

# Health Benchmarks<sup>®</sup> Program

## Clinical Quality Indicator Specification 2011

<b>Measure Title</b>	DIABETIC RETINAL EXAM		
<b>Disease State</b>	Diabetes	<b>Indicator Classification<sup>1</sup></b>	Disease Management
<b>Strength of Recommendation<sup>2</sup></b>	B		
<b>Organizations Providing Recommendation</b>	American Academy of Ophthalmology American College of Endocrinology/American Association of Clinical Endocrinologists American Diabetes Association		
<b>Clinical Intent</b>	To ensure that all diabetic members ages 18-75 receive at least 1 retinal or dilated eye exam during the measurement year.		
<b>Background</b>	<p><b>Disease Burden</b></p> <ul style="list-style-type: none"> <li>• Diabetes is a chronic, serious disease that affects approximately 23.6 million Americans and is the leading cause of new cases of blindness among adults aged 20-74. [1-4]</li> <li>• 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.[5, 6]</li> <li>• The incidence of blindness 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.[7]</li> </ul> <p><b>Reason for Indicated Intervention or Treatment</b></p> <ul style="list-style-type: none"> <li>• Screening and early treatment for diabetic retinopathy is associated with a decreased rate of visual loss.[6, 8-10]</li> <li>• Current treatments for diabetic retinopathy may be 90% effective in preventing blindness.[11]</li> </ul> <p><b>Evidence Supporting Intervention or Treatment</b></p> <ul style="list-style-type: none"> <li>• 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.[12] 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.[13]</li> <li>• Appropriate screening and early detection of retinopathy preserves vision.[9, 14-16]</li> </ul>		

- At least three randomized controlled trials have reported that photocoagulation for diabetic retinopathy preserves vision.[17-19]

**Clinical Recommendations**

- The American Diabetes Association recommends:
  - Adults and children aged 10 years or older with type 1 diabetes should have an initial dilated and comprehensive eye examination by an ophthalmologist or optometrist within 5 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.[4, 20]
  - 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.[4, 20]
- 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.[11]
- The American College of Endocrinology/American Association of Clinical Endocrinologists recommends that patients with type-1 diabetes should have a dilated retinal exam within 5 years of diagnosis, and that patients with type-2 diabetes should have exams at the time of diagnosis, and that examinations should occur yearly thereafter.[4]

**Source** Healthcare Effectiveness Data and Information Set (HEDIS®) 2011 Technical Specification for Physician Measurement

**Denominator**

**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 Index Date** N/A

**Denominator Encounters/Claims Criteria** CPT-4 code(s): 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99221-99223, 99231-99233, 99238, 99239, 99241-99245, 99251-99255, 99281-99285, 99291, 99304-99310, 99315, 99316, 99318, 99324-99328, 99334-99337, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99455, 99456

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

UB revenue code(s): 010x, 0110-0114, 0118, 0128, 0119, 0120-0124, 0129, 0130-0134, 0138, 0139, 0140-0144, 0148, 0149, 0150-0154, 0158, 0159, 016x, 019x, 020x-021x, 045x, 051x, 0520-0529, 055x, 057x-059x, 066x, 072x, 080x, 082x-085x, 088x, 0981, 0982, 0983, 0987

### Denominator Exclusion

**Denominator Exclusion Definition** Members in the denominator with a diagnosis of polycystic ovaries at any time prior to the end of the measurement year 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.

*Note: The denominators for all adult diabetes care measures must be the same (NCQA)*

**Denominator Exclusion Claims Criteria** CPT-4 code(s): 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99221-99223, 99231-99233, 99238, 99239, 99241-99245, 99251-99255, 99281-99285, 99291, 99304-99310, 99315, 99316, 99318, 99324-99328, 99334-99337, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99455, 99456

ICD-9 diagnosis code(s): 249.xx, 250.xx, 251.8x, 256.4x, 357.2x, 362.0x, 366.41, 648.0x, 648.8x, 962.0x

UB revenue code(s): 010x, 0110-0114, 0118, 0119, 0120-0124, 0128, 0129, 0130-0134, 0138, 0139, 0140-0144, 0148, 0149, 0150-0154, 0158, 0159, 016x, 019x, 020x-021x, 045x, 051x, 0520-0529, 055x, 057x-059x, 066x, 072x, 080x, 082x-085x, 088x, 0981, 0982, 0983, 0987

### Numerator

**Numerator Definition** Members who received at least 1 screening exam for diabetic retinal disease by an eye care professional, who had at least 1 office visit with an ophthalmologist or optometrist during the measurement year, or members who had a negative retinal exam by an eye care professional during the year prior to 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 2009)*

**Numerator Claims Criteria** CPT-4 code(s): 67028, 67030, 67031, 67036, 67039-67043, 67101, 67105, 67107, 67108, 67110, 67112, 67113, 67121, 67141, 67145, 67208, 67210, 67218, 67220, 67221, 67227, 67228, 92002, 92004, 92012, 92014, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260, 99203-99205, 99213-99215, 99242-99245

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

HCPCS code(s): S0620, S0621, S062, S3000

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

*Note: CPT Category II code 3072F can only be used if the claim/encounter was during the measurement year because it indicates the patient had "no evidence of retinopathy in the prior year." Additionally, because the code definition itself indicates results were negative, an automated result is not required. (HEDIS® 2010)*

*\*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® 2010)*

#### Physician Attribution

**Physician Attribution Description** Score all physicians who saw the member during the measurement year.

#### References

1. CDC. *National Diabetes Surveillance System*. Available from: <http://www.cdc.gov/diabetes/statistics/prev/national/fiqpersons.htm>. 2007.
2. Garg, et al., *Microalbuminuria: marker of vascular dysfunction, risk factor for cardiovascular disease*. *Vasc Med*, 2002. **7**(1): p. 35-43.
3. American Diabetes Association. *All About Diabetes*. [online article] Available: <http://www.diabetes.org/about-diabetes.jsp>. Accessed 22 May 2009. .
4. ADA, *Standards of Medical Care in Diabetes - 2010*. *Diabetes Care*, 2010. **33**(Supplement 1): p. 536-37.
5. Frank, R.N., *Diabetic retinopathy*. *N Engl J Med*, 2004. **350**(1): p. 48-58.
6. Garg, et al., *Diabetic Retinopathy Screening Update*. *Clinical Diabetes*, 2009. **27**(4): p. 140-145.
7. Klein, R., et al., *Association of ocular disease and mortality in a diabetic population*. *Arch Ophthalmol*, 1999. **117**(11): p. 1487-95.
8. Javitt, et al., *Cost-effectiveness of detecting and treating diabetic retinopathy*. *Ann Intern Med*, 1996. **124**(1 Pt 2): p. 164-9.
9. Malone, J.I., et al., *Prevalence and significance of retinopathy in subjects with type 1 diabetes of less than 5 years' duration screened for the diabetes control and complications trial*. *Diabetes Care*, 2001. **24**(3): p. 522-6.
10. Chew, E.Y., et al., *The long-term effects of laser photocoagulation treatment in patients with diabetic retinopathy: the early treatment diabetic retinopathy follow-up study*. *Ophthalmology*, 2003. **110**(9): p.

- 1683-9.
11. *Diabetic Retinopathy*. Preferred Practice Pattern. American Academy of Ophthalmology.  
[http://www.aao.org/education/guidelines/ppp/upload/Diabetic\\_Retinopathy.pdf](http://www.aao.org/education/guidelines/ppp/upload/Diabetic_Retinopathy.pdf) 2003 [cited October 19, 2007].
  12. Javitt, J.C., et al., *Detecting and treating retinopathy in patients with type I diabetes mellitus. A health policy model*. Ophthalmology, 1990. **97**(4): p. 483-94; discussion 494-5.
  13. Javitt, J.C., et al., *Preventive eye care in people with diabetes is cost-saving to the federal government. Implications for health-care reform*. Diabetes Care, 1994. **17**(8): p. 909-17.
  14. Singer, D.E., et al., *Screening for diabetic retinopathy*. Ann Intern Med, 1992. **116**(8): p. 660-71.
  15. Fong, et al., *Retinopathy in diabetes*. Diabetes Care, 2004. **27 Suppl 1**: p. S84-7.
  16. Zoega, G.M., et al., *Screening compliance and visual outcome in diabetes*. Acta Ophthalmol Scand, 2005. **83**(6): p. 687-690.
  17. *Proliferative diabetic retinopathy: treatment with xenon-arc photocoagulation. Interim report of multicentre randomised controlled trial*. Br Med J, 1977. **1**(6063): p. 739-41.
  18. *Photocoagulation for diabetic maculopathy. A randomized controlled clinical trial using the xenon arc. British Multicentre Study Group*. Diabetes, 1983. **32**(11): p. 1010-6.
  19. *Photocoagulation for diabetic macular edema. Early Treatment Diabetic Retinopathy Study report number 1. Early Treatment Diabetic Retinopathy Study research group*. Arch Ophthalmol, 1985. **103**(12): p. 1796-806.
  20. *Standards of medical care in diabetes--2008*. Diabetes Care, 2008. **31 Suppl 1**: p. S12-54.

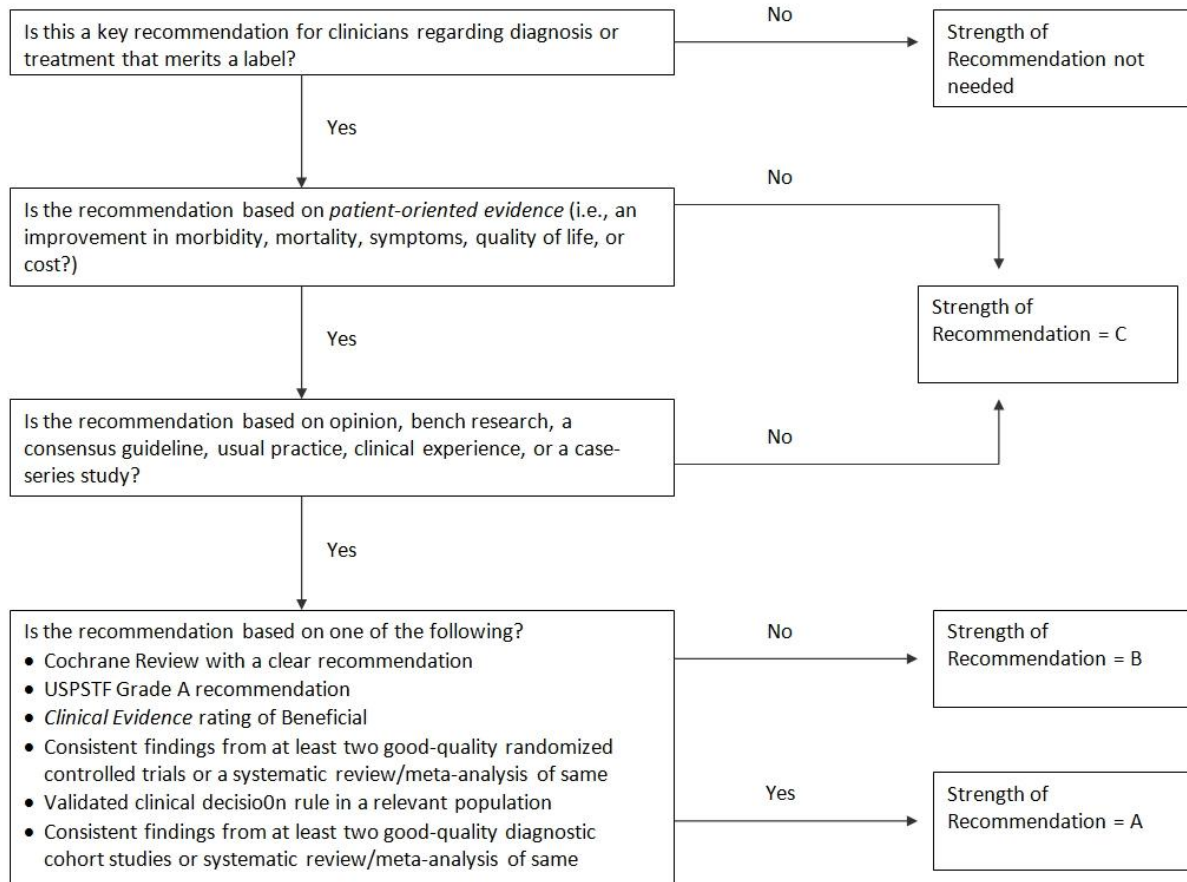
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<sup>1</sup> **Indicator Classification** (Adapted from HEDIS® technical specifications)

<b>Diagnosis</b>	Measures applicable to patients receiving diagnostic workups for a symptom or condition that delineate appropriate laboratory or radiological testing to be performed (e.g. evaluation of thyroid nodule; pregnancy test in patients with vaginal bleeding or abdominal pain)
<b>Effectiveness of Care</b>	
<b>Prevention</b>	Measures applicable to asymptomatic individuals that are designed to prevent the onset of the targeted condition (e.g. immunizations).
<b>Screening</b>	Measures applicable to asymptomatic patients who have risk factors or pre-clinical disease, but in whom the condition has not become clinically apparent (e.g. pap smears; screening for elevated blood pressure).
<b>Disease Management</b>	Measures applicable to individuals diagnosed with a condition that are part of the treatment or management of the condition (e.g. cholesterol reduction in patients with diabetes; radiation therapy following breast conserving surgery; appropriate follow-up after acute event).
<b>Medication Monitoring</b>	Measures applicable to patients taking medications with narrow therapeutic windows and / or potential preventable significant side effects or adverse reactions (e.g. thyroid stimulating hormone (TSH) testing after levothyroxine dose change; hepatic enzyme monitoring for patients using antimycotic pharmacotherapy)
<b>Medication Adherence</b>	Measures applicable to patients taking medications for chronic conditions that are designed to assess patient adherence to medication (e.g. adherence to lipid lowering medication).
<b>Utilization</b>	Measures applicable to patients receiving treatment for a symptom or condition that advocate appropriate utilization of laboratory and pharmaceutical resources (e.g. conservative use of imaging for low back pain; inappropriate use of antibiotics for viral upper respiratory infection).

## <sup>2</sup> Strength of Recommendation

### Strength of Recommendation Based on a Body of Evidence



**FIGURE 2.** Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation based on the benefits, harms, and costs of the intervention being recommended. (USPSTF = U.S. Preventive Services Task Force)