

Utilization *ALERT*

- Prior to use of this MCP for evaluation of medical necessity, benefit coverage MUST be verified in the member's EOC or benefit document. Please check benefit plan descriptions for vision therapy exclusions.
- For Medicare members, please refer to CMS guidelines through Medicare Coverage Database requirements.
- Note: After searching the Medicare Coverage Database, if no NCD/LCD/LCA is found, then use the
 policy referenced above for coverage guidelines
- I. Procedure or Service: Vision Therapy
- II. Specialty: Ophthalmology, Optometry

III. Definition

Active Vision or Orthoptic Therapy is therapy to address visual system deficiencies without ocular disease. Orthoptic therapy is used to address abnormal eye teaming issues such as convergence insufficiency, accommodative dysfunction, saccadic dysfunction, pursuit dysfunction, oculomotor dysfunction, and visuo-vestibular dysfunction, strabismus, amblyopia, etc. Orthoptic therapy includes eye-focusing exercises to improve binocular vision and visual functioning.

Convergence insufficiency is a medical condition when there is misalignment of the eyes when focusing on a word or object at close range in combination with difficulty sustaining convergence. The condition affects the eye muscles causing one eye to drift outward instead of inward with the other eye, creating a double or blurred vision. Common causes of this condition are amblyopia, strabismus, accommodative dysfunction, general binocular dysfunction, mild traumatic brain injury (mTBI), stroke or concussion. Convergence insufficiency's sign and symptoms may include eyestrain, squinting, rubbing, or closing one eye, headaches, difficulty when reading or other close work, diplopia and/or difficulty concentrating. Stereopsis or depth perception is usually affected.

Saccadic Dysfunction is deficiency in rapid refixation eye movements from one point to another. To propagate a saccade, the visual system must release fixation from the point of regard, preplan where the next fixation will take hold, which requires peripheral awareness, and then shift fixation to the planned fixation point. Deficits in horizontal saccades are suggestive of oculomotor impairment and deficits in vertical saccades are suggestive of a generalized rapid automated naming deficit (which may suggest reduced visual memory and is linked to lower reading fluency rates).

Pursuit dysfunction is considered a deficit in smooth eye movement when tracking a moving target.



Visuo-vestibular dysfunction is known as difficulty maintaining a fixed gaze upon a target when the target is stationary while the head is in motion – VOR (the vestibular ocular reflex) is an integration of the oculomotor and vestibular systems.

Accommodative dysfunction is defined as the inability to sustain a clear image on the retina during fixation at a near target. Both monocularly and binocularly. Accommodative facility dysfunction is the inability to smoothly change focus quickly without asthenopia/eyestrain or delay as the fixation targets approach or recede.

Visual Impairment -- Best corrected visual acuity (BCVA) is less than 20/70 in the better eye (including 20/70 to 20/160). Severe visual impairment -- BCVA is less than 20/160 (including 20/200 to 20/400); or visual field diameter is 20° or less (largest field diameter for Goldman isopter III4e, 1/100 white test object or equivalent) in the better eye.

IV. Clinical Indication for Referral, Limitation and Exclusion

A. Active Vision Therapy

- 1. Vision therapy is medically necessary for the treatment of confirmed symptomatic convergence insufficiency.
- 2. A diagnosis of convergence insufficiency and stereoacuity is **documented** by **ALL** the following:
 - a. Near point of convergence (NPC) break of more than 10 cm; and
 - b. Patient is visually symptomatic
- 3. Up to 12 sessions of office-based vergence/accommodative vision therapy, typically performed once per week is medically necessary for initial treatment of convergence insufficiency.
- 4. Subsequent treatment of additional 12 sessions will be authorized if:
 - a. The patient remains symptomatic after completion of initial 12 weeks of orthoptic training; and
 - b. The initial 12 sessions of treatment reflect patient's improvement as documented by the treating optometrist and/or ophthalmologist in the patient's examination notes.

B. Low Vision Therapy

- 1. Low vision programs are medically necessary for members with a mild, moderate, or severe visual impairment, which is not correctable by conventional refractive means. Ophthalmologic low vision evaluations and testing, instruction in visual aids, interviews and counseling are medically necessary services typically included in a low vision therapy program.
- 2. For purposes of this policy, moderate to severe visual impairment is defined as follows:
 - Mild Visual impairment best corrected visual acuity is 20/40 or worse in the better eye



- Moderate visual impairment Best corrected visual acuity (BCVA) is less than 20/60 in the better eye (including 20/70 to 20/160).
- Severe visual impairment BCVA is less than 20/160 (including 20/200 to 20/400); or visual field diameter is 20° or less (largest field diameter for Goldman isopter III4e, 1/100 white test object or equivalent) in the better eye.

C. Limitation

- 1. Only active vision therapy provided by an ophthalmologist or optometrist in an office setting is addressed in this policy.
- 2. The policy does not address passive orthoptic nor pleoptic devices, which are considered durable medical equipment (DME).
- 3. This policy is not about optical low vision services other than low vision therapy or standard vision therapy with lenses, prisms, filters, or occlusion (i.e., For treatment of amblyopia or acquired esotropia prior to surgical intervention).

D. Exclusion

- 1. Vision therapy for all other indications except those listed in section IV, A is not considered medically necessary.
- 2. Vision therapy is considered experimental and investigational for all other conditions due to lack of supporting evidence, including but not limited to the following conditions:
 - a. Visual disorders other than convergence insufficiency such as exotropia, nystagmus, convergence excess or divergence insufficiency;
 - b. Reading difficulties;
 - c. Learning disabilities;
 - d. Dyslexia;
 - e. Attention deficit hyperactivity disorder (ADHD);
 - f. Intermittent exotropia; or
 - g. Treatment of visual field deficits such as visuospatial deficit, hemi-spatial neglect, visual loss or other unusual neurological symptoms after a stroke, concussion, or traumatic brain injury.



References

- Pediatric Eye Disease Investigator Group (2016). Home-Based Therapy for Symptomatic Convergence Insufficiency in Children: A Randomized Clinical Trial. Optometry and vision science: official publication of the American Academy of Optometry, 93(12), 1457–1465. https://doi.org/10.1097/OPX.0000000000000975
- 2. Hussaindeen, J. R., & Murali, A. (2020). Accommodative Insufficiency: Prevalence, Impact and Treatment Options. *Clinical optometry*, 12, 135–149. https://doi.org/10.2147/OPTO.S224216
- Rasmussen, R. S., Schaarup, A., & Overgaard, K. (2018). Therapist-Assisted Rehabilitation of Visual Function and Hemianopia after Brain Injury: Intervention Study on the Effect of the Neuro Vision Technology Rehabilitation Program. *JMIR research protocols*, 7(2), e65. https://doi.org/10.2196/resprot.8334 https://pubmed.ncbi.nlm.nih.gov/29487042/
- Conrad, J. S., Mitchell, G. L., & Kulp, M. T. (2017). Vision Therapy for Binocular Dysfunction Post Brain Injury. Optometry and vision science: official publication of the *American Academy of Optometry*, 94(1), 101–107. https://doi.org/10.1097/OPX.0000000000000037 https://pubmed.ncbi.nlm.nih.gov/27464572/
- 5. Horton J. C. (2005). Disappointing results from Nova Vision's visual restoration therapy. *The British Journal of Ophthalmology*, 89(1), 1–2. https://doi.org/10.1136/bjo.2004.058214 https://pubmed.ncbi.nlm.nih.gov/15615733/
- Taylor, K., & Elliott, S. (2014). Interventions for strabismic amblyopia. *The Cochrane database of systematic reviews*, (7), CD006461. https://doi.org/10.1002/14651858.CD006461.pub4 https://pubmed.ncbi.nlm.nih.gov/25051925/
- Rucker, Janet C. MD; Phillips, Paul H. MD Efferent Vision Therapy, *Journal of Neuro-Ophthalmology:* June 2018 - Volume 38 - Issue 2 - p 230-236. doi:10. 1097/ WNO. 0000000000000480 https://journals.lww.com/jneuro-ophthalmology/Fulltext/2018/06000/Efferent_Vision_T herapy.20.aspx
- Scheiman, M., Talasan, H., & Alvarez, T. L. (2019). Objective Assessment of Disparity Vergence after Treatment of Symptomatic Convergence Insufficiency in Children. Optometry and vision science: official publication of the *American Academy of Optometry*, 96(1), 3–16. https://doi.org/10.1097/OPX.000000000001320
- Scheiman, M., Kulp, M. T., Cotter, S., Mitchell, G. L., Gallaway, M., Boas, M., Coulter, R., Hopkins, K., Tamkins, S., & Convergence Insufficiency Treatment Trial Study Group (2010). Vision therapy/orthoptics for symptomatic convergence insufficiency in children: treatment kinetics. Optometry and vision science: official publication of the *American Academy of Optometry*, 87(8), 593–603. https://doi.org/10.1097/OPX.0b013e3181e61bad
- Scheiman, M., Mitchell, G. L., Cotter, S., Cooper, J., Kulp, M., Rouse, M., Borsting, E., London, R., Wensveen, J., &. Convergence Insufficiency Treatment Trial Study Group (2005). A randomized clinical trial of treatments for convergence insufficiency in children. *Archives of ophthalmology* (Chicago, Ill.: 1960), 123(1), 14–24. https://doi.org/10.1001/archopht.123.1.14 https://pubmed.ncbi.nlm.nih.gov/15642806/
- 11. Negareh Yazdani, Ramin Sadeghi, Hamed Momeni-Moghaddam, Leili Zarifmahmoudi, Asieh Ehsaei, Brendan T. Barrett. Part-time versus full-time occlusion therapy for treatment of amblyopia:



- A meta-analysis. *J Curr Ophthalmol*. 2017 Jun; 29(2): 76–84. Published online 2017 Mar 6. doi: 10.1016/j.joco.2017.01.006. PMCID: PMC5463007 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5463007/pdf/main.pdf
- 12. Li, Y., Sun, H., Zhu, X., Su, Y., Yu, T., Wu, X., Zhou, X., & Jing, L. (2020). Efficacy of interventions for amblyopia: a systematic review and network meta-analysis. *BMC ophthalmology*, 20(1), 203. https://doi.org/10.1186/s12886-020-01442-9
- CITT-ART Investigator Group (2019). Treatment of Symptomatic Convergence Insufficiency in Children Enrolled in the Convergence Insufficiency Treatment Trial-Attention & Reading Trial: A Randomized Clinical Trial. Optometry and vision science: official publication of the *American* Academy of Optometry, 96(11), 825–835. https://doi.org/10.1097/OPX.0000000000001443
- 14. Shainberg M. J. (2010). Vision therapy and orthoptics. *The American Orthoptic Journal*, 60, 28–32. https://doi.org/10.3368/aoj.60.1.28_https://pubmed.ncbi.nlm.nih.gov/21061881/
- American Association of Pediatric Opthalmology and Strabismus (AAPOS, 2016). Eye terms and Conditions. Vision Therapy. Accessed 10/27/2020 https://aapos.org/glossary/vision-therapy
- Mayo Clinic. Convergence Insufficiency. Disease and Condition. Patient Care & Health Information https://www.mayoclinic.org/diseases-conditions/convergence-insufficiency/symptoms-causes/syc-20352735.
- 17. Simpson-Jones, Mary E.; Hunt, Anne W.; Vision rehabilitation interventions following mild traumatic brain injury: a scoping review. *Academic Journal (*includes abstract) Disability & Rehabilitation, Sep2019; 41(18): 2206-2222. 17p. (Article research, systematic review, tables/charts) ISSN: 0963-8288,
- 18. Barton JJS; Ranalli PJ, Vision Therapy: Ocular Motor Training in Mild Traumatic Brain Injury..*Annals of neurology* [Ann Neurol], ISSN: 1531-8249, 2020 Jun 15; Publisher: Wiley-Liss; PMID: 32542907, Database: MEDLINE PubMed . Ahead of print accessed on line 11/6/2020
- Hernández-Rodríguez, C. J., & Piñero, D. P. (2020). Active Vision Therapy for Anisometropic Amblyopia in Children: A Systematic Review. *Journal of ophthalmology*, 2020, 4282316. https://doi.org/10.1155/2020/4282316
- Hsieh, YC., Liao, WL., Tsai, YY. et al. Efficacy of vision therapy for unilateral refractive amblyopia in children aged 7–10 years. BMC Ophthalmol 22, 44 (2022). https://doi.org/10.1186/s12886-022-02246-9
- Rucker, Janet C. MD; Phillips, Paul H. MD Efferent Vision Therapy, Journal of Neuro-Ophthalmology: June 2018 - Volume 38 - Issue 2 - p 230-236. doi: 10.1097/WNO.0000000000000480
- 22. Wang, B., & Kuwera, E. (2022). Vision Therapy: A Primer and Caution for Pediatricians. *Children (Basel, Switzerland)*, 9(12), 1873. https://doi.org/10.3390/children9121873
- 23. Xu M, Zheng F, Peng Y, et al. Effects of orthoptic therapy in children with intermittent exotropia after surgery: Study protocol for a randomized controlled trial. *Trials*. 2022;23(1):289. https://trialsjournal.biomedcentral.com/articles/10.1186/s13063-022-06246-4



Approval History

Effective June 01, 2016, state filing is no longer required per Maryland House Bill HB 798 - Health Insurance - Reporting

Date approved by RUMC	Date of Implementation
12/16/2020	12/16/2020
12/15/2021	12/15/2021
12/28/2022	12/28/2022
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^{*}The Regional Utilization Management Committee received delegated authority in 2011 to review and approve designated Utilization Management and Medical Coverage Policies by the Regional Quality Improvement Committee.

Note: Kaiser Permanente Mid-Atlantic States (KPMAS) include referral and authorization criteria to support primary care and specialty care practitioners, as appropriate, in caring for members with selected conditions. Medical Coverage Policies are not intended or designed as a substitute for the reasonable exercise of independent clinical judgment by a practitioner in any particular set of circumstances for an individual member.

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