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. There is evidence suggesting that even in non-dialysis patients, anemia develops once renal function decreases to < 50% because of a deficiency in endogenous erythropoietin production. In these patients, therapy with erythropoiesis-stimulating agents (ESAs) can improve anemia. However, there are medical reasons (e.g., pregnancy, history of angioedema, hyperviscosity) for not prescribing an ACE inhibitor or ARB therapy. There are medical reasons documented (e.g., patient receiving dialysis, patient undergoing palliative care, patient receiving chemotherapy or radiation therapy) for not selecting the patient for dialysis vascular access evaluation.

ACE inhibitors and ARBs are recommended as preferred agents for diabetic kidney disease, and likely reduce CVD risk by mechanisms in addition to lowering blood pressure. In these patients, therapy with erythropoiesis-stimulating agents (ESAs) can improve anemia. Despite the use of ESAs and other therapies, anemia remains an important complication in patients with chronic kidney disease.
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While there is no conclusive evidence on which catheter type should be used for peritoneal dialysis, there is evidence to demonstrate that proper placement techniques and appropriate placement of the catheter contribute to successful catheter use. Insertion techniques and appropriate placement of the catheter contribute to the outcome of treatment, on the basis of AVG patency. Clinical success is defined as the ability to use an AVG properly at the first dialysis treatment following thrombectomy.

Successful removal of a thrombosis can lead to continued patency of the vascular access procedures. Seminars in Dialysis. 2007;20:359-364.

Outcomes after treatment of AVG thrombosis:

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Outcomes after treatment of AVG thrombosis:
### Peritoneal Dialysis Catheter Exit Site Infection Rate

**Rationale**: Patients who receive peritoneal dialysis (PD) are at risk for peritonitis, which is one of the primary drivers for transfers to hemodialysis, inpatient hospitalizations and places a patient at increased risk for a cardiovascular event and death. (Bender, 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 (Crabtree, 1999; van Diepen, 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 (Bender, 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.

### References


### Advance Directives Completed

**Rationale**: 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. (RPA, 2010)

The vast majority of patients with CKD die in acute care facilities, without accessing palliative care services. In a survey of 584 stage 4 and stage 5 CKD patients in Canada, the majority of dialysis patients (60.7%) regretted 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 (36.1%) 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)

### Clinical Guideline Recommendations

- Institute advance care planning. (RPA, 2010)
- 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.
- The renal care team should designate a person to be primarily responsible for communicating the patient's wishes to all healthcare providers and individuals involved in the patient's care.

**EHR , Paper medical record**

### Renal Physicians Association

**n/a**