

## Medical Coverage Policy | Rhinomanometry and Acoustic Optical Rhinomanometry



**EFFECTIVE DATE:** 12|01|2008

**POLICY LAST REVIEWED:** 01|17|2024

### OVERVIEW

Rhinomanometry, acoustic rhinometry, and optical rhinometry are techniques to objectively measure nasal patency. Several clinical applications are proposed including allergy testing, evaluation of obstructive sleep apnea, and patient assessment prior to nasal surgery.

### MEDICAL CRITERIA

Not applicable

### PRIOR AUTHORIZATION

Not applicable

### POLICY STATEMENT

#### Medicare Advantage Plans

Rhinomanometry and acoustic/optical rhinometry are considered not covered as the evidence is insufficient to determine the effects of the technology on health outcomes.

#### Commercial Products

Rhinomanometry and acoustic/optical rhinometry are considered not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes.

### COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage, or Subscriber Agreement for applicable medically necessary benefits/coverage.

### BACKGROUND

Rhinomanometry, acoustic rhinometry, and optical rhinometry are techniques to objectively measure nasal patency. Several clinical applications are proposed including allergy testing, evaluation of obstructive sleep apnea, and patient assessment prior to nasal surgery.

Nasal patency is a complex clinical issue that can involve mucosal, structural, and psychological factors. The perception of nasal obstruction is subjective and does not always correlate with clinical examination of the nasal cavity, making it difficult to determine which therapy might be most likely to restore satisfactory nasal breathing. Therefore, procedures that objectively measure nasal patency have been sought. Three techniques that could potentially be useful in measuring nasal patency are as follows:

1. Rhinomanometry is a test of nasal function that measures air pressure and the rate of airflow in the nasal airway during respiration. These findings are used to calculate nasal airway resistance. Rhinomanometry is intended to be an objective quantification of nasal airway patency.
2. Acoustic rhinometry is a technique intended for assessment of the geometry of the nasal cavity and nasopharynx and for evaluating nasal obstruction. The technique is based on an analysis of sound waves reflected from the nasal cavities.
3. Optical rhinometry uses an emitter and a detector placed at opposite sides of the nose and can detect relative changes in nasal congestion by the change in transmitted light. This technique is based on the absorption of red/near-infrared light by hemoglobin and the endonasal swelling-associated increase in local blood volume.

Overall, the scientific evidence does not permit conclusions about the effect of rhinomanometry, acoustic rhinometry, or optical rhinometry on health outcomes. To date, no studies have been published that evaluate the clinical utility of these tests. None of the studies identified have prospectively compared patient outcomes with and without the use of one or more of these tests for any clinical condition. Therefore, the technologies are considered not medically necessary as there is no proven efficacy.

## CODING

### Medicare Advantage Plans and Commercial Products

The following CPT code(s) is not covered for Medicare Advantage Plans and considered not medically necessary for Commercial Products:

**92512** Nasal function studies (e.g., rhinomanometry)

## RELATED POLICIES

Not applicable

## PUBLISHED

Provider Update, March 2024

Provider Update, March 2023

Provider Update, July 2022

Provider Update, July 2021

Provider Update, June 2020

## REFERENCES

1. Larivee YMD, Leon Z BS, Salas-Prato M PhD, Ganeva E MD, Desrosiers M MD. "Evaluation of the Nasal Response to Histamine Provocation with Acoustic Rhinometry." *Journal of Otolaryngology*; November 2001; 30(6):319-323.
2. Andre RF, Vuyk HD, Ahmed A et al. Correlation between subjective and objective evaluation of the nasal airway. A systematic review of the highest level of evidence. *Clin Otolaryngol* 2009; 34(6):518-25.
3. Canakcioglu S, Tahamiler R, Saritzali G et al. Nasal patency by rhinomanometry in patients with sensation of nasal obstruction. *Am J Rhinol Allergy* 2009; 23(3):300-2.
4. Pirila T, Tikanto J. Acoustic rhinometry and rhinomanometry in the preoperative screening of septal surgery patients. *Am J Rhinol Allergy* 2009; 23(6): 605-9.
5. Schumacher MJ. Nasal congestion and airway obstruction: the validity of available objective and subjective measures. *Curr Allergy Asthma Rep* 2002; 2(3):245-51.
6. Wilson AM, Sims EJ, Orr LC et al. Effects of topical corticosteroid and combined mediator blockade on domiciliary and laboratory measurement of nasal function in seasonal allergic rhinitis. *Ann Allergy Asthma Immunol* 2001; 87(4):344-9.
7. Ellegard EK, Hellgren M, Karlsson NG. Fluticasone propionate aqueous nasal spray in pregnancy rhinitis. *Clin Otolaryngol* 2001; 26(5):394-400.
8. Rhee CS, Kim DY, Won TB et al. Changes of nasal function after temperature-controlled radiofrequency tissue volume reduction for the turbinate. *Laryngoscope* 2001; 111(1):153-8.
9. Suzina AH, Hamzah M, Samsudin AR. Objective assessment of nasal resistance in patients with nasal disease. *J Laryngol Otol* 2003; 117(8):609-13.
10. Numminen J, Dastidar P, Heinonen T et al. Reliability of acoustic rhinometry. *Respir Med* 2003; 97(4):421-7.

[CLICK THE ENVELOPE ICON BELOW TO SUBMIT COMMENTS](#)

This medical policy is made available to you for informational purposes only. It is not a guarantee of payment or a substitute for your medical judgment in the treatment of your patients. Benefits and eligibility are determined by the member's subscriber agreement or member certificate and/or the employer agreement, and those documents will supersede the provisions of this medical policy. For information on member-specific benefits, call the provider call center. If you provide services to a member which are determined to not be medically necessary (or in some cases medically necessary services which are non-covered benefits), you may not charge the member for the services unless you have informed the member and they have agreed in writing in advance to continue with the treatment at their own expense. Please refer to your participation agreement(s) for the applicable provisions. This policy is current at the time of publication; however, medical practices, technology, and knowledge are constantly changing. BCBSRI reserves the right to review and revise this policy for any reason and at any time, with or without notice. Blue Cross & Blue Shield of Rhode Island is an independent licensee of the Blue Cross and Blue Shield Association.

