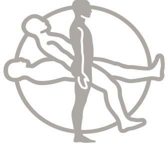

Medtronic

Minimally-Invasive Genioglossus Advancement and Hyoid Myotomy for Treatment of Obstructive Sleep Apnea Coding Guide

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TO OUR PARTNERS IN HEALTH CARE

This document provides general reimbursement information provided to assist in obtaining coverage and reimbursement for healthcare services. These coding suggestions do not replace seeking coding advice from the payer and/or your own coding staff. The ultimate responsibility for correct coding lies with the provider of services. Please contact your local payer for interpretation of the appropriate codes to use for specific procedures.

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Minimally-Invasive Genioglossus Advancement and Hyoid Myotomy for Treatment of Obstructive Sleep Apnea

Overview of Obstructive Sleep Apnea (OSA)

According to the American Academy of Family Physicians, obstructive sleep apnea (OSA) syndrome affects over 18 million people in the United States. Sleep apnea is characterized by an interruption of breathing during sleep, due to extra or loose tissue in the upper airway that collapses into the air passage with the effort of inhalation.[1] This is often linked to obesity and decreased muscle tone due to aging. When the airway becomes blocked, a drop in blood oxygen content can occur which is detected by the brain, causing the patient to wake just enough to tighten the airway muscles and allow breathing to then resume. This may occur several hundred times in one night. Obstructive sleep apnea can cause many symptoms, such as depression, irritability, sexual dysfunction, learning and memory difficulties, and falling asleep while at work or driving.

Treatment of OSA is directed at preventing airway collapse. For some patients, positional therapy, weight loss and conservative medical treatments are effective. For most, intervention which increases upper airway size or decreases collapsibility may be required. The most common therapy is nasal continuous positive airway pressure (CPAP). Nasal CPAP prevents upper airway collapse by splinting the upper airway. However, nasal CPAP therapy is not tolerated by some patients and poorly tolerated by greater than fifty percent (50%) of patients.[2] When a patient cannot or will not tolerate CPAP, effective surgical options may be the only remaining option.

Surgical Options

Genioglossal advancement and hyoid myotomy with suspension are two common surgical options for the treatment of OSA. Although they can be performed individually, the two procedures are also commonly performed together, often through the same incision. The result of performing both procedures together is opening the upper airway while advancing the tongue base. As medically necessary, this one operation can correct two major points of obstruction causing OSA.

Genioglossus Advancement (GA)

Genioglossal advancement permanently moves the back (base) of the tongue forward to prevent it from collapsing into the air passage. This can be performed by creating osteotomies in the mandible or by a minimally invasive approach.

In the minimally invasive approach, the procedure may be performed intraorally or alternatively through a submental incision, approximately 2.5 cm beneath the inferior rim of the mandible. A screw is attached to the cortex of the mandible. A suture is then attached to the screw and passed through the tongue muscle into the posterior aspect of the base of the tongue. The suspension suture may attach to the tongue base by means of suture triangulation or other means. The suture is tightened and the base of the tongue is suspended anteriorly.

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[1] Silverberg D, Iaina A. Treating obstructive sleep apnea improves essential hypertension and quality of life. Am Fam Phys. 2002; 65(2):229-236.

[2] Bribbs NB, Pack AI, Lkine, LR, et al. Objective measurement of patterns of nasal CPAP use by patients with obstructive sleep apnea. Am Rev Respir Dis 1993;147:887-95

Hyoid Myotomy and Suspension

The hyoid is a horseshoe shaped bone in the neck where the tongue muscles attach. In hyoid myotomy and suspension, the hyoid bone and its attachments are moved forward. This treats OSA by expanding the upper airway.

The hyoid myotomy and suspension procedure is performed through an external incision on the neck, just superior to the hyoid bone. Two screws are implanted into the posterior cortex of the mandible. Two heavy, permanent sutures are attached to each screw then passed around the hyoid bone. As the surgeon pulls on the suture tails, the hyoid bone and associated musculature are advanced toward the mandible, approximately 6-8 mm, until the medial infrahyoid muscles become tight.

Coverage

The information below describes what we have been able to gather from AMA, CMS, commercial payers, and healthcare consultants familiar with coding reimbursement, CPT rules, AMA and CMS.

Many of the Local Medicare Carriers and Commercial payers only consider the surgical treatment of OSA as medically necessary under certain conditions. The conditions vary from payer to payer. The list below includes the most common conditions found in the payer guidelines:

1. A diagnosis of OSA must be made with a sleep test either in a sleep lab or with a portable home sleep testing device as defined by:
   Apnea Hypopnea Index (AHI) or a Respiratory Disturbance Index (RDI) greater than or equal to 15 events per hour;
   OR
   AHI (or RDI) greater than or equal to 5, and less than 15 events per hour with documentation demonstrating **any** of the following symptoms:
   - Excessive daytime sleepiness, as documented by either a score of greater than **10** on the Epworth Sleepiness scale or inappropriate daytime napping, (e.g., during driving, conversation or eating) or sleepiness that interferes with daily activities; or
   - Impaired cognition or mood disorders; or
   - Hypertension; or
   - Ischemic heart disease or history of stroke; or
   - Cardiac arrhythmias, or
   - Pulmonary hypertension.

   The AHI is equal to the average number of episodes of apnea and hypopnea per hour and must be based on a minimum of two hours of sleep recorded using actual recorded hours of sleep, (i.e., the AHI may not be extrapolated or projected).

2. Patient fails to respond to CPAP therapy or demonstrates an inability to tolerate CPAP or other appropriate non-invasive treatments.
3. Demonstrated significant soft tissue and/or tongue base abnormalities with airway collapse.
   OR
4. Previous failure of UPPP to correct the OSA with evidence that retrolingual obstruction remains a significant and potentially correctable cause.

NOTE: Hyoid myotomy is a commonly covered procedure. However, providers should contact their individual payers regarding the minimally-invasive genioglossus advancement procedure as coverage for this procedure may vary.

ICD-9-CM Diagnosis Codes

Each claim must be submitted with the ICD-9-CM diagnosis codes that reflect the highest level of specificity of the condition of the patient.

Commercial payers and Medicare Local Coverage Decisions specify the ICD-9-CM codes that are considered medically necessary with specific procedures. The following codes are commonly used for obstructive sleep apnea.

327.23	Obstructive sleep apnea (adult) (pediatric)
780.51	Sleep apnea with insomnia
780.53	Sleep apnea with hypersomnia
780.57	Sleep apnea, unspecified type

Physician Coding and Reimbursement

Medicare National Average Payment

CPT	Description	CY2009 RVU	CY2009 Conv Factor	CY2009 Payment
41512	Tongue base suspension, permanent suture technique	15.66	$36.07	$564.85
21685	Hyoid myotomy and suspension	25.21	$36.07	$909.32

The average payment is for the physician service when the procedure is performed in the facility setting.

Under Medicare's RBRVS fee schedule, code 41512 and 21685 are marked as "N/A" in the non-facility setting. This indicates that the procedures are not expected to be performed in the physician office, but rather in a facility setting. However, if the procedures are performed in the office and the Medicare contractor determines that this was appropriate, the facility fee as shown above will be paid.

When the GA procedure is performed in conjunction with the hyoid myotomy procedure, these procedures are distinct and can be coded and reported separately. There are no CCI edits at this time that bundle the procedures together. The standard multiple procedure rules apply to both procedures. As the higher weighted procedure, 21685 for the hyoid myotomy would generally be listed first followed by 41512 for the GA.

Facility Coding and Reimbursement

For facilities, coding and reimbursement depend on the setting, inpatient or outpatient, and the type of facility, hospital or Ambulatory Surgery Center.

Hospital Inpatient

Because ICD-9-CM does not have a specific procedure code for minimally-invasive GA, a general code for tongue repair 25.59 is used. The hyoid myotomy procedure uses the general code for myotomy 83.02.

25.59	Other repair and plastic operations on tongue
83.02	Myotomy

Genioglossal Advancement (GA)

When GA is performed as a stand-alone procedure with any of the sleep apnea codes as the principal diagnosis, one of the following DRGs is assigned depending on whether secondary complications are coded:

Medicare National Average Payment

DRG	Description	Weight	Payment
137	Mouth Procedures W CC/MCC	1.2619	$7,007
138	Mouth Procedures WO CC/MCC	0.7366	$4,090

Hyoid Myotomy

When hyoid myotomy is performed with any of the sleep apnea codes as the principal diagnosis, one of the following DRGs is assigned, again depending on whether secondary complications are coded:

Medicare National Average Payment

DRG	Description	Weight	Payment
133	Other Ear, Nose, Mouth and Throat Procedures WCC/MCC	1.5552	$8,635
134	Other Ear, Nose, Mouth and Throat Procedures WO CC/MCC	0.8213	$4,560

GA with Hyoid Myotomy

When the GA procedure is performed together with a hyoid myotomy, the hyoid myotomy takes precedence and the DRG is assigned based on the hyoid myotomy code.

Medicare National Average Payment

DRG	Description	Weight	Payment
133	Other Ear, Nose, Mouth and Throat Procedures WCC/MCC	1.5552	$8,635
134	Other Ear, Nose, Mouth and Throat Procedures WO CC/MCC	0.8213	$4,560

<u>Hospital Outpatient</u>

Medicare allows both the GA and hyoid myotomy procedures to be performed in the hospital outpatient setting.

When performed together, the procedures are coded and reported separately; the procedures are then paid applying standard multiple procedure rules.

Medicare National Average Payment

CPT	Code Description	APC	APC Weight	Status Indicator	Payment
41512	Tongue base suspension, permanent suture technique	0252 Level III ENT Procedures	7.5330	T	$497.62
21685	Hyoid myotomy and suspension	0252 Level III ENT Procedures	7.5330	T	$497.62

Ambulatory Surgery Center

The GA code 41512 is a new procedure code for 2009. Medicare has not added code 41512 to the list of approved procedures that can be performed in an ASC. Instead, it is currently listed as "Excluded from Payment in ASCs for CY 2009". On a practical basis, this means that ASCs cannot perform the minimally-invasive GA procedure for Medicare patients.

Reimbursement for 41512 for commercial payers may vary depending on the ASC's individual provider contract and the patient's benefits. Providers should contact local payers to verify coverage and appropriate coding.

CPT 21685 for hyoid myotomy is on the Medicare list of approved procedures performed in an ASC and is payable in this setting.

Medicare National Average Payment

CPT	Code Description	Weight	Payment
21685	Hyoid myotomy and suspension	7.3454	$304.05

A Note about Commercial Payers for Physicians and Hospitals

Since CPT code 41512 is a new procedure code for 2009, not all of the commercial payers have updated their coverage guidelines to date. Many commercial payers follow the CMS/Medicare coding guidelines and edits. However, some commercial payers may have a different interpretation of the use of these codes. Providers should contact local payers to verify coverage, to determine if precertification and to identify what documentation must accompany the claim.