

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 Classification	Screening
Strength of Recommendation	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.		
Physician Specialties	Family Practice, General Practice, Internal Medicine, Mixed Specialty		

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 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.[11]

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

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, 098

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

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 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 Codes

Nephropathy screening test

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 (*if available*)

CPT category II code(s): 3060F, 3061F (*if available*)

Chronic renal disease

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

Dialysis

CPT-4 code(s): 36145, 36800, 36810, 36815, 36818-36821, 36831-36833, 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,

ICD-9 diagnosis code(s): V45.1x, V56.xx

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

Renal transplantation

CPT-4 code(s): 50300, 50320, 50340, 50360, 50365, 50370, 50380

ICD-9 diagnosis code(s): V42.0x

Diabetic nephropathy

DRG code(s): 316, 317
CPT category II code(s): 3066F (if available)
HCPCS code(s): G0257, G0314-G0319, G0322, G0323, G0326, G0327, G0392, G0393, S9339
ACE inhibitor/ARB therapy
CPT category II code(s): 4009F (if available)
Urine macro-albumin test
CPT category II code(s): 3062F (if available)
CPT-4 code(s): 81000-81003, 81005
LOINC code(s): 5804-0, 20454-5, 24356-8, 24357-6 (if available)

**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

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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. *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.