GUIDELINES
This policy does not certify benefits or authorization of benefits, which is designated by each individual policyholder contract. Paramount applies coding edits to all medical claims through coding logic software to evaluate the accuracy and adherence to accepted national standards. This guideline is solely for explaining correct procedure reporting and does not imply coverage and reimbursement.

DESCRIPTION
A sleep study is a test that may be used to assist in the diagnosis of sleep disorders, such as sleep apnea, narcolepsy or other night time behaviors. It can record a range of bodily functions during sleep, such as: measurement of breathing, respiratory effort, oxygen saturation levels, heart monitoring, eye movement and heart, brain and muscle activity. A sleep study may be performed in a sleep facility/laboratory or in the home.

Home/Portable Monitor Sleep Testing is a sleep study performed in the home that utilizes portable monitoring (PM) devices that are designed to be used by a patient without supervision of a sleep technologist. The system usually consists of a recording device and related accessories. PM devices measure fewer parameters than a laboratory based sleep study and are therefore not recommended for assessment of sleep disorder in the pediatric population.

Polysomnogram (PSG) is a sleep study that is performed in a facility/laboratory setting and requires an overnight stay. PSG is designed to capture multiple sensory channels including brain waves, heartbeat, blood pressure and breathing patterns as a patient sleeps. It can also record eye and leg movements and muscle tension which can be useful in diagnosing parasomnias. A PSG performed at a facility will record a minimum of 12 channels which involves at least 22 wire attachments to the patient. Sensors that send electrical signals to a computer are placed on the head, face, chest and legs. This test is attended by a technologist and the results are evaluated by a qualified physician. A PSG may be performed in conjunction with a positive airway pressure (PAP) machine to determine the titration of oxygen flow.

Positive Airway Pressure (PAP) titration study is used to set the right level of PAP which can be administered as continuous positive airway pressure (CPAP) or bilevel positive airway pressure (BPAP) once patient tolerance and optimal levels are determined by a sleep technologist. PAP titration may be performed in conjunction with a PSG as part of a second or split night study if the diagnosis of moderate or severe OSA can be made within the first two hours of recorded sleep and at least three hours of PAP titration, including the ability of PAP to eliminate respiratory events during both rapid eye movement (REM) sleep and non REM sleep, is demonstrated.

Facility based, daytime, abbreviated, cardiorespiratory sleep studies (PAP NAP testing) uses a therapeutic framework that includes mask and pressure desensitization, emotion focused therapy to overcome aversive emotional reactions, mental imagery to divert patient attention from mask or pressure sensations and physiological exposure to PAP therapy during a 100 minute nap period which is purported to enhance PAP therapy adherence.

Multiple Sleep Latency Test (MSLT) is a facility based study that is used to measure levels of daytime sleepiness. During a routine MSLT, a patient is given five nap trials that are separated by two hour intervals: each trial consists of a twenty-minute session in which the patient attempts to fall asleep. Onset of sleep and rapid eye movement, along with heartbeat and chin movements are recorded. The test is typically performed on the night following a PSG (where at least six hours of sleep were achieved) in order to rule out other sleep disorders as a cause of excessive daytime sleepiness. The results of the study are primarily used to confirm the suspected diagnosis of narcolepsy.

Maintenance of Wakefulness Test (MWT) is a facility based study that is used to measure the ability to stay awake and alert. The procedure protocol is similar to that of the MSLT, with the exception that a patient is given four nap trials, each trial consisting of a forty minute session in which the patient attempts to fall asleep. The test is routinely performed the day after a nocturnal PSG and evaluates the ability to stay awake for a defined period of time. Results may be used to determine the efficacy of therapy for sleep disturbance disorders (such as narcolepsy) or to determine if the inability to stay awake is a public or personal safety concern.
**POLICY**

<table>
<thead>
<tr>
<th>HMO, PPO, Individual Marketplace, Elite, Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage of, testing for, and the treatment of obstructive sleep apnea and other sleep disorders is subject to the terms, conditions and limitations as described in the applicable benefit plan’s schedule of copayments. Please refer to the applicable benefit plan document and schedules to determine benefit availability and the terms, conditions and limitations of coverage particularly around coverage for testing required for employment, insurance coverage, or government license purposes. Even when there is no exclusion in the benefit plan for such coverage, Paramount considers screening for or the evaluation of obstructive sleep apnea or other sleep disorder to be not medically necessary when required for employment, insurance or government license purposes in the absence of symptoms suggestive of obstructive sleep apnea or other sleep disorder.</td>
</tr>
</tbody>
</table>

**Adult Home Sleep Study (95800, 95801, 95806, G0398, G0399, G0400)**

A. Paramount covers a sleep study as medically necessary for the diagnosis of suspected obstructive sleep apnea (OSA) in an adult (age 18 or older) when BOTH of the following criteria are met:
   - evidence of daytime sleepiness (e.g., excessive sleepiness not explained by other factors, non-refreshing sleep, sleep fragmentation)
   - ANY of the following additional symptoms or risk factors of OSA:
     - witnessed apneas
     - gasping or choking at night
     - disruptive snoring
     - increased neck circumference (i.e., > 17 inches in men, > 16 inches in women)
     - obesity (i.e., body mass index ≥ 30)

B. Paramount covers a home/portable sleep study* as medically necessary for the diagnosis of obstructive sleep apnea (OSA) in an adult (age 18 or older) when ALL of the following criteria are met:
   - medical necessity criteria for a sleep study for suspected OSA as outlined above have been met
   - absence of significant comorbid condition that would be expected to degrade the accuracy of a home/portable study, such as any of the following:
     - moderate to severe pulmonary disease, such as chronic obstructive pulmonary disease (COPD)
     - moderate to severe neuromuscular/neurodegenerative disorder causing restrictive lung diseases (e.g., kyphoscoliosis, myasthenia gravis, amyotrophic lateral sclerosis (ALS), polio, Polymyositis, Guillain Barre syndrome)
     - congestive heart failure Class III or IV
     - obesity hypoventilation syndrome, previously documented
     - pulmonary hypertension
   - no sleep disorder other than OSA is suspected (e.g., central sleep apnea, periodic limb movement disorder, parasomnias, narcolepsy, REM behavior sleep disorder)

*Note: A home/portable study is considered to be one study, whether performed during a single night or during two or more consecutive nights.

C. Paramount covers a home/portable sleep study when the diagnosis of OSA has been established in an adult (age 18 or older) when ALL of the following criteria are met:
   - testing is to be performed for ANY of the following:
o confirmation of therapeutic benefit following final adjustment of a mandibular repositioning appliance (MRA)
o assessment of results following surgical treatment for OSA
o clinical response is insufficient or symptoms return despite a good initial response to a mandibular repositioning appliance

- no significant oxygen desaturation* during diagnostic sleep study
- absence of comorbid sleep disorder or significant comorbid medical condition, as described above, that would be expected to degrade the accuracy of a home/portable study

D. Paramount covers home titration using auto-titrating PAP (APAP) to determine a fixed CPAP pressure for ongoing treatment when ALL of the following criteria are met:
- individual meets the criteria for PAP (detailed in PAP section below)
- individual does not have a comorbid condition that would be expected to degrade the accuracy of auto-titration, such as any of the following:
  o congestive heart failure Class III or IV
  o significant lung disease [e.g., COPD]
  o prior diagnosis of central sleep apnea
- no evidence of nocturnal oxygen (O₂) desaturations* caused by a condition other than OSA (e.g. obesity hypoventilation syndrome)

E. Paramount covers follow-up home titration using APAP when ALL of the following criteria are met:
- no comorbid condition that would be expected to degrade the accuracy of auto-titration
- no evidence of nocturnal oxygen desaturation* caused by a condition other than OSA (as described above)
- procedure to be performed for ANY of the following:
  o to determine whether pressure adjustment is needed when clinical response is insufficient or symptoms return despite a good initial response to PAP
  o substantial weight loss (e.g., 10% of body weight) to determine if adjustment of PAP pressure is indicated
  o substantial weight gain (e.g., 10% of body weight) with return of symptoms despite continued use of CPAP, to determine if adjustment of PAP pressure is indicated

* Significant oxygen desaturation:
  o O₂ saturation < 80% for > 1% of recording time or < 90% for > 20% of recording time during prior diagnostic home study
  o O₂ saturation < 80% for > 1% of sleep time or < 90% for > 30% of sleep time during prior diagnostic facility-based study

F. Paramount does not cover a home/portable sleep study for any other indication because it is considered not medically necessary.

Adult Facility Sleep Study (95808, 95810, 95811)
A. Paramount covers a sleep study as medically necessary for the diagnosis of suspected obstructive sleep apnea (OSA) in an adult (age 18 or older) when BOTH of the following criteria are met:
- evidence of daytime sleepiness (e.g., excessive sleepiness not explained by other factors, non-refreshing sleep, sleep fragmentation)
- ANY of the following additional symptoms or risk factors of OSA:
  o witnessed apneas
  o gasping or choking at night
  o disruptive snoring
  o increased neck circumference (i.e., > 17 inches in men, > 16 inches in women)
  o obesity (i.e., body mass index ≥ 30)

B. Paramount covers full night in-facility polysomnography (PSG) (95808, 95810) as medically necessary in an adult (age 18 or older) when BOTH of the following criteria are met:
- medical necessity criteria for a sleep study for suspected obstructive sleep apnea (OSA) as outlined above have been met
- ANY of the following:
  o significant comorbid condition that would be expected to degrade the accuracy of a home/portable study such as any of the following
- moderate to severe pulmonary disease, such as chronic obstructive pulmonary disease (COPD)
- moderate to severe neuromuscular/neurodegenerative disorder causing restrictive lung diseases (e.g., kyphoscoliosis, myasthenia gravis, amyotropic lateral sclerosis (ALS), polio, polymyositis, Guillain Barre syndrome)
- congestive heart failure (moderate to severe)
- obesity hypventilation syndrome, previously documented
- pulmonary hypertension
- sleep disorder other than OSA is suspected (e.g., central sleep apnea, periodic limb movement disorder, parasomnias, narcolepsy, REM behavior sleep disorder) that is corroborated by the clinical documentation
- recent home/portable testing proved to be technically inadequate or failed to establish the diagnosis of OSA in an individual with high pretest likelihood of OSA
- individual and caregiver/companion incapable of operating home testing equipment

C. Paramount covers full night in-facility polysomnography (PSG) (95808, 95810) as medically necessary prior to a planned multiple sleep latency test (MSLT) in an adult (age 18 or older) with suspected narcolepsy.

D. Paramount covers split-night in-facility polysomnography (PSG) (95811), in which the initial diagnostic portion of the PSG is followed by positive airway pressure (PAP) titration, as medically necessary in an adult (age 18 or older) when ALL of the following criteria are met:
- medical necessity criteria for a sleep study for suspected obstructive sleep apnea (OSA) as outlined above have been met
- apnea/hypopnea index (AHI) or respiratory disturbance index (RDI) of 15 or higher during initial diagnostic portion of split-night study, or AHI or RDI > 5 with symptoms indicative of significant OSA (e.g., repetitive obstructions, significant oxygen desaturation [i.e. oxygen saturation < 80% for >1% of sleep time or < 90% for > 30% of sleep time during a diagnostic facility based PSG])
- AHI or RDI is calculated based on at least two hours of continuous recorded sleep or, if calculated based on less than two hours of sleep, the total number of recorded events to calculate the AHI or RDI must be at a minimum the number of events that would have been required in a two-hour period.
- ANY of the following:
  - significant comorbid condition that would be expected to degrade the accuracy of a home/portable study, such as any of the following
    - moderate to severe pulmonary disease, such as chronic obstructive pulmonary disease (COPD)
    - moderate to severe neuromuscular/neurodegenerative disorder causing restrictive lung diseases (e.g., kyphoscoliosis, myasthenia gravis, amyotropic lateral sclerosis (ALS), polio, polymyositis, Guillain Barre syndrome)
    - congestive heart failure (moderate to severe)
    - obesity hypoventilation syndrome, previously documented
    - pulmonary hypertension
  - sleep disorder other than OSA is suspected (e.g., central sleep apnea, periodic limb movement disorder, parasomnias, narcolepsy, REM behavior sleep disorder) and is corroborated by the clinical documentation
  - recent home/portable testing proved to be technically inadequate or failed to establish the diagnosis of OSA in an individual with high pretest likelihood of OSA
  - individual and caregiver/companion incapable of operating home testing equipment

E. Paramount covers in-facility PSG (95811) for PAP titration, following a prior diagnostic study as medically necessary in an adult (age 18 or older) when ALL of the following criteria are met:
- AHI or RDI ≥ 15 documented on prior PSG or home/portable study, or AHI or RDI ≥ 5 and < 15, with symptoms of OSA (e.g., excessive daytime sleepiness, impaired cognition, mood disorders or insomnia, or with hypertension, ischemic heart disease or history of stroke
- AHI or RDI was calculated based on at least two hours of continuous recorded sleep or, if calculated based on less than two hours of sleep, the total number of recorded events to calculate the AHI or RDI was, at a minimum, the number of events that would have been required in a two-hour period.
- EITHER of the following:
  - a comorbid sleep disorder (e.g., significant central sleep apnea [i.e., central sleep apneas/hypopneas > 50% of total apneas/hypopneas, or ≥ 5 central apneas/hypopneas per hour], periodic limb movement disorder (> 15 periodic limb movements per hour resulting in arousal), parasomnias, narcolepsy, REM behavior sleep disorder) corroborated by the clinical documentation
o a significant comorbid condition that would be expected to degrade the accuracy of a home/portable study, such as any of the following
  - moderate to severe pulmonary disease, such as chronic obstructive pulmonary disease (COPD)
  - moderate to severe neuromuscular/neurodegenerative disorder causing restrictive lung diseases (e.g., kyphoscoliosis, myasthenia gravis, amyotrophic lateral sclerosis (ALS), polio, Polymyositis, Guillian Barre syndrome)
  - congestive heart failure (moderate to severe)
  - obesity hypoventilation syndrome, previously documented
  - pulmonary hypertension

F. Paramount covers in-facility PSG (95811) for re-titration of PAP as medically necessary in an adult (age 18 or older) when BOTH of the following criteria are met:
   - clinical response to PAP is insufficient or symptoms return despite compliance with PAP therapy
   - individual with significant oxygen desaturation* during diagnostic sleep study, or presence of a comorbid sleep disorder or significant comorbid medical condition as described above

* Significant oxygen desaturation:
  - $O_2$ saturation < 80% for > 1% of recording time or < 90% for > 20% of recording time during prior diagnostic home study
  - $O_2$ saturation < 80% for > 1% of sleep time or < 90% for > 30% of sleep time during prior diagnostic facility-based study

G. Paramount does not cover adult in-facility PSG for any other indication because it is considered not medically necessary.

Child Home Sleep Study (95800, 95801, 95806, G0398, G0399, G0400)
A. Paramount does not cover a home/portable sleep study for the diagnosis of OSA in a child because it is considered experimental, investigational or unproven.

Child Facility Sleep Study (95782, 95783, 95808, 95810, 95811)
A. Paramount covers pediatric in-facility polysomnography (PSG) as medically necessary for ANY the following indications:
   - obstructive sleep apnea (OSA) suspected based on clinical assessment
   - following adenotonsillectomy in a child with mild preoperative OSA with residual symptoms of OSA
   - following adenotonsillectomy to assess for residual OSA in child with preoperative evidence of moderate to severe OSA, obesity, craniofacial anomalies that obstruct the upper airway, or neurologic disorder (e.g., Down syndrome, Prader-Willi syndrome, myelomeningocele)
   - titration of positive airway pressure (PAP) in a child with OSA
   - suspected congenital central alveolar hypoventilation syndrome or sleep related hypoventilation due to neuromuscular disorders or chest wall deformities
   - primary apnea of infancy
   - evidence of a sleep related breathing disorder in infant who has experienced an apparent life threatening event (ALTE).
   - child being considered for adenotonsillectomy to treat OSA
   - follow-up for child on chronic PAP support, to determine whether pressure requirements have changed due to growth and development; if symptoms recur while on PAP; or if additional or alternate treatment is instituted
   - assessment of response to treatment with an oral appliance
   - noninvasive positive pressure ventilation (NIPPV) titration in child with other sleep-related breathing disorder (SRBD)
   - evaluation of child treated with mechanical ventilation for adjustment of ventilator settings.
   - evaluation prior to decannulation in child treated with tracheostomy for SRBD
   - clinical suspicion of an accompanying sleep related breathing disorder in a child with chronic asthma, cystic fibrosis, pulmonary hypertension, bronchopulmonary dysplasia, or chest wall abnormality (e.g., kyphoscoliosis)

B. Paramount does not cover pediatric in-facility PSG for any other indication because it is considered not medically necessary.
Other Diagnostic Tests
A. Paramount covers maintenance of wakefulness testing (MWT) (95805) as medically necessary to evaluate response to treatment for obstructive sleep apnea, narcolepsy, or periodic limb movement disorder.
B. Paramount covers multiple sleep latency testing (MSLT) as medically necessary for the evaluation of suspected narcolepsy when other sleep disorders have been ruled out by PSG.
C. Paramount does not cover MSLT or MWT (95805) for the diagnosis of OSA because it is considered not medically necessary.

Investigational and Not Medically Necessary
A. Paramount does not cover a home/portable sleep study (95800, 95801, 95806, G0398, G0399, G0400) for the diagnosis of OSA in a child because it is considered experimental, investigational or unproven.
B. Paramount does not cover an in-facility polysomnography (PSG) or home/portable sleep study for any of the following indications because each is considered experimental, investigational or unproven (this list may not be all-inclusive):
   - chronic lung disease
   - circadian rhythm disorders
   - depression
   - seizures in the absence of symptoms of sleep disorder
   - transient or chronic insomnia
   - insomnia associated with psychiatric disorders
C. Paramount does not cover an abbreviated cardiorespiratory sleep study to acclimate an individual to PAP (e.g., PAP-Nap) (95807) because it is considered experimental, investigational or unproven.
D. Paramount does not cover prescreening devices to predict pretest probability of OSA prior to seeking a sleep study (e.g., SleepStrip, acoustic pharyngometry) because they are considered experimental, investigational or unproven.

CODING/BILLING INFORMATION
The appearance of a code in this section does not necessarily indicate coverage. Codes that are covered may have selection criteria that must be met. Payment for supplies may be included in payment for other services rendered.

CPT CODES

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>95782</td>
<td>Polysomnography; younger than 6 years, sleep staging with 4 or more additional parameters of sleep, attended by a technologist</td>
</tr>
<tr>
<td>95783</td>
<td>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</td>
</tr>
<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>
</tr>
<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>
</tr>
<tr>
<td>95803</td>
<td>Actigraphy testing, recording, analysis, interpretation, and report (minimum of 72 hours to 14 consecutive days of recording)</td>
</tr>
<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>
</tr>
<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>
</tr>
<tr>
<td>95807</td>
<td>Sleep study, simultaneous recording of ventilation, respiratory effort, ECG or heart rate, and oxygen saturation, attended by a technologist</td>
</tr>
<tr>
<td>95808</td>
<td>Polysomnography; any age, sleep staging with 1-3 additional parameters of sleep, attended by a technologist</td>
</tr>
<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>
</tr>
<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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</table>

HCPCS CODES

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<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>
</tr>
<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>
</tr>
<tr>
<td>G0400</td>
<td>Home sleep test (HST) with type IV portable monitor, unattended; minimum of 3 channels</td>
</tr>
</tbody>
</table>

TAWG REVIEW DATES: 10/22/2015

REVISION HISTORY EXPLANATION
07/01/12: Verbiage updated to allow coverage for members meeting criteria.
10/22/15: Title changed from Home Sleep Study Testing to Sleep Study Testing. Added codes 95782, 95783, 95803, 95805, 95807, 95808, 95810, 95811. Policy reviewed and updated to reflect most current clinical evidence per TAWG.

REFERENCES/RESOURCES
Centers for Medicare and Medicaid Services, CMS Manual System and other CMS publications and services
Ohio Department of Medicaid http://jfs.ohio.gov/
American Medical Association, Current Procedural Terminology (CPT®) and associated publications and services
Centers for Medicare and Medicaid Services, Healthcare Common Procedure Coding System, HCPCS Release and Code Sets
Industry Standard Review
Hayes, Inc.