
Inspire Upper Airway Stimulation (UAS) Device

Policy

This policy describes the use of the Inspire Upper Airway Stimulation (UAS) system in adults (18 years and older) suffering from obstructive sleep apnea (OSA).

Background

Obstructive Sleep Apnea (OSA) is a prevalent sleep disorder characterized by repeated episodes of upper airway closure during sleep, leading to oxygen desaturation and sleep fragmentation. The Inspire Upper Airway Stimulation (UAS) system, an implantable electrical device, offers a unique approach to manage OSA in adults (18 years and older). This device stimulates the hypoglossal nerve, moving the tongue forward to alleviate airway obstruction, thereby reducing episodes of apnea.

Indications

1. Age: Adults aged 18 years and over.
2. Diagnosis of OSA: The patient should have a confirmed diagnosis of moderate to severe OSA.
3. CPAP Trial: The patient should have tried CPAP therapy unsuccessfully or intolerably for at least six months.
4. Pre-operative Laryngoscopy: The patient must undergo a pre-operative laryngoscopy that demonstrates the tongue as a major factor in airway obstruction.

Procedure

Initial Consultation and Pre-operative Evaluation: A comprehensive history and physical examination should include an evaluation of the oral cavity, tongue, and other tissues used in sleep breathing.

Pre-operative Laryngoscopy: A pre-operative laryngoscopy must be conducted to confirm the tongue's role in airway obstruction.

Trial of CPAP: The patient should have had a minimum six-month trial of CPAP therapy, showing it was unsuccessful or intolerable.

**Medical Policy: Inspire Upper Airway Stimulation
(UAS) Device**

Effective Date: 8/10/2023

Created by: Dr. Howard Taekman

Reviewed/No Updates: 8/10/23, 2/8/24, 2/20/25

Surgical Implantation of the Inspire UAS Device: The Inspire system is surgically implanted under general anesthesia. The device is tested during surgery to confirm it provides appropriate stimulation of the hypoglossal nerve.

Post-operative Management and Follow-up: Regular appointments should be scheduled to monitor the patient's response to treatment, adjust device settings, and manage any potential complications or side effects. A post-operative sleep study would document the degree of improvement.

Conclusion

The Inspire UAS system represents an innovative approach to managing OSA in patients who meet specific criteria. Clinical studies show it is effective in reducing OSA symptoms and improving quality of life. The eligibility for the device should be carefully evaluated, and patients must be thoroughly prepared for the treatment, including understanding the risks and benefits of the procedure.

References

Kapur, V. K., Auckley, D. H., Chowdhuri, S., Kuhlmann, D. C., Mehra, R., Ramar, K., & Harrod, C. G. (2017). Clinical practice guideline for diagnostic testing for adult obstructive sleep apnea: an American Academy of Sleep Medicine clinical practice guideline. *Journal of Clinical Sleep Medicine*, 13(03), 479-504.

Weaver, T. E., & Sawyer, A. M. (2010). Adherence to continuous positive airway pressure treatment for obstructive sleep apnea: implications for future interventions. *Indian journal of medical research*, 131(2), 245.

Strollo, P. J., Soose, R. J., Maurer, J. T., de Vries, N., Cornelius, J., Froymovich, O., ... & STAR Trial Group. (2014). Upper-airway stimulation for obstructive sleep apnea. *New England Journal of Medicine*, 370(2), 139-149.

History

Created by: Howard Taekman, MD and Robert Sterling, MD

Committee Review: UM: August 10, 2023; QAC: August 29, 2023

Reviewed/No Updates by: Howard Taekman, MD & Robert Sterling, MD

Committee Review: UM: February 8, 2024; QAC: February 27, 2024

Reviewed/No Updates by: Howard Taekman, MD & Robert Sterling, MD

**Medical Policy: Inspire Upper Airway Stimulation
(UAS) Device**

Effective Date: 8/10/2023

Created by: Dr. Howard Taekman

Reviewed/No Updates: 8/10/23, 2/8/24, 2/20/25

Committee Review: UM: February 20, 2025; QAC: February 25, 2025

Revision Date	Content Revised (Yes/No)	Contributors	Review/Revision Notes
8/10/23	N/A	Howard Taekman, MD and Robert Sterling, MD	New
2/8/24	No	Howard Taekman, MD; Robert Sterling, MD	Annual Review
2/20/25	No	Howard Taekman, MD and Robert Sterling, MD	Annual Review