

Policy Name	Clinical Policy - Refraction
Policy Number	1310.00
Department	Clinical Strategy
Subcategory	Medical Management
Original Approval Date	05/24/2017
Current MPC/CCO Approval Date	01/07/2026
Current Effective Date	04/01/2026

Company Entities Supported (Select All that Apply)

Superior Vision Benefit Management
 Superior Vision Services
 Superior Vision of New Jersey, Inc.
 Block Vision of Texas, Inc. d/b/a Superior Vision of Texas
 Davis Vision
 (Collectively referred to as 'Versant Health' or 'the Company')

ACRONYMS and DEFINITIONS

BCVA	Best corrected visual acuity
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PURPOSE

To provide the medical necessity criteria to support the indication(s) for refraction and to render medical necessity determinations. Applicable procedure codes are also defined.

POLICY
A. BACKGROUND

Per the American Medical Association, refraction is provided, in addition to an eye examination, when the ophthalmologist or optometrist determines that the patient's uncorrected visual acuity can be improved. Refraction provides the measurements required for prescription of corrective lenses (glasses or contact lenses). Refraction and prescribing glasses involve history, examination, diagnosis, and treatment decisions so that the physician satisfies the individual patient's visual needs. CMS describes refraction as inherent to the routine eye exam.

Refractometry is a measurement of refractive error but does not include a prescription for corrective lenses. Where permitted by state laws and regulations, it is performed by technicians, medical assistants or other qualified health personnel and may utilize photo screeners, autorefractors, aberrometers, phoropters, trial frames, and other instruments. Refractometry is a component of the eye exam (or refraction) and is not a standalone service.

B. Medically Necessary

Medical necessity for any diagnostic testing, including refraction, includes pertinent signs, symptoms, or medical history of a condition for which the examining physician needs further information. Refraction is performed when the patient's uncorrected visual acuity suggests an ametropia is present. Ametropia, such as myopia, hyperopia, astigmatism, or presbyopia, may be caused by other diseases such as diabetes mellitus or cataract. The value of refraction is not simply the quantification of ametropia (*i.e.*, refractometry); it is the achievement of best corrected visual acuity (BCVA) through the prescription of corrective lenses that provides a meaningful benefit to the patient such as improved ability to perform normal activities of daily living.

1. Refraction is considered necessary:
 - a. To minimize or eliminate refractive errors and improve uncorrected visual acuity.
 - b. To improve BCVA from current glasses or contact lenses.
 - c. To prescribe replacement lenses (*e.g.*, broken glasses, lost contact lenses).
 - d. To prescribe additional glasses for other circumstances or functionality (*e.g.*, protective eyewear, computer glasses, piano glasses, reading glasses).
 - e. To prescribe prism in spectacles to address symptomatic phorias or tropias.
 - f. To prescribe low vision aids (*e.g.*, high plus bifocals, telescopes, magnifiers).
 - g. Following cataract surgery to address residual refractive error (*i.e.*, pseudophakia or aphakia).
2. Refraction is a component part of an eye exam, and not a separate procedure. Refractions may be repeated when the examiner suspects a change.

C. Documentation

Medical necessity must be supported by adequate and complete documentation in the patient's medical record that describes the procedure and the medical rationale, as in requirements above. All items must be available upon request to initiate or sustain previous payments.

Every page of the record must be legible and include appropriate patient identification information (*e.g.*, complete name, date(s) of service). Services provided/ordered must be authenticated by the physician, in a handwritten or electronic signature. Stamped signatures are not acceptable.

1. Medical necessity for refraction, including but not limited to relevant medical history, physical examination, and results of pertinent diagnostic tests or procedures. All findings and a plan of action should be documented in the patient's medical record.

2. A prescription for lenses. This may be spectacles, contact lenses, or other lenses. It includes specification of lens type (monofocal, bifocal, other), lens power, axis, prism, absorptive factor, impact resistance, and other factors. Refraction is not equivalent to contact lens fitting, with determination of base curves, diameter, bevels, and lens materials, but is a necessary adjunct to the fitting.

D. Procedural Detail

CPT/HCPCS Codes	
92002	Ophthalmological services: medical examination and evaluation with initiation of diagnostic and treatment program; intermediate, new patient
92004	Ophthalmological services: medical examination and evaluation with initiation of diagnostic and treatment program; comprehensive, new patient, 1 or more visits
92012	Ophthalmological services: medical examination and evaluation, with initiation or continuation of diagnostic and treatment program; intermediate, established patient
92014	Ophthalmological services: medical examination and evaluation, with initiation or continuation of diagnostic and treatment program; comprehensive, established patient, 1 or more visits
92015	Determination of refractive state
G0466	Federally qualified health center (FQHC) visit, new patient (for Medicare only)
G0467	Federally qualified health center (FQHC) visit, established patient (for Medicare only)
S0620	Routine ophthalmological examination including refraction; new patient
S0621	Routine ophthalmological examination including refraction; established patient
T1015	Clinic visit/encounter, all-inclusive (FQHC) (for Medicaid only)
Invalid Modifiers	
Anatomical modifiers	RT, LT, 50
TC and 26	There is no technical component of refraction because this service cannot be delegated to a medical assistant or ophthalmic technician; TC and 26 are not valid modifiers to append to any of the codes above for routine eye exam.

Diagnosis Coding	
If the primary diagnosis is a disorder of refraction and accommodation, and the beneficiary has a vision plan with or without a medical plan, use an ICD-10 code in the series H52.xxx on the claim for the routine eye exam with refraction (S0620, S0621) or, conversely, the office visit (920xx) and refraction (92015). The payment rate is the same with either approach.	
If the primary diagnosis is a disease, injury, or abnormality a concurrent refraction will use the same primary medical diagnosis, and a secondary diagnosis will use one of the ICD-10 codes below. For both scenarios, payment for refraction is additive to the eye exam.	
ICD-10 codes	
H52.01 – H52.03	Hypermetropia
H52.11 – H52.13	Myopia, right eye
H52.201 – H52.203	Unspecified astigmatism
H52.211 – H52.213	Irregular astigmatism
H52.221 – H52.223	Regular astigmatism
H52.31	Anisometropia
H52.32	Aniseikonia
H52.4	Presbyopia
H52.511 – H52.513	Internal ophthalmoplegia (complete)
H52.521 – H52.523	Paresis of accommodation
H52.531 – H52.533	Spasm of accommodation
H52.6	Other disorders of refraction
H52.7	Unspecified disorder of refraction
H53.50	Unspecified color vision deficiencies
Z01.00	Encounter for examination of eyes and vision without abnormal findings
Z01.01	Encounter for examination of eyes and vision with abnormal findings
Z01.020	Encounter for examination of eyes and vision following failed vision screening without abnormal findings
Z01.021	Encounter for examination of eyes and vision following failed vision screening with abnormal findings
Z46.0	Encounter for fitting and adjustment of spectacles and contact lenses
Z82.1	Family history of blindness and visual loss
Z83.511	Family history of glaucoma
Z83.518	Family history of other specified eye disorders
Z97.3	Presence of spectacles and contact lenses

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RELATED POLICIES AND PROCEDURES

1316	Eye exams
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DOCUMENT HISTORY

Approval Date	Revision	Effective Date
05/24/2017	Initial policy	05/24/2017
02/06/2017	Annual review; no criteria change.	02/06/2017
03/21/2018	Annual review; no criteria change.	03/21/2018
03/13/2019	Annual review; no criteria change.	03/13/2019
02/19/2020	Annual review; no criteria change.	04/01/2020
06/03/2020	Deletion of benefit and coverage statements; no change in criteria	08/01/2020
01/06/2021	Annual review; no criteria change	04/01/2021
01/05/2022	Annual review; added ICD-10 codes H52.511-13.	02/01/2022
01/04/2023	Annual review; no criteria changes.	04/01/2023
09/20/2023	Administrative review for CMS 2024 final rule Medicare Part C equity: no changes.	n/a
01/03/2024	Annual review; no criteria change.	04/01/2024
01/08/2025	Annual review; no criteria change.	03/01/2025
01/07/2026	Annual review; no criteria change.	04/01/2026

REFERENCES

1. Aghaei H, Es'haghi A. Contributing Factors in Final Refractive Outcomes After Retreatment Procedures. *J Refract Surg.* 2020 Jun 1;36(6):419. doi: 10.3928/1081597X-20200522-01. PMID: 32521031.
2. Bonafede L, Bender L, Shaffer J, et.al. Refractive change in children with accommodative esotropia. *Br J Ophthalmol.* 2020 Sep;104(9):1283-1287. doi: 10.1136/bjophthalmol-2019-314891. Epub 2019 Dec 5. PMID: 31806647.
3. Bray C, Britton S, Yeung D, Haines L, Sorbara L. Change in over-refraction after scleral lens settling on average corneas. *Ophthalmic Physiol Opt.* 2017 Jul;37(4):467-472. doi: 10.1111/opo.12380. Epub 2017 May 12. PMID: 28497619.
4. Camp AS, Shane TS, Kang J, et.al. Evaluating Self-Refraction and Ready-Made Spectacles for Treatment of Uncorrected Refractive Error. *Ophthalmic Epidemiol.* 2018 Oct-Dec;25(5-6):392-398. doi: 10.1080/09286586.2018.1500615. Epub 2018 Aug 17. PMID: 30118609.
5. Carracedo G, Carpena-Torres C, Pastrana C, et.al. Repeatability of Aberrometry-Based Automated Subjective Refraction in Healthy and Keratoconus Subjects. *J Ophthalmol.* 2020 Oct 30; 2020:4831298. doi: 10.1155/2020/4831298. PMID: 33489331; PMCID: PMC7803284.
6. Charlesworth E, Alderson AJ, de Juan V, et.al. When is refraction stable following routine cataract surgery? A systematic review and meta-analysis. *Ophthalmic Physiol Opt.* 2020 Sep;40(5):531-539. doi: 10.1111/opo.12719. Epub 2020 Jul 22. PMID: 32696501.
7. Gatinel D, Rampat R, Dumas L, et.al. An Alternative Wavefront Reconstruction Method for Human Eyes. *J Refract Surg.* 2020 Feb 1;36(2):74-81. doi: 10.3928/1081597X-20200113-01.

PMID: 32032427.

8. Gil A, Hernández CS, Pérez-Merino P, et.al. Assessment of the QuickSee wavefront autorefractor for characterizing refractive errors in school-age children. *PLoS One*. 2020 Oct 28;15(10): e0240933. doi: 10.1371/journal.pone.0240933. PMID: 33112912; PMCID: PMC7592806.
9. Goldblum D, Brugger A, Haselhoff A, et.al. Longitudinal change of refraction over at least 5 years in 15,000 patients. *Graefes Arch Clin Exp Ophthalmol*. 2013 May;251(5):1431-6. doi: 10.1007/s00417-012-2213-3. Epub 2012 Nov 28. PMID: 23188521.
10. He JC. A Model of the Effect of Lens Development on Refraction in Schoolchildren. *Optom Vis Sci*. 2017 Dec;94(12):1129-1137. doi: 10.1097/OPX.0000000000001146. PMID: 29116952.
11. Hennein L, de Alba Campomanes A. Longitudinal Analysis of Refractive Errors in Premature Children during the First Three Years of Life. *J Binocul Vis Ocul Motil*. 2020 Oct-Dec;70(4):170-176. doi: 10.1080/2576117X.2020.1830670. Epub 2020 Oct 23. PMID: 33095122.
12. Ishikawa N, Hayashi Y, Miyamoto T, et.al. Errors in the prediction of postoperative refraction following intraocular lens implantation in eyes with pseudoexfoliation syndrome. *J Cataract Refract Surg*. 2013 Apr;39(4):649-50. doi: 10.1016/j.jcrs.2013.02.023. PMID: 23522588.
13. Joseph S, Sundar B, Rashme VL, Venkatachalam S, Ehrlich JR, Ravilla T. Accuracy of a low-cost, portable, refractive error estimation device: Results of a diagnostic accuracy trial. *PLoS One*. 2022;17(8):e0272451. Published 2022 Aug 3. doi:10.1371/journal.pone.0272451.
14. Kanellopoulos AJ, Vingopoulos F. Does Pregnancy Affect Refractive and Corneal Stability or Corneal Epithelial Remodeling After Myopic LASIK? *J Refract Surg*. 2020 Feb 1;36(2):118-122. doi: 10.3928/1081597X-20200115-01. PMID: 32032433.
15. Khurana R, Tibrewal S, Ganesh S, et.al. Accuracy of noncycloplegic refraction performed at school screening camps. *Indian J Ophthalmol*. 2018 Jun;66(6):806-811. doi: 10.4103/ijo.IJO_982_17. PMID: 29785988; PMCID: PMC5989502.
16. Kobashi H, Hieda O, Itoi M, et.al, The Keratoconus Study Group of Japan. Corneal Cross-Linking for Pediatric Keratoconus: A Systematic Review and Meta-Analysis. *J Clin Med*. 2021 Jun 15;10(12):2626. doi: 10.3390/jcm10122626. PMID: 34203646; PMCID: PMC8232120.
17. Kolker, RJ. Subjective Refraction and Prescribing Glasses. Guide to Practical Techniques and Principals. JCAHPO, Nov. 2014.
18. Kumar RS, Moe CA, Kumar D, et al. Accuracy of autorefraction in an adult Indian population. *PLoS One*. 2021 May 19;16(5): e0251583. doi: 10.1371/journal.phone.0251583. PMID: 34010350; PMCID: PMC8133404.
19. Kwok E, Patel B, Backhouse S, et.al. Peripheral refraction in high myopia with spherical soft contact lenses. *Optom Vis Sci*. 2012 Mar;89(3):263-70. doi: 10.1097/OPX.0b013e318242dfbf. PMID: 22282223.
20. Li M, Li M, Sun L, et.al. Predictive Formula for Refraction of Autologous Lenticule Implantation for Hyperopia Correction. *J Refract Surg*. 2017 Dec 1;33(12):827-833. doi: 10.3928/1081597X-20171016-01. PMID: 29227511.
21. Mutti DO, Sinnott LT, Lynn Mitchell G, et al. Ocular Component Development during Infancy and Early Childhood. *Optom Vis Sci*. 2018; 95(11):976–985; 2018.
22. Reinstein DZ, Yap TE, Carp GI, et.al; London Vision Clinic optometric group. Reproducibility of manifest refraction between surgeons and optometrists in clinical refractive surgery practice. *J Cataract Refract Surg*. 2014 Mar;40(3):450-9. doi: 10.1016/j.jcrs.2013.08.053. PMID: 24581774.
23. Tabernero J, Ohlendorf A, Fischer MD, et.al. Peripheral refraction profiles in subjects with low

foveal refractive errors. *Optom Vis Sci.* 2011 Mar;88(3): E388-94. doi: 10.1097/OPX.0b013e31820bb0f5. PMID: 21258260.

24. Tabernero J, Otero C, Pardhan S. A Comparison Between Refraction from an Adaptive Optics Visual Simulator and Clinical Refractions. *Transl Vis Sci Technol.* 2020 Jun 22;9(7):23. doi: 10.1167/tvst.9.7.23. PMID: 32832229; PMCID: PMC7414619.

25. Tan Y, Zhang J, Li W, et.al. Refraction Shift After Nd: YAG Posterior Capsulotomy in Pseudophakic Eyes: A Systematic Review and Meta-analysis. *J Refract Surg.* 2022 Jul;38(7):465-473. doi: 10.3928/1081597X-20220516-01. Epub 2022 Jul 1. PMID: 35858199.

26. Taneri S, Arba-Mosquera S, Rost A, et.al. Repeatability and reproducibility of manifest refraction. *J Cataract Refract Surg.* 2020 Dec;46(12):1659-1666. doi: 10.1097/j.jcrs.0000000000000343. PMID: 33259390.

27. Teel DF, Jacobs RJ, Copland J, et.al. Differences between wavefront and subjective refraction for infrared light. *Optom Vis Sci.* 2014 Oct;91(10):1158-66. doi: 10.1097/OPX.0000000000000370. PMID: 25148218.

28. Tsuneyoshi Y, Negishi K, Tsubota K. Importance of Accommodation and Eye Dominance for Measuring Objective Refractions. *Am J Ophthalmol.* 2017 May; 177:69-76. doi: 10.1016/j.ajo.2017.02.013. Epub 2017 Feb 22. PMID: 28237412.

29. Wang YH, Huang C, Tseng YL, et.al. Refractive Error and Eye Health: An Umbrella Review of Meta-Analyses. *Front Med (Lausanne).* 2021 Nov 4; 8:759767. doi: 10.3389/fmed.2021.759767. PMID: 34805225; PMCID: PMC8599990.

30. Wertheimer CM, Brandt K, Kaminsky S, et.al. Refractive Changes After Corneal Stromal Filler Injection for the Correction of Hyperopia. *J Refract Surg.* 2020 Jun 1;36(6):406-413. doi: 10.3928/1081597X-20200429-01. PMID: 32521029.

31. Wilson S, Ctori I, Shah R, et.al. Systematic review and meta-analysis on the agreement of non-cycloplegic and cycloplegic refraction in children. *Ophthalmic Physiol Opt.* 2022 Nov;42(6):1276-1288. doi: 10.1111/opp.13022. Epub 2022 Aug 1. PMID: 35913773.

32. Wu J, Xiong L, Wang Z, et.al. Correction of Moderate to High Hyperopia with Implantation of an Allogeneic Refractive Lenticule. *J Refract Surg.* 2020 Nov 1;36(11):772-779. doi: 10.3928/1081597X-20200826-01. PMID: 33170285.

33. Yew SME, Chen Y, Goh JHL, et.al. Ocular image-based deep learning for predicting refractive error: A systematic review. *Adv Ophthalmol Pract Res.* 2024 Jul 2;4(3):164-172. doi: 10.1016/j.aopr.2024.06.005. PMID: 39114269; PMCID: PMC11305245.

SOURCES

1. AAO Pediatric Eye Evaluations. PPP 2023. [https://www.aaojournal.org/article/S0161-6420\(22\)00866-1/pdf](https://www.aaojournal.org/article/S0161-6420(22)00866-1/pdf). Accessed 10/2025.
2. [AAO Refractive Management/Intervention Summary Benchmark](#) - 2024. Accessed 10/2025.
3. [AOA Comprehensive Adult Eye and Vision Examination](#). <https://www.aoanet.org/-/media/assets/advocacy/position-statements/aoa-comprehensive-adult-eye-and-vision-examination.ashx> Accessed 10/2025.
4. [AOA Comprehensive Pediatric Eye and Vision Examination](#) 2017.. Accessed 10/2025.