

Renal Physicians Association Kidney Quality Improvement Registry Powered by Premier

2017 CMS Measure ID	Summary/Measure Title	Denominator Exclusions	Denominator Exclusions	High Priority	Outcome	NOF Number	eCOM Number	Rationale	Data Source	Steward	Number of Multiple Performance Rates to be submitted (A in the XMS field. Type in the number or N/A to indicate the number of performance rates submitted.)	Indicate an Overall Performance Rate if more than 1 performance rate is to be submitted field - Specify which rate will represent an overall performance rate for the measure or how an overall performance rate could be calculated based	Inverse Measurement (Yes/No)	Proportion Measure Scoring (Yes/No)	Continuous Measure Scoring (Yes/No)	Ratio Measure	Risk Adjusted (Yes/No)	
TBA	Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy	Patients receiving renal replacement therapy (RRT).	Medical Reasons There are medical reason(s) documented (e.g., pregnancy, history of angioedema to ACEi, other allergy to ACEi and ARB, hyperkalemia or history of hyperkalemia while on ACEi or ARB therapy, acute kidney injury due to ACEi or ARB therapy, other medical reasons) for not prescribing an ACE inhibitor or ARB therapy. Patient Reasons There are patient reason(s) documented (e.g., patient declined, other patient reasons) for not prescribing an ACE inhibitor or ARB therapy.		Process	N/A	N/A	ACE inhibitors and ARBs are recommended as preferred agents for diabetic kidney disease and non-diabetic kidney diseases with proteinuria. In these diseases, they lower blood pressure, reduce proteinuria, slow the progression of kidney disease, and likely reduce CVD risk by mechanisms in addition to lowering blood pressure. In these types of CKD, ACE inhibitors and ARBs are recommended even in the absence of hypertension. ACE inhibitors and ARBs may also be used to reduce proteinuria in patients with or without hypertension.	Electronic Clinical Data, Electronic Clinical Data Electronic Health Record, Paper Medical Records	RPA	n/a	n/a	No	Yes	No	No	No	
TBA	Adequacy of Volume Management	N/A	N/A		Process	N/A	N/A	There is ample evidence in the non-CKD population that optimal control of blood pressure improves mortality. In the HD population, available evidence indicates that control of a patient's fluid volume influences outcome. Volume and blood pressure are linked, thus, it is important to optimize ultrafiltration and dry weight to control blood pressure in an effort to improve patient outcome. From the very beginning of the dialysis therapy, concomitant with ultrafiltration probing, dietary sodium should be restricted and use of a high dialysate sodium concentration and sodium profiling should be avoided. While decreasing the patient's fluid volume, net fluid losses ideally should not exceed 1 to 2 kg/wk, and by restricting dietary sodium and fluid intake, weight gain between dialyses should not exceed 1 kg during the week and 1.5 to 2 kg during the weekend. It should be noted that during this dry weight-probing stage, in 90% of patients, ECF volume becomes normal within a few weeks, but the elevated blood pressure continues to decrease for another 8 months or longer. As patients lose excess fluid and their hypertension improves, therapy with antihypertensive medications can be systematically tapered or discontinued.	Electronic Clinical Data, Electronic Clinical Data Electronic Health Record, Paper Medical Records	RPA	n/a	n/a	No	Yes	No	No	No	No
TBA	Arteriovenous Fistula Rate	N/A	Medical Reasons There are medical reason(s) documented (e.g., patient has a functioning AV graft, patient is undergoing palliative dialysis with a catheter, patient approved by a qualified transplant program and scheduled to receive a living donor kidney transplant, other medical reasons). Patient Reasons There are patient reason(s) documented (e.g., patient declined fistula placement, other patient reasons).		Process	N/A	N/A	Anemia is a common complication of chronic kidney disease (CKD). The prevalence of anemia varies with the degree of renal impairment in pre-dialysis patients with CKD, but once end stage kidney failure occurs, all patients are eventually affected. Anemia develops once renal function decreases to <50% because of a deficiency in endogenous erythropoietin (EPO) production by the kidney, decreased red cell survival, blood losses, and increased red blood cell destruction once the patient begins dialysis treatment, particularly hemodialysis. Anemia reduces physical capacity, well-being, neurocognitive function, and energy level and worsens quality of life both in pre-dialysis and dialysis patients. Anemia also induces adaptive cardiovascular mechanisms to maintain tissue oxygen supply. This leads to left ventricular hypertrophy, left ventricular dilation, and myocardial ischemia, which are risk factors for cardiovascular disease and death.	Electronic Clinical Data, Electronic Clinical Data Electronic Health Record, Paper Medical Records	RPA	n/a	n/a	No	Yes	No	No	No	
TBA	Transplant Referral	N/A	Medical Reasons There are medical reason(s) documented (e.g., patient not receiving dialysis for 90 days or longer, patient undergoing palliative dialysis, patient already approved by a qualified transplant program and scheduled to receive a living donor kidney transplant, other medical reasons) for not referring the patient for kidney transplant evaluation. Patient Reasons There are patient reason(s) documented (e.g., patient declined, other patient reasons) for not referring the patient for kidney transplant evaluation. System Reasons There are system reason(s) documented (e.g., lack of insurance coverage, nearest facility too far away, other system reasons) for not referring the patient for kidney transplant evaluation.		Process	N/A	N/A	Patients should have a functional permanent access at the initiation of dialysis therapy. A fistula should be placed at least 6 months before the anticipated start of HD treatments. This timing allows for access evaluation and additional time for revision to ensure a working fistula is available at initiation of dialysis therapy. A structured approach to the type and location of long-term HD accesses should help optimize access survival and minimize complications. The access should be placed distally and in the upper extremity whenever possible. Options for fistula placement should be considered first, followed by prosthetic grafts if fistula placement is not possible. Catheters should be avoided for HD and used only when other options listed are not available.	Electronic Clinical Data, Electronic Clinical Data Electronic Health Record, Paper Medical Records	RPA	n/a	n/a	No	Yes	No	No	No	
TBA	Advance Care Planning (End-of-Life Care)	N/A	N/A		Process	N/A	N/A	Kidney transplantation offers lower rates of all-cause, cardiovascular and infectious hospital admissions and better long-term survival than hemodialysis in ESRD patients. In 2007, adjusted one-year survival with a functioning transplant is 91% for recipients of first-time, deceased donor transplants and 90% for recipients of first-time, living donor transplants. Transplant patients require less hospitalization. Hospital days per patient year for transplant, hemodialysis and peritoneal dialysis patients are 12.8%, 13.3% and 5.9%, respectively.	Electronic Clinical Data, Electronic Clinical Data Electronic Health Record, Paper Medical Records	RPA	n/a	n/a	No	Yes	No	No	No	
TBA	Hospitalization Rate Following Procedures Performed under Procedure Sedation Analysis	Procedure performed	Medical Reasons Patient admitted for 23-hour observation for renal biopsy or patient admitted for other reasons unrelated to the procedure. Patient Reasons Elective admission		Outcome	N/A	N/A	Dialysis access procedures have been demonstrated to be safely performed utilizing moderate sedation in the non-hospital setting. The rate of hospitalization for procedure related complications is very low despite this being an elderly population with multiple comorbidities. The provider is able to directly influence hospitalization rate by careful patient selection, proper administration and monitoring of sedation medications, and skilled procedural technique. Hospitalizations after dialysis access procedures, while not entirely avoidable, are the direct responsibility of the provider during the procedure. While the occurrence may be infrequent, hospitalizations following procedures performed under procedure sedation analysis can negatively impact patient's quality of life and health as well as prove costly to patients and the healthcare system. The American Society of Diagnostic and Interventional Nephrology released a position statement around the classification of complications related to hemodialysis vascular access procedures to promote tracking and monitoring of these events for quality improvement and patient safety. Hospitalizations were classified as Grade 3 (the second highest grade of complication) (Vesely, 2007). Understanding the frequency with which these complications occur at the individual-physician level can demonstrate whether proper management and expertise were provided. For example, AV Fistula (AVF) and AV Graft (AVG) thrombectomies have wide variations in outcomes. AVF thrombectomy success can be >90% whilst the success of AVG thrombectomy can be below 75% in most centers. References Vesely TM, Bushard G, Ash S, Hoggard J, Schon D for the ASDIN Clinical Practice Committee. Classification of complications associated with hemodialysis vascular access procedures. Seminars in Dialysis. 2007;20:359-364.	DIR, Paper medical record	Renal Physicians Association	n/a	n/a	Yes	Yes	No	No	No	
TBA	Arterial Complication Rate Following Arteriovenous Access Intervention	N/A	N/A		Outcome	N/A	N/A	While the occurrence may be infrequent, arterial complications can lead to loss of the arteriovenous access, additional procedure to enable continued treatment and negatively impact a patient's quality of life and health (Elliott, 2014). The American Society of Diagnostic and Interventional Nephrology released a position statement around the classification of complications related to hemodialysis vascular access procedures to promote tracking and monitoring of these events for quality improvement and patient safety. Arterial complications were classified as Grade 2 (the second highest grade of complication) (Vesely, 2007). Understanding the frequency with which these complications occur at the individual-physician level can demonstrate whether proper management and expertise were provided. For example, AV Fistula (AVF) and AV Graft (AVG) thrombectomies have wide variations in outcomes. AVF thrombectomy success can be >90% whilst the success of AVG thrombectomy can be below 75% in most centers. References Bowlde A. Vascular complications of central venous catheter placement: evidence based methods for prevention and treatment. Cardiothorac Vasc Anesth. 2014;28:358-368. Vesely TM, Bushard G, Ash S, Hoggard J, Schon D for the ASDIN Clinical Practice Committee. Classification of complications associated with hemodialysis vascular access procedures. Seminars in Dialysis. 2007;20:359-364.	DIR, Paper medical record	Renal Physicians Association	n/a	n/a	Yes	Yes	No	No	No	

2017 CMS Measure ID	Summary/Measure Title	Denominator Exclusions	Denominator Exemptions	High Priority	Outcome	NOF Number	eCOM Number	Rationale	Data Source	Steward	Number of Multiple Performance Rates to be submitted (A the XMS, Yes/ No, Type in the number or N/A to indicate the number of performance rates submitted)	Indicate an Overall Performance Rate if more than 1 performance rate is to be submitted (A) - Specify which rate will represent an overall performance rate for the measure or how an overall performance rate could be calculated based	Inverse Measurement (Yes/No)	Proportion Measure Scoring (Yes/No)	Continuous Measure Scoring (Yes/No)	Ratio Measure	Risk Adjusted (Yes/No)
TBA	Rate of Timely Documentation Transmission to Dialysis Unit/Referring Physician	N/A	N/A		Process	N/A	N/A	There is a clear benefit to patient outcomes if adequate and comprehensive care coordination across physicians and other healthcare providers occurs, including reducing repeating testing and procedures, polypharmacy concerns, and unintended emergency department and hospital visits (MDRPA, 2012). Both primary care providers (PCPs) and specialists report a lack of adequate communication when co-managing the care for patients with specialists. Studies show that patient information does not accompany referrals when needed and PCPs do not receive a report back from the specialist in a timely manner (Malley, 2011; Chandi, 2009). Initial measures focused on referrals to specialists but an equally critical component remains, which is ensuring that the referral loop is closed with a report back to the referring physician. Health information technology hold promise to further improve this communication and co-management of care. For example, Chandi and colleagues demonstrated higher rates of communication between PCPs and specialists when an electronic referral tool was used, with 70% of specialists reporting that information was received prior to the referral visit while less than 45% reporting a similar experience in the control group. Even though this study did not examine the rate of reports back to the PCP, one would assume that a similar improvement would be seen. To address this issue, the Centers for Medicare and Medicaid Services implemented a Closing the Referral Loop measure in the Meaningful Use program and the EPA developed a similar measure focused on reports from the nephrologist to the referring PCP or dialysis unit. References Chandi TK, Keating NL, Ditmore M, et al. Improving referral communication using a referral tool within an electronic medical record. In: Henikoff K, Bates IS, Kohn MA, et al., editors. <i>Advances in Patient Safety: New Directions and Alternative Approaches</i> (Vol. 3, Performance and Tools). Rockville (MD): Agency for Healthcare Research and Quality (US); August 2008. Chandi TK, Shih DF, Franklin M, Sussman AJ, Fairchild DG, Bates DW.	EHR, Paper medical record	Renal Physicians Association	n/a	n/a	No	Yes	No	No	No
TBA	Arteriovenous Graft Thrombectomy Success Rate	N/A	N/A		Outcome	N/A	N/A	While there is no conclusive evidence on which thrombectomy technique is most effective (percutaneous vs. surgical) for an arteriovenous graft (AVG) thrombosis, there is evidence demonstrating that proactive identification and treatment impacts the continued patency of the graft, reducing the need for a temporary catheter (KDOQI, 2006). Evaluating whether an AVG is functioning properly at the first dialysis treatment following thrombectomy ensures that appropriate processes and expertise are in place to proactively manage this complication. AVG thrombectomy success can be >90% while the success of AVG thrombectomy can be below 75% in most centers. Also, the expense and equipment required for AVF debridement is higher than for AVG debridement. Clinical Guideline Recommendations 2006 Update: Hemodialysis Adequacy, Peritoneal Dialysis Adequacy and Vascular Access (KDOQI, 2006) (Outcomes after treatment of AVG thrombosis) After percutaneous or surgical thrombectomy, each institution should monitor the outcome of treatment on the basis of AVG patency. Reasonable goals are as follows: 1. A clinical success rate of 85%; clinical success is defined as the ability to use the AVG for at least 1 HD treatment. (B) 2. After percutaneous thrombectomy, primary patency should be 40% at 3 months. (B) 3. After surgical thrombectomy, primary patency should be 50% at 6 months and 40% at 1 year. (B) References KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for 2006 Update: Hemodialysis Adequacy, Peritoneal Dialysis Adequacy and Vascular Access. <i>Am J Kidney Dis</i> 48(5):S22-206 (suppl 3). Taves TM, Heathard C, Ash S, Hoggard J, Schon D for the ASN Clinical Practice Committee. Classification of complications associated with hemodialysis	EHR, Paper medical record	Renal Physicians Association	n/a	n/a	No	Yes	No	No	No
TBA	Arteriovenous Fistula Thrombectomy Success Rate	N/A	N/A		Outcome	N/A	N/A	Successful removal of a thrombosis can lead to continued patency of the arteriovenous fistula (AVF), reducing the potential for patients to undergo additional procedures such as the creation of a new AVF to facilitate dialysis. Coetran and colleagues examined the costs required and associated outcomes for the patients who required some AVF thrombectomy intervention. They found that performing these procedures reduced the overall costs associated with access-related care (Coetran, 2010). Evaluating whether an AVF is functioning properly at the first dialysis treatment following thrombectomy ensures that appropriate processes and expertise are in place to proactively manage this complication. AV Fistula (AVF) and AV Graft (AVG) thrombectomies have wide variations in outcomes. AV thrombectomy success can be >90% while the success of AVF thrombectomy can be below 75% in most centers, illustrating a gap in care. Additionally, the expense and equipment required for AVF debridement is higher than for AVG debridement. Therefore, RPAQDR 14 and RPAQDR 15 should remain separate measures. Clinical Guideline Recommendations 2006 Update: Hemodialysis Adequacy, Peritoneal Dialysis Adequacy and Vascular Access (KDOQI, 2006) GUIDELINE 5. TREATMENT OF FISTULA COMPLICATIONS 5.1 Thrombectomy of a fistula should be attempted as early as possible after thrombosis is detected, but can be successful even after several days. (B) References Coetran A, Barro P, Ribeiro C, Neto R, Portina M. Percutaneous treatment of thrombotic arteriovenous fistulae: clinical and economic implications. <i>Clin J Am Soc Nephrol</i> . 2010;5:2245-2250. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for 2006 Update: Hemodialysis Adequacy, Peritoneal Dialysis Adequacy and Vascular Access. <i>Am J Kidney Dis</i> 48(5):S22-206 (suppl 3).	EHR, Paper medical record	Renal Physicians Association	n/a	n/a	No	Yes	No	No	No
TBA	Peritoneal Dialysis Catheter Success Rate	Patients who have had a kidney transplant or who died before first use of the catheter.	N/A		Outcome	N/A	N/A	While there is no conclusive evidence on which catheter type should be used for peritoneal dialysis (PD), there is evidence to demonstrate that proper insertion techniques and appropriate placement of the catheter contribute to its successful use following initial placement (Scott, 1994; Crabtree, 1999; Crabtree, 2005; Haugas, 2005; Sooner-epstein, 2005; Moss, 2008; Poppeleboch, 2008). Evaluating whether a PD catheter is functioning properly at the time of first use assesses the experience and skill of the physician. References Crabtree JH, Fishman A, Siddiq RA, et al. The risk of infection and peritoneal catheter loss from implant procedure exit-site trauma. <i>Perit Dial Int</i> 1999; 19:366-371. Crabtree JH, Fishman A. A laparoscopic method for optimal peritoneal dialysis access. <i>Am Surg</i> 2005; 71:135-141. Flanagan M, Galati R. Peritoneal catheters and exit-site practices toward optimum peritoneal access: a review of current developments. <i>Perit Dial Int</i> 2005; 25:132-139. Moon Y, Song S, Jung KH, et al. Fluoroscopically guided peritoneal dialysis catheter placement: long-term results from a single center. <i>Perit Dial Int</i> 2008; 28:163-169. Poppeleboch A, van Kalk WBM, Booy ND, van der Sande FM, Tordoir JHM. Peritoneal dialysis catheter placement technique and complications. <i>NUTR</i> 2008; 1(suppl 4):23-28. Scott PD, Baker A, Pearson R, Reid H, Purvis N, Johnson RW, et al. Peritoneal dialysis access. Prospective randomized trial of 3 different peritoneal catheters - preliminary report. <i>Perit Dial Int</i> 1994; 14:289-90. Sooner-epstein JF, Simopoulos T. Comparison of open and laparoscopic source placement of peritoneal dialysis catheters. <i>Surg Endosc</i> 2005; 19:137-139.	EHR, Paper medical record	Renal Physicians Association	n/a	n/a	No	Yes	No	No	No

2017 CMS Measure ID	Summary/Measure Title	Denominator Exclusions	Denominator Exclusions	High Priority	Outcome	NOF Number	eCCM Number	Rationale	Data Source	Steward	Number of Multiple Performance Rates to be submitted in the XMS file. Type in the number or N/A to indicate the number of performance rates submitted.	Indicate an Overall Performance Rate if more than 1 performance rate is to be submitted. Specify which rate will represent an overall performance rate for the measure or how an overall performance rate could be calculated based on the submitted rates.	Inverse Measurement (Yes/No)	Proportion Measure Scoring (Yes/No)	Continuous Measure Scoring (Yes/No)	Ratio Measure	Risk Adjusted (Yes/No)
TBA	Peritoneal Dialysis Catheter Exit Site Infection Rate	N/A	N/A		Outcome	N/A	N/A	<p>Patients who receive peritoneal dialysis (PD) are at risk for peritonitis, which is one of the primary drivers for transfer to hemodialysis, inpatient hospitalizations, and places a patient at increased risk for a cardiovascular event and death. (Bonder, 2006; USRDS, 2015) Studies demonstrated that the risk for infection starts from the time of catheter placement and that there is a clear link between exit site infections and subsequent peritonitis (G abtrev, 1999; van Deppin, 2012). There is evidence to support that proper insertion techniques and appropriate placement of the catheter can minimize the potential for exit site infections and subsequent risk for peritonitis and future complications. (Bonder, 2006) While rates of exit site infections may be small, its potential impact on a patient's quality of life and complications can be significant.</p> <p>References: Bonder PJ, Bernardin J, Piraino B. Prevention of infectious complications in peritoneal dialysis: best demonstrated practices. <i>Semin Nephrol</i>. 2006;7(9):544-54. Cabrero JL, Fishman A, Siddiqui RA, et al. The risk of infection and peritoneal catheter loss from implant procedure exit-site trauma. <i>Perit Dial Int</i> 1999; 19:566-571. United States Renal Data System. 2015 USRDS annual data report: Epidemiology of kidney disease in the United States. National Institutes of Health, National Institutes of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2015. Available at: http://www.usrds.org/adr.aspx van Deppin JN, Tomlinson CA, [unreadable]. The association between exit site infection and subsequent peritonitis among peritoneal dialysis patients. <i>Clin J Am Soc Nephrol</i>. 2012;7:1266-1271.</p>	EHR, Paper medical record	Renal Physicians Association	n/a	n/a	Yes	Yes	No	No	No
TBA	Advance Directives Completed	N/A	Patient Reasons Patient declined or other patient reasons.		Process	N/A	N/A	<p>The renal care team should attempt to obtain written advance directives from all dialysis patients. Where legally accepted, Physician Orders for Life-Sustaining Treatment (POLST) or similar state-specific forms, also should be completed as part of the advance care planning process. At a minimum, each dialysis patient should be asked to designate a legal agent in a state-specific advance directive. Advance directives should be honored by dialysis centers, nephrologists, and other nephrology clinicians except possibly in situations in which the advance directive requests treatment contrary to the standard of care. (RFA, 2010)</p> <p>The vast majority of patients with CKD die in acute care facilities, without accessing palliative care services. In a survey of 588 stage 4 and stage 5 CKD patients in Canada, the majority of dialysis patients (68.7%) reported their decision to start dialysis. Furthermore, 90.4% of patients reported that their nephrologist had not discussed prognosis with them, and only 38.2% had completed an advance directive. Less than 18% of patients preferred a course of treatment focused on extending life at the expense of prolonging pain and discomfort. More patients wanted to die at home (36.3%) or in an inpatient hospice (28.8%) compared with in a hospital (27.4%). More than half of the patients (51.9%) reported not having had a discussion regarding end-of-life care preferences in the past 12 months, with less than 10% having had such a discussion with their nephrologist. (Davidson, 2010)</p> <p>Clinical Guidelines Recommendations Institute advance care planning. (RFA, 2010)</p> <p>*The purpose of advance care planning is to help the patient understand his/her condition, identify his/her goals for care, and prepare for the decisions that may have to be made as the condition progresses over time. *For chronic dialysis patients, the interdisciplinary renal care team should encourage patient-family discussion and advance care planning and include advance care planning in the overall plan of care for each individual patient.</p>	EHR, Paper medical record	Renal Physicians Association	n/a	n/a	No	Yes	No	No	No