Health Benchmarks®
Clinical Quality Indicator Specification

Measure Title	DIABETIC RETINAL EXAM
Disease State	Diabetes, Retinopathy
Indicator Classification[1]	disease management
Strength of Recommendation[2]	A
Physician Specialties	Endocrinology, Family Practice, Gerontology, Internal Medicine, Ophthalmology

Clinical Rationale

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.[1]
- 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.[2]

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[3-5].

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.[6] 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.[7]
- Appropriate screening and early detection of retinopathy preserves vision.[4, 8-10]
- At least three randomized controlled trials have reported that photocoagulation for diabetic retinopathy preserves vision.[11-13]

Guidelines

- The American Diabetes Association, the American Academy of Ophthalmology, and the American College of Physicians guidelines recommend [14-16]:
  - Patients with type 1 diabetes (defined operationally as diabetes onset before age 30 years and requiring therapy with insulin) should have a complete examination by an ophthalmologist within three to five years after the onset of diabetes. Subsequent examinations should be determined by the presence and severity of retinopathy at the initial examination, but the minimum recommendation is annual examination. One exception is that screening is not indicated before

puberty.[17]
- Patients with type 2 diabetes should have a complete examination by an ophthalmologist beginning at the time of diagnosis. Subsequent examinations or referral for treatment should be determined by the presence and severity of retinopathy at the initial examination, but the minimum recommendation is annual examination.[18]

Source

Adapted from Health Plan Employer Data and Information Set (HEDIS®) 2006 Technical Specification (unable to include evidence of negative retinal exam in year prior to measurement year as this is ascertained with result data that are not available).

Denominator

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 Exclusion

Members with a diagnosis of polycystic ovaries at any time in the member's history who did not receive a diagnosis of diabetes during the measurement year or year prior, or members diagnosed with gestational diabetes or steroid-induced diabetes during the measurement year.

Numerator

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

Interpretation of Score

High score implies better performance.

Physician Attribution

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

External Files Required for Analysis

Denominator file name: *Diabetes_den_medlist_2006*.xls
Source: NCQA website
Updated Annually

References

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16. AAO, *Diabetic Retinopathy*, in *preferred practice pattern*. 2003, American Academy of Opthalmology.
17. Klein, R., et al., *The Wisconsin epidemiologic study of diabetic retinopathy. II. Prevalence and risk of diabetic retinopathy when age at diagnosis is less than 30 years.* Arch Ophthalmol, 1984. **102**(4): p. 520-6.
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[1] **Indicator Classification** (Adapted from Health Plan Employer Data Information Set (HEDIS®) technical specifications)

Diagnosis	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)
Effectiveness of Care	
Prevention	Measures applicable to asymptomatic individuals that are designed to prevent the onset of the targeted condition (e.g. immunizations).
Screening	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).
Disease Management	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).
Medication Monitoring	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)

Medication Adherence	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).
Utilization	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).

[2] **Strength of Recommendation**

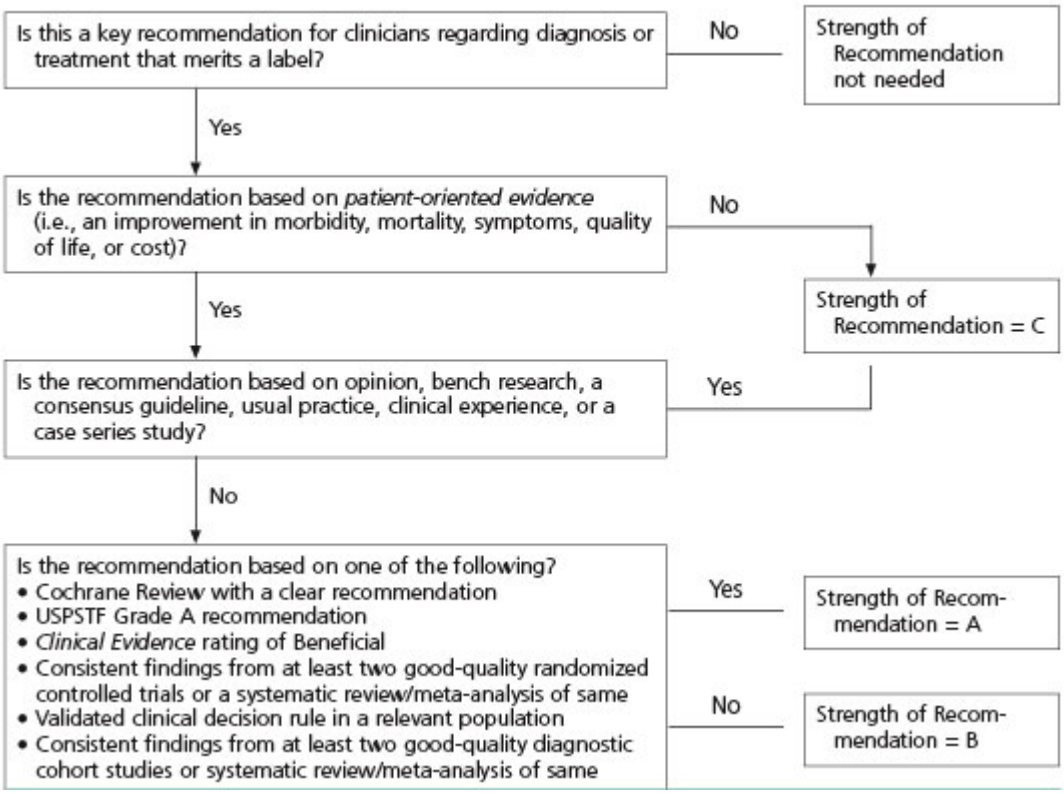

FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation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