

Client	HEALTH BENCHMARKS, INC. STANDARD ALGORITHM		
Measure Title	MEDICAL ATTENTION FOR DIABETIC NEPHROPATHY		
Disease State	Diabetes	Indicator Classification¹	Screening
Strength of Recommendation²	B		
Organizations Providing Recommendation	American Diabetes Association		
Clinical Intent	To ensure diabetic members ages 18-75 receive a diabetic nephropathy screening test during the measurement year.		

Background

Disease Burden

- Diabetes is a chronic, serious disease that affects approximately 14.7 million Americans.[1]
- 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.[2, 3]

Reason for Indicated Intervention or Treatment

- Type 1 diabetics with microalbuminuria have a higher risk of all-cause mortality than those without (RR = 1.8 95% CI 1.5-2.1). Similarly, Type 2 diabetics with microalbuminuria had a higher all-cause mortality risk (RR=1.9 95% CI 1.7-2.1) than those without.[4]
- Type 1 diabetics with microalbuminuria are 4.8 times more likely to develop ESRD than those who do not have it. Type 2 diabetics are 3.9 times more likely to develop ESRD than those who did not have microalbuminuria.[4]

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.[5-7]
- In addition, evidence supports that early treatment for diabetic nephropathy with an ACE inhibitor is associated with a reduced risk of progression to ESRD.[8-10]

Clinical Recommendations

- The American Association of Clinical Endocrinologists states that all patients with diabetes mellitus should be screened for kidney disease annually. Specifically, they state that screening should begin 5 years after diagnosis in patients with type 1- diabetes and at the time of diagnosis in patients with type 2 diabetes.[11]
- The American Diabetes Association recommends that an annual test be performed to measure the presence of microalbuminuria for type 1 diabetic patients who have had diabetes for 5 or more years and in all type 2 diabetic patients starting at diagnosis.[12]

Source Healthcare Effectiveness Data and Information Set (HEDIS®) 2009 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 ICD-9 diagnosis code(s): 250.xx, 357.2x, 362.0x, 366.41, 648.0x
CPT-4 code(s): 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99221-99223, 99231-99233, 99238, 99239, 99241-99245, 99251-99255, 99261-99263, 99281-99285, 99291, 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,
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, 051x, 020x-022x, 045x, 0520-0529, 055x, 057x-059x, 066x, 072x, 077x, 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.

Denominator Exclusion Claims Criteria ICD-9 diagnosis code(s): 250.xx, 251.8x, 256.4x, 357.2x, 362.0x, 366.41, 648.0x, 648.8x, 962.0x
CPT-4 code(s): 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99221-99223, 99231-99233, 99238, 99239, 99241-99245, 99251-99255, 99261-99263,

99281-99285, 9929199301-99313, 99315, 99316, 99318, 99321-99328, 99331-99337, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99455, 99456,

UB revenue code(s): 010x, 0110-0114, 0118, 0128, 0138, 0119, 0120-0124, 0129, 0130-0134, 0148, 0158, 0159, 016x, 019x, 020x-022x, 045x, 051x, 0520-0529, 055x, 057x-059x, 066x, 072x, 077x, 080x, 082x-085x, 088x, 0981, 0982, 0983, s0987

Numerator

Numerator Definition

Members who met one of the following criteria during the measurement year:

- A nephropathy screening test
- A claim indicating evidence of nephropathy
- A nephrologist visit (no restriction on the diagnosis or procedure code submitted)
- A positive urine macroalbumin test
- Evidence of ACE/ARB therapy

Numerator Claims Criteria

CPT-4 code(s): 82042, 82043, 82044, 84156

LOINC code(s): 1753-3, 1754-1, 1755-8, 1757-4, 2887-8, 2888-6, 2889-4, 2890-2, 9318-7, 11218-5, 12842-1, 13705-9, 13801-6, 14585-4, 14956-7, 14957-5, 14958-3, 14959-1, 18373-1, 20621-9, 21059-1, 21482-5, 26801-1, 27298-9, 30000-4, 30001-2, 30003-8, 32209-9, 32294-1, 32551-4, 34366-5, 34535-5, 35663-4, 40486-3, 40662-9, 40663-7, 43605-5, 43606-3, 43607-1, 44292-1, 47558-2, 49023-5, 50561-0, 50949-7, 53121-0, 53525-2, 53530-2, 53531-0, 53532-8, 5804-0, 20454-5, 24356-8, 24357-6, 50556-0, 50561-0, 50564-4 (if available)

CPT category II code(s): 3060F, 3061F, 3062F, 3066F, 4009F (if available)

Evidence of treatment for or diagnosis of diabetic nephropathy defined as:

ICD-9 diagnosis code(s): 250.4x, 403.xx, 404.xx, 405.01, 405.11, 405.91, 580.xx-588.xx, 753.0x, 753.1x, 791.0x, V42.0x, V45.1x, V56.xx

CPT-4 code(s): 36145, 36800, 36810, 36815, 36818-36821, 36831-36833, 50300, 50320, 50340, 50360, 50365, 50370, 50380, 81000-81003, 81005, 90920, 90921, 90924, 90925, 90935, 90937, 90939, 90940, 90945, 90947, 90989, 90993, 90997, 90999, 99512

ICD-9 surgical proc code(s): 38.95, 39.27, 39.42, 39.43, 39.53, 39.93- 39.95, 54.98, 55.4x-55.6x

UB revenue code(s): 0367, 080x, 082x-085x, 088x

UB type of bill code(s): 72X

Place of service code(s): 65

HCPCS code(s): G0257, G0314-G0319, G0322, G0323, G0326, G0327, G0392, G0393, S9339

Physician Attribution

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

1. CDC. *National Diabetes Surveillance System*. 2004 [cited 2004 November 17th]; Available from: <http://www.cdc.gov/diabetes/statistics/prev/national/figpersons.htm>
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4. Newman, D.J., et al., *Systematic review on urine albumin testing for early detection of diabetic complications*. Health Technol Assess, 2005. **9**(30): p. iii-vi, xiii-163.
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6. Molitch, M.E., et al., *Nephropathy in diabetes*. Diabetes Care, 2004. **27 Suppl 1**: p. S79-83.
7. Schjoedt, K.J., et al., *Beneficial impact of spironolactone in diabetic nephropathy*. Kidney Int, 2005. **68**(6): p. 2829-36.
8. Blumel, M.B., et al., *[Depressive symptoms after an acute myocardial infarction.]*. Rev Med Chil, 2005. **133**(9): p. 1021-1027.
9. Borch-Johnsen, K., et al., *Is screening and intervention for microalbuminuria worthwhile in patients with insulin dependent diabetes?* Bmj, 1993. **306**(6894): p. 1722-5.
10. Thorp, M.L., *Diabetic nephropathy: common questions*. Am Fam Physician, 2005. **72**(1): p. 96-9.
11. (2007) *American Association of Clinical Endocrinologists medical guidelines for clinical practice for the management of diabetes mellitus. AACE diabetes mellitus guidelines. Microvascular complications.* .

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12. *American Diabetes Association (ADA). Standards of medical care in diabetes. VI. Prevention and management of diabetes complications. Diabetes Care, 2007. 30(Suppl 1): p. S15-24.*

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¹ **Indicator Classification** (Adapted from 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

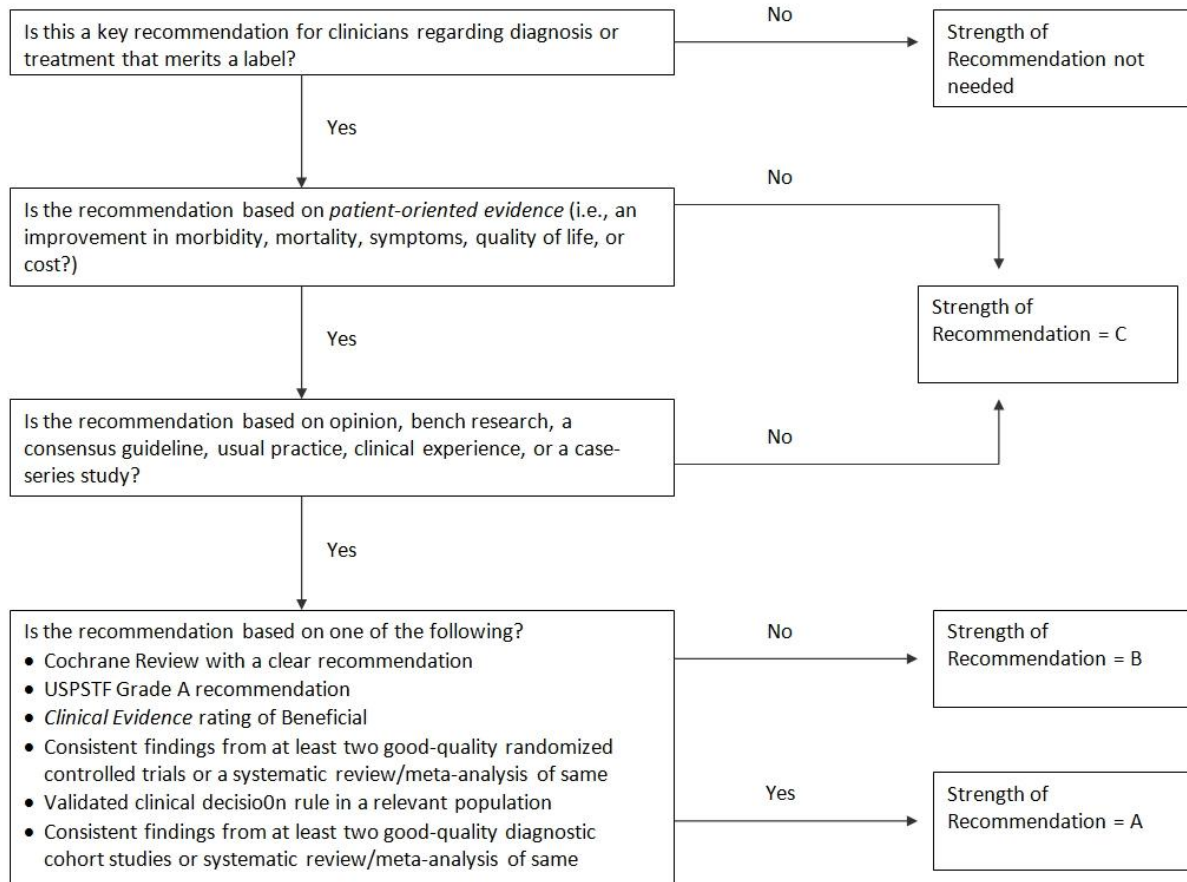


FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation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