# Reimbursement fast facts: RADs

## This tool will assist you in understanding Medicare coding and coverage for respiratory assist devices.

**Respiratory assist devices (RADs)** are used to deliver adjustable, variable levels of positive air pressure (PAP) by way of tubing and a noninvasive interface (such as a nasal, oral or facial mask) to assist spontaneous respiratory efforts and supplement the volume of inspired air into the lungs. RADs may also include a timed backup feature to deliver air pressure whenever sufficient spontaneous inspiratory efforts fail to occur. ResMed bilevel devices combine increased comfort with a high level of clinical control to help meet the unique needs of every patient. *Bilevel to treat obstructive sleep apnea (OSA) and noncompliant continuous positive airway pressure (CPAP) is addressed in a separate Medicare coverage policy and summarized in the ResMed PAP for OSA Reimbursement fast facts: PN 1013493. For Life support ventilator, see Ventilator reimbursement fast facts: PN 1017230.*

| Device | Description | HCPCS | Medicare Jan 2019 former Competitive Bid Area monthly rate[1] ceiling – floor | Medicare Jan 2019 non-CBA non-rural monthly rate[1] ceiling – floor | Medicare Jan 2019 non-CBA rural monthly rate[1] ceiling – floor |
|---|---|---|---|---|---|
| **Bilevel without a backup rate** | ResMed bilevel device examples (e.g. ResMed AirCurve™ 10 VAuto, AirCurve 10 S, VPAP™ COPD) | E0470 | $123 – $94 | $107 – $101 | $186 – $166 |
| **Bilevel with a backup rate** | ResMed bilevel device examples (e.g. AirCurve 10 ST, AirCurve 10 ST-A, AirCurve 10 ASV) | E0471 | $300 – $236 | $271 – $253 | $463 – $415 |

### Billing criteria for RADs

Medicare has specified coverage criteria for patients with the following groups of clinical conditions. Please refer to the local coverage policy for additional details.[2]

### Restrictive thoracic disorders

An E0470 or E0471 device is covered for the first three months of therapy when the following criteria are met:

**A.** There is documentation in the patient's medical record of a neuromuscular disease (e.g. amyotrophic lateral sclerosis) or a severe thoracic cage abnormality (e.g. post-thoracoplasty for TB).

**B.** One of the following:

- **a.** An arterial blood gas (ABG) $PaCO_2$, done while awake and breathing the patient's prescribed $FiO_2$ is ≥ 45 mm Hg, OR
- **b.** Sleep oximetry demonstrates oxygen saturation ≤ 88% for ≥ 5 minutes of nocturnal recording time (minimum recording time of 2 hours), done while breathing the patient's prescribed recommended $FiO_2$, or
- **c.** For a neuromuscular disease only, either:
  - **i.** Maximal inspiratory pressure is < 60 $cmH_20$, or
  - **ii.** Forced vital capacity is < 50% predicted.

**C.** Chronic obstructive pulmonary disease (COPD) does not contribute significantly to the patient's pulmonary limitation.

### Severe COPD

An E0470 device is covered for the first three months of therapy if the following criteria are met:

**A.** An ABG $PaCO_2$, done while awake and breathing the patient's prescribed $FiO_2$, is ≥ 52 mm Hg.

**B.** Sleep oximetry demonstrates oxygen saturation ≤ 88% for ≥ a cumulative 5 minutes of nocturnal recording time (minimum recording time of 2 hours), done while breathing oxygen at 2 LPM or the patient's prescribed $FiO_2$ (whichever is higher).

**C.** Prior to initiating therapy, sleep apnea and treatment with a CPAP has been considered and ruled out. (Note: Formal sleep testing is not required if there is sufficient information in the medical record to demonstrate that the patient does not suffer from some form of sleep apnea [OSA, central sleep apnea (CSA) and/or complex sleep apnea (CompSA)] as the predominant cause of awake hypercapnia or nocturnal arterial oxygen desaturation).

An E0471 device will be covered for a patient with COPD if additional criteria are met. Refer to the RAD Local Coverage Determination (LCD) at www.cms.gov/medicare-coverage-database.

### Central sleep apnea or complex sleep apnea

An E0470 or E0471 device is covered for the first three months of therapy when, prior to initiating therapy, a complete facility-based, attended PSG is performed documenting the following:

**A.** The diagnosis of CSA[3] or CompSA[4], and

**B.** Significant improvement of the sleep-associated hypoventilation with the use of an E0470 or E0471 device on the settings that will be prescribed for initial use at home, while breathing the patient's prescribed $FiO_2$.[2]

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## Hypoventilation syndrome

An E0470 device is covered for the first three months of therapy if the following criteria are met for both A & B, and either C or D:

**A.** An initial ABG $PaCO_2$, done while awake and breathing the patient's prescribed $FiO_2$, is ≥ 45 mm Hg, and

**B.** Spirometry shows an FEV1/FVC ≥ 70% (refer to Severe COPD section for information about device coverage for patients with FEV1/FVC < 70%), and either

**C.** An ABG $PaCO_2$, done during sleep or immediately upon awakening, and breathing the patient's prescribed $FiO_2$, shows the patient's $PaCO_2$ worsened ≥ 7 mm HG compared to the original result in criterion A (above), or

**D.** A facility-based PSG or HST demonstrates oxygen saturation ≤ 88% for ≥ 5 minutes of nocturnal recording time (minimum recording time of 2 hours) that is not caused by obstructive upper airway events, i.e. AHI < 5.

An E0471 device is covered for the first three months of therapy if the following criteria are met for both A & B, and either C or D:

**A.** A covered E0470 device is being used, and

**B.** Spirometry shows an FEV1/FVC ≥ 70%, (refer to Severe COPD section for information about device coverage for patients with FEV1/FVC < 70%), and either

**C.** An ABG $PaCO_2$, done while awake, and breathing the patient's prescribed $FiO_2$, shows that the patient's $PaCO_2$ worsens ≥ 7 mm HG compared to the ABG result performed to qualify the patient for the E0470 device (criterion A under E0470), or

**D.** A facility-based PSG or HST demonstrates oxygen saturation ≤ 88% for ≥ 5 minutes of nocturnal recording time (minimum recording time of 2 hours) that is not caused by obstructive upper airway events, i.e. AHI < 5 while using an E0470 device.[2]

## Follow-up documentation requirements

**Documentation requirements for billing E0470 or E0471 beyond the first three months of therapy**

- Patient's medical record documents:
  - that the patient was re-evaluated by the treating practitioner on or after the 61st day after initiation of therapy
  - the progress of relevant symptoms
  - patient usage (avg. 4 hours per 24-hour period) of the device up to the time of reevaluation.
- Documentation in supplier's records includes:
  - a signed and dated statement completed by the treating practitioner no sooner than 61 days after initiating use of the device that the patient consistently uses the device (an average of 4 hours per 24-hour period) and is benefiting from its use.[2]

## FAQs

### Q: How does Medicare determine if a patient should receive a RAD or a ventilator (E0465–E0467)?

The RAD LCD states: "Choice of an appropriate treatment plan, including the determination to use a ventilator vs. a bilevel PAP device, is made based upon the specifics of each individual beneficiary's medical condition. In the event of a claim review, there must be sufficiently detailed information in the medical record to support the treatment selected. CMS distinguishes the use of respiratory product types in a National Coverage Analysis Decision Memo (CAG-00052N) in June 2001, stating that RADs are distinguished from ventilation in a patient for whom interruption or failure of respiratory support leads to death." See Ventilator reimbursement fast facts for details: PN 1017230.

### Q: What is the appropriate diagnosis code for complex sleep apnea?

Complex sleep apnea (CompSA) is a form of central sleep apnea (CSA) and is may be billed using ICD-10 diagnosis code G47.37 (central sleep apnea in conditions classified elsewhere) when performing a full diagnostic polysomnography or G47.31 (primary central sleep apnea) when performing a split-night polysomnography.[5]

### Q: Can an HST or portable monitoring device be used to diagnose CSA or CompSA?

No. A complete facility-based, attended PSG is required.



**1** Rates are based upon the Medicare January 2019 DMEPOS Fee Schedules. Non-contiguous (Alaska, Hawaii, United States territories) area rates are excluded. Fee schedule rate reduces 25% after the third month; rental payment capped at 13 months. Actual allowable varies by state. Retrieved online Jan 15, 2019 from https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/DMEPOSFeeSched/DMEPOS-Fee-Schedule-Items/DME19-A.html?DLPage=1&DLEntries=10&DLFilter=2019&DLSort=2&DLSortDir=descending. **2** U.S. Centers for Medicare & Medicaid Services. Local Coverage Determination (LCD): RESPIRATORY Assist Devices (L33800) (Rev. eff. date 01/01/2017). Retrieved online Jan 15, 2019 from https://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=33800&ver=13&CoverageSelection=Both&ArticleType=All&PolicyType=Final&s=All&KeyWord=respiratory&KeyWordLookUp=Title&KeyWordSearchType=And&bc=gAAAACAAAAAA&. **3** Central sleep apnea (CSA) is defined by all of the following: (1) An apnea-hypopnea index (AHI) ≥ 5; and (2) The sum total of central apneas plus central hypopneas is > than 50% of the total apneas and hypopneas; and (3) A central apnea-central hypopnea index (CAHI) is ≥ 5 per hour; and (4) The presence of at least one of the following: (a) Sleepiness (b) Difficulty initiating or maintaining sleep, frequent awakenings, or non-restorative sleep (c) Awakening short of breath (d) Snoring (e) Witnessed apneas; and (5) There is no evidence of daytime or nocturnal hypoventilation. For diagnosis of CSA, the central apnea-central hypopnea index (CAHI) is defined as the average number of episodes of central apnea and central hypopnea per hour of sleep without the use of a positive airway pressure device. **4** Complex sleep apnea (CompSA) is a form of central apnea specifically identified by all of the following: (1) With use of a positive airway pressure device without a backup rate (E0601 or E0470), the polysomnogram (PSG) shows a pattern of apneas and hypopneas that demonstrates the persistence or emergence of central apneas or central hypopneas upon exposure to CPAP (E0601) or a bi-level device without backup rate (E0470) device when titrated to the point where obstructive events have been effectively treated (obstructive AHI < than 5 per hour); and (2) After resolution of the obstructive events, the sum total of central apneas plus central hypopneas is > 50% of the total apneas and hypopneas; and (3) After resolution of the obstructive events, a central apnea-central hypopnea index (CAHI) ≥ 5 per hour.[2] For CompSA, the CAHI is determined during the use of a positive airway pressure device after obstructive events have disappeared. If the AHI or CAHI is calculated based on less than 2 hours of continuous recorded sleep, the total number of recorded events used to calculate the AHI or CAHI must be at least the number of events that would have been required in a 2-hour period (i.e. greater than or equal to 10 events). Apnea is defined as the cessation of airflow for at least 10 seconds. Hypopnea is defined as an abnormal respiratory event lasting at least 10 seconds associated with at least a 30% reduction in thoracoabdominal movement or airflow as compared to baseline, and with at least a 4% decrease in oxygen saturation. See RAD LCD for additional definitions.[2] **5** U.S. Centers for Medicare & Medicaid Services. Local Coverage Determination (LCD): Polysomnography and Other Sleep Studies (L36861) (Rev. eff. Date 10/01/2017). Retrieved online Jan 21, 2019 from https://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=36861&ver=7&CoverageSelection=Local&ArticleType=All&PolicyType=Final&s=All&CptHcpcsCode=95806&bc=gAAAACAAAAAA&.

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