or alternative sleep disorder is suspected e.g., central sleep apnea, obesity hypoventilation syndrome (OHS)
   c. There is lack of resolution of sleep-related symptoms after a 12-week trial of auto-titrating CPAP

B. A home/portable sleep study is covered when the following criteria are met (subject to Limitations/Exclusions and Administrative Guidelines):
   1. Patient is 18 years of age or older
   2. Criteria in II.A.1 and 2 above for facility-based PSG are met
   3. There is no evidence by history or physical examination of a health condition that might alter ventilation or require alternative treatment, including the following:
      a. Congestive heart failure Class III or IV; or LVEF less than 45%
      b. Moderate to severe chronic pulmonary disease including, but not limited to, chronic obstructive pulmonary disease or asthma requiring supplemental oxygen use or with documented hypercapnia (i.e., pCO2 > 45 mmHg)
      c. Severe obesity
         i. BMI greater than 45
         ii. BMI greater than 35 plus arterial blood gas with pCO2 > 45 mmHg
         iii. BMI greater than 35 plus inability to lie flat in bed
      d. Pulmonary hypertension
      e. Neuromuscular/neurodegenerative disorder causing restrictive lung disease, e.g., kyphoscoliosis, Myasthenia Gravis, amyotrophic lateral sclerosis (ALS), polymyositis, Guillain Barre syndrome, Parkinson’s disease, myotonic dystrophy
      f. A sleep disorder other than suspected obstructive sleep apnea, as suggested by history, physical exam, or prior documentation, e.g., central sleep apnea, obesity hypoventilation syndrome, periodic limb movement disorder, parasomnias, narcolepsy, REM behavior sleep disorder; OR
   4. Patient has one of the above contraindications for a home/portable study but a facility-based PSG is not possible because of immobility, critical illness, or inability to achieve adequate sleep time during a facility-based PSG
   5. There is a minimum of three recording channels including oxygen saturation, respiratory effort, airflow, and ECG.
   6. Home/portable sleep study is performed under the supervision (i.e., review of the sleep study request form or see the member in consultation) of a board certified sleep specialist who is associated with the AASM-accredited or JCAHO-accredited sleep center located in the same state where the member is being tested.
   7. Home/portable sleep study is provided by a facility that meets the requirements under II.A.3.
8. Home/portable sleep study is interpreted by a board certified sleep specialist located in the same state where the member is being tested.

9. PAP titration will be done using auto-titrating PAP in the home setting when the diagnostic study demonstrates OSA and there are no contraindications to home titration as noted in II.A.6.a and b. Home titration using auto-titrating PAP is appropriate when the following criteria are met:
   a. A facility-based polysomnography or home/portable sleep study demonstrates an Apnea Hypopnea Index (AHI) or Respiratory Disturbance Index (RDI) greater than 5 per hour
   b. There is no evidence of central sleep apnea syndrome, or other sleep disorder
   c. There is no evidence of significant nocturnal oxygen desaturations caused by a condition other than OSA e.g., obesity hypoventilation syndrome, as indicated by ANY of the following results of the initial sleep study:
      i. Oxygen saturation less than 80 percent for greater than one percent of recording or sleep time
      ii. Oxygen saturation less than 90 percent for greater than 22 percent of recording or sleep time

C. One facility-based PSG or home/portable sleep study will be covered every five years. A repeat PSG before five years will be covered for one or more of the following indications:
   1. Weight loss of at least ten percent of body weight when there is a clinical indication for a repeat study, e.g., to ascertain whether PAP is still needed at the previously titrated pressure.
   2. Weight gain of at least ten percent of body weight when there is a clinical indication for a repeat study, e.g., patient is again symptomatic despite continued use of PAP to ascertain whether pressure adjustments are needed.
   3. To confirm therapeutic benefit after upper airway surgery
   4. To confirm therapeutic benefit after a trial of oral appliance
   5. When clinical response is insufficient or when symptoms return despite a good initial response to treatment with PAP device.
   6. Follow-up PAP titration study is indicated and split-night sleep study could not be completed as noted in II.A.5.
      a. If PAP titration was not tolerated, any problems related to use of the device and interface must be resolved prior to repeat testing.
      b. If there are no contraindications, PAP titration in the home setting with auto-titrating PAP is an option.

D. A facility based PSG (95810) is covered when being done in conjunction with multiple sleep latency test (MSLT) (95805) for the evaluation of patients with a suspected diagnosis of narcolepsy to confirm the diagnosis.
III. Limitations/Exclusions
A. A home PSG is not covered for children under the age of 18.
B. A home/portable study is considered to be one study, whether performed during a single night or during two or more consecutive nights.
C. Polysomnography and daytime multiple sleep latency testing (MSLT) are not indicated in the routine evaluation of chronic insomnia as it is not known to be effective in improving health outcomes.
D. The use of SleepStrip or actigraphy for the diagnosis of OSA or other sleep disorders in an adult or child is not covered as it is not known to be effective in improving health outcomes.
E. A split-night study (CPT 95811), in which obstructive sleep apnea (OSA) is diagnosed and followed by PAP eliminates the need for a second PSG to titrate PAP. A split-night study would be appropriate for patients with a baseline apnea index or AHI of at least 15 events per hour or from 5 to 14 events per hour with documented symptoms of excessive daytime sleepiness, impaired cognition, mood disorders, or insomnia; or hypertension, ischemic heart disease, or history of stroke. Because CPT code 95811 includes the initiation of CPAP therapy, CPT code 94660 will not be paid separately.
F. The Epworth sleepiness scale is considered medically appropriate as part of the evaluation of OSA, but is performed as part of the evaluation and management of the patient and will not be paid separately.
G. HMSA’s global payment for facility-based PSG includes payment for the EEG, EOG and EMG. These services will not be paid separately.
H. Other measurements performed during a facility-based PSG (e.g., vital signs, muscular activity, oximetry, airflow, blood gases, penile tumescence) are also integral to the service and will not be paid separately.
I. CPT code 95805 is only covered as noted in II.D. 95805 is not covered for maintenance of wakefulness testing (MWT) to assess response to therapy for employment purposes as its use is not for the purpose of diagnosing or treating a medical condition.
J. Facility-based PSG and home sleep studies are covered only once every five years except as noted in II.C.
K. Facility-based PSG and home sleep studies are performed as part of the routine evaluation of patients prior to bariatric surgery is not covered as it is not known to be effective in improving health outcomes. PSG is covered when criteria in II.A or II.B are met.
L. PAP-NAP (daytime session for patients who are resistant to PAP therapy) is not covered as it is not known to be effective in improving health outcomes.

IV. Administrative Guidelines
A. Private business plans
1. Precertification is not required for an initial study. Documentation, including the physician's clinical notes that supports medical necessity should be legible, maintained in the patient's medical record and must be made available to HMSA upon request. HMSA reserves the right to perform retrospective review using the above criteria to validate if services rendered met payment determination criteria.
2. Precertification is required for any study done within five years of a previous study. The following documentation must be submitted:
a. Previous study report;
b. Documentation supporting the reason why another study is needed.

B. QUEST Integration
1. Precertification is required for all facility-based PSG and home sleep studies
2. For facility-based PSG only CPT code 95811 will be initially approved. CPT code 95810 will not be approved.
   a. If the study does not demonstrate events consistent with OSA and the study is terminated without a titration of PAP, a claim for CPT code 95810, with supporting documentation should be submitted.
   b. If study demonstrates OSA and PAP titration is not completed, precertification request should be submitted for PAP titration study. The following documentation must be submitted:
      i. Initial study report(s);
      ii. Documentation supporting the reason why PAP titration could not be performed or completed at the time of initial study.

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<tr>
<th>CPT Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>95800</td>
<td>Sleep study, unattended, simultaneous recording; heart rate, oxygen saturation, respiratory analysis (e.g., by airflow or peripheral arterial tone), and sleep time</td>
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<tr>
<td>95801</td>
<td>Sleep study, unattended, simultaneous recording; minimum of heart rate, oxygen saturation, and respiratory analysis (e.g., by airflow or peripheral arterial tone)</td>
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<tr>
<td>95806</td>
<td>Sleep study, simultaneous recording of ventilation, respiratory effort, ECG or heart rate, and oxygen saturation, unattended by a technologist</td>
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<tr>
<td>G0398</td>
<td>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</td>
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<tr>
<td>G0399</td>
<td>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</td>
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<tr>
<td>G0400</td>
<td>Home sleep test (HST) with type IV portable monitor, unattended; minimum of 3 channels</td>
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<tr>
<td>95805</td>
<td>Multiple sleep latency or maintenance of wakefulness testing, recording, analysis and interpretation of physiological measurements of sleep during multiple trials to assess sleepiness</td>
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<tr>
<td>95810</td>
<td>Polysomnography; 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; sleep staging with 4 or more additional parameters of sleep,</td>
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with initiation of continuous positive airway pressure therapy or bi-level ventilation, attended by a technologist

| 95782 | Polysomnography; younger than 6 years, sleep staging with 4 or more additional parameters of sleep, attended by a technologist |
| 95783 | 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 |

V. Important Reminder

The purpose of this Medical Policy is to provide a guide to coverage. This Medical Policy is not intended to dictate to providers how to practice medicine. Nothing in this Medical Policy is intended to discourage or prohibit providing other medical advice or treatment deemed appropriate by the treating physician.

Benefit determinations are subject to applicable member contract language. To the extent there are any conflicts between these guidelines and the contract language, the contract language will control.

This Medical Policy has been developed through consideration of the medical necessity criteria under Hawaii’s Patients’ Bill of Rights and Responsibilities Act (Hawaii Revised Statutes §432E-1.4), generally accepted standards of medical practice and review of medical literature and government approval status. HMSA has determined that services not covered under this Medical Policy will not be medically necessary under Hawaii law in most cases. If a treating physician disagrees with HMSA’s determination as to medical necessity in a given case, the physician may request that HMSA reconsider the application of the medical necessity criteria to the case at issue in light of any supporting documentation.

VI. References

5. CMS National Coverage Determination (NCD) for Continuous positive airway pressure (CPAP) therapy for obstructive sleep apnea (OSA) (240.4). August 4, 2008.