

Transvenous Phrenic Nerve Stimulation for Central Sleep Apnea

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[Effective Date](#) 10/2022
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[Coverage Policy](#) Surgical 134
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Member-specific benefits take precedence over medical policy and benefits may vary across plans. Refer to the individual's benefit plan for details [*](#).

Purpose:

This policy addresses the medical necessity of Transvenous Phrenic Nerve Stimulation for Central Sleep Apnea.

Description & Definitions:

Transvenous phrenic nerve stimulation (TPNS) for Central Sleep Apnea (CSA) is a surgical intervention utilized to treat those with moderate to severe CSA. The TPNS procedure involves placement of a transvenous lead utilized to stimulate the phrenic nerve, leading to contractions of the diaphragm resembling normal breathing patterns.

Central sleep apnea (CSA) is a disorder characterized by repetitive cessation or decrease of both airflow and ventilatory effort during sleep. Phrenic nerve stimulation sends an signal to help mimic breathing.

Criteria:

Transvenous Phrenic Nerve Stimulation for Central Sleep Apnea is considered **not medically necessary** for any indication.

Coding:

Medically necessary with criteria:

Coding	Description
	None

Considered Not Medically Necessary:

Coding	Description
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0424T	Insertion or replacement of neurostimulator system for treatment of central sleep apnea; complete system (transvenous placement of right or left stimulation lead, sensing lead, implantable pulse generator)
0425T	Insertion or replacement of neurostimulator system for treatment of central sleep apnea; sensing lead only
0426T	Insertion or replacement of neurostimulator system for treatment of central sleep apnea; stimulation lead only
0427T	Insertion or replacement of neurostimulator system for treatment of central sleep apnea; pulse generator only
0428T	Removal of neurostimulator system for treatment of central sleep apnea; pulse generator only
0429T	Removal of neurostimulator system for treatment of central sleep apnea; sensing lead only
0430T	Removal of neurostimulator system for treatment of central sleep apnea; stimulation lead only
0431T	Removal and replacement of neurostimulator system for treatment of central sleep apnea, pulse generator only
0432T	Repositioning of neurostimulator system for treatment of central sleep apnea; stimulation lead only
0433T	Repositioning of neurostimulator system for treatment of central sleep apnea; sensing lead only
0434T	Interrogation device evaluation implanted neurostimulator pulse generator system for central sleep apnea
0435T	Programming device evaluation of implanted neurostimulator pulse generator system for central sleep apnea; single session
0436T	Programming device evaluation of implanted neurostimulator pulse generator system for central sleep apnea; during sleep study

Document History:

Revised Dates:

Reviewed Dates:

- 2023: October

Effective Date:

- October 2022

References:

Specialty Association Guidelines; Government Regulations; Winifred S. Hayes, Inc; UpToDate; Literature Review; Specialty Advisors; National Coverage Determination (NCD); Local Coverage Determination (LCD).

(2023, Jun 27). Retrieved Sep 14, 2023, from MCG: <https://careweb.careguidelines.com/ed27/index.html>

(2023). Retrieved Sep 14, 2023, from Google, Inc:

https://www.google.com/search?q=Clinical+guidelines+for+phrenic+nerve&safe=strict&sca_esv=565363226&rlz=1C1GCEA_enUS982US982&ei=rjEDZZqhMJCnqtsP2aOUuAs&ved=0ahUKEwiasOXmv6qBAxWQk2oFHdkRBbcQ4dUDCBA&uact=5&oq=Clinical+guidelines+for+phrenic+nerve&gs_lp=Egxn

Badr, M. (2023, May 23). Central sleep apnea: Treatment. Retrieved Sep 13, 2023, from UpToDate:

[https://www.uptodate.com/contents/central-sleep-apnea-](https://www.uptodate.com/contents/central-sleep-apnea-treatment?search=phrenic%20nerve%20stimulation&source=search_result&selectedTitle=1~3&usage_type=default&display_rank=1#H10)

[treatment?search=phrenic%20nerve%20stimulation&source=search_result&selectedTitle=1~3&usage_type=default&display_rank=1#H10](https://www.uptodate.com/contents/central-sleep-apnea-treatment?search=phrenic%20nerve%20stimulation&source=search_result&selectedTitle=1~3&usage_type=default&display_rank=1#H10)

Implanted phrenic nerve stimulator for central sleep apnea. (2023, Sep 11). Retrieved Sep 14, 2023, from U.S. Food and Drug Administration: <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpma/pma.cfm?id=P160039>

NCD: Phrenic Nerve Stimulator (160.19). (N.D.). Retrieved Sep 13, 2023, from Centers for Medicare and Medicaid Services: [https://www.cms.gov/medicare-coverage-](https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?ncdid=244&ncdver=1&keyword=Phrenic%20nerve&keywordType=starts&areald=s53&docType=NCA,CAL,NCD,MEDCAC,TA,MCD,6,3,5,1,F,P&contractOption=all&sortBy=relevance&bc=1)

[database/view/ncd.aspx?ncdid=244&ncdver=1&keyword=Phrenic%20nerve&keywordType=starts&areald=s53&docType=NCA,CAL,NCD,MEDCAC,TA,MCD,6,3,5,1,F,P&contractOption=all&sortBy=relevance&bc=1](https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?ncdid=244&ncdver=1&keyword=Phrenic%20nerve&keywordType=starts&areald=s53&docType=NCA,CAL,NCD,MEDCAC,TA,MCD,6,3,5,1,F,P&contractOption=all&sortBy=relevance&bc=1)

Phrenic Nerve Stimulation (remedē System) for Central Sleep Apnea. (2023, May 26). Retrieved Sep 13, 2023, from Hayes, Inc: <https://evidence.hayesinc.com/report/htb.phrenic3649>

Phrenic Nerve Stimulation for the Treatment of Central Sleep Apnea: A Pooled Cohort Analysis. (2019, Dec 15).

Retrieved Sep 14, 2023, from PubMed: <https://jcsa.aasm.org/doi/10.5664/jcsa.8076>

Sec. 882.5830 Implanted diaphragmatic/phrenic nerve stimulator. (2023, Jun 07). Retrieved Sep 14, 2023, from Code of Federal Regulations (National Archives):

<https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?FR=882.5830>

Sleep Disorder Management. (2023, Sep 10). Retrieved Sep 13, 2023, from Carelon Medical Benefits Management:

<https://guidelines.carelonmedicalbenefitsmanagement.com/sleep-disorder-management-2023-09-10/>

Special Notes: *

Medical policies can be highly technical and complex and are provided here for informational purposes. These medical policies are intended for use by health care professionals. The medical policies do not constitute medical advice or medical care. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Sentara Health Plan members should discuss the information in the medical policies with their treating health care professionals. Medical technology is constantly evolving, and these medical policies are subject to change without notice, although Sentara Health Plan will notify providers as required in advance of changes that could have a negative impact on benefits.

Services mean both medical and behavioral health (mental health) services and supplies unless We specifically tell You otherwise. We do not cover any services that are not listed in the Covered Services section unless required to be covered under state or federal laws and regulations. We do not cover any services that are not Medically Necessary. We sometimes give examples of specific services that are not covered but that does not mean that other similar services are covered. Some services are covered only if We authorize them. When We say You or Your We mean You and any of Your family members covered under the Plan. Call Member Services if You have questions.

Keywords:

SHP Transvenous Phrenic Nerve Stimulation Central Sleep Apnea Treatments, SHP Surgical 134, transvenous phrenic nerve stimulation/neurostimulation, remedē System