



Client	HEALTH BENCHMARKS, INC. STANDARD ALGORITHM <i>Implemented for Blue Cross Blue Shield of Illinois</i>	
Measure Title	MEDICAL ATTENTION FOR DIABETIC NEPHROPATHY	
Disease State	Diabetes	Indicator Classification¹ Screening
Strength of Recommendation²	B	
Clinical Intent	To ensure that all members with diabetes receive a diabetic nephropathy screening test at a clinically appropriate frequency.	
Physician Specialties	Family Practice, General Practice, Internal Medicine, Mixed Specialty	

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, the leading cause of end-stage renal disease, and a major contributing cause of lower extremity amputations.[5]
- Diabetes is the leading cause of end-stage renal disease (ESRD), accounting for 44 percent of new cases. In 2001, over 42,000 people with diabetes began treatment for ESRD and over 142,000 people with ESRD due to diabetes were living on chronic dialysis or with a kidney transplant.[6, 7]

Reason for Indicated Intervention or Treatment

- Evidence supports that screening and early treatment for diabetic nephropathy is associated with a reduced risk and decreased rate of progression to ESRD.[7-9] In addition, micro-albuminuria is a well-established marker of increased cardiovascular disease (CVD) risk.[10]

Evidence Supporting Intervention or Treatment

- Detection of nephropathy in its earliest stages affords the opportunity to provide patients with effective treatments to slow the progression of renal disease. For example, at least one large prospective randomized trial provided evidence that adequate blood pressure control can reduce the development of severe renal disease.[3, 11, 12] In addition, several large prospective randomized trials have demonstrated that reduction of blood pressure specifically with ACE inhibitors or ARBs provides a selective benefit over other classes of anti-hypertensive medications in delaying the progression from micro- to macro-albuminuria and can slow the decline in glomerular filtration in patients with macroalbuminuria.[11, 13-16] Further support for the use of ACE inhibitors in patients with diabetes and micro-albuminuria was provided in another trial which demonstrated the ability of this class of medication to reduce severe CVD.[17]
- Experts suggest that managing urine micro-albumin to maintain normal or near normal range may improve renal and cardiovascular prognosis;

- this approach has not been formally evaluated in prospective trials.[3, 18]
- Although not advocated by the American Diabetes Association, semi-quantitative MA screening tests using random urine sampling have acceptable accuracy but may not be reliable in all.[1]

Clinical Recommendations

- Annual screening for microalbuminuria should be initiated once the child is 10 years of age and has had diabetes for 5 years. Screening may be done with a random spot urine sample analyzed for microalbumin-to-creatinine ratio.[1]
- Serum creatinine should be measured at least annually for the estimation of glomerular filtration rate (GFR) in all adults with diabetes regardless of the degree of urine albumin excretion. Serum creatinine alone should not be used as a measure of kidney function but rather used to estimate GFR and stage the level of CKD.[1]
- Confirmed, persistently elevated microalbumin levels should be treated with an ACE inhibitor, titrated to normalization of microalbumin excretion (if possible).[2-4]

Source

Adapted from Health Plan Employer Data and Information Set (HEDIS®) 2007 Technical Specification. HBI removed the “urine macroalbumin test” criteria for the numerator because there is no way to verify the “evidence of protein” component with administrative claims data (HEDIS requires that plans must use automated laboratory data to confirm a positive result for a urine macroalbumin test identified through administrative data).

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 in the denominator 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 or year prior.

Numerator

Members who were screened for diabetic nephropathy or who had evidence of treatment for or diagnosis of diabetic nephropathy 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 measurement year.

References

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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

Strength of Recommendation Based on a Body of Evidence

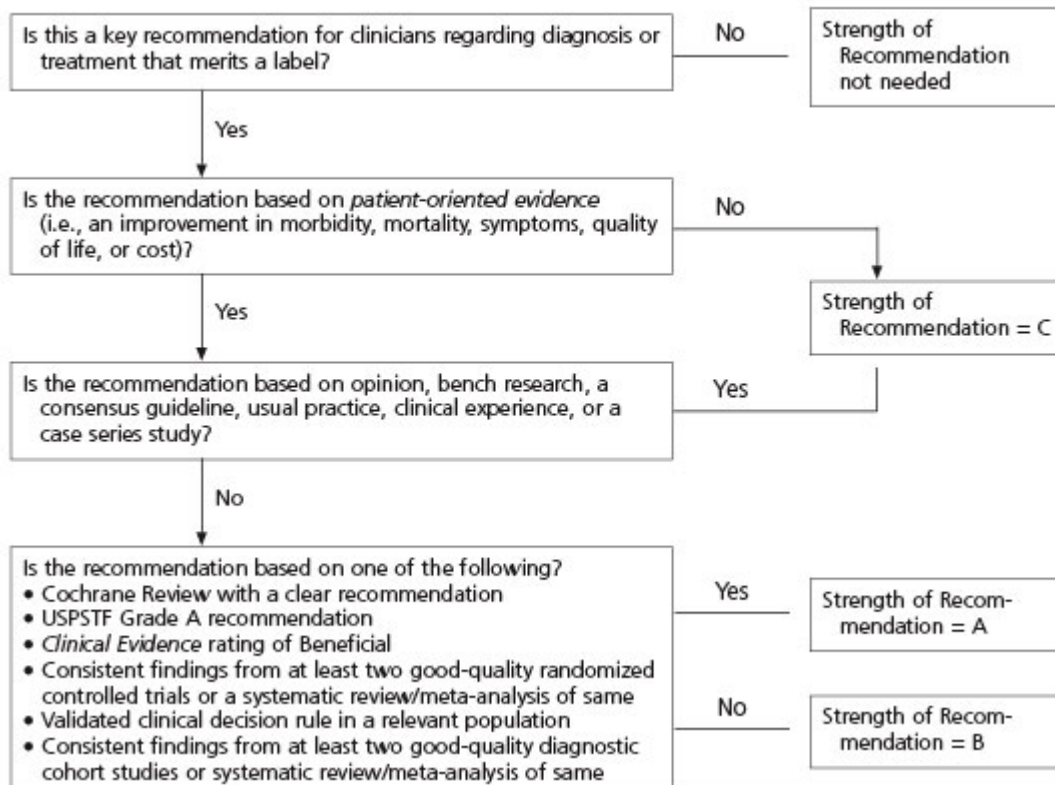


FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation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