

Medical Coverage Policy | Surgical Treatment of Snoring and Obstructive Sleep Apnea Syndrome



EFFECTIVE DATE: 04|01|2026

POLICY LAST REVIEWED: 04|01|2026

OVERVIEW

Obstructive sleep apnea (OSA) syndrome is characterized by repetitive episodes of upper airway obstruction due to the collapse of the upper airway during sleep. This policy addresses the various surgical procedures that have been evaluated for the treatment of adult and pediatric patients with OSA.

Note: This policy is applicable for Commercial Products only. For Medicare Advantage Plans, see the applicable policy in the Related Policies section. This policy does not address Uvulopalatopharyngoplasty (UPPP). Laser-assisted uvulopalatoplasty (LAUP) should not be confused with UPPP. For more information regarding UPPP, please see the Related Policies section below.

MEDICAL CRITERIA

Medicare Advantage Plans

For CPT codes 64582 64583: Blue Cross & Blue Shield of Rhode Island (BCBSRI) follows the medical necessity criteria from the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations (NCD/LCD). Please use the online tool for participating providers.

For CPT codes C8007 C8008 C8011 C8012 (New Codes Effective 1/1/2026): Prior Authorization requests will be reviewed using the Medical Necessity criteria. See the Related Policies section.

Medicare Advantage Plans and Commercial Products

Note: The following criteria is used for CPT's codes 64582, 64583, 64568, **C8007, C8008, C8011, C8012** for Commercial Products and for CPT 64568 for Medicare Advantage Plans.

Hypoglossal nerve stimulation with the Inspire U.S. Food and Drug Administration (FDA) approved device may be considered medically necessary in adults with OSA under the following conditions:

- Age \geq 18 years; **AND**
- AHI \geq 15 and \leq 100 with less than 25% central apneas; **AND**
- CPAP failure (residual AHI \geq 15 or failure to use CPAP \geq 4 hour per night for \geq 5 nights per week) or inability to tolerate CPAP; **AND**
- Body mass index \leq 35 kg/m²; **AND**
- Absence of complete concentric collapse at the soft palate level

Hypoglossal nerve stimulation with the Inspire U.S. Food and Drug Administration (FDA) approved device may be considered medically necessary in adolescents or young adults with Down syndrome and OSA under the following conditions:

- Age 13 to 18 years; **AND**
- AHI $>$ 10 and $<$ 50 with less than 25% central apneas after prior adenotonsillectomy; **AND**
- One of the following:
 - Individual has a tracheotomy OR
 - Ineffectively treated with CPAP due to one of the following: noncompliance, discomfort, undesirable side effects, persistent symptoms despite compliance use, or refusal to use the device; **AND**
- Body mass index \leq 95th percentile for age; **AND**

- Absence of complete concentric collapse at the soft palate level

PRIOR AUTHORIZATION

Medicare Advantage Plans and Commercial Products

Prior authorization for hypoglossal nerve stimulation is required for Medicare Advantage Plans and recommended for Commercial Products. See the Related Policies section.

POLICY STATEMENT

Medicare Advantage Plans

CPTs 64582 and 64583 may be considered medically necessary when the medical criteria in the online authorization tool has been met.

CPT 64568, when used for implantable hypoglossal nerve stimulation, may be considered medically necessary when the above medical criteria has been met.

CPTs C8007 C8008 C8011 C8012 may be considered medically necessary when the criteria in the Medical Necessity policy have been met. See the Related Policies section.

The following minimally invasive surgical procedures are not covered for the sole or adjunctive treatment of OSA or upper airway resistance syndrome (UARS) as the evidence is insufficient to determine the effects of the technology on health outcomes:

- Radiofrequency volumetric tissue reduction of the tongue, with or without radiofrequency reduction of the palatal tissues
- Laser-assisted uvulopalatoplasty (LAUP) or radiofrequency volumetric tissue reduction of the palatal tissues
- Palatal stiffening procedures including, but not limited to, cautery-assisted palatal stiffening operation, injection of a sclerosing agent, and the implantation of palatal implants
- Tongue base suspension
- All other minimally invasive surgical procedures not described above

All interventions, including LAUP, radiofrequency volumetric tissue reduction of the palate, or palatal stiffening procedures, are considered not covered for the treatment of snoring in the absence of documented OSA; snoring alone is not considered a medical condition, as the evidence is insufficient to determine the effects of the technology on health outcomes.

Commercial Products

CPTs 64582, 64583, C8007, C8008, C8011, C8012 may be considered medically necessary when the above medical criteria has been met and is for the Inspire U.S. Food and Drug Administration (FDA) approved device.

CPT 64568, when used for implantable hypoglossal nerve stimulation and is for the Inspire U.S. Food and Drug Administration (FDA) approved device, may be considered medically necessary when the above medical criteria has been met.

Hypoglossal nerve stimulation with other U.S. Food and Drug Administration (FDA) approved devices (e.g., Genio) are considered not medically necessary for the treatment of clinically significant OSA syndrome.

The following minimally invasive surgical procedures are considered not medically necessary for the sole or adjunctive treatment of OSA or upper airway resistance syndrome (UARS) as the evidence is insufficient to determine the effects of the technology on health outcomes:

- Radiofrequency volumetric tissue reduction of the tongue, with or without radiofrequency reduction of the palatal tissues

- Laser-assisted uvulopalatoplasty (LAUP) or radiofrequency volumetric tissue reduction of the palatal tissues
- Palatal stiffening procedures including, but not limited to, cautery-assisted palatal stiffening operation, injection of a sclerosing agent, and the implantation of palatal implants
- Tongue base suspension
- All other minimally invasive surgical procedures not described above

All interventions, including LAUP, radiofrequency volumetric tissue reduction of the palate, or palatal stiffening procedures, are considered not medically necessary for the treatment of snoring in the absence of documented OSA; snoring alone is not considered a medical condition as the evidence is insufficient to determine the effects of the technology on health outcomes.

COVERAGE

Benefits may vary between groups/contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage, or Subscriber Agreement for applicable not medically necessary/not covered benefits/coverage.

BACKGROUND

Obstructive Sleep Apnea

Obstructive sleep apnea (OSA) is characterized by repetitive episodes of upper airway obstruction due to the collapse and obstruction of the upper airway during sleep. The hallmark symptom of OSA is excessive daytime sleepiness, and the typical clinical sign of OSA is snoring, which can abruptly cease and be followed by gasping associated with a brief arousal from sleep. The snoring resumes when the patient falls back to sleep, and the cycle of snoring/apnea/arousal may be repeated as frequently as every minute throughout the night. Sleep fragmentation associated with the repeated arousal during sleep can impair daytime activity. For example, adults with OSA-associated daytime somnolence are thought to be at higher risk for accidents involving motorized vehicles (ie, cars, trucks, heavy equipment). OSA in children may result in neurocognitive impairment and behavioral problems. In addition, OSA affects the cardiovascular and pulmonary systems. For example, apnea leads to periods of hypoxia, alveolar hypoventilation, hypercapnia, and acidosis. This, in turn, can cause systemic hypertension, cardiac arrhythmias, and cor pulmonale. Systemic hypertension is common in individuals with OSA. Severe OSA is associated with decreased survival, presumably related to severe hypoxemia, hypertension, or an increase in automobile accidents related to overwhelming sleepiness.

Minimally invasive surgical approaches being evaluated for OSA in adults include the following:

Laser-assisted Uvulopalatoplasty: LAUP is proposed as a treatment of snoring with or without associated OSA. LAUP cannot be considered an equivalent procedure to the standard UPPP, with the laser simply representing a surgical tool that the physician may opt to use. LAUP is considered a unique procedure, which raises its own issues of safety and, in particular, effectiveness. For individuals who have obstructive sleep apnea (OSA) who receive laser-assisted uvulopalatoplasty, the evidence includes a single randomized controlled trial (RCT). Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The trial indicates reductions in snoring, but limited efficacy on the Apnea/Hypopnea Index (AHI) or symptoms in patients with mild-to-moderate OSA. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Radiofrequency Volumetric Reduction of (RFA) of Palatal Tissues and Base of Tongue: RFA is used to produce thermal lesions within the tissues rather than using a laser to ablate the tissue surface. In some situations, RF of the soft palate and base of tongue are performed together as a multilevel procedure. For individuals who have OSA who receive radiofrequency volumetric reduction of palatal tissues and base of tongue, the evidence includes 2 sham-controlled randomized trials and a prospective, single-arm cohort study. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. Single-stage radiofrequency to palatal tissues did not improve outcomes compared with sham. Multiple sessions of radiofrequency to the palate and base of tongue did not significantly (statistically or clinically) improve AHI, and the improvement in functional outcomes was not clinically significant. The prospective cohort study included 56 patients with mild-to-moderate OSA who received 3 sessions of office-based

multilevel RFA. Results demonstrated improvement in AHI and Oxygen Desaturation Index (ODI) at the 6-month follow up. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Tongue Base Suspension: In this procedure, the base of the tongue is suspended with a suture that is passed through the tongue and fixated with a screw to the inner side of the mandible, below the tooth roots. The suspension aims to make it less likely for the base of the tongue to prolapse during sleep. For individuals who have OSA who receive tongue base suspension, the evidence includes a feasibility RCT with 17 patients. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The single RCT compared tongue suspension plus UPPP with tongue advancement plus uvulopalatopharyngoplasty (UPPP) and showed success rates of 50% to 57% for both procedures. Additional RCTs with a larger number of subjects are needed to determine whether tongue suspension alone or added to UPPP improves the net health outcome. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Palatal Stiffening: Palatal stiffening procedures include insertion of palatal implants, injection of a sclerosing agent (snoreplasty), or a cautery-assisted palatal stiffening operation. Snoreplasty and cautery-assisted palatal stiffening operations are intended for snoring and are not discussed here. Palatal implants are cylindrically shaped devices that are implanted in the soft palate. For individuals who have OSA who receive palatal stiffening procedures, the evidence includes 2 sham-controlled randomized trials and several case series. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The 2 RCTs differed in their inclusion criteria, with the study that excluded patients with Friedman tongue position of IV and palate of 3.5 cm or longer reporting greater improvement in AHI (45% success) and snoring (change of -4.7 on a 10-point visual analog scale) than the second trial. Additional studies are needed to corroborate the results of the more successful trial and, if successful, define the appropriate selection criteria. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Hypoglossal Nerve Stimulation: Stimulation of the hypoglossal nerve causes tongue protrusion and stiffening of the anterior pharyngeal wall, potentially decreasing apneic events. For patients with moderate-to-severe sleep apnea who have failed or are intolerant of CPAP, the alternative would be an established surgical procedure.

The evidence on HNS for the treatment of OSA includes systematic reviews, 3 RCTs, nonrandomized prospective studies, nonrandomized studies with historical controls, and prospective single-arm studies. An RCT of 89 adults with moderate-to-severe OSA who did not tolerate CPAP found significant short-term improvement in AHI, ESS, and quality of life measures with HNS compared to sham stimulation. The study was limited by short duration of follow-up and lack of diverse individuals included in the trial. Another RCT including 138 patients with moderate-to-severe OSA who did not tolerate CPAP compared outcomes for patients who received HNS therapy at 1 or 4 months after implant for the treatment and control groups, respectively. Results demonstrated significant short-term improvement in AHI and ODI when comparing HNS to no HNS at month 4. However, after 11 months of active therapy, the difference between the treatment and control groups was not statistically significant for AHI, but remained significant for ODI in favor of the treatment group. This trial was also limited by a lack of diverse individuals, as well as a lack of a true control group for long-term outcomes. In nonrandomized studies, about two-thirds of patients with moderate-to-severe OSA who had failed conservative therapy (CPAP) and had a favorable pattern of palatal collapse met the study definition of success. Results observed at the 12-month follow-up were maintained at 5 years in the pivotal study. A prospective study that compared outcomes in patients who had received HNS to patients who were denied insurance coverage reported significant differences in both objective and subjective measures of OSA. However, there is a high potential for performance bias in this non-blinded study. For children and adolescents with OSA and Down Syndrome who are unable to tolerate CPAP, the evidence includes a systematic review and a prospective study of 42 individuals. The systematic review investigated HNS in adolescents with Down Syndrome and OSA, and demonstrated significant improvement in AHI and OSA-18 after HNS. The study of 42 individuals with Down Syndrome and OSA found a success

rate of 73.2% with 4 device extrusions corrected with replacement surgery. The efficacy of HNS in obese patients is limited with recent clinical trials only enrolling patients who have a BMI of 35 kg/m² or lower.

For individuals who have OSA who receive hypoglossal nerve stimulation, the evidence includes systematic reviews, 3 RCTs, nonrandomized prospective studies, nonrandomized studies with historical controls, and prospective single-arm studies. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. A double-blind, multicenter RCT of 89 adults with moderate-to-severe OSA who did not tolerate continuous positive airway pressure (CPAP) found significant short-term improvement in AHI, Epworth Sleepiness Score (ESS), and quality of life measures with hypoglossal nerve stimulation (HNS) compared to sham stimulation. The study was limited by a short duration of follow-up and lack of diversity amongst included participants. Another RCT including 138 patients with moderate-to-severe OSA who did not tolerate CPAP compared outcomes for patients who received HNS therapy at 1 or 4 months after implant for the treatment and control groups, respectively. Results demonstrated significant short-term improvement in AHI and ODI when comparing HNS to no HNS at month 4. However, after 11 months of active therapy, the difference between the treatment and control groups was not statistically significant for AHI, but remained significant for ODI in favor of the treatment group. This trial was also limited by a lack of diverse individuals, as well as a lack of a true control group for long-term outcomes. Hypoglossal nerve stimulation has shown success rates for about two-thirds of a subset of patients who met selection criteria that included AHI, BMI (≤ 32 or ≤ 35 kg/m²), and favorable pattern of palatal collapse across nonrandomized trials. These results were maintained out to 5 years in the pivotal single-arm study. The single prospective comparative study of patients who received HNS versus patients who were denied insurance coverage for the procedure has a high potential for performance bias. For children and adolescents with OSA and Down Syndrome who are unable to tolerate CPAP, the evidence includes a systematic review and a prospective study of 42 individuals. The systematic review investigated HNS in adolescents with Down Syndrome and OSA, and demonstrated significant improvement in AHI and OSA-18 survey scores after HNS. A study of 42 individuals with Down Syndrome and OSA found a success rate of 73.2% with 4 device extrusions corrected with replacement surgery. Limitations of the current evidence base preclude determination of who is most likely to benefit from this invasive procedure. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have OSA who receive HNS, clinical input supports this use provides a clinically meaningful improvement in net health outcome and indicates this use is consistent with generally accepted medical practice in subgroups of appropriately selected patients. One subgroup includes adult patients with a favorable pattern of non-concentric palatal collapse. The alternative treatment for this anatomical endotype is maxillo-mandibular advancement (MMA), which is associated with greater morbidity and lower patient acceptance than HNS. The improvement in AHI with HNS, as shown in the Stimulation Therapy for Apnea Reduction (STAR) trial, is similar to the improvement in AHI following MMA. Another subgroup includes appropriately selected adolescents with OSA and Down's syndrome who have difficulty using CPAP. The following patient selection criteria are based on information from clinical study populations and clinical expert opinion:

- Age ≥ 22 years in adults or adolescents with Down's syndrome age 10 to 21; AND
- Diagnosed moderate to severe OSA (with less than 25% central apneas); AND
- CPAP failure or inability to tolerate CPAP; AND
- Body mass index ≤ 32 kg/m² in adults; AND
- Favorable pattern of palatal collapse

CODING

Medicare Advantage Plans

The following CPT code(s) are considered medically necessary when the medical criteria in the online authorization tool has been met:

- 64582** Open implantation of hypoglossal nerve neurostimulator array, pulse generator, and distal respiratory sensor electrode or electrode array
- 64583** Revision or replacement of hypoglossal nerve neurostimulator array and distal respiratory sensor electrode or electrode array, including connection to existing pulse generator

The following CPT code(s) are considered medically necessary when used for implantable hypoglossal nerve stimulation and the medical criteria in the Medicare Medical Necessity policy have been met:

- C8007** Open implantation of hypoglossal nerve neurostimulator array and pulse generator, not requiring insertion of a separate distal respiratory sensor electrode or electrode array (New Code Effective 1/1/2026)
- C8008** Revision or replacement of hypoglossal nerve neurostimulator array including connection to existing pulse generator (New Code Effective 1/1/2026)
- C8011** Open implantation of hypoglossal nerve(s) neurostimulator electrode array(s) and receiver, including external power source and all system components (New Code Effective 1/1/2026)
- C8012** Revision or replacement of hypoglossal nerve(s) neurostimulator electrode array(s) and receiver (New Code Effective 1/1/2026)

Commercial Products

The following CPT code(s) are considered medically necessary when used for implantable hypoglossal nerve stimulation and the above medical criteria have been met:

- 64582** Open implantation of hypoglossal nerve neurostimulator array, pulse generator, and distal respiratory sensor electrode or electrode array
- 64583** Revision or replacement of hypoglossal nerve neurostimulator array and distal respiratory sensor electrode or electrode array, including connection to existing pulse generator
- C8007** Open implantation of hypoglossal nerve neurostimulator array and pulse generator, not requiring insertion of a separate distal respiratory sensor electrode or electrode array (New Code Effective 1/1/2026)
- C8008** Revision or replacement of hypoglossal nerve neurostimulator array including connection to existing pulse generator (New Code Effective 1/1/2026)
- C8011** Open implantation of hypoglossal nerve(s) neurostimulator electrode array(s) and receiver, including external power source and all system components (New Code Effective 1/1/2026)
- C8012** Revision or replacement of hypoglossal nerve(s) neurostimulator electrode array(s) and receiver (New Code Effective 1/1/2026)

Medicare Advantage Plans and Commercial Products

The following CPT code(s) are considered medically necessary when used for implantable hypoglossal nerve stimulation and the above medical criteria have been met:

- 64568** Open implantation of cranial nerve (eg, vagus nerve) neurostimulator electrode array and pulse generator

Medicare Advantage Plans and Commercial Products

The following code(s) are not covered for Medicare Advantage Plans and not medically necessary for Commercial Products:

- 41512** Tongue base suspension, permanent suture technique
- 41530** Submucosal ablation of the tongue base, radiofrequency, 1 or more sites, per session
- S2080** Laser-assisted uvulopalatoplasty (LAUP)
- C9727** Insertion of implants into the soft palate; minimum of three implants

For those procedures without a specific CPT code(s), claims should be filed with an appropriate Unlisted Procedure code(s).

RELATED POLICIES

Medicare Advantage Plans National and Local Coverage Determinations
Medical Necessity
Prior Authorization of Services, Treatments or Procedures
Removal of Implantable Devices
Unlisted Procedures

PUBLISHED

Provider Update, February 2026
Provider Update, October 2025
Provider Update, November 2024
Provider Update, June 2023
Provider Update, June 2022

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