

Clinical Policy: Corneal Hysteresis

Reference Number: CP.VP.17

Last Review Date: 11/2024

[Coding Implications](#)[Revision Log](#)

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

Description

Corneal hysteresis is a measure of the viscoelastic dampening of the cornea that may be associated with an increased risk of glaucoma progression. This policy describes the medical necessity requirements for corneal hysteresis.

Policy/Criteria

- I. It is the policy of health plans affiliated with Centene Corporation[®] (Centene) and Envolve Vision, Inc.[®] (Envolve) that corneal hysteresis is considered experimental and investigational; therefore, it not medically indicated for any ocular conditions.

Background

Corneal hysteresis is determined through inducing the cornea to move following an air pulse. The difference in pressure valued at the inward and outward applanation (flattening of the cornea by pressure) event times is defined as corneal hysteresis. Corneal hysteresis is determined by the viscoelastic properties of the corneoscleral shell. This information is different from thickness or topography, which are geometrical attributes of the cornea. Corneal hysteresis represents a tissue property, which provides more comprehensive information about ocular biomechanics.

Recent evidence suggests corneal hysteresis may be associated with glaucoma presence, risk of progression, and effectiveness of glaucoma treatments than central corneal thickness. Additional studies are needed.

Coding Implications

This clinical policy references Current Procedural Terminology (CPT[®]). CPT[®] is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2024, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

| CPT [®] Codes | Description |
|------------------------|---|
| 92145 | Corneal hysteresis determination, by air impulse stimulation, unilateral or bilateral, with interpretation and report |

| Reviews, Revisions, and Approvals | Date | Approval Date |
|-----------------------------------|---------|---------------|
| Annual Review | 12/2019 | 12/2019 |
| Converted to new template | 04/2020 | 06/2020 |

| Reviews, Revisions, and Approvals | Date | Approval Date |
|--|---------|---------------|
| Annual Review; Added applicable CPT® codes; Added possible link to glaucoma presence/progression in background; Updated references | 12/2020 | 12/2020 |
| Annual Review; Updated References | 12/2021 | 01/2022 |
| Annual Review | 11/2022 | 12/2022 |
| Annual Review | 11/2023 | 12/2023 |
| Annual Review | 11/2024 | 12/2024 |

References

1. Deol M, Taylor DA, Radcliffe NM. Corneal hysteresis and its relevance to glaucoma. *Curr Opin Ophthalmol*. 2015;26(2):96-102.
2. Park JH, Jun RM, Choi KR. Significance of corneal biomechanical properties in patients with progressive normal-tension glaucoma. *Br J Ophthalmol*. 2015 Jun;99(6):746-51.
3. Medeiros FA, Meira-Freitas D, Lisboa R, Kuang TM, Zangwill LM, Weinreb RN. Corneal hysteresis as a risk factor for glaucoma progression: a prospective longitudinal study. *Ophthalmology*. 2013 Aug;120(8):1533-40.
4. American Academy of Ophthalmology Glaucoma Panel, Preferred Practice Pattern® Guidelines. Primary Open-Angle Glaucoma, San Francisco, CA: American Academy of Ophthalmology; 2020, <https://www.aao.org/preferred-practice-pattern/primary-open-angle-glaucoma-ppp>
5. American Academy of Ophthalmology, Preferred Practice Pattern® Guidelines, Primary Open-Angle Glaucoma Suspect, San Francisco, CA, American Academy of Ophthalmology, 2020, <https://www.aao.org/preferred-practice-pattern/primary-open-angle-glaucoma-suspect-ppp>
6. American Academy of Ophthalmology, Preferred Practice Pattern® Guidelines, Primary Angle-Closure Disease, San Francisco, CA, American Academy of Ophthalmology, 2020, <https://www.aao.org/preferred-practice-pattern/primary-angle-closure-disease-ppp>

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy,

contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

This clinical policy is the property of the Health Plan. Unauthorized copying, use, and distribution of this clinical policy or any information contained herein are strictly prohibited. Providers, members and their representatives are bound to the terms and conditions expressed herein through the terms of their contracts. Where no such contract exists, providers, members and their representatives agree to be bound by such terms and conditions by providing services to members and/or submitting claims for payment for such services.

Note: For Medicaid members, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <https://www.cms.gov> for additional information.

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