Molina Clinical Policy
Posterior Nasal Nerve Ablation
Policy No. 465

Last Approval: 02/11/2026
Next Review Due By: February 2027

DISCLAIMER

This Molina Clinical Policy (MCP) is intended to facilitate the Utilization Management process. Policies are not a supplementation or recommendation for treatment; Providers are solely responsible for the diagnosis, treatment, and clinical recommendations for the Member. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (e.g., will be paid for by Molina) for a particular Member. The Member's benefit plan determines coverage – each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their Providers will need to consult the Member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a Member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid Members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP and provide the directive for all Medicare members. References included were accurate at the time of policy approval and publication.

OVERVIEW

Chronic rhinitis is a long-term condition characterized by dysregulation of nasal mucosal function, which may be inflammatory or noninflammatory in nature depending on the etiology. An estimated 20 to 40 million people in the United States have chronic, nonallergic rhinitis ([2]Hayes 2025). Chronic rhinitis presents with symptoms such as nasal congestion, runny nose, postnasal drip, and frequent throat clearing or coughing, that persist for more than 12 weeks. It can be classified into allergic rhinitis, caused by triggers like pollen or dust mites, or nonallergic rhinitis, which may result from irritants, foods, weather, medications, infections, or hormonal factors. While many patients respond well to medical management, including intranasal corticosteroids, antihistamines, or anticholinergics, some individuals experience symptoms that are refractory to standard treatments. Advances in therapeutic approaches, such as cryoablation and radiofrequency ablation of the posterior nasal nerve, aim to address this unmet need, offering potential relief for patients with chronic, treatment-resistant rhinitis (Keswani & Holbrook 2025; Lieberman 2023).

Posterior nasal nerve (PNN) ablation is a minimally invasive procedure used to treat chronic rhinitis that works by disrupting the nerve signals responsible for nasal hyperreactivity, providing relief from symptoms like congestion and rhinorrhea. The procedure is usually performed on an outpatient basis in a clinic setting under local anesthesia and involves the use of cryotherapy or radiofrequency energy to deactivate the PNN. A probe is inserted into the nasal passage to deliver either temperature-controlled radiofrequency energy (e.g., RhinAer or Neuromark) or freezing temperatures using nitrous oxide (e.g., ClariFix) to ablate the nerve and reduce neural signaling ([1-3]Hayes 2025). While PNN ablation is less invasive than traditional surgical methods such as surgical and laser turbinectomy, it results in modulation or neurolysis of the PNN in attempt to inhibit parasympathetic signals thought to trigger rhinitis symptoms, in which there is limited long-term data as to the permanence, side-effects and efficacy of this procedure.

Regulatory Status

The primary devices on the market for radiofrequency PNN ablation include Neuromark (Neurent Medical Inc.) and RhinAer (Aerin Medical Inc.). Both devices are FDA-cleared through the 510(k) premarket notification process as Class II devices. They are regulated as electrosurgical cutting and coagulation accessories under product code GEI, and are indicated for use in otorhinolaryngology (ENT) surgery for the creation of radiofrequency lesions in the nasal airway.

The primary device on the market for cryoablation of the PNN is ClariFix (Stryker), which was FDA-cleared in 2017 through the 510(k) premarket notification process. The device is regulated as a cryosurgical unit and is a Class II device under product code GEH. The ClariFix device is indicated for use as a cryosurgical tool for the destruction of unwanted tissue during surgical procedures, including adults with chronic rhinitis.

COVERAGE POLICY

Posterior nasal nerve (PNN) ablation, such as cryoablation (e.g., ClariFix) or radiofrequency ablation (e.g., RhinAer, Neuromark) for the treatment of chronic rhinitis, is considered **experimental, investigational, and unproven** due to insufficient evidence in the peer-reviewed medical literature to establish long-term safety, efficacy, and effect on net health outcomes

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SUMMARY OF MEDICAL EVIDENCE

The existing evidence on posterior nasal nerve (PNN) ablation for the treatment of chronic rhinitis, including cryoablation and radiofrequency (RF) ablation, is limited, particularly regarding comparisons to other treatment options. Some studies show greater symptom improvement compared to sham procedures, but it is unclear whether participants had chronic rhinitis that was resistant to medical management, which is the intended target group for this treatment. Other studies report improvements in symptoms following ablation, but often lack control groups and suffer from biases due to high dropout rates and unclear patient definitions. Overall, larger, and more rigorous randomized controlled trials (RCTs) with clearly defined patient populations and comparisons to other treatments are needed to better understand the effectiveness and the long-term benefits and risks of these procedures for chronic rhinitis.

Randomized Controlled Trials

Stolovitzky et al. (2021) conducted a multicenter, prospective, single-blinded, RCT to evaluate the safety and efficacy of temperature-controlled radiofrequency (TCRF) neurolysis of the PNN for treating chronic rhinitis. The study involved 116 adults (mean age 57.5 years, 64.7% female) randomized into two groups: 77 participants received TCRF neurolysis of the PNN using RhinAer, while 39 participants underwent a sham procedure. Participants had chronic rhinitis for at least six months, a total 24-hour reflective nasal symptom score (rTNSS) of ≥6, moderate-to-severe rhinorrhea, and mild-to-severe nasal congestion. At three months, the primary endpoint was a responder rate defined as a ≥30% reduction in rTNSS from baseline. Baseline rTNSS scores averaged 8.3 in the active treatment group and 8.2 in the sham group. Results showed a significantly higher responder rate in the active treatment group (67.5%) compared to the sham group (41.0%), along with a greater reduction in rTNSS. The authors concluded that RF neurolysis was more effective than the sham procedure in reducing chronic rhinitis symptoms. The study had several limitations, including a design that did not standardize or reduce medication use, a short three-month follow-up period, lack of comparison to other treatments, and absence of investigator blinding.

Takashima et al. (2023) reported 12-month outcomes for the RCT conducted by Stolovitzky et al. (2021). At the three-month primary endpoint, the sham control group was unblinded. Of the 39 participants in the sham group, 27 met the eligibility criteria and agreed to transition to active treatment. Participants who did not meet the criteria, declined to continue, or underwent additional nasal procedures during follow-up, were exited from the trial. The active treatment group showed a sustained responder rate of 80.6% at 12 months, with a 57.8% improvement in rTNSS. Postnasal drip and cough scores also improved throughout the study period. The crossover group demonstrated similar baseline characteristics and treatment outcomes to the active group. Study limitations included uncontrolled medication use, the absence of a sustained control group, and inclusion of patients with both allergic and nonallergic rhinitis. Despite these limitations, the authors concluded that temperature-controlled RF neurolysis of the PNN area is a safe and effective treatment for chronic rhinitis, with symptom relief lasting through 12 months.

Takashima et al. (2024) reported 2-year outcomes for the RCT conducted by Stolovitzky et al. (2021). The study combined patients from the active treatment arm and those who crossed over from the control arm after the primary 3-month endpoint. At baseline, the mean reflective total nasal symptom score (rTNSS) was 8.2, which improved by 64.6% to a mean change of -5.3 at two years ($p < 0.001$). The responder rate, defined as a ≥30% improvement in rTNSS, was 87.3%. All components of the rTNSS—rhinorrhea, congestion, sneezing, and nasal itching—showed significant improvements, with rhinorrhea and congestion improving the most. Postnasal drip and cough also improved significantly. At two years, 81% of participants reported meaningful quality-of-life improvements, and nearly half of those using chronic rhinitis medications at baseline reduced or stopped their medication use. No serious device- or procedure-related adverse events were reported. Adjusting for patients who left the trial or underwent additional nasal procedures, the imputed two-year responder rate was 79.4%. The authors concluded that TCRF ablation of the PNN is a safe, effective, and durable treatment for chronic rhinitis, with the added benefit of reducing medication reliance.

Stolovitzky et al. (2025) reported 3-year outcomes for the RCT conducted by Stolovitzky et al. (2021). Of the 104 participants who underwent TCRF, 59 participated in the 3-year follow-up. The baseline rTNSS of 8.2 was reduced to 3.5 (95% CI, 2.9 to 4.1) at 3 years, a 57.3% reduction and mean change of -4.7 (95% CI, -5.3 to -4.1, $p < 0.0001$). Cough scores also decreased from the mean baseline of 1.5 to 0.7 at 3 years (95% CI, 0.5 to 0.9, mean change -0.8, $p < 0.0001$) and postnasal drip symptoms were reduced from 2.5 to 1.4 at 3 years (95% CI, 1.2 to 1.7, mean change -1.1, $p < 0.0001$). No adverse events were reported between 24 and 36 months of follow-up. At baseline, 72.9% of participants were taking ≥ 1 medication class. By year 3, 18.6% of participants had reduced or stopped at least one medication class and 9.3% stopped medications altogether, while others continued or began new use of antihistamines and other medications. The authors concluded that TCRF ablation of the PNN is a safe, effective, and durable treatment option for chronic rhinitis.

Systematic Reviews and Meta-Analyses

Yu et al. (2024) conducted a systematic review and meta-analysis evaluating the safety and efficacy of TCRF of the PNN as a treatment for chronic rhinitis. The review included five studies in total, with two being RCTs and three being prospective single-arm studies, for a total number of 284 patients. The primary outcome assessed was a validated symptom score of nasal congestion, itching, rhinorrhea, and sneezing (0-12 scale) measured using the rTNSS. Meta-analysis showed a pooled mean change in rTNSS at 3 months of -4.28 (95% CI, -5.10 to -3.46), indicating clinically meaningful improvement. The responder rate, defined as a ≥ 30% reduction in baseline rTNSS, was 77.11% at 3 months and 80.80% at 6 months. The RCT by Stolovitzky et al. (2021) showed a significantly greater reduction in rTNSS scores in the treatment arm versus sham at 3 months. Secondary, qualitative outcomes included postnasal drip and cough scores, quality of life (QoL) and nasal pain. Postnasal drip and cough symptoms improved significantly from baseline in the four studies that reported them. One study assessed QoL using the Mini Rhinoconjunctivitis Quality (RQLQ) of Life Questionnaire and found a 53.3% improvement at 3 months and a 60.0% improvement at 6 months. In general, pain was low post-procedure, measured using visual analogue (VAS) scores. Adverse events were reported in 21 patients (7.4%), totaling 36 events, with the most common being nasal soreness and pain, nasal mucosa changes, sinusitis, nasal bleeding, and eye dryness. No serious adverse events were reported and there were no cases of cheek or palate numbness. The authors concluded that radiofrequency neurolysis of the PNN is effective in reducing chronic rhinitis symptoms, with a favorable safety and tolerability profile. However, despite promising results, the authors caution that further RCTs with larger, more diverse populations and with longer follow-up periods are needed.

Kang et al. (2023) conducted a systematic review and meta-analysis of 12 studies, including the Chang et al. (2019) and Ow et al. (2021) studies, to evaluate the effectiveness of cryotherapy and radiofrequency ablation (RFA) in managing allergic and nonallergic rhinitis. The analysis included 12 studies with a total of 788 patients, five of which utilized RFA devices for refractory rhinitis, and seven employed cryotherapy devices. Primary outcomes were measured using the Total Nasal Symptom Score (TNSS) and the RQLQ. A "good response" to treatment was defined as a ≥30% reduction in the total TNSS, while a "clinical response" was considered an improvement of at least one point from baseline. Cryotherapy and RFA both significantly reduced TNSS at 1, 3, 6, and 12 months, though RFA showed a higher clinical response rate at three months (91.9% vs. 81.8%; P=0.005). Chang et al. (2019) reported that cryotherapy significantly improved rTNSS at all time points ($P < 0.001$), with notable reductions in rhinorrhea, congestion, sneezing, and nasal itchiness, as well as improved RQLQ scores at three months ($P < 0.001$). Additionally, 35.2% of participants discontinued intranasal medications, though limitations such as lack of a control group were noted. Ow et al. (2021) extended these findings, demonstrating sustained improvements in TNSS and RQLQ at 18 and 24 months, with over 80% achieving meaningful clinical improvement in symptoms and quality of life. Adverse events across studies were generally mild and transient, with one participant experiencing serious complications. Overall, the meta-analysis concluded that cryotherapy and RFA are effective treatments for chronic rhinitis, with RFA offering slightly greater efficacy for nonallergic rhinitis symptoms, while cryotherapy provided sustained benefits up to 24 months.

Desai et al. (2023) performed a systematic review to evaluate the safety and efficacy of ClariFix, a novel, intranasal cryotherapy device used for cryosurgical ablation of the PNN to treat chronic rhinitis refractory to medical management. The review included one RCT and seven single-arm cohort studies (five prospective and two retrospective), for a combined total of 472 patients with chronic rhinitis. While the review targeted patients of all ages with both allergic and non-allergic rhinitis subtypes, the definition of chronic rhinitis varied among studies. The primary outcome was clinical improvement in nasal symptoms, measured using TNSS and rTNSS to assess symptoms such as rhinorrhea, congesting, itching, and sneezing, using a 0-3 scale per symptom for a total score range of 0-12. A clinically meaningful

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improvement was defined as a ≥30% reduction from baseline. Overall, all studies demonstrated statistically significant and clinically important reductions in TNSS and rTNSS scores at one and three months, with some studies showing maintained improvements for up to 24 months. In the RCT (n = 133), TNSS scores improved from a baseline of 8.1 ± 1.7 to 4.8 ± 2.3 at one month, and 4.3 ± 2.4 at three months. Similar improvements were seen in other single-arm trials. While no serious adverse events were reported in any study, the most frequently reported side effects were post-procedural pain (13.5%), headache (4.2%), and palate numbness (3.0%). Other less common events included nasal congestion, bleeding, and watery eyes, and all adverse effects were transient, resolving without intervention. Study limitations include lack of raw patient data, heterogeneity in outcome measures and follow-up intervals, and predominance of single-arm designs without control groups. The authors concluded that ClariFix is a safe and effective clinic-based interventional treatment for chronic rhinitis unresponsive to pharmacologic therapy. However, more independent, high-quality RCTs are needed.

National and Specialty Organizations

The **American Academy of Otolaryngology (AAO)** released a position statement on peripheral nerve ablation for chronic rhinitis in January 2023. The statement endorsed PNN ablation for medically refractory chronic rhinitis. According to the statement, “Based on these safety and efficacy data, we endorse the use of posterior nasal nerve ablation for the treatment of medically refractory chronic rhinitis. We do not consider these treatments to be experimental” (AAO 2023).

The **American Rhinologic Society (ARS)** issued a position statement on posterior nasal nerve ablation. The statement affirms the procedures effectiveness, stating, “The American Rhinologic Society supports the use of posterior nasal nerve ablation for the treatment of chronic rhinitis, including both allergic and non-allergic subtypes. This procedure should not be considered experimental but should be considered as an effective option in treating chronic rhinitis and improving patient quality of life in those suffering from rhinorrhea and nasal congestion based on the following data” (ARS 2022).

The **National Institute for Health and Care Excellence (NICE)** published interventional procedure guidance on cryotherapy for chronic rhinitis and recommends that it be only used in the research setting. According to NICE, the evidence is limited and includes patients with different types of rhinitis. While short-term evidence is promising, long-term efficacy remains uncertain and patient selection criteria are undefined (NICE 2023).

CODING & BILLING INFORMATION

CPT (Current Procedural Terminology)

Code	Description
31242	Nasal/sinus endoscopy, surgical; with destruction by radiofrequency ablation, posterior nasal nerve
31243	Nasal/sinus endoscopy, surgical; with destruction by cryoablation, posterior nasal nerve
30999	Unlisted procedure, nose [when specified as posterior nasal nerve ablation]

CODING DISCLAIMER: Codes listed in this policy are for reference purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement. Listing of a service or device code in this policy does not guarantee coverage. Coverage is determined by the benefit document. Molina adheres to Current Procedural Terminology (CPT®), a registered trademark of the American Medical Association (AMA). All CPT codes and descriptions are copyrighted by the AMA; this information is included for informational purposes only. Providers and facilities are expected to utilize industry standard coding practices for all submissions. When improper billing and coding is not followed, Molina has the right to reject/deny the claim and recover claim payment(s). Due to changing industry practices, Molina reserves the right to revise this policy as needed.

APPROVAL HISTORY

02/11/2026 Policy reviewed. No change to coverage criteria.
02/12/2025 New policy. IRO Peer Review on January 14, 2025, by practicing physician board-certified in Otolaryngology.

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