

American Academy of Otolaryngic Allergy (AAOA) Clinical Care Statement: Office-Based Management of Nasal Valve Dysfunction

The American Academy of Otolaryngic Allergy (AAOA) recognizes nasal valve dysfunction (NVD), including nasal valve collapse (NVC) as a clinically significant anatomic cause of nasal airway obstruction (NAO) that can be diagnosed and effectively treated with targeted interventions. This Clinical Care Statement is intended to guide physicians, payers and healthcare stakeholders regarding the appropriate use of office-based interventions for NVD, particularly temperature-controlled radiofrequency (TCRF) remodeling and absorbable nasal implant stabilization, while recognizing that traditional reconstructive surgical approaches remain appropriate for selected patients.

Definitions

- Nasal airway obstruction (NAO) refers to impaired airflow through the nasal passages resulting in symptoms such as congestion, restricted nasal breathing, sleep disturbance, impaired exercise capacity, or reduced quality of life.
- Nasal valve dysfunction (NVD) refers to static narrowing and/or dynamic inspiratory collapse of the internal and/or external nasal valve resulting in symptomatic airflow limitation.
- Nasal valve collapse (NVC) is a form of nasal valve dysfunction characterized by dynamic inspiratory narrowing or collapse of the lateral nasal wall.

The internal and external nasal valves are primary determinants of nasal airflow resistance and may contribute to obstruction independently or in conjunction with septal deviation, turbinate hypertrophy, or rhinitis.

Burden of Disease

NAO is a condition associated with significant patient discomfort, reduced quality of life, and increased financial burden, as it can interfere with sleep, work performance, and activities of daily living.^{1,2} Chronic NAO can lead to a range of health problems, including sleep disturbances, snoring, sinusitis, and obstructive sleep apnea.^{3,4} These health problems may in turn impact cardiovascular health, exercise capacity, leisure and activity, mental health, and work productivity.⁵⁻¹⁰ Because the NV represents the point of greatest physiologic airflow resistance within the nasal cavity, structural compromise at this level may produce substantial symptoms even in the absence of significant septal deviation or inflammatory disease.

Diagnosis of Nasal Valve Dysfunction

The diagnosis of NVD is primarily clinical, based on focused history and physical examination. Clinical evaluation may include:

- External nasal examination
- Anterior rhinoscopy
- Assessment of static and dynamic collapse
- Cottle or modified Cottle maneuver
- Nasal endoscopy when indicated to evaluate additional causes of obstruction

Improvement in airflow or symptoms with lateral nasal wall support maneuvers is supportive of the diagnosis. Imaging studies are not required for diagnosis of NVD and do not reliably assess dynamic collapse of the NV.

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Limitations of Medical Therapy

Nasal valve collapse is a structural and mechanical disorder that is not effectively corrected with medical therapy in the absence of coexisting inflammatory disease. Medical therapies such as intranasal corticosteroids, antihistamines, saline irrigations, or decongestants may be appropriate for conditions such as rhinitis or turbinate hypertrophy but do not address NV structural insufficiency or collapse. External nasal dilators or intranasal stents may provide temporary symptom relief but are not definitive treatment options. Requiring prolonged trials of medical therapy for isolated structural NVD is not clinically appropriate when inflammatory disease is not a significant contributing factor.

Office-Based Treatments of Nasal Valve Dysfunction

Office-based interventions, including temperature-controlled radiofrequency (TCRF) remodeling, and bioabsorbable nasal implants, offer effective, minimally invasive alternatives to traditional operating-room-based surgery. These procedures are typically performed under local anesthesia, providing patients with the benefits of reduced recovery time, lower procedural morbidity, and reduced healthcare resource utilization. Published evidence demonstrates clinically meaningful improvements in nasal obstruction symptoms and quality of life following these interventions.^{11,12} These minimally invasive interventions are supported by peer-reviewed evidence and should not be considered investigational when used in appropriately selected patients.

TCRF delivers temperature-controlled thermal energy to the NV while preserving mucosal integrity. Multiple studies, including a sham-controlled randomized trial, have demonstrated significant and durable improvements in nasal obstruction symptoms.¹³ In a prospective multicenter non-inferiority trial comparison of patients with severe nasal airway obstruction, TCRF demonstrated a 90.5% responder rate at 3 months and was non-inferior to septoplasty with turbinate reduction and functional rhinoplasty, with faster return to work and fewer procedure-related adverse events.¹⁴ In patients with obstructive sleep apnea, real-world claims analyses have shown that TCRF was associated with improved CPAP persistence and reduced healthcare resource utilization.^{15,16}

Bioabsorbable nasal implants provide structural support to the lateral nasal wall and have demonstrated significant improvement in patient-reported nasal breathing outcomes in prospective studies, including a randomized controlled trial with durable improvements through 24 months.^{15, 16} Reported adverse events are generally uncommon, mild, and self-limited.¹²

Relationship to Traditional Surgical Treatment Functional rhinoplasty, cartilage grafting, and structural lateral wall reconstruction remain established treatment options for selected patients with NVD. Office-based procedures are additional evidence-based options within the continuum of care rather than replacements for all surgical intervention. Treatment selection should be individualized based on anatomy, symptom severity, comorbidities, physician expertise, and patient preference.

Septoplasty and inferior turbinate reduction may be appropriate complementary procedures in selected patients with coexisting pathology but do not independently correct NVD and should not be considered substitutes for targeted NV treatment when valve pathology is present.

Functional Versus Cosmetic Treatment

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Functional treatment of NVD is distinct from cosmetic rhinoplasty. Procedures performed to improve nasal airflow are reconstructive and medically necessary when performed for symptomatic NVD. Incidental changes in nasal appearance do not negate the functional nature or medical necessity of treatment. Coverage determinations should be based on functional impairment and clinical findings rather than assumptions regarding cosmetic intent.

Medical Necessity

Office-based treatment of NVD is considered medically necessary when the following are present:

- Age $\geq$ 18 years
- Persistent nasal airway obstruction $\geq$ 12 weeks, presenting as congestion, mouth breathing, sleep disturbance, exercise intolerance or impaired quality of life
- Clinical evaluation confirms nasal valve dysfunction as one of the primary causes of the nasal airway obstruction based on physical examination, including improvement with Cottle or modified Cottle maneuver
- Improvement with external nasal dilator strips, nasal cones, or other nasal dilator devices, further supporting that lateral nasal wall support improves the patient's obstruction
- Failure of appropriate conservative medical therapy for $\geq$ 4 weeks when clinically indicated, such as intranasal corticosteroids, antihistamines, saline therapy, or decongestants, particularly when inflammatory rhinitis or allergic rhinitis may be contributing to symptoms

Statement

The American Academy of Otolaryngic Allergy recognizes office-based nasal valve treatments, including TCRF remodeling and bioabsorbable nasal implant stabilization, as evidence-supported therapeutic options for appropriately selected adult patients with symptomatic nasal airway obstruction due to nasal valve dysfunction. These minimally invasive interventions are supported by peer-reviewed evidence demonstrating improvement in nasal obstruction symptoms and quality of life and should not be considered investigational or experimental when used with appropriate clinical evaluation, patient selection, and physician judgment.

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