**Health Benchmarks®**

**Clinical Quality Indicator Specification 2008**

**Client**

HEALTH BENCHMARKS, INC. STANDARD ALGORITHM

*Implemented for Blue cross Blue Shield of Texas*

**Measure Title**

DIABETIC RETINAL EXAM

**Disease State**

Diabetes, Retinopathy  
**Indicator Classification** Disease Management

**Strength of Recommendation**

B

**Organizations Providing Recommendation**

American Diabetes Association  
American Academy of Ophthalmology

**Clinical Intent**

To ensure that all diabetic members ages 18-75 receive at least 1 retinal or dilated eye exam during the measurement year.

**Physician Specialties (suggested)**

Endocrinology, Family Practice, Geriatric Medicine, Internal Medicine, Nephrology

**Background**

**Disease Burden**

- Diabetes is a chronic, serious disease that affects approximately 14.7 million Americans. This disease is the leading cause of new cases of blindness among adults aged 20-74.[1]
- After living with diabetes for 20 years, almost all patients with type 1 diabetes and 50 to 80 percent of those with type 2 diabetes will manifest signs of retinopathy.[2]
- Retinopathy is a major cause of morbidity in patients with diabetes. The incidence of blindness, for example, is 25 times higher in patients with diabetes than in the general population. Furthermore, diabetic retinopathy is the most common cause of blindness in middle-aged subjects, accounting for at least 12 percent of all new cases in the United States each year.[3]

**Reason for Indicated Intervention or Treatment**

- Evidence supports that screening and early treatment for diabetic retinopathy is associated with a decreased rate of visual loss.[4-6]
- Current treatment for diabetic retinopathy may be 90% effective in preventing blindness.[7]

**Evidence Supporting Intervention or Treatment**

- In their cost-effectiveness analyses, Javitt and colleagues have reported that in patients with type 1 diabetes, annual screening (ophthalmoscopy with dilated pupils) for those without retinopathy and screening every six
months for those with retinopathy followed by guideline concordant treatment would result in a saving of 70,000 to 80,000 person-years of sight and 60 to 80 million dollars annually in the United States.[8] In patients with type 2 diabetes, the same screening program and treatment would result in saving over 94,000 person-years of sight and over 250 million dollars per year.[9]

- Appropriate screening and early detection of retinopathy preserves vision.[5, 10-12]
- At least three randomized controlled trials have reported that photocoagulation for diabetic retinopathy preserves vision.[13-15]

**Clinical Recommendations**

- The American Diabetes Association recommends:
  - Patients with type 1 diabetes should have a complete examination by an ophthalmologist or optometrist within three to five years after the onset of diabetes. Subsequent examinations should be repeated annually. Less frequent exams (every 2 to 3 years) may be considered if the screening is normal. More frequent exams may be indicated for patients with evidence of retinopathy.[16]
  - Patients with type 2 diabetes should have a complete examination by an ophthalmologist or optometrist beginning at the time of diagnosis. Subsequent examinations should be repeated annually. Less frequent exams (every 2 to 3 years) may be considered if the screening is normal. More frequent exams may be indicated for patients with evidence of retinopathy.[16]
  - The American Academy of Ophthalmology recommends:
    - Patients with type I diabetes should have a dilated eye exam 5 years after the onset of diabetes. Patients with type II diabetes should have a dilated eye exam at onset of their diagnosis. A follow-up dilated eye exam is recommended yearly for both groups. Patients with abnormal findings on eye exam may need more frequent follow-ups.[7]

**Source**

Healthcare Effectiveness Data and Information Set (HEDIS®) 2008 Technical Specification for Physician Measurement

**Denominator Definition**

Continuously enrolled members ages 18-75 years by the end of the measurement year who were identified as having diabetes during the measurement year or year prior.

**Denominator Codes**

<table>
<thead>
<tr>
<th>ICD-9 diagnosis code(s): 250.xx, 357.2x, 362.0x, 366.41, 648.0x</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRG code(s): 294, 295</td>
</tr>
<tr>
<td>Outpatient/nonacute inpatient setting:</td>
</tr>
<tr>
<td>CPT-4 code(s): 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99301-99313, 99315, 99316, 99318, 99321-99328, 99331-99337, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99455, 99456, 99499</td>
</tr>
</tbody>
</table>
**Denominator Exclusion Definition**

Members in the denominator with a diagnosis of polycystic ovaries at any time in the member’s history who did **NOT** have a face-to-face encounter with a diagnosis of diabetes in any setting during the measurement year or year prior, or members diagnosed with gestational diabetes or steroid-induced diabetes during the measurement year or year prior who did **NOT** have a face-to-face encounter with a diagnosis of diabetes in any setting during the measurement year or year prior.

**Denominator Exclusion Codes**

**Polycystic ovaries**

ICD-9 diagnosis code(s): 256.4x

**Diabetes:**

ICD-9 diagnosis code(s): 250.xx, 357.2x, 362.0x, 366.41, 648.0x

DRG code(s): 294, 295

*Outpatient/nonacute inpatient setting:*

CPT-4 code(s): 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99301-99313, 99315, 99316, 99318, 99321-99328, 99331-99337, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99455, 99456, 99499

UB revenue code(s): 0118, 0128, 0138, 0148, 0158, 019x, 051x, 052x, 055x, 057x-059x, 066x, 077x, 082x-085x, 088x, 0982, 0983

**Acute inpatient or emergency room setting:**

CPT-4 code(s): 99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99261-99263, 99281-99285, 99291

UB revenue code(s): 010x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 016x, 020x-022x, 045x, 072x, 080x, 0981, 0987

**Steroid-induced or gestational diabetes**

ICD-9 diagnosis code(s): 251.8x, 648.8x, 962.0x

**Numerator Definition**

Members who received at least 1 screening exam for diabetic retinal disease by an eye-care professional or had at least 1 office visit with an ophthalmologist or optometrist during the measurement year.*

*Eye exams provided by eye care professionals are a proxy for dilated eye examinations because there is no administrative way to determine that a dilated exam was performed. (HEDIS 2008)*
Numerator Codes

**Screening exam for diabetic retinal disease (including either retinal or dilated eye exam) conducted by an ophthalmologist or optometrist**

CPT-4 code(s): 67028, 67030, 67031, 67036, 67038-67040, 67101, 67105, 67107, 67108, 67110, 67112, 67121, 67141, 67145, 67208, 67210, 67218, 67220, 67221, 67227, 67228, 92002, 92004, 92012, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260

ICD-9 surgical proc code(s): 14.1x-14.5x, 14.9x, 95.02-95.04, 95.11, 95.12, 95.16

ICD-9 diagnosis code(s): V72.0

HCPCS code(s): S0620, S0621, S0625, S3000

Office visit with an optometrist or ophthalmologist

CPT-4 code(s): 99203-99205, 99213-99215, 99242-99245

Screening exam for diabetic retinal disease (including either retinal or dilated eye exam) conducted by an eye care professional

CPT category II code(s)*: 2022F, 2024F, 2026F, 3072F (if available)

Negative retinal exam (no evidence of retinopathy) by an eye care professional according to an electronic result

*The organization does not need to limit CPT category II codes to an optometrist or an ophthalmologist. These codes indicate an eye exam was performed by an eye care specialist. (HEDIS 2008)

**Physician Attribution Description**

If client data does not contain PCP:

Score all physicians (in the selected specialties) who saw the member during the measurement year

If client data contains PCP:

Score all primary care physicians who were assigned to the member during the measurement year.

**References**

6. Chew, E.Y., et al., The long-term effects of laser photocoagulation...


