

Policy Name	Clinical Policy - Refraction
Policy Number	1310.00
Department	Clinical Product & Strategy
Subcategory	Medical Management
Original Approval Date	05/24/2017
Current MPC/CMO Approval Date	01/05/2022
Current Effective Date	02/01/2022

Company Entities Supported (Select All that Apply) <input checked="" type="checkbox"/> Superior Vision Benefit Management <input checked="" type="checkbox"/> Superior Vision Services <input checked="" type="checkbox"/> Superior Vision of New Jersey, Inc. <input checked="" type="checkbox"/> Block Vision of Texas, Inc. d/b/a Superior Vision of Texas <input checked="" type="checkbox"/> Davis Vision (Collectively referred to as 'Versant Health' or 'the Company')

ACRONYMS and DEFINITIONS	
BCVA	Best corrected visual acuity
Refractometry	A measurement of refractive error
Refraction	Eye exam with history, examination, diagnosis, and treatment including prescription of corrective lenses.

ACRONYMS and DEFINITIONS	
BCVA	Best corrected visual acuity
Refractometry	A measurement of refractive error
Refraction	Eye exam with history, examination, diagnosis, and treatment including prescription of corrective lenses.

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

The goal of clinical refraction is to determine the strength of the corrective lens that will achieve an optimal, precise focus when placed in front of the eye.

In CPT (AMA) a refraction is a “special ophthalmological service” provided in addition to an eye examination when the ophthalmologist or optometrist determines that the patient’s uncorrected visual acuity can be improved and a prescription is given for corrective lenses (glasses or contact lenses). HCPCS (CMS) takes a different approach and treats refraction as an inherent part of a 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 photoscreeners, autorefractors, aberrometers, phoropters, trial frames, and other instruments. Refraction and prescribing glasses involve history, examination, diagnosis and treatment decisions so that the physician satisfies the individual patient’s visual needs. 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 disease 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 separately reimbursed. 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 Code	
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)
CPT 92002, 92004, 92012, 92014, 92015, S0620, and S0621 are reported per patient and not per eye. These procedures are considered to be unilateral or bilateral and may only be reimbursed once per encounter.	
Invalid Modifiers	
Anatomical modifiers	RT, LT, 50, E1, E2, E3, and E4 are inappropriate to use for these codes. Do not append these to any of the eye exam codes listed above.
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.
Surgical modifiers	Refraction is not a surgical service. Modifiers AS, XE, XP, XS, XU, 22, 52, 54, 55, 58, 59, 76, 77, 78, 79, 80, 81, and 82 should not be appended 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 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 covered in policy 1316 for Eye Exams under a Medical Plan, a claim for reimbursement of a concurrent refraction will use the same primary diagnosis, and a secondary diagnosis in the series H52. Payment for refraction is additive to the eye exam.	
ICD10 code	
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) (total), right eye
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 disorder

Z97.3	Presence of spectacles and contact lenses
-------	---

DISCLAIMER and COPYRIGHTS

This policy is provided for information purposes only and does not constitute medical advice. Versant Health, Inc. and its affiliates (the “Company”) do not provide health care services and cannot guarantee any results or outcomes. Treating doctors are solely responsible for determining what services or treatments to provide to their patients. Patients (members) should always consult their doctor before making any decisions about medical care.

Subject to applicable law, compliance with this Coverage Policy is not a guarantee of coverage or payment. Coverage is based on the terms of an individual’s particular coverage plan document, which may not cover the service(s) or procedure(s) addressed in this Coverage Policy. The terms of the individual’s specific coverage plan is always determinative. Every effort has been made to ensure that the information in this coverage policy is accurate and complete however the Company does not guarantee that there are no errors in this policy or that the display of this file on a website is without error. The company and its employees are not liable for any errors, omissions, or other inaccuracies in the information, product, or processes disclosed herein. Neither the company nor the employees represent that use of such information, product, or processes will not infringe on privately owned rights. In no event shall the Company be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of such information, product, or process.

COMPANY’S COPYRIGHT STATEMENT Except for any copyrights described below, this Coverage Policy is confidential and proprietary and no part of this Coverage Policy may be copied without Versant Health or its applicable affiliates express prior written approval.

AMA COPYRIGHT STATEMENT CPT only copyright 2002-2021 American Medical Association. All Rights Reserved. CPT is a registered trademark of the American Medical Association. Applicable FARS/DFARS Apply to Government Use. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

RELATED POLICIES AND PROCEDURES	
1316.00	Eye exams

DOCUMENT HISTORY		
<i>Approval Date</i>	<i>Revision</i>	<i>Effective Date</i>
05/24/2017	Initial policy	05/24/2017
02/06/2017	Annual review	02/06/2017
03/21/2018	Annual review	03/21/2018
03/13/2019	Annual review	03/13/2019
02/19/2020	Annual review	04/01/2020

06/03/2020	Deletion of benefit coverage statements; no change in criteria	08/01/2020
01/06/2021	Annual review	04/01/2021
01/05/2022	Added ICD-10 codes H52.511-13.	02/01/2022

REFERENCES

1. Aghaei H, Es'laghi A. Contributing Factors in Final Refractive Outcomes After Re-treatment Procedures. *J Refract Surg.* 2020 Jun 1;36(6):419. doi: 10.3928/1081597X-20200522-01. PMID: 32521031.
2. Backhouse S, Fox S, Ibrahim B, et.al. Peripheral refraction in myopia corrected with spectacles versus contact lenses. *Ophthalmic Physiol Opt.* 2012 Jul;32(4):294-303. doi: 10.1111/j.1475-1313.2012.00912.x. Epub 2012 May 12. PMID: 22577970.
3. 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.
4. Camp AS, Shane TS, Kang J, et.al. Evaluating Self-Refractation 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. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. Kansara N, Cui D, Banerjee K, et.al. Anterior, posterior, and nonkeratometric contributions to refractive astigmatism in pseudophakes. J Cataract Refract Surg. 2021 Jan 1;47(1):93-99. doi: 10.1097/j.jcrs.0000000000000390. PMID: 32815865.
 14. 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.
 15. Kolker, RJ. Subjective Refraction and Prescribing Glasses. Guide to Practical Techniques and Principals. JCAHPO, Nov. 2014.
[file:///C:/Users/rboltz/Downloads/Subjective Refraction Prescribing Glasses JCAHPO%20\(1\).pdf](file:///C:/Users/rboltz/Downloads/Subjective%20Refraction%20Prescribing%20Glasses%20JCAHPO%20(1).pdf) . Accessed 01/21/2020.
 16. Kumar RS, Moe CA, Kumar D, et al. Accuracy of autorefractometry in an adult Indian population. PLoS One. 2021 May 19;16(5):e0251583. doi: 10.1371/journal.pone.0251583. PMID: 34010350; PMCID: PMC8133404.
 17. 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.
 18. 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.
 19. 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.
 20. Reinstein DZ, Yap TE, Carp GI, et.al; London Vision Clinic optometric group. Reproducibility of manifest refraction between surgeons and optometrists in a clinical refractive surgery practice. J Cataract Refract Surg. 2014 Mar;40(3):450-9. doi: 10.1016/j.jcrs.2013.08.053. PMID: 24581774.
 21. 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.
 22. 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.
 23. 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.
 24. 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.
 25. 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.
 26. 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.
 27. 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.

SOURCES

1. AAO Pediatric Ophthalmology/Strabismus PPP Panel, Hoskins Center for Quality Eye Care. Pediatric Eye Evaluations Preferred Practice Pattern – 2018
2. Advertising of Ophthalmic Goods and Services, Statement of Basis and Purpose and Final Trade Regulation Rule, 43 FR 23992, 23998 (June 2, 1978). Reviewed and confirmed, [Federal Register, Vol.69, No.23, 5451, 5455 \(February 4, 2004\)](#).
3. Comprehensive Adult Eye and Vision Examination-Evidence Based Clinical Practice Guidelines, 1st Edition, The American Optometric Association 2015.
4. Comprehensive Adult Medical Eye Evaluation-Preferred Practice Pattern, The American Academy of Ophthalmology 2015.
5. Comprehensive Pediatric Eye and Vision Examination-Evidence Based Clinical Practice Guidelines, American Optometric Association, as approved by AOA Board 2/12/2017.
6. CPT Assistant Mar 96:11, Feb 97:6, Aug 98:3, Aug 06:11, Mar 13:6, Mar 16:11 Pediatric Eye Examination-Preferred Practice Pattern-American Academy of Ophthalmology, 2017.