

Clinical Policy: Aqueous Shunt

Reference Number: CP.VP.05

Last Review Date: 08/2025

[Coding Implications](#)

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

Description

Aqueous shunts are implanted for the purpose of decreasing intraocular pressure by increasing outflow of aqueous fluid. This policy describes the medical necessity requirements for aqueous shunt implants.

Policy/Criteria

- I. It is the policy of health plans affiliated with Centene Corporation® (Centene) and Envolve Vision, Inc.® (Envolve) that aqueous shunts are **medically necessary** for any of the following indications:
 - A. Uncontrolled or poorly controlled glaucoma
 - B. Uncontrolled glaucoma with multiple previous failed procedures
 - C. Patients at high risk for failure for standard glaucoma filtering surgery
 - D. Neovascular glaucoma
 - E. Congenital glaucoma

Background

Aqueous shunts are employed for intraocular pressure (IOP) control in primary and secondary glaucomas that fail medical, laser, and other surgical therapies. Though constantly produced and drained, the overall pressure of aqueous is relatively constant in a healthy eye's anterior chamber. Overly high or low intra-ocular pressure can cause permanent damage. To enhance drainage, the physician places an ocular speculum in the patient's eye and makes an incision in the conjunctiva and sutures tubing to the sclera with or without a scleral graft covering. The tubing enters the anterior chamber of the eye at the juncture of the sclera and cornea (the limbus). This improves the aqueous outflow in the anterior chamber. The tube implant connects to a reservoir plate sutured into place behind the pars plana between the extraocular muscles. The physician stretches conjunctival tissue over the shunt and reservoir and sutures it into place. The physician closes the incision with sutures and may restore the intra-ocular pressure with an injection of viscous material and/or saline. A topical antibiotic and/or pressure patch may be applied.

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 2025, 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
66179	Aqueous shunt extraocular equatorial plate reservoir external approach, without graft
66180	Aqueous shunt extraocular reservoir (e.g. Molteno, Shocket, Denver-Krupin), with graft
66183	Insertion of anterior segment aqueous drainage device without extraocular reservoir external approach
66184	Revision of aqueous shunt to extraocular equatorial plate reservoir, without graft
66185	Revision of aqueous shunt to extraocular reservoir, with graft

ICD-10-CM Code	Description
H40.1111	Primary open-angle glaucoma, right eye, mild stage
H40.1112	Primary open angle glaucoma, right eye, moderate stage
H40.1113	Primary open angle glaucoma, right eye, severe stage
H40.1121	Primary open-angle glaucoma, left eye, mild stage
H40.1122	Primary open angle glaucoma, left eye, moderate stage
H40.1123	Primary open angle glaucoma, left eye, severe stage
H40.1131	Primary open-angle glaucoma, bilateral, mild stage
H40.1132	Primary open angle glaucoma, bilateral, moderate stage
H40.1133	Primary open angle glaucoma, bilateral, severe stage
H40.1211	Low-tension glaucoma, right eye, mild stage
H40.1212	Low-tension glaucoma, right eye, moderate stage
H40.1213	Low-tension glaucoma, right eye, severe stage
H40.1221	Low-tension glaucoma, left eye, mild stage
H40.1222	Low-tension glaucoma, left eye, moderate stage
H40.1223	Low-tension glaucoma, left eye, severe stage
H40.1231	Low-tension glaucoma, bilateral, mild stage
H40.1232	Low-tension glaucoma, bilateral, moderate stage
H40.1233	Low-tension glaucoma, bilateral, severe stage
H40.151	Residual stage of open-angle glaucoma, right eye
H40.152	Residual stage of open-angle glaucoma, left eye
H40.153	Residual stage of open-angle glaucoma, bilateral
H40.211	Acute angle-closure glaucoma, right eye
H40.212	Acute angle-closure glaucoma, left eye
H40.213	Acute angle-closure glaucoma, bilateral
H40.2211	Chronic angle-closure glaucoma, right eye, mild stage
H40.2212	Chronic angle-closure glaucoma, right eye, moderate stage
H40.2213	Chronic angle-closure glaucoma, right eye, severe stage
H40.2221	Chronic angle-closure glaucoma, left eye, mild stage
H40.2222	Chronic angle-closure glaucoma, left eye, moderate stage
H40.2223	Chronic angle-closure glaucoma, left eye, severe stage
H40.2231	Chronic angle-closure glaucoma, bilateral, mild stage

ICD-10-CM Code	Description
H40.2232	Chronic angle-closure glaucoma, bilateral, moderate stage
H40.2233	Chronic angle-closure glaucoma, bilateral, severe stage
H40.231	Intermittent angle-closure glaucoma, right eye
H40.232	Intermittent angle-closure glaucoma, left eye
H40.233	Intermittent angle-closure glaucoma, bilateral
H40.241	Residual stage of angle-closure glaucoma, right eye
H40.242	Residual stage of angle-closure glaucoma, left eye
H40.243	Residual stage of angle-closure glaucoma, bilateral
H40.31X1	Glaucoma secondary to eye trauma, right eye, mild stage
H40.31X2	Glaucoma secondary to eye trauma, right eye, moderate stage
H40.31X3	Glaucoma secondary to eye trauma, right eye, severe stage
H40.32X1	Glaucoma secondary to eye trauma, left eye, mild stage
H40.32X2	Glaucoma secondary to eye trauma, left eye, moderate stage
H40.32X3	Glaucoma secondary to eye trauma, left eye, severe stage
H40.33X1	Glaucoma secondary to eye trauma, bilateral, mild stage
H40.33X2	Glaucoma secondary to eye trauma, bilateral, moderate stage
H40.33X3	Glaucoma secondary to eye trauma, bilateral, severe stage
H40.41X1	Glaucoma secondary to eye inflammation, right eye, mild stage
H40.41X2	Glaucoma secondary to eye inflammation, right eye, moderate stage
H40.41X3	Glaucoma secondary to eye inflammation, right eye, severe stage
H40.42X1	Glaucoma secondary to eye inflammation, left eye, mild stage
H40.42X2	Glaucoma secondary to eye inflammation, left eye, moderate stage
H40.42X3	Glaucoma secondary to eye inflammation, left eye, severe stage
H40.43X1	Glaucoma secondary to eye inflammation, bilateral, mild stage
H40.43X2	Glaucoma secondary to eye inflammation, bilateral, moderate stage
H40.43X3	Glaucoma secondary to eye inflammation, bilateral, severe stage
H40.51X1	Glaucoma secondary to other eye disorders, right eye, mild stage
H40.51X2	Glaucoma secondary to other eye disorders, right eye, moderate stage
H40.51X3	Glaucoma secondary to other eye disorders, right eye, severe stage
H40.52X1	Glaucoma secondary to other eye disorders, left eye, mild stage
H40.52X2	Glaucoma secondary to other eye disorders, left eye, moderate stage
H40.52X3	Glaucoma secondary to other eye disorders, left eye, severe stage
H40.53X1	Glaucoma secondary to other eye disorders, bilateral, mild stage
H40.53X2	Glaucoma secondary to other eye disorders, bilateral, moderate stage
H40.53X3	Glaucoma secondary to other eye disorders, bilateral, severe stage
H40.61X1	Glaucoma secondary to drugs, right eye, mild stage
H40.61X2	Glaucoma secondary to drugs, right eye, moderate stage
H40.61X3	Glaucoma secondary to drugs, right eye, severe stage
H40.62X1	Glaucoma secondary to drugs, left eye, mild stage
H40.62X2	Glaucoma secondary to drugs, left eye, moderate stage
H40.62X3	Glaucoma secondary to drugs, left eye, severe stage
H40.63X1	Glaucoma secondary to drugs, bilateral, mild stage
H40.63X2	Glaucoma secondary to drugs, bilateral, moderate stage

ICD-10-CM Code	Description
H40.63X3	Glaucoma secondary to drugs, bilateral, severe stage
H40.811	Glaucoma with increased episcleral venous pressure, right eye
H40.812	Glaucoma with increased episcleral venous pressure, left eye
H40.813	Glaucoma with increased episcleral venous pressure, bilateral
H40.821	Hypersecretion glaucoma, right eye
H40.822	Hypersecretion glaucoma, left eye
H40.823	Hypersecretion glaucoma, bilateral
H40.831	Aqueous misdirection, right eye
H40.832	Aqueous misdirection, left eye
H40.833	Aqueous misdirection, bilateral
H40.841	Neovascular secondary angle closure glaucoma, right eye
H40.842	Neovascular secondary angle closure glaucoma, left eye
H40.843	Neovascular secondary angle closure glaucoma, bilateral
Q15.0	Congenital glaucoma

Reviews, Revisions, and Approvals	Date	Approval Date
Annual Review	12/2019	12/2019
Converted to new template	04/2020	06/2020
Annual Review; Added ICD-10 diagnosis codes; 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
Updated coding to include newly published ICD-10 codes for neovascular secondary angle closure glaucoma.	08/2025	10/2025

References

1. Wang J, Barton K. Aqueous shunt implantation in glaucoma. Taiwan J Ophthalmol. 2017;7(3):130-137.
2. Minckler DS, Vedula SS, Li TJ, Mathew MC, Ayyala RS, Francis BA. Aqueous shunts for glaucoma. Cochrane Database Syst Rev. 2006 Apr 19;(2):CD004918. doi: 10.1002/14651858.CD004918.pub2. Update in: Cochrane Database Syst Rev. 2017 Jul 28;7:CD004918.
3. American Academy of Ophthalmology, 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>
4. 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.

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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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