Medical Policy
Retinal Telescreening for Diabetic Retinopathy

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Policy Number: 065
BCBSA Reference Number: 9.03.13
NCD/LCD: Local Coverage Determination (LCD): Ophthalmology: Posterior Segment Imaging (Extended Ophthalmoscopy and Fundus Photography) (L33567)

Related Policies
Intravitreal Angiogenesis Inhibitors for Retinal Vascular Conditions, #401

Policy
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

Screening for retinopathy in diabetics performed by ophthalmologists or optometrists using conventional fundus photography OR digital retinal imaging technology may be considered MEDICALLY NECESSARY when all of the following criteria are met:
- The individual does not have prior known diabetic retinopathy; and
- The imaging technique covers a total retinal area which includes the Diabetic Retinopathy Study seven-standard fields (DRS7); and
- Use does not exceed one study, utilizing either method, per member, per provider, per year.

Screening for retinopathy in diabetics ordered by non-eye care professionals using digital retinal imaging technology may be considered MEDICALLY NECESSARY when all of the following criteria are met:
- The individual does not have prior known diabetic retinopathy; and
- The imaging technique covers a total retinal area which includes the Diabetic Retinopathy Study seven-standard fields (DRS7); and
- Use does not exceed one study per member per provider per year.

Note: Digital retinal imaging can be performed through either a dilated or undilated pupil.

Retinal telescreening is INVESTIGATIONAL for all other indications, including the monitoring and management of disease in individuals diagnosed with diabetic retinopathy.
Medicare HMO BlueSM and Medicare PPO BlueSM Members

Medical necessity criteria and coding guidance for Medicare Advantage members living in Massachusetts can be found through the link below.

Local Coverage Determination (LCD): Ophthalmology: Posterior Segment Imaging (Extended Ophthalmoscopy and Fundus Photography) (L33567)

For medical necessity criteria and coding guidance for Medicare Advantage members living outside of Massachusetts, please see the Centers for Medicare and Medicaid Services website for information regarding your specific jurisdiction at https://www.cms.gov.

Prior Authorization Information
Pre-service approval is required for all inpatient services for all products.
See below for situations where prior authorization may be required or may not be required for outpatient services.
Yes indicates that prior authorization is required.
No indicates that prior authorization is not required.
N/A indicates that this service is primarily performed in an inpatient setting.

<table>
<thead>
<tr>
<th>Outpatient</th>
<th>Commercial Managed Care (HMO and POS)</th>
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<td></td>
<td>Commercial PPO and Indemnity</td>
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<td></td>
<td>Medicare PPO BlueSM</td>
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CPT Codes / HCPCS Codes / ICD Codes
Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The above medical necessity criteria MUST be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity:

CPT Codes

<table>
<thead>
<tr>
<th>CPT codes:</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>92227</td>
<td>Remote imaging for detection of retinal disease (e.g., retinopathy in a patient with diabetes) with analysis and report under physician supervision, unilateral or bilateral</td>
</tr>
<tr>
<td>92228</td>
<td>Remote imaging for monitoring and management of active retinal disease (e.g., diabetic retinopathy) with physician review, interpretation and report, unilateral or bilateral</td>
</tr>
<tr>
<td>92250</td>
<td>Fundus photography with interpretation and report</td>
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Description
Diabetic retinopathy is the leading cause of blindness among adults aged 20–74 years in the United States. The major risk factors for developing diabetic retinopathy are duration of diabetes and severity of hyperglycemia. After 20 years of disease, almost all patients with type 1 and greater than 60% of patients with type 2 diabetes will have some degree of retinopathy. Other important risk factors include hypertension and elevated serum lipid levels.
Diabetic retinopathy progresses, at varying rates, from asymptomatic, mild nonproliferative abnormalities to proliferative diabetic retinopathy (PDR), with new blood vessel growth on the retina and posterior surface of the vitreous. The 2 most serious complications for vision are diabetic macular edema and PDR. Although proliferative disease is the main blinding complication of diabetic retinopathy, macular edema is more frequent and is the leading cause of moderate vision loss in people with diabetes.

The value of screening is well-established, since diabetic retinopathy has few visual or ocular symptoms until vision loss develops. With early detection, diabetic retinopathy can be treated with modalities that can decrease the risk of severe vision loss. Diabetic retinopathy telescreening is a diagnostic test, which uses a digital fundus camera and the internet to transmit digital images of the retina to another location for evaluation by trained readers. Screening can be performed in the medical doctor's office rather than having to make an additional appointment. Results are sent back to the medical doctor's office with recommendations for follow-up with an eye specialist if necessary.

Examples of digital camera and transmission systems for diabetic retinopathy telescreening include the Diabetic Retinopathy Digital Disease Detection and Tracking System from Inoveon Corp., DigiScope® from EyeTel Corp., and the Fundus AutoImager® from Visual Pathways Inc. All retinal telescreening for diabetic retinopathy are considered investigational regardless of the commercial name, the manufacturer or FDA approval status except when used for the medically necessary indications that are consistent with the policy statement.

**Summary**

A number of studies have reported on the agreement regarding the presence and stage of retinopathy based on ophthalmoscopy versus photography or standard film versus digital imaging. The studies generally found a high level of agreement between retinal examination and imaging. Several studies suggested that retinal imaging through a dilated pupil was equivalent or superior to ophthalmic examination regarding the detection of diabetic retinal changes. Although evidence indicates that digital imaging without mydriasis leads to an increase in the proportion of ungradable photographs, practice guidelines and clinical input supports the use of both dilated and undilated retinal telescreening. At this time, it is unclear whether nonspecialist photographers would evaluate undilated photographs at the point-of-care and, if needed, repeat photography with dilation.

Overall, the published medical literature is adequate to conclude that digital imaging systems are safe and effective alternatives to the gold standard of dilated indirect ophthalmoscopy coupled with biomicroscopy or stereoscopic fundus photography. Additional advantages of digital imaging systems include short examination time and the ability to perform the test in the primary care physician setting. Automated scoring also has the potential to improve screening in the primary care setting, and several automated scoring systems are being evaluated. Although the sensitivity of these systems to rule out disease appears to be high, the moderate specificity indicates there are a substantial number of false positive results, implying that positive results would need to be confirmed by referral to and examination by appropriate specialists.

**Policy History**

<table>
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<tr>
<td>4/2017</td>
<td>New references added from BCBSA National medical policy.</td>
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<tr>
<td>5/2016</td>
<td>New references added from BCBSA National medical policy.</td>
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<td>Clarified coding information.</td>
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<td>12/2014</td>
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<tr>
<td>6/2014</td>
<td>Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.</td>
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<td>No changes to policy statements.</td>
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<td></td>
<td>No changes to policy statements.</td>
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</table>
### References

16. Rasmussen ML, Broe R, Frydkjær-Olsen U, et al. Comparison between Early Treatment Diabetic Retinopathy Study 7-field retinal photos and non-mydriatic, mydriatic and mydriatic steered widefield...


