

## Clinical Policy: Home Sleep Testing

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### Description

Medical necessity criteria for home sleep testing (HST), also referred to as unattended portable monitoring and out-of-center sleep testing, for the diagnosis of obstructive sleep apnea (OSA) in adulthood. HST is a diagnostic tool that can be used to diagnose simple OSA. It can be used as an alternative to an in-facility, overnight, attended polysomnogram (PSG) in members with a high probability for moderate to severe OSA.

### Policy/Criteria

- I. It is the policy of Pennsylvania Health and Wellness<sup>®</sup> (PHW) that *initial HST* performed with a Type 2 or Type 3 device is **medically necessary** when meeting the following criteria:
  - A. Performed in conjunction with a comprehensive sleep evaluation;
  - B. Sleep center performing the test is accredited by AASM or Joint Commission;
  - C. Age  $\geq 18$  and  $\leq 65$  years;
  - D. High pretest probability of moderate to severe OSA, as indicated by excessive daytime sleepiness which impacts daily activities that is not explained by other factors (e.g., medication, drugs, alcohol, psychiatric disorder) and at least one other factor:
    1. Witnessed apnea;
    2. Sleep-disruptive snoring;
    3. Gasping or snorting while sleeping;
    4. Obesity (BMI  $\geq 30$  kg/m<sup>2</sup>) or increased neck circumference (>17 inches men, >16 inches women);
  - E. Has none of the following contraindications to HST:
    1. Moderate to severe pulmonary disease (e.g., COPD with class III or IV heart failure,<sup>4</sup> asthma, O<sub>2</sub> dependent);
    2. Neuromuscular disease;
    3. Congestive heart failure;
    4. Hypoventilation syndromes;<sup>4</sup>
    5. Suspected or diagnosed central sleep apnea, periodic limb movement disorder, insomnia, parasomnias, circadian rhythm disorders, or narcolepsy;
    6. Physical or cognitive inability to appropriately use the equipment or does not have someone able to assist with the equipment;
    7. Previous technically suboptimal home sleep study.
- II. It is the policy of PHW that *follow up HST* performed with a Type 2 or Type 3 device is **medically necessary** when meeting the following criteria:
  - A. For assessment of one of the following:
    1. Effectiveness of surgery or oral appliances or devices (i.e., CPAP/BiPAP); or
    2. Re-evaluate the diagnosis of OSA and the need for continuing a device following significant weight loss (loss of  $\geq 10\%$  of body weight) since the most recent study.
  - B. Has none of the following contraindications to HST:
    1. Moderate to severe pulmonary disease (e.g., COPD, asthma, oxygen-dependence);
    2. Neuromuscular disease;

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3. Congestive heart failure;
4. Suspected or diagnosed central sleep apnea, periodic limb movement disorder, insomnia, parasomnias, circadian rhythm disorders, or narcolepsy;
5. Physical or cognitive inability to appropriately use the equipment or does not have someone able to assist with the equipment;
6. Previous technically suboptimal home sleep study.

**III.** It is the policy of PHW that HST is considered **not medically necessary** when performed with a Type 4 device or for any other indications not listed above.

#### Background

Polysomnography (PSG) is the most commonly used test in the diagnosis of specific sleep disorders, primarily OSA. Monitoring typically includes activity of the brain, chin, eyes, chest wall, and limbs; heart rate and rhythm; airflow through the nose and mouth; oxygen saturation; snoring loudness; sleep position; and fragmentation of sleep.

There are four types of monitoring devices which may be used for sleep studies. Type 1 devices are used in the sleep center, technician attended, for an overnight PSG. Type 2 devices can record the same variables as type 1 devices but can also be used outside of a sleep center and do not require a technician to be present. Type 3 devices measure between four and seven physiologic parameters, including two respiratory variables, a cardiac variable, and oxygen saturation by pulse oximetry. Measurement of these variables generally provides adequate information for the evaluation of most sleep apneas. Type 4 devices differ by definition and may only record one to 3 variables. Generally, Type 4 devices provide insufficient data for an accurate diagnosis of OSA.<sup>4</sup>

Portable monitoring is a more convenient and lower cost tool for diagnosing OSA in those members who are highly suspected of having moderate to severe OSA. Advantages include that the members are able to perform the test in the comfort of their own homes, the HST system is less costly than the complete PSG system, and a technician is not required for completion of the test. Fewer physiologic variables are measured with HST in comparison with PSG, however, so proper patient selection is necessary to take full advantage of the value of this technology. The Portable Monitoring Task Force of the American Academy of Sleep Medicine (AASM) recommends portable monitoring for the diagnosis of OSA in conjunction with a comprehensive sleep evaluation (2007).<sup>5</sup>

Furthermore, several studies have established HST as being similar to PSG in the diagnosis and treatment of OSA. Rosen and colleagues conducted a large, multisite randomized trial of lab-based PSG versus HST (2012). They found that HST performed similarly to PSG for diagnosis and treatment of patients with moderate to severe OSA, and that it was well-accepted by patients (Rosen et al., 2012). These findings are consistent with multiple other studies conducted in a similar fashion by Whitelaw, et al. (2005), Mulgrew, et al. (2007), Berry, et al. (2008), and Skomro, et al. (2010). Most studies on HST included subjects who were under 65 and over 18 and who did not have significant comorbidities (Collop, et al., 2007, p. 740).<sup>1 5 8 9 10 11</sup>

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For HST, the AASM stipulates that an experienced sleep technician, sleep technologist, or appropriately-trained healthcare practitioner must apply HST sensors or directly educate the patient in the correct application of sensors. <sup>5</sup>

Per the AASM, HST should not be used in patients who have comorbid medical conditions that predispose to sleep-related breathing disorders. This includes patients with significant respiratory disease such as chronic obstructive pulmonary disease (COPD) patients with class III or IV heart failure (because they are predisposed to Cheyne-Stokes breathing), and patients with hypoventilation syndromes. <sup>4</sup>

### Coding Implications

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CPT® Codes	Description
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)
95806	Sleep study, unattended, simultaneous recording of, heart rate, oxygen saturation, respiratory airflow, and respiratory effort (e.g., thoracoabdominal movement)

HCPCS Codes	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

### ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Codes	Description
E66.9	Obesity, unspecified
G47.00	Insomnia, unspecified
G47.30	Sleep apnea, unspecified
G47.33	Obstructive sleep apnea (adult) (pediatric)
G47.9	Sleep disorder, unspecified
R06.83	Snoring

Reviews, Revisions, and Approvals	Date	Approval Date

**References**

- Berry RB, Hill G, Thompson L, McLaurin V. Portable monitoring and autotitration versus polysomnography for the diagnosis and treatment of sleep apnea. *Sleep*. 2008;31:1423–31. Accessed online at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2572748/>.
- Brunk D. Home-based OSA testing beats lab-based testing on cost. *Internal Medicine News*. 2014, May 20.
- Canadian Sleep Society Committee members & Canadian Thoracic Society Committee members. Canadian Sleep Society/Canadian Thoracic Society position paper on the use of portable monitoring for the diagnosis of obstructive sleep apnea/hypopnea in adults. *Can Respir J* 2010;17(5):229-232. Accessed online at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2975504/pdf/crj17229.pdf>.
- Collop N. Out-of-center sleep testing for obstructive sleep apnea in adults. In: UpToDate, Badr MS (Ed), UpToDate, Waltham, MA, 2015. Accessed February 15, 2016.
- Collop NA, Anderson WM, Boehlecke B, et al. Clinical guidelines for the use of unattended portable monitors in the diagnosis of obstructive sleep apnea in adult patients. Portable Monitoring Task Force of the American Academy of Sleep Medicine. *J Clin Sleep Med* 2007; 3:737. Accessed online at: <http://www.aasmnet.org/Resources/clinicalguidelines/030713.pdf>
- Collop NA, Tracy SL, Kapur V, et al. Obstructive sleep apnea devices for out-of –center (OOC) testing: Technology evaluation. *J Clin Sleep Med*. 2007;3(7):737. Accessed online at: <http://www.aasmnet.org/Resources/PracticeParameters/Outofcenter.pdf>.
- Kline LR. Clinical presentation and diagnosis of obstructive sleep apnea in adults. In: UpToDate, Collop N (Ed), UpToDate, Waltham, MA, 2015. Accessed February 16, 2015.
- Mulgrew AT, Fox N, Ayas NT, Ryan CF. Diagnosis and initial management of obstructive sleep apnea without polysomnography: a randomized validation study. *Ann Intern Med*. 2007;146:157–66.
- Rosen CL, Auckley D, Beneca R, et al. A multisite randomized trial of portable sleep studies and positive airway pressure autotitration versus laboratory-based polysomnography for the diagnosis and treatment of obstructive sleep apnea: the HomePAP Study. *Sleep*. 2012; 35(6): 757-767. Accessed online at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3353048/>.
- Skomro RP, Gjevre J, Reid J, et al. Outcomes of home-based diagnosis and treatment of obstructive sleep apnea. *Chest*. 2010;138:257.

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11. Whitelaw WA, Brant RF, Flemons WW. Clinical usefulness of home oximetry compared with polysomnography for assessment of sleep apnea. *Am J Respir Crit Care Med.* 2005;171:188–93.