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Rhinomanometry, Acoustic Rhinometry, Optical Rhinometry and Acoustic Pharyngometry

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Related Policies (if applicable)
None

Disclaimer

Carefully check state regulations and/or the member contract.

Each benefit plan, summary plan description or contract defines which services are covered, which services are excluded, and which services are subject to dollar caps or other limitations, conditions or exclusions. Members and their providers have the responsibility for consulting the member's benefit plan, summary plan description or contract to determine if there are any exclusions or other benefit limitations applicable to this service or supply. **If there is a discrepancy between a Medical Policy and a member's benefit plan, summary plan description or contract, the benefit plan, summary plan description or contract will govern.**

Coverage

Rhinomanometry, acoustic rhinometry and optical rhinometry **are considered experimental, investigational, and/or unproven.**

Acoustic pharyngometry **is considered experimental, investigational, and/or unproven** for all indications.

Policy Guidelines

Because there is no specific code to report acoustic pharyngometry, it is commonly billed with unlisted code 92700. Code 92520 is not considered appropriate for this service.

Description

Rhinomanometry, Acoustic Rhinometry and Optical Rhinometry

Rhinomanometry, acoustic rhinometry (AR), and optical rhinometry are techniques to objectively measure nasal patency. Several clinical applications are proposed including allergy testing, evaluation of obstructive sleep apnea (OSA) 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. (1) 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 and provides a functional measurement of the pressure/flow relationships during the respiratory cycle. Rhinomanometry is intended to be an objective quantification of nasal airway patency and may be used for the assessment of nasal decongestion, polyps, enlarged adenoids and for evaluating changes in the volume of the nasal passage due to allergies, surgical procedures or medications. (2)
2. AR is a technique intended for assessment of the geometry of the nasal cavity and nasopharynx and for evaluating nasal obstruction. A spark generator produces an acoustic click, which travels past a microphone and is directed through the nasal passages via a conduit; the click is reflected back from the various nasal contours and received by the microphone. A computer program analyzes the sounds, producing a graph of the cross-sectional area (CSA) of the nasal passage from the vestibule to the nasopharynx. AR gives an anatomic description of a nasal passage and is used to evaluate nasal patency and may be used for the assessment of fixed lesions (e.g., septal deviations, or alterations in CSA induced by allergens or drugs). (3, 4)
3. Optical rhinometry is a test that uses an emitter, and a detector placed at opposite sides of the nose to provide continuous measurement of changes in blood flow (optical density) within the nasal vessels while simultaneously monitoring oxygen saturation by evaluating change(s) 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. Optical rhinometry may be used to provide real-time measurements in the case of polyps, perforation, and deviated septum. (5)

Acoustic Pharyngometry

An acoustic pharyngometry (Eccovision®) device uses acoustic reflection technology to map the size, structure and collapsibility of the oral and nasal airway. The device measures pharyngeal airway size and stability from the oral pharyngeal junction to the glottis. The pharyngometer graphically displays the relationship between the CSA of the airway and distance down the airway in centimeters. Sound waves are projected down the airway and reflected back so that the software can analyze and quantify changes in the airways. Acoustic pharyngometry is minimally invasive and takes 2-5 minutes to complete. (6) Several clinical applications have

been proposed including but not limited to the assessment of patients who may benefit from oral appliances and for the evaluation of the site and severity of airway obstruction. (6)

Regulatory Status

Several models of rhinomanometers or ARs have received marketing clearance by the United States (U.S.) Food and Drug Administration (FDA) through the 510(k)-clearance process. Refer to <<https://www.accessdata.fda.gov>> for a comprehensive list of FDA approved devices.

Optical rhinometry is a technique developed in Europe; to date, no devices have received clearance for marketing in the U.S.

In 2002, the acoustic pharyngometry (Eccovision®) device received marketing clearance by the U.S. FDA through the 510(k)-clearance process under FDA product code: BXQ. (7)

NOTE: This section is to be used for informational purposes only. United States Food and Drug Administration (FDA) approval alone is not a basis for coverage.

Rationale

This policy is based on a review of relevant professional association recommendations.

Professional Guidelines and Position Statements

The Academy of Allergy, Asthma and Immunology (AAAAI), the American College of Allergy, Asthma and Immunology (ACAAI) and the American Academy of Sleep Medicine Clinical Practice Guideline focus on established evidence-based management options that have robust evidence of efficacy and long-term safety. Available guidelines do not specifically include rhinomanometry, acoustic rhinometry/optical rhinometry, and/or acoustic pharyngometry therefore, the lack of inclusion in current professional guidelines suggest that these procedures do not meet the necessary criteria for routine standard of care due to insufficient clinical evidence. In addition, optical rhinometry has not received clearance for marketing in the United States.

Academy of Allergy, Asthma and Immunology (AAAAI) and the American College of Allergy, Asthma and Immunology (ACAAI)

In 2020, the AAAAI and ACAAI updated their practice parameter for rhinitis. (8) This guideline discusses the diagnosis, assessment, and pharmacologic options for allergic rhinitis and nonallergic rhinitis. The workgroup does not specifically mention rhinomanometry, acoustic rhinometry and/or optical rhinometry within their recommendations although they offer the following guidance:

- Recommendation 1: We recommend that the clinician complete a detailed history and a physical examination in an individual presenting with symptoms of rhinitis. (Strength of recommendation: Strong; Certainty of evidence: low).

- Recommendation 2: We recommend that for individuals presenting with rhinitis symptoms, a review of all current medications should be completed to assess whether drug-induced rhinitis may be present. (Strength of recommendation: Strong; Certainty of evidence: Ungraded due to lack of studies addressing this specific issue although this was a unanimous vote in favor by the work group and the Joint Task Force on Practice Parameters).

American Academy of Sleep Medicine Clinical Practice Guideline

The 2018 American Academy of Sleep Medicine Clinical Practice Guideline (9) states polysomnography is the only diagnostic test which can diagnose OSA. There is no mention of acoustic pharyngometry as a diagnostic tool within the context of the guideline.

Standardisation Committee on Objective Assessment of the Nasal Airway

An international committee to establish standardized methods for measuring objective nasal assessments, such as rhinomanometry and acoustic rhinometry, was created. (10) In 2005, this committee published a consensus report on acoustic rhinometry and rhinomanometry, which states “a more stringent standardization of these decongestive procedures is suggested.”

International Consensus Statement on Obstructive Sleep Apnea

In 2023, the International Consensus Statement (11) stated that “objective nasal function testing is not standard clinical practice and not routinely used to identify patients at the highest risk of non-adherence.”

Coding

Procedure codes on Medical Policy documents are included **only** as a general reference tool for each policy. **They may not be all-inclusive.**

The presence or absence of procedure, service, supply, or device codes in a Medical Policy document has no relevance for determination of benefit coverage for members or reimbursement for providers. **Only the written coverage position in a Medical Policy should be used for such determinations.**

Benefit coverage determinations based on written Medical Policy coverage positions must include review of the member’s benefit contract or Summary Plan Description (SPD) for defined coverage vs. non-coverage, benefit exclusions, and benefit limitations such as dollar or duration caps.

CPT Codes	92512, 92700
HCPCS Codes	None

*Current Procedural Terminology (CPT®) ©2025 American Medical Association: Chicago, IL.

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Centers for Medicare and Medicaid Services (CMS)

The information contained in this section is for informational purposes only. HCSC makes no representation as to the accuracy of this information. It is not to be used for claims adjudication for HCSC Plans.

The Centers for Medicare and Medicaid Services (CMS) does not have a national Medicare coverage position. Coverage may be subject to local carrier discretion.

A national coverage position for Medicare may have been developed since this medical policy document was written. See Medicare's National Coverage at <<https://www.cms.hhs.gov>>.

Policy History/Revision

Date	Description of Change
05/15/2026	Document updated. Coverage unchanged. Added reference 6; others updated and one removed.
01/01/2026	Document updated. Coverage unchanged. Added references 11, 12; others updated/removed.

05/15/2024	Document updated with literature review. Coverage unchanged. Added reference 25; others updated.
03/15/2023	Reviewed. No changes.
05/15/2022	Document updated with literature review. Coverage unchanged. Added references 23, 24, 33; others updated and/or removed.
02/15/2021	Reviewed. No changes.
05/01/2020	Document updated with literature review. Coverage unchanged. Added references 6, 7, 18-22, 24-25.
10/01/2018	Reviewed. No changes.
11/1/2017	Document updated with literature review. Added to Coverage “Acoustic pharyngometry is considered experimental, investigational and/or unproven for all indications.” Title changed from Rhinomanometry, Acoustic Rhinometry, Optical Rhinometry.
7/01/2016	Reviewed. No changes.
10/15/2015	Document updated with literature review. Coverage unchanged.
09/01/2014	Reviewed. No changes.
10/15/2013	Document updated with literature review. The following change(s) were made: Optical rhinometry was added to the Coverage statement as another type of rhinometry.
10/01/2007	Revised/Updated Entire document
08/15/2003	Revised/Updated Entire document
07/01/1994	Revised/Updated Entire document
04/01/1994	Revised/Updated Entire document
05/01/1990	New Medical Policy