Quality ID #489 (CBE 1662): Adult Kidney Disease: Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy

2025 COLLECTION TYPE:
MIPS CLINICAL QUALITY MEASURES (CQMS)

MEASURE TYPE:
Process

DESCRIPTION:
Percentage of patients aged 18 years and older with a diagnosis of chronic kidney disease (CKD) (Stages 1-5, not receiving Renal Replacement Therapy (RRT)) and proteinuria who were prescribed ACE inhibitor or ARB therapy within a 12-month period.

INSTRUCTIONS:
This measure is to be submitted a minimum of once per performance period for patients with a diagnosis of CKD (Stages 1-5, not receiving Renal Replacement Therapy (RRT)) and proteinuria seen during the performance period. This measure may be submitted by Merit-based Incentive Payment System (MIPS) eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

NOTE: Patient encounters for this measure conducted via telehealth (including but not limited to encounters coded with GQ, GT, 95, POS 02, POS 10) are allowable. Please note that effective January 1, 2025, while a measure may be denoted as telehealth eligible, specific denominator codes within the encounter may no longer be eligible due to changes outlined in the CY 2024 PFS Final Rule List of Medicare Telehealth Services.

Measure Submission Type:
Measure data may be submitted by individual MIPS eligible clinicians, groups, or third-party intermediaries. The listed denominator criteria are used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions as allowed by the measure. The quality data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third-party intermediaries that utilize this modality for submissions; however, these codes may be submitted for those third-party intermediaries that utilize Medicare Part B claims data. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

DENOMINATOR:
All patients aged 18 years and older with the diagnosis of CKD (Stages 1-5, not receiving RRT) and proteinuria

Definitions:
Proteinuria:
1. > 300mg of albumin in the urine per 24 hours OR
2. Urine albumin-to-creatinine ratio (ACR) > 300 mg/g OR
3. Urine protein-to-creatinine ratio (PCR) > 0.3 g/g

Renal Replacement Therapy (RRT) – For the purposes of this measure, RRT includes hemodialysis, peritoneal dialysis, and kidney transplantation.
Patients receiving RRT –
The following codes would be sufficient to define the Denominator Exclusion (M1199) of receiving RRT: 90951, 90952, 90953, 90954, 90955, 90956, 90957, 90958, 90959, 90960, 90961, 90962, 90963, 90964, 90965, 90966, 90967, 90968, 90969, 90970, I70.1, N18.6, Z49.31, Z49.32, Z99.2

Denominator Criteria (Eligible Cases):

All patients aged 18 years and older on the date of the encounter
AND
Diagnosis of CKD (Stages 1-5) (ICD-10-CM): E11.22, N18.1, N18.2, N18.30, N18.31, N18.32, N18.4, N18.5, N18.9
AND
Diagnosis of Proteinuria (ICD-10-CM): R80.1, R80.8, R80.9
AND
Patient encounter during the performance period (CPT): 98000, 98001, 98002, 98003, 98004, 98005, 98006, 98007, 98008, 98009, 98010, 98011, 98012, 98013, 98014, 98015, 98016, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99341, 99342, 99344, 99345, 99347, 99348, 99349, 99350
AND NOT
DENOMINATOR EXCLUSION:
Patients receiving RRT: M1199

NUMERATOR:
Patients who were prescribed ACE inhibitor or ARB therapy within a 12-month period

Definition:
Prescribed – May include prescription given to the patient for ACE Inhibitor or ARB therapy OR patient already taking ACE Inhibitor or ARB therapy as documented in the current medication list.

Numerator Options:

Performance Met:	ACE Inhibitor (ACE-I) or ARB therapy prescribed during the measurement period (M1200)
OR	
Denominator Exception:	Documentation of medical reason(s) for not prescribing ACE inhibitor (ACE-I) or ARB therapy during the measurement period (e.g., pregnancy, history of angioedema to ACE-I, other allergy to ACE-I and ARB, hyperkalemia or history of hyperkalemia while on ACE-I or ARB therapy, acute kidney injury due to ACE-I or ARB therapy, other medical reasons.) (M1201)
OR	
Denominator Exception:	Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy during the measurement period (e.g., patient declined, other patient reasons) (M1202)
OR	
Performance Not Met:	ACE inhibitor or ARB therapy not prescribed during the measurement period, reason not given (M1203)

RATIONALE:
This measure is aimed at increasing the number of patients with CKD and proteinuria who are prescribed ACE inhibitor or ARB therapy. ACE inhibitors and ARBs are preferred agents for diabetic kidney disease and nondiabetic kidney diseases with proteinuria (albuminuria), even in the absence of hypertension. In these diseases, ACE inhibitors and ARBs lower blood pressure, reduce proteinuria (albuminuria), slow the progression of kidney disease, and likely reduce cardiovascular disease risk by mechanisms in addition to lowering blood pressure. These benefits have been shown across high quality, multi-center, randomized controlled trials such as RENAAL (Reduction of Endpoints in NIDDM with the Angiotensin II Antagonist Losartan) (Brenner et al., New England Journal of Medicine, 2001). A meta-analysis of randomized trials showed that ACEi/ARB therapy lowered the odds of kidney failure (also known as end-stage renal disease [ESRD]) by 30-39 percent and of cardiovascular disease events by 18 percent-24 percent (Xie et al., Am J Kidney Dis, 2016). In a meta-analysis including primarily diabetic patients with proteinuria, use of ACEi/ARB therapy had

a 0.36 to 0.78 odds of incident kidney failure (Cai et al., Nephrology, dialysis, transplantation, 2018). Similarly, in a Cochrane meta-analysis, patients with early (stage 1 to 3) non-diabetic CKD who were treated versus not treated with ACEi/ARB had 31 percent lower risk of kidney failure (Jafar et al., Annals of internal medicine, 2001). Based upon this robust evidence, ACE inhibitors and ARBs are recommended for patients with CKD and proteinuria by the Kidney Disease: Improving Global Outcomes (KDIGO) international guidelines and the Kidney Disease Outcomes Quality Initiative.

CKD is a major public health problem; a total of 37 million Americans have CKD. There is a clear performance gap in ACE inhibitor and ARB usage among patients with CKD, with only 40 percent of CKD patients receiving an ACEi/ARB in NHANES data (Murphy et al., JASN, 2019). Population health efforts to increase the use of ACEi/ARB in American Indians and Alaska Natives have been associated with a decrease in incident kidney failure related to diabetic kidney disease (Bullock et al., MMWR Morbidity and mortality weekly report, 2017). In summary, this measure is a central component of high-quality nephrology care, as ACE inhibitors and ARBs decrease the rate of kidney failure, cardiovascular outcomes, and mortality in patients with CKD and proteinuria.

CLINICAL RECOMMENDATION STATEMENTS:

Clinical practice guidelines support the use of ACE and ARB in CKD patients not on RRT.

The Kidney Disease Improving Global Outcomes (KDIGO) 2012 guidelines for the evaluation and management of CKD recommend that “an ARB or ACE-I be used in both diabetic and non-diabetic adults with CKD and urine albumin excretion > 300 mg/24 hours (or equivalent)” (Recommendation 3.1.7, 1B). Guideline available at https://kdigo.org/wp-content/uploads/2017/02/KDIGO_2012_CKD_GL.pdf.

The KDIGO 2021 Clinical Practice Guideline on the Management of Blood Pressure (BP) in CKD recommends “starting renin-angiotensin-system inhibitors (RASi) (ACEi or ARB) for people with high BP, CKD, and severely increased albuminuria (G1–G4, A3) without diabetes” and “for people with high BP, CKD, and moderately-to-severely increased albuminuria (G1–G4, A2 and A3) with diabetes” (Recommendations 3.2.1 and 3.2.3, 1B). Guideline available at https://kdigo.org/wp-content/uploads/2016/10/KDIGO-2021-BP-GL.pdf.

This measure was rated as HIGH for Overall Measure Validity in Mendu ML, Tummalapalli SL, Lentine KL, Erickson KF, Lew SQ, Liu F, Gould E, Somers M, Garimella PS, O'Neil T, White DL, Meyer R, Bieber SD, Weiner DE. *Measuring Quality in Kidney Care: An Evaluation of Existing Quality Metrics and Approach to Facilitating Improvements in Care Delivery*. J Am Soc Nephrol. 2020 Mar;31(3):602-614. doi: 10.1681/ASN.2019090869. Epub 2020 Feb 13. PMID: 32054692; PMCID: PMC7062216.

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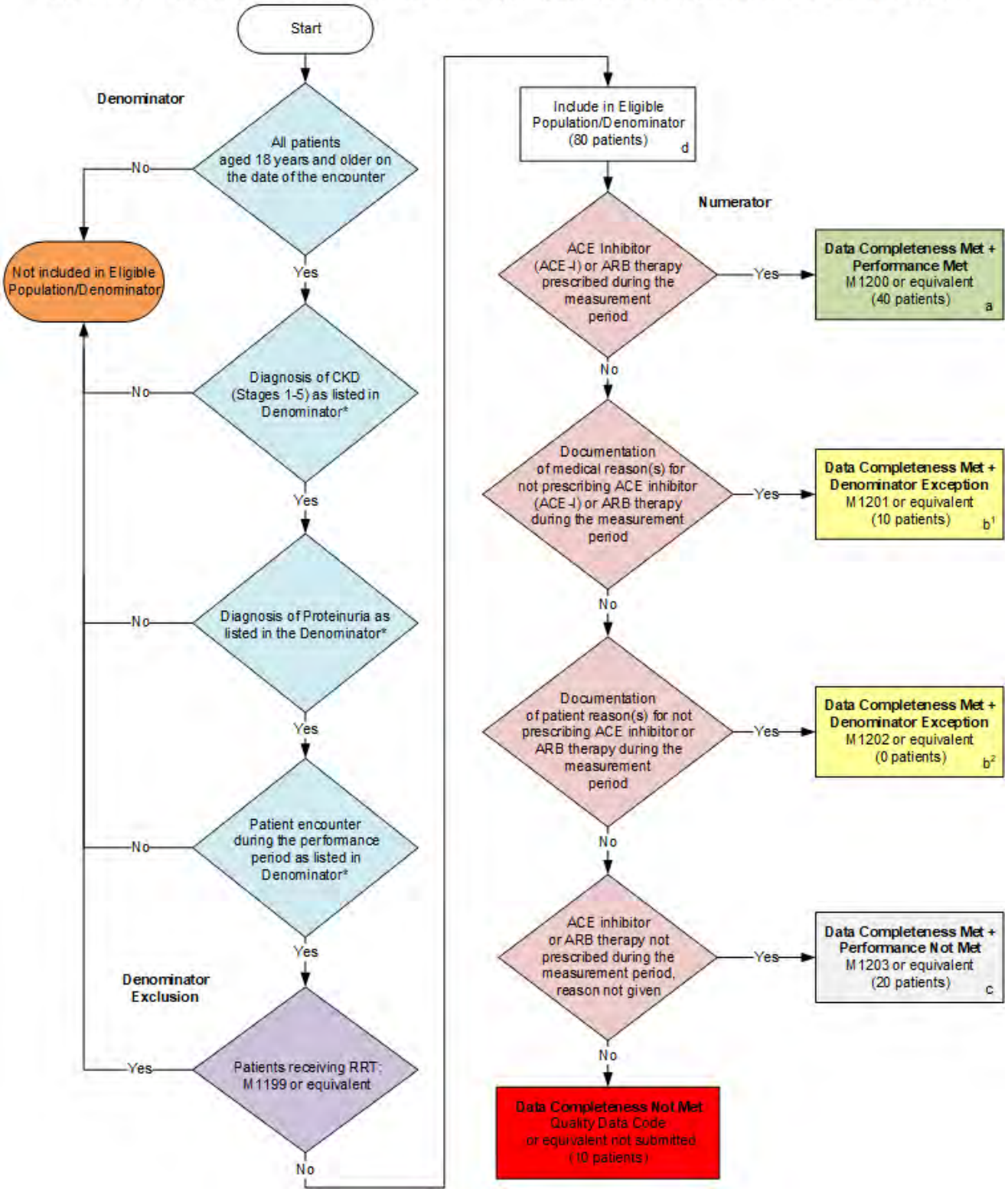
2025 Clinical Quality Measure Flow for Quality ID #489 (CBE 1662): Adult Kidney Disease: Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy

Disclaimer: *Refer to the measure specification for specific coding and instructions to submit this measure.*



SAMPLE CALCULATIONS

Data Completeness=

Performance Met (a=40 patients) + Denominator Exception (b^1+b^2=10 patients) + Performance Not Met (c=20 patients) = 70 patients = **87.50%**

Eligible Population / Denominator (d=80 patients) = 80 patients

Performance Rate=

Performance Met (a=40 patients) = 40 patients = **66.67%**

Data Completeness Numerator (70 patients) - Denominator Exception (b^1+b^2=10 patients) = 60 patients

*See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Patient-Process

2025 Clinical Quality Measure Flow Narrative for Quality ID #489 (NQF 1662): Adult Kidney Disease: Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy

***Disclaimer**: Refer to the measure specification for specific coding and instructions to submit this measure.*

1. Start with Denominator
2. Check *All patients aged 18 years and older on the date of the encounter*:
   a. If *All patients aged 18 years and older on the date of the encounter* equals No, do not include in *Eligible Population/Denominator*. Stop processing.
   b. If *All patients aged 18 years and older on the date of encounter* equals Yes, proceed to check *Diagnosis of CKD (Stages 1-5) as listed in Denominator*.*
3. Check *Diagnosis of CKD (Stages 1-5*) *as listed in Denominator**:
   a. If *Diagnosis of CKD (Stages 1-5) as listed in Denominator** equals No, do not include in *Eligible Population/Denominator*. Stop processing.
   b. If Diagnosis of CKD (Stages 1-5) *as listed in Denominator** equals Yes, proceed to check *Diagnosis of Proteinuria*.
4. Check *Diagnosis of Proteinuria*:
   a. If *Diagnosis of Proteinuria* equals No, do not include in *Eligible Population/Denominator*. Stop processing.
   b. If *Diagnosis of Proteinuria* equals Yes, proceed to check *Patient encounter during the performance period as listed in Denominator**.
5. Check *Patient encounter during the performance period as listed in Denominator**:
   a. If *Patient encounter during the performance period as listed in Denominator** equals No, do not include in *Eligible Population/Denominator*. Stop processing.
   b. If *Patient encounter during the performance period as listed in Denominator** equals Yes, proceed to check *Patients receiving RRT*.
6. Check *Patients receiving RRT*:
   a. If *Patients receiving RRT* equals Yes, do not include in *Eligible Population/Denominator*. Stop processing.
   b. If *Patients receiving RRT* equals No, include in *Eligible Population/Denominator*.
7. Denominator Population:
   - Denominator Population is all Eligible Patients in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 patients in the Sample Calculation.
8. Start Numerator
9. Check *ACE Inhibitor (ACE-I) or ARB therapy prescribed during the measurement period*:

a. If *ACE Inhibitor (ACE-I) or ARB therapy prescribed during the measurement period* equals Yes, include in *Data Completeness Met and Performance Met*.

- *Data Completeness Met and Performance Met* letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 40 patients in the Sample Calculation.

b. If *ACE Inhibitor (ACE-I) or ARB therapy prescribed during the measurement period* equals No, proceed to check *Documentation of medical reason(s) for not prescribing ACE inhibitor (ACE-I) or ARB therapy during the measurement period*.

10. Check *Documentation of medical reason(s) for not prescribing ACE inhibitor (ACE-I) or ARB therapy during the measurement period*:

    a. If *Documentation of medical reason(s) for not prescribing ACE inhibitor (ACE-I) or ARB therapy during the measurement period* equals Yes, include in *Data Completeness Met and Denominator Exception.*

    - *Data Completeness Met and Denominator Exception letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter b1 equals 10 patients in the Sample Calculation.*

    b. If *Documentation of medical reason(s) for not prescribing ACE inhibitor (ACE-I) or ARB therapy during the measurement period equals* No, proceed to check *Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy during the measurement period*.

11. Check *Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy during the measurement period*:

    a. If *Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy during the measurement period* equals Yes, include in *Data Completeness Met and Denominator Exception*.

    - *Data Completeness Met and Denominator Exception* letter is represented as Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter b^2 equals 0 patients in the Sample Calculation.

    b. If Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy during the measurement period equals No, proceed to check *ACE inhibitor or ARB therapy not prescribed during the measurement period, reason not given*.

12. Check *ACE inhibitor or ARB therapy not prescribed during the measurement period, reason not given*:

    a. If *ACE inhibitor or ARB therapy not prescribed during the measurement period, reason not given* equals Yes, include in *Data Completeness Not Met and Performance Not Met.*

    - Data Completeness Met and Performance Not Met letter is represented as Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 20 patients in the Sample Calculation.

    b. If *ACE inhibitor or ARB therapy not prescribed during the measurement period, reason not given* equals No, proceed to check *Data Completeness Not Met*.

13. Check *Data Completeness Not Met*:

    - If *Data Completeness Not Met*, the Quality Data Code or equivalent was not submitted. 10 patients have been subtracted from the Data Completeness Numerator in the Sample Calculation.

Sample Calculations

Data Completeness equals Performance Met (a equals 40 patients) plus Denominator Exception ($b^1 + b^2$ = 10 patients) plus Performance Not Met (c equals 20 patients) divided by Eligible Population / Denominator (d equals 80 patients). All equals 70 patients divided by 80 patients. All equals 87.50 percent.

Performance Rate equals Performance Met (a equals 40 patients) divided by Data Completeness Numerator (70 patients) minus Denominator Exception ($b^1 + b^2$ = 10 patients). All equals 40 patients divided by 60 patients. All equals 66.67 percent.

*See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Patient-Process

The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification.