MEDICAL POLICY

Capital BLUE

POLICY TITLE	PHARYNGOMETRY AND RHINOMETRY
POLICY NUMBER	MP 2.088

Original Issue Date (Created):	**October 25, 2011**
Most Recent Review Date (Revised):	**November 26, 2013**
Effective Date:	**February 1, 2014**

I. POLICY

Pharyngometry and rhinometry are considered **investigational** as techniques for screening, diagnosis, or treatment planning in persons with known or suspected obstructive sleep apnea (OSA) and for all other indications. There is insufficient evidence to support a conclusion concerning the health outcomes or benefits associated with these procedures

Cross-references
MP 2.045 Diagnosis and Medical Management of Obstructive Sleep Apnea
MP 1.128 Surgical Treatment of Snoring and Obstructive Sleep Apnea

II. PRODUCT VARIATIONS

[N] = No product variation, policy applies as stated
[Y] = Standard product coverage varies from application of this policy, see below

[N] Capital Cares 4 Kids
[N] PPO
[N] HMO
[N] SeniorBlue HMO
[N] SeniorBlue PPO
[N] Indemnity
[N] SpecialCare
[N] POS
[Y] FEP PPO*

* The FEP program dictates that all drugs, devices or biological products approved by the U.S. Food and Drug Administration (FDA) may not be considered investigational. Therefore, FDA-approved drugs, devices or biological products may be assessed on the basis of medical necessity.

III. DESCRIPTION/BACKGROUND

Sleep-Disordered breathing (SDB) describes a group of disorders with many factors and causes and is characterized by abnormalities of respiratory pattern (pauses in breathing) or the quantity of ventilation during sleep. Obstructive sleep apnea (OSA), the most common such disorder, is characterized by the repetitive collapse or partial collapse of the pharyngeal airway during sleep and the need to arouse to resume ventilation. Sleep is thus disrupted, yielding waking somnolence and diminished neurocognitive performance.

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Stenosis of the oral and hypo-pharyngeal tract is a major factor in the manifestation of symptoms. Multiple methods that detect structural and functional abnormalities of the upper airway associated with obstructive sleep apnea (OSA) are being evaluated in search of non-invasive testing that will allow physicians to more easily assess patient risk of OSA, distinguish patients with OSA from those without it, monitor treatment modalities implemented for OSA management and as a result reduce the number of more complex overnight sleep studies that a patient requires.

Since its introduction in 1989, acoustic rhinometry (AR) has been employed in a multitude of scientific investigations to study nasal physiology and to document surgical and pharmacological interventions. AR is a non-invasive technique which provides an estimate of the internal dimensions of varying cross-sectional areas (CSA) of the nasal passages as a function of distance from the nostrils providing a two dimensional picture of the nasal cavity. It is based on the physical principle of acoustic reflection which uses the generation of sound waves and detection of reflected waves. A mathematical algorithm is used to translate changes in sound impedance into changes in cross-sectional areas. Normative values have been published for healthy adults of different races and AR has been used in a variety of clinical applications including assessing changes in nasal CSA following rhinoplasty, documenting dynamic
changes in nasal airway patency related to nasal valve collapse, for investigating the nasal cycle as well as for evaluation of patients with sleep apnea.

Acoustic pharyngometry also uses acoustic reflection for volume analysis of oro-pharynometric parameters to establish a correlation between morpho-volumetric variations of oro-pharyngo-laryngeal spaces and the presence and severity of disease. Acoustic pharyngometry is a method of investigating obstruction in sleep disordered breathing together with other exams such as cephalometrics, computed tomography, magnetic resonance imaging and fibronasopharngolaryngoscopy etc. It is also used to monitor medical and surgical treatments for the management of obstructive sleep apnea.

Devices

With the availability of technology and continuing education, dentists and orthodontists are becoming involved in the treatment of OSA. Devices with 510(k) pre-market approval, such as the Eccovision® Control Unit, are available for use in the practitioner's office setting for the assessment of a patient for potential sites of sleep related upper-airway obstruction, and to consider whether an oral appliance or continuous positive pressure airway device is appropriate for the patient. The rhinometer is also listed for use by ENT and pulmonary specialists for evaluation of patients with deviated septum, allergies, congestion, nasal resistance, nasal polyps, hypertrophied turbinates and any other type of upper airway obstruction or resistance.

Acoustic Pharyngometer
The Eccovision® Acoustic Pharyngometer (Sleep Group Solutions) is a device which uses acoustic reflection technology to measure the patient's pharyngeal airway size and stability from the Oral Pharyngeal Junction to the Glottis. Sound waves are projected down the airway and reflected back in such a way that the Pharyngometer software can analyze and quantify changes in the airways cross-sectional area. The data is graphically displayed showing the relationship between the cross-sectional area of the airway and distance in centimeters. Studies suggest a relationship between the existence of obstructive sleep apnea and a narrow, collapsible, airway. The test is completed with the patient awake and seated during the exam which takes 2-5 minutes to complete.

Acoustic Rhinometer
The Eccovision® Acoustic Rhinometer (Sleep Group Solutions) also uses acoustic reflection technology and measures nasal patency and maps out the topography of the nasal airway identifying the location and severity of airway obstruction. The test is completed with the patient awake and seated during the exam which takes 30 seconds to complete.

IV. Definitions

510 (K) is a premarketing submission made to FDA to demonstrate that the device to be marketed is as safe and effective, that is, substantially equivalent (SE), to a legally marketed device that is not subject to premarket approval (PMA). Applicants must compare their 510(k) device to one or more similar devices currently on the U.S. market and make and support their substantial equivalency claims.

ACOUSTIC REFLECTION technology is based on the analysis of sound waves that are launched from a loudspeaker and travel along a wave tube into the subject's airways where they are reflected. Measurement of differences in the reflected wave signals enables a graphic representation of the variations in pharyngeal cross-sectional area at several anatomic levels.

ACOUSTIC PHARYNGOMETRY is a non-invasive technique using acoustic reflection that quantifies geometrically complex pharyngeal dimensions in order to assess the upper airway for possible site(s) of obstruction.

ACOUSTIC RHINOMETRY is a non-invasive technique using acoustic reflection to study nasal physiology. It may be used to evaluate the nasal cavity to aid in the identification of fixed lesions such as septal deviations or alterations in cross-sectional area induced by allergens or drugs.

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V. BENEFIT VARIATIONS

The existence of this medical policy does not mean that this service is a covered benefit under the member's contract. Benefit determinations should be based in all cases on the applicable contract language. Medical policies do not constitute a description of benefits. A member's individual or group customer benefits govern which services are covered, which are excluded, and which are subject to benefit limits and which require preauthorization. Members and providers should consult the member's benefit information or contact Capital for benefit information.

VI. DISCLAIMER

Capital's medical policies are developed to assist in administering a member's benefits, do not constitute medical advice and are subject to change. Treating providers are solely responsible for medical advice and treatment of members. Members should discuss any medical policy related to their coverage or condition with their provider and consult their benefit information to determine if the service is covered. If there is a discrepancy between this medical policy and a member's benefit information, the benefit information will govern. Capital considers the information contained in this medical policy to be proprietary and it may only be disseminated as permitted by law.

VII. REFERENCES

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VIII. CODING INFORMATION

Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

Investigational when billed for pharyngometry; therefore not covered:

CPT Codes ®							
92512	92520	92700					

Investigational; therefore not covered:

CPT Codes ®							
92512							

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IX. POLICY HISTORY

MP- 2.088	**CAC 10/25/2011 -** New policy
	CAC 10/30/12 – Consensus review. No change to policy statements. References updated. Codes reviewed 10/31/12 klr
	01/14/2013- Codes updated-skb
	CAC 11/26/13 Consensus review. No change to policy statements References updated,

[Note: Final page is signature page and is kept on file, but not issued with Policy.]