Clinical Policy: Surgical Strabismus Repair

Reference Number: OC.UM.CP.0057
Last Review Date: 11/2022

Coding Implications
Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description

Treatment of strabismus is dependent upon the degree of ocular deviation and visual symptoms, with the goal of gaining binocular fusion. In some children and adults, strabismus treatment consists of glasses, prisms, patching or blurring of one eye, botulinum toxin injections, or a combination of these treatments. When surgical strabismus repair is indicated, one or more of the six extraocular muscles are strengthened, weakened or moved to a different position on the globe to improve binocular alignment. This policy describes the medical indications for surgical repair of strabismus.

Policy/Criteria

I. It is the policy of health plans affiliated with Envolve Vision, Inc.® (Envolve) that surgical repair of strabismus is **medically necessary** when all of the following criteria are met:

A. Exotropia or esotropia measuring ten prism diopters or greater in deviation;
B. Diplopia, visual confusion or peripheral visual field loss in esotropia;
    1. Pediatric patients are not required to meet symptomatic criteria as a high rate of pediatric patients with strabismus will present with suppression.
C. Surgical repair will allow fusion.

II. It is the policy of health plans affiliated with Envolve that surgical repair of strabismus is not **medically necessary** for the following indications:

A. Strabismus of less than ten prism diopters;
B. Unlikely ability to regain fusion;
C. Cosmetic improvement.

Background

Three antagonistic pairs of muscles control eye movements: the lateral and medial rectus muscles, the superior and inferior rectus muscles, and the superior and inferior oblique muscles. These muscles are responsible for movements of the eye along three different axes: horizontal, either toward the nose (adduction) or away from the nose (abduction); vertical, either elevation or depression; and torsional, movements that bring the top of the eye toward the nose (intorsion) or away from the nose (extorsion). Horizontal movements are controlled entirely by the medial and lateral rectus muscles; the medial rectus muscle is responsible for adduction, the lateral rectus muscle for abduction. Vertical movements require the coordinated action of the superior and inferior rectus muscles, as well as the oblique muscles. The extraocular muscles are innervated by lower motor neurons that form three cranial nerves: the abducens, the trochlear, and the oculomotor. The abducens nerve (cranial nerve VI) exits the brainstem from the pons-medullary junction and innervates the lateral rectus muscle. The trochlear nerve (IV) exits from the caudal portion of the midbrain and supplies the superior oblique muscle. In distinction to all other cranial nerves, the trochlear nerve exits from the dorsal surface of the brainstem and crosses the midline to innervate the superior oblique muscle on the contralateral side. The

oculomotor nerve (III), which exits from the rostral midbrain near the cerebral peduncle, supplies all the rest of the extraocular muscles.

Strabismus is a condition in which binocular alignment is abnormal. There are many different types of strabismus, but broadly speaking they can be divided into the following groups:

- Esotropias: An esotropia is a convergent strabismus where one eye turns in towards the nose.
- Exotropias: An exotropia is a divergent strabismus where the one eye turns outwards.
- Hypertropias and hypotropias: These terms refer to vertical strabismus where one eye is higher (hypertropia) or lower (hypotropia) than the fellow eye.
- Paralytic strabismus: Damage to the third, fourth or sixth cranial nerves as result of poor blood supply, pressure on the nerve or head injuries will cause limited eye movements and a strabismus.

There are a number of different types of strabismus in each of these groups that carry their own individual characteristics and treatments. Of the many different types of strabismus, three types are seen much more commonly in the pediatric population: congenital esotropia, accommodative esotropia and intermittent exotropia.

During strabismus surgery, one or more of the six extraocular muscles are strengthened, weakened or moved to a different position on the globe to improve binocular alignment. Surgery involves sewing the eye muscle to the sclera after altering the insertion position and/or the length of the muscle.

- A recession weakens function by altering the attachment site of the muscle on the eyeball. Once the muscle has been identified, a suture is placed through the muscle at the attachment site to the eye. The muscle is detached from the surface of the eye and reattached further back from the front of the eye, loosening the resting tension of the muscle.
- A resection strengthens muscle function by reattaching a muscle to the eyeball at the original insertion site after a portion is removed. A suture is placed through the muscle at the intended new attachment site. The segment of muscle between the suture and the eyeball is removed and the shortened muscle is reattached to the eye.

Standard strabismus surgery (no adjustable suture) utilizes a permanent knot tied during the surgical procedure. Adjustable suture technique utilizes a bow-knot or slip-knot (temporary knot) in an accessible position. After surgery, the eye alignment can be altered by adjusting the temporary knot. The adjustment is typically done with the patient awake and the operated eye numbed, so adjustable suture surgery generally may only be offered to patients who are able to fully cooperate with the adjustment process. This adjustment may be done in the postoperative room, the next day, or later in the week, depending upon the surgeon's preference. A patch is usually applied to the eye if the time until adjustment is sufficiently long.

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 2020, 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
67311	Strabismus surgery, recession or resection procedure; 1 horizontal muscle
67312	Strabismus surgery, recession or resection procedure; 2 horizontal muscles
67314	Strabismus surgery, recession or resection procedure; 1 vertical muscle (excluding superior oblique)
67316	Strabismus surgery, recession or resection procedure; 2 or more vertical muscles (excluding superior oblique)
67318	Strabismus surgery, any procedure, superior oblique muscle
67320	Transposition procedure (e.g., for paretic extraocular muscle), any extraocular muscle (specify) (List separately in addition to code for primary procedure)
67331	Strabismus surgery on patient with previous eye surgery or injury that did not involve the extraocular muscles (List separately in addition to code for primary procedure)
67332	Strabismus surgery on patient with scarring of extraocular muscles (eg, prior ocular injury, strabismus or retinal detachment surgery) or restrictive myopathy (e.g., dysthyroid ophthalmopathy) (List separately in addition to code for primary procedure)
67334	Strabismus surgery by posterior fixation suture technique, with or without muscle recession (List separately in addition to code for primary procedure)
67340	Strabismus surgery involving exploration and/or repair of detached extraocular muscle(s) (List separately in addition to code for primary procedure)

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

+ Indicates a code requiring an additional character

ICD-10-CM Code	Description
G52.7	Disorders of multiple cranial nerves
G53.	Cranial nerve disorders in diseases classified elsewhere
H05.121	Orbital myositis, right orbit
H05.122	Orbital myositis, left orbit
H05.123	Orbital myositis, bilateral
H49.01	Third [oculomotor] nerve palsy, right eye
H49.02	Third [oculomotor] nerve palsy, left eye
H49.03	Third [oculomotor] nerve palsy, bilateral
H49.11	Fourth [trochlear] nerve palsy, right eye
H49.12	Fourth [trochlear] nerve palsy, left eye
H49.13	Fourth [trochlear] nerve palsy, bilateral
H49.21	Sixth [abducent] nerve palsy, right eye
H49.22	Sixth [abducent] nerve palsy, left eye
H49.23	Sixth [abducent] nerve palsy, bilateral

ICD-10-CM Code	Description
H49.31	Total (external) ophthalmoplegia, right eye
H49.32	Total (external) ophthalmoplegia, left eye
H49.33	Total (external) ophthalmoplegia, bilateral
H49.41	Progressive external ophthalmoplegia, right eye
H49.42	Progressive external ophthalmoplegia, left eye
H49.43	Progressive external ophthalmoplegia, bilateral
H49.881	Other paralytic strabismus, right eye
H49.882	Other paralytic strabismus, left eye
H49.883	Other paralytic strabismus, bilateral
H50.011	Monocular esotropia, right eye
H50.012	Monocular esotropia, left eye
H50.021	Monocular esotropia with A pattern, right eye
H50.022	Monocular esotropia with A pattern, left eye
H50.031	Monocular esotropia with V pattern, right eye
H50.032	Monocular esotropia with V pattern, left eye
H50.041	Monocular esotropia with other noncomitancies, right eye
H50.042	Monocular esotropia with other noncomitancies, left eye
H50.05	Alternating esotropia
H50.06	Alternating esotropia with A pattern
H50.07	Alternating esotropia with V pattern
H50.08	Alternating esotropia with other noncomitancies
H50.111	Monocular exotropia, right eye
H50.112	Monocular exotropia, left eye
H50.121	Monocular exotropia with A pattern, right eye
H50.122	Monocular exotropia with A pattern, left eye
H50.131	Monocular exotropia with V pattern, right eye
H50.132	Monocular exotropia with V pattern, left eye
H50.141	Monocular exotropia with other noncomitancies, right eye
H50.142	Monocular exotropia with other noncomitancies, left eye
H50.15	Alternating exotropia
H50.16	Alternating exotropia with A pattern
H50.17	Alternating exotropia with V pattern
H50.18	Alternating exotropia with other noncomitancies
H50.21	Vertical strabismus, right eye
H50.21	Vertical strabismus, right eye
H50.22	Vertical strabismus, left eye
H50.22	Vertical strabismus, left eye
H50.30	Unspecified intermittent heterotropia
H50.311	Intermittent monocular esotropia, right eye
H50.312	Intermittent monocular esotropia, left eye
H50.32	Intermittent alternating esotropia
H50.331	Intermittent monocular exotropia, right eye
H50.332	Intermittent monocular exotropia, left eye

ICD-10-CM Code	Description
H50.34	Intermittent alternating exotropia
H50.411	Cyclotropia, right eye
H50.412	Cyclotropia, left eye
H50.42	Monofixation syndrome
H50.51	Esophoria
H50.52	Exophoria
H50.53	Vertical heterophoria
H50.54	Cyclophoria
H50.55	Alternating heterophoria
H50.611	Brown's sheath syndrome, right eye
H50.612	Brown's sheath syndrome, left eye
H50.811	Duane's syndrome, right eye
H50.812	Duane's syndrome, left eye
H51.0	Palsy (spasm) of conjugate gaze
H51.21	Internuclear ophthalmoplegia, right eye
H51.22	Internuclear ophthalmoplegia, left eye
H51.23	Internuclear ophthalmoplegia, bilateral
H52.511	Internal ophthalmoplegia (complete) (total), right eye
H52.512	Internal ophthalmoplegia (complete) (total), left eye
H52.513	Internal ophthalmoplegia (complete) (total), bilateral
H53.031	Strabismic amblyopia, right eye
H53.032	Strabismic amblyopia, left eye
H53.033	Strabismic amblyopia, bilateral
H53.2	Diplopia
H53.31	Abnormal retinal correspondence
H53.33	Simultaneous visual perception without fusion
H53.34	Suppression of binocular vision
S02.3XXA	Fracture of orbital floor, initial encounter for closed fracture
S02.3XXB	Fracture of orbital floor, initial encounter for open fracture
S02.42XA	Fracture of alveolus of maxilla, initial encounter for closed fracture
S02.42XB	Fracture of alveolus of maxilla, initial encounter for open fracture
S02.8XXA	Fractures of other specified skull and facial bones, initial encounter for closed fracture
S02.8XXB	Fractures of other specified skull and facial bones, initial encounter for open fracture

Reviews, Revisions, and Approvals	Date	Approval Date
Annual Review	12/2019	12/2019
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Annual Review	12/2020	12/2020
Annual Review; Revised Policy Description	12/2021	12/2021
Annual Review	11/2022	11/2022

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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

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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.

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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 http://www.cms.gov for additional information.