Sleep Studies (for North Carolina Only)

Policy Number: CSNCT0334.07
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➲ Instructions for Use

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Related Policies

- Durable Medical Equipment, Orthotics, Medical Supplies, and Repairs/Replacements (for North Carolina Only)
- Obstructive and Central Sleep Apnea Treatment (for North Carolina Only)

Application

This Medical Policy only applies to the State of North Carolina.

Coverage Rationale

Home Sleep Apnea Testing

For medical necessity clinical coverage criteria, refer to the North Carolina Medicaid (Division of Health Benefits) Clinical Coverage Policy, Physician: 1A-20, Sleep Studies and Polysomnography Services.

Attended Full-Channel Polysomnography, Performed in a Healthcare Facility or Laboratory Setting

For medical necessity clinical coverage criteria, refer to the North Carolina Medicaid (Division of Health Benefits) Clinical Coverage Policy, Physician: 1A-20, Sleep Studies and Polysomnography Services.

Daytime Sleep Studies

Note: The following sleep studies may be performed during the night if necessary to match an individual's normal sleep pattern.

Maintenance of Wakefulness Testing (MWT)

For medical necessity clinical coverage criteria, refer to the North Carolina Medicaid (Division of Health Benefits) Clinical Coverage Policy, Physician: 1A-20, Sleep Studies and Polysomnography Services.

Multiple Sleep Latency Testing (MSLT)

For medical necessity clinical coverage criteria, refer to the North Carolina Medicaid (Division of Health Benefits) Clinical Coverage Policy, Physician: 1A-20, Sleep Studies and Polysomnography Services.

Abbreviated Daytime Sleep Studies

Abbreviated daytime sleep studies (e.g., PAP-Nap) are not medically necessary due to insufficient evidence of efficacy.

Attended PAP Titration

When an individual meets the above criteria for an attended full-channel polysomnography sleep study, the following are medically necessary:

- A split-night sleep study, performed in a healthcare facility or laboratory setting, for diagnosis and PAP titration; or
- A full night study for PAP titration, when a split-night sleep study is inadequate or not feasible and the individual has a confirmed diagnosis of OSA

Attended Repeat Testing

For medical necessity clinical coverage criteria, refer to the North Carolina Medicaid (Division of Health Benefits) Clinical Coverage Policy, Physician: 1A-20, Sleep Studies and Polysomnography Services.

Definitions

PAP-Nap: PAP-Nap is a daytime, abbreviated cardio-respiratory sleep study for individuals who experience anxiety about starting PAP therapy or are having problems tolerating PAP therapy. The test combines psychological and physiological treatments into one procedure and includes mask and pressure desensitization, emotion-focused therapy to overcome aversive emotional reactions, mental imagery to divert attention from mask or pressure sensations and physiological exposure to PAP therapy during a 100-minute nap period (Krakow et al., 2008).

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by federal, state, or contractual requirements and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

CPT Code	Description
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
95800	Sleep study, unattended, simultaneous recording; heart rate, oxygen saturation, respiratory analysis (e.g., by airflow or peripheral arterial tone), and sleep time
*95801	Sleep study, unattended, simultaneous recording; minimum of heart rate, oxygen saturation, and respiratory analysis (e.g., by airflow or peripheral arterial tone)
*95803	Actigraphy testing, recording, analysis, interpretation, and report (minimum of 72 hours to 14 consecutive days)
95805	Multiple sleep latency or maintenance of wakefulness testing, recording, analysis and interpretation of physiological measurements of sleep during multiple trials to assess sleepiness
95806	Sleep study, unattended, simultaneous recording of, heart rate, oxygen saturation, respiratory airflow, and respiratory effort (e.g., thoracoabdominal movement)
95807	Sleep study, simultaneous recording of ventilation, respiratory effort, ECG or heart rate, and oxygen saturation, attended by a technologist
95808	Polysomnography; any age, sleep staging with 1-3 additional parameters of sleep, attended by a technologist
95810	Polysomnography; age 6 years or older, sleep staging with 4 or more additional parameters of sleep, attended by a technologist
95811	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 bilevel ventilation, attended by a technologist

HCPCS Code	Description
*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

Codes labeled with an asterisk (*) are not on the State of North Carolina Medicaid Fee Schedule and therefore may not be covered by the State of North Carolina Medicaid Program.

Description of Services

Sleep disorders are conditions that affect an individual's normal sleep patterns and can have an impact on quality of life. One of the most common sleep disorders is Obstructive Sleep Apnea (OSA), a condition in which a person stops breathing during sleep due to a narrowed or closed airway. Symptoms of OSA include daytime sleepiness, loud snoring and breathing interruptions or awakenings due to gasping or choking. If left untreated, OSA can lead to serious health consequences such as hypertension, heart disease, stroke, insulin resistance and obesity. Other sleep disorders include Central Sleep Apnea, Periodic Limb Movement Disorder (PLMD), Narcolepsy, Restless Legs Syndrome, Parasomnias, Circadian Rhythm disorders and Insomnia.

The evaluation of sleep disorders can be done at home or in a specialized sleep center that can study sleep patterns during the day or at night. Home Sleep Apnea Testing (HSAT) is used to diagnose OSA and records breathing rate, airflow, heart rate and blood oxygen levels during sleep. These studies are performed at home without a sleep technician present (unattended). Polysomnography (PSG) records breathing, heart rate, blood oxygen levels, body movements, brain activity and eye movements during sleep. PSG is performed in a laboratory setting with a sleep technician present (attended) (American Thoracic Society, 2015; updated 2019).

Once a diagnosis of OSA is made, a PAP trial (titration) is performed to determine the optimal amount of pressure needed to prevent the airway from narrowing or closing. An attended split-night study combines diagnostic polysomnography and PAP titration into a single night, PSG may also be used to assess and adjust the treatment plan (American Thoracic Society, 2015; updated 2019).

Sleep studies conducted during the day include the Multiple Sleep Latency Test (MSLT) and Maintenance of Wakefulness Test (MWT). MSLT is performed after a PSG to measure daytime sleepiness and is most often used to diagnose Narcolepsy and idiopathic Hypersomnia. MWT is performed to assess the ability to stay awake in nonstimulating conditions for a defined period of time (Krahn et al., 2021). Evidence is insufficient to specify a recommended protocol for the MWT in children and adolescents (Maski et al., 2024).

Additional Information

According to the AASM (Epstein et al., 2009), the diagnosis of OSA is confirmed if the number of obstructive events (Apneas, Hypopneas + respiratory event related arousals) on PSG is greater than 15 events/hour in the absence of associated symptoms or greater than 5/hour in an individual who reports any of the following: unintentional sleep episodes during wakefulness; daytime sleepiness; unrefreshing sleep; fatigue; Insomnia; waking up breath holding, gasping or choking; or the bed partner describing loud snoring, breathing interruptions, or both during the individual's sleep.

The frequency of obstructive events is reported as an AHI or RDI. RDI has at times been used synonymously with AHI, but at other times has included the total of Apneas, Hypopneas, and Respiratory Effort Related Arousals (RERAs) per hour of sleep. When a portable monitor is used that does not measure sleep, the RDI refers to the number of Apneas plus Hypopneas per hour of recording.

OSA severity is defined as:
- Mild for AHI or RDI ≥ 5 and < 15
- Moderate for AHI or RDI ≥ 15 and ≤ 30
- Severe for AHI or RDI > 30/hour

The AASM classifies sleep study devices (sometimes referred to as Type or Level) as follows (Collop et al., 2007):
- Type 1: Full attended PSG (≥ 7 channels) in a laboratory setting
- Type 2: Full unattended PSG (≥ 7 channels)

- Type 3: Limited channel devices (usually using 4–7 channels)
- Type 4: 1 or 2 channels usually using oximetry as one of the parameters

This classification system was introduced in 1994 and closely mirrored available Current Procedural Terminology (CPT) codes. However, since that time, devices have been developed which do not fit well within that classification scheme. In 2011, Collop et al. presented a new classification system for out-of-center (OOC) testing devices that details the type of signals measured by these devices. This proposed system categorizes OOC devices based on measurements of Sleep, Cardiovascular, Oximetry, Position, Effort, and Respiratory (SCOPER) parameters. Additional information can be found at: https://aasm.org/resources/practiceparameters/outofcenter.pdf. (Accessed May 17, 2024).

Clinical Evidence

PAP-Nap Test

Further results from large, prospective studies are needed to assess the clinical value of this test.

Ulibarri et al. (2020) performed a retrospective chart review on 139 patients diagnosed with OSA (n = 116) or upper airway resistance syndrome (n = 23). All participants refused to proceed with either a full-night attended titration or an in-home trial of PAP but completed a PAP-Nap instead. The most common risk factors for PAP rejection were depression, insomnia, and claustrophobia, while the most common indications for PAP-Nap were general reluctance, anxiety, and claustrophobia. Although results showed that improvements in emotional aversion and motivation were associated with increased PAP use, the authors noted that randomized control trials are needed to assess the experiential component at the core of the PAP-Nap procedure and its efficacy in reversing early PAP rejecters.

In a pilot study, Krakow et al. (2008) assessed the impact of the PAP-Nap sleep study on adherence to PAP therapy among insomnia patients with sleep disordered breathing (SDB). The PAP-Nap test combines psychological and physiological treatments into one procedure and 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. Patients treated with the PAP-Nap test (n = 39) were compared to a historical control group (n = 60) of insomnia patients with SDB who did not receive the test. All 99 patients with insomnia were diagnosed with SDB (mean AHI 26.5 +/-26.3, mean RDI 49.0 +/-24.9), and all reported a history of psychiatric disorders or symptoms as well as resistance to PAP therapy. Among 39 patients completing the PAP-Nap, 90% completed overnight titrations, compared with 63% in the historical control group. Eighty-five percent of the nap-tested group filled PAP therapy prescriptions for home use compared with 35% of controls. Sixty-seven percent of the nap-tested group maintained regular use of PAP therapy compared with 23% of the control group. Using standards from the field of sleep medicine, the nap-tested group demonstrated objective adherence of 49% to 56% compared to 12% to 17% among controls. Further results from large, prospective studies are needed to assess the clinical value of this test.

U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

Systems to record and analyze PSG information are cleared for marketing under the 510(k) premarketing notification process. Refer to the following website for more information (use product code OLV): http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm. (Accessed July 22, 2024)

HSAT devices are cleared for marketing under the 510(k) premarketing notification process. Refer to the following website for more information (use product code MNR): http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm. (Accessed July 22, 2024)

Actigraphy devices are cleared for marketing under the 510(k) premarketing notification process. Some actigraphy devices measure sleep-wake states, while others measure levels of physical activity. Search the following website by product name for more information: http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm. (Accessed July 22, 2024)

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Maski KP, Amos LB, Carter JC, et al. Recommended protocols for the Multiple Sleep Latency Test and Maintenance of Wakefulness Test in children: guidance from the American Academy of Sleep Medicine. J Clin Sleep Med. 2024 Apr 1;20(4):631-641.

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Ulibarri VA, Krakow B, McIver ND. The PAP-NAP one decade later: patient risk factors, indications, and clinically relevant emotional and motivational influences on PAP use. Sleep Breath. 2020 Dec;24(4):1427-1440.

Policy History/Revision Information

Date	Summary of Changes
11/01/2024	**Definitions** • Removed definition of: ○ Actigraphy ○ Apnea ○ Apnea Hypopnea Index (AHI) ○ Central Disorders of Hypersomnolence ○ Central Sleep Apnea (CSA) ○ Chronic Pulmonary Disease (CPD) ○ Circadian Rhythm ○ Circadian Rhythm Sleep-Wake Disorders ○ Epworth Sleepiness Scale (ESS) ○ Excessive Sleepiness [Somnolence, Hypersomnia, Excessive Daytime Sleepiness (EDS)] ○ Home Sleep Apnea Testing (HSAT) ○ Hypersomnia (Excessive Sleepiness) ○ Hypersomnolence ○ Hypopnea ○ Insomnia ○ Monitoring Time ○ Narcolepsy ○ New York Heart Association (NYHA) Heart Failure Classification (NYHA, 1994) ○ Obesity Hypoventilation Syndrome (OHS) ○ Obstructive Sleep Apnea (OSA) ○ Parasomnia ○ Periodic Limb Movement Disorder (PLMD) ○ Periodic Limb Movements of Sleep (PLMS) ○ Polysomnogram (Attended) ○ Positive Airway Pressure (PAP) ○ Rapid Eye Movement Sleep Behavior Disorder (RBD) ○ Respiratory Disturbance Index (RDI)

Date	Summary of Changes
	○ Respiratory Effort-Related Arousal (RERA) ○ Respiratory Event Index (REI) ○ Restless Legs Syndrome (RLS)/Willis-Ekbom Disease **Applicable Codes** • Added notation to indicate CPT/HCPCS codes 95801, 95803, G0398, G0399, and G0400 are not on the State of North Carolina Medicaid Fee Schedule and therefore may not be covered by the State of North Carolina Medicaid Program **Supporting Information** • Updated *Description of Services*, *Clinical Evidence*, *FDA*, and *References* sections to reflect the most current information • Archived previous policy version CSNCT0334.06

Instructions for Use

This Medical Policy provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the federal, state, or contractual requirements for benefit plan coverage must be referenced as the terms of the federal, state, or contractual requirements for benefit plan coverage may differ from the standard benefit plan. In the event of a conflict, the federal, state, or contractual requirements for benefit plan coverage govern. Before using this policy, please check the federal, state, or contractual requirements for benefit plan coverage. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Medical Policy is provided for informational purposes. It does not constitute medical advice.

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