

**RENAL PHYSICIANS ASSOCIATION QUALITY IMPROVEMENT
REGISTRY IN COLLABORATION WITH CECITY**

Non-PQRS Narrative Measure Specifications

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Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy

DESCRIPTION

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

NQS DOMAIN

Effective Clinical Care

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) ACR >300 mcg/mg creatinine OR
- 3) Protein to creatinine ratio > 0.3 mg/mg creatinine

RRT (Renal Replacement Therapy): For the purposes of this measure, RRT includes hemodialysis, peritoneal dialysis, and kidney transplantation.

Denominator Exceptions/Exclusions:

- Documentation of medical reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, pregnancy, history of angioedema, cough due to ACE inhibitor or ARB therapy, allergy to medications, other medical reasons)
- Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy (eg, patient declined, other patient reasons)

NUMERATOR

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

Definition of 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.

RATIONALE

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.

MEASURE TYPE

Process

Adequacy of Volume Management

DESCRIPTION

Percentage of calendar months within a 12-month period during which patients aged 18 years and older with a diagnosis of ESRD undergoing maintenance hemodialysis in an outpatient dialysis facility have an assessment of the adequacy of volume management from a nephrologist.

NQS DOMAIN

Effective Clinical Care

DENOMINATOR

All calendar months during which patients aged 18 years and older with a diagnosis of ESRD are undergoing maintenance* hemodialysis in an outpatient dialysis facility

*Definition: Adequacy of volume management for a patient on dialysis-determined by assessing whether or not the patient achieved a target end dialysis weight after receiving dialysis, by a comparison of the patient-specific target end dialysis weight and the actual post dialysis weight.

NUMERATOR

Calendar months during which patients have an assessment of the adequacy of volume management from a nephrologist

RATIONALE

There is ample evidence in the non-CKD population that optimal control of blood pressure influences 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, noncomitant 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.

MEASURE TYPE

Process

ESRD Patients Receiving Dialysis: Hemoglobin Level <10g/dL

DESCRIPTION

Percentage of calendar months within a 12-month period during which patients aged 18 years and older with a diagnosis of ESRD who are receiving hemodialysis or peritoneal dialysis have a Hemoglobin level <10 g/dL.

NQS DOMAIN

Effective Clinical Care; Patient Safety

DENOMINATOR

All calendar months during which patients aged 18 years and older with a diagnosis of ESRD are receiving hemodialysis or peritoneal dialysis.

Denominator Exceptions/Exclusions:

- Documentation of medical reason(s) for patient having a hemoglobin (Hgb) level <10g/dL (eg, patients how have non-renal etiologies of anemia [eg, sickle cell anemia or other hemoglobinopathies, multiple myeloma, primary bone marrow disease, anemia related to chemotherapy for diagnosis of malignancy] other medical reasons)

NUMERATOR

Calendar months during which patients have a hemoglobin (Hgb) level <10g/dL*

*The hemoglobin values used for this measure should be the most recent (last) hemoglobin result recorded for each calendar month.

RATIONALE

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.

MEASURE TYPE

Outcome

Arteriovenous Fistula Rate

DESCRIPTION

Percentage of calendar months within a 12-month period during which patients aged 18 years and older with a diagnosis of ESRD and receiving maintenance hemodialysis are using an autogenous arteriovenous (AV) fistula with two needles.

NQS DOMAIN

Effective Clinical Care

DENOMINATOR

All calendar months during which patients aged 18 years and older with a diagnosis of ESRD are receiving maintenance hemodialysis.

Denominator Exceptions/Exclusions:

- Documentation of medical reason(s) for not having an autogenous arteriovenous (AV) fistula with two needles (eg, 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)
- Documentation of patient reason(s) for not having an autogenous arteriovenous (AV) fistula with two needles (eg, patient declined fistula placement, other patient reasons)

NUMERATOR

Calendar months during which patients are using an autogenous arteriovenous (AV) fistula with two needles.

RATIONALE

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 extremities 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.

MEASURE TYPE

Process

Transplant Referral

DESCRIPTION

Percentage of patients aged 18 years and older with a diagnosis of ESRD on hemodialysis or peritoneal dialysis for 90 days or longer who are referred to a transplant center for kidney transplant evaluation within a 12-month period.

NQS DOMAIN

Communication and Care Coordination

DENOMINATOR

All patients aged 18 years and older with a diagnosis of ESRD on hemodialysis or peritoneal dialysis for 90 days or longer.

Denominator Exceptions/Exclusions:

- Documentation of medical reason(s) for not referring for kidney transplant evaluation (eg, patient undergoing palliative dialysis, patient already approved by a qualified transplant program and scheduled to receive a living donor kidney transplant, other medical reasons)
- Documentation of patient reason(s) for not referring for kidney transplant evaluation (eg, patient declined, other patient reasons)
- Documentation of system reason(s) for not referring for kidney transplant evaluation (eg, lack of insurance coverage, nearest facility too far away, other system reasons)

NUMERATOR

Patients who are referred to a transplant center for kidney transplant evaluation within a 12-month period.

RATIONALE

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 96% 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.

MEASURE TYPE

Process

Advance Care Planning

DESCRIPTION

Percentage of patients aged 18 years and older with a diagnosis of ESRD on hemodialysis or peritoneal dialysis for whom there is documentation of a discussion regarding advance care planning.

NQS DOMAIN

Person and Caregiver-Centered Experience and Outcomes

DENOMINATOR

All patients aged 18 years and older with a diagnosis of ESRD on hemodialysis or peritoneal dialysis

NUMERATOR

Patients for whom there is documentation of a discussion* regarding advance care planning

*Discussion must include: 1) who patient trusts to make medical decisions for him/her if he/she is unable to make decisions and an opportunity for the patient to complete written advance directives, including to designate the person the patient trusts as proxy decision-maker, 2) patient's overall medical condition and prognosis, 3) the benefits and burdens of dialysis on the individual and the impact on the patient's quality of life, and 4) patient's preferences for end-of-life care regarding cardiopulmonary resuscitation and other life support and an opportunity to be issued do not resuscitate (DNR) or do not attempt resuscitation (DNAR) identification and/or a Physician Orders for Life-Sustaining Treatment (POLST) Paradigm form according to state law where available. Discussion must endorse a family-centered approach and with the patient's permission, family and identified decision-makers are to be included in the discussion.

Note: Although the discussion can take place with other providers, the physician overseeing the dialysis should confirm that the conversation has been undertaken either [i] directly by the nephrologist or dialysis center staff, or [ii] by another physician overseeing the patient's care.

RATIONALE

- 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 ensuring that advance care planning is offered to each patient.
- Patients with decision-making capacity should be strongly encouraged while they have capacity to talk to their legal agents to ensure that the legal agent knows the patient's wishes and agrees to make decisions according to these wishes.
- 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.

MEASURE TYPE

Process

Advance Directives Completed

DESCRIPTION

Percentage of patients aged 18 years and older with a diagnosis of ESRD on hemodialysis or peritoneal dialysis who have advance directives or end of life medical orders completed based on their preferences.

NQS DOMAIN

Person and Caregiver-Centered Experience and Outcomes

DENOMINATOR

All patients aged 18 years and older with a diagnosis of ESRD on hemodialysis or peritoneal dialysis.

Denominator Exceptions/Exclusions: Documentation of patient reason(s) for not having advance directives completed (eg, patient declined, other patient reasons)

NUMERATOR

Patients who have advance directives or end of life medical orders completed based on their preferences*

*May include do not resuscitate orders, POLST forms, or other form of written advance directive.

Note: Although the discussion can take place with other providers, the physician overseeing the dialysis should confirm that the conversation has been undertaken either [i] directly by the nephrologist or dialysis center staff, or [ii] by another physician overseeing the patient's care..

RATIONALE

- 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 ensuring that advance care planning is offered to each patient.

- Patients with decision-making capacity should be strongly encouraged while they have capacity to talk to their legal agents to ensure that the legal agent knows the patient's wishes and agrees to make decisions according to these wishes.
- 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.

MEASURE TYPE

Outcome

Referral to Hospice

DESCRIPTION

Percentage of patients aged 18 years and older with a diagnosis of ESRD who withdraw from hemodialysis or peritoneal dialysis who are referred to hospice care.

NQS DOMAIN

Communication and Care Coordination

DENOMINATOR

All patients aged 18 years and older with a diagnosis of ESRD who withdraw from hemodialysis or peritoneal dialysis.

Denominator Exceptions/Exclusions: Documentation of patient reason(s) for not referring to hospice care (eg, patient declined, other patient reasons).

NUMERATOR

Patients who are referred to hospice care.

RATIONALE

Palliative care services are appropriate for people who chose to undergo or remain on dialysis and for those who choose not to start or to discontinue dialysis. With the patient's consent, a multi-professional team with expertise in renal palliative care, including nephrology professionals, family or community-based professionals, and specialist hospice or palliative care providers, should be involved in managing the physical, psychological, social, and spiritual aspects of treatment for these patients, including end-of-life care. Physical and psychological symptoms should be routinely and regularly assessed and actively managed. The professionals providing treatment should be trained in assessing and managing symptoms and in advanced communication skills. Patients should be offered the option of dying where they prefer, including at home with hospice care, provided there is sufficient and appropriate support to enable this option.

MEASURE TYPE

Process

Advance Care Planning (Pediatric Kidney Disease)

DESCRIPTION

Percentage of patients aged 17 years and younger with a diagnosis of ESRD on hemodialysis or peritoneal dialysis for whom there is documentation of a discussion regarding advance care planning.

NQS DOMAIN

Person and Caregiver-Centered Experience and Outcomes

DENOMINATOR

All patients aged 17 years and younger with a diagnosis of ESRD on hemodialysis or peritoneal dialysis.

NUMERATOR

Patients for whom there is documentation of a discussion* regarding advance care planning

Note: Although the discussion can take place with other providers, the physician overseeing the dialysis should confirm that the conversation has been undertaken either [i] directly by the nephrologist or dialysis center staff, or [ii] by another physician overseeing the patient's care.

*Discussion should result in a plan to establish treatment goals based on patient's medical condition and prognosis. Discussion must endorse a family centered approach, and treatment goals must be determined. The benefits and burdens of dialysis should be discussed, and the quality of the life of the individual be taken into account. Kidney transplant should be discussed if appropriate.

RATIONALE

Institute family-centered advance care planning for children and adolescents with CKD and ESRD. The plan should establish treatment goals based on a child's medical condition and prognosis. Advance care planning should be an ongoing process in which treatment goals are determined and revised based on observed benefits and burdens of dialysis and the values of the pediatric patient and the family. The renal care team should designate a person to be primarily responsible for ensuring that advance care planning is offered to each patient. Patients with decision-making capacity should be strongly encouraged to talk to their parents to ensure that they know the patient's wishes and agrees to make decisions according to these wishes. Ongoing discussions that

include reestablishing goals of care based on the child's response to medical treatment and optimal quality of life is the mechanism by which advance care planning occurs. Discussions should include pros and cons of dialysis as well as potential morbidity associated with dialysis. Kidney transplantation should also be discussed if appropriate.

MEASURE TYPE

Process