Client: HMSA: PQSR 2007

Measure Title: ANNUAL CBC OR HEMOGLOBIN/HEMATOCRIT FOR PRE-ESRD PATIENTS

Disease State: Renal Disease

Indicator Category: Disease Management

Strength of Recommendation: C

Clinical Intent: To ensure that all eligible members identified as having pre-esrd receive a CBC or hematocrit test within a clinically appropriate timeframe.

Physician Specialties: Refer to PQSR 2007 Specialty Matrix

Clinical Rationale: Disease Burden
- Approximately 20 million American adults have kidney disease.[1] Of these people, it is estimated that more than 8 million have Stage 3 chronic kidney disease.[1]
- Approximately 60-80% of renal failure patients have a normocytic, normochromic anemia.[2]

Reason for Indicated Intervention or Treatment
- Early treatment of anemia in chronic renal disease patients significantly slows the progression of renal disease and delays the initiation of dialysis.[3]
- Anemia correction can also improve cardiac function [4], physical activity [5] and quality of life [6], while substantially reducing the need for hospitalizations and blood transfusions.[6]
- Current guidelines recommend starting erythropoietin when hemoglobin levels drop below 10 g/dL in the United States [7, 8], and below 11 g/dL in Europe.[9]

Evidence supporting Intervention or Treatment
- Data from the Third National Health and Nutrition Examination Survey show that patients with chronic kidney disease not on dialysis have an increased prevalence of anemia as glomerular filtration rates decline below 60 mL/min/1.73m².[10, 11]
- In addition, the National Kidney Foundation reviewed 22 studies spanning almost 30 years that explored the relationship between hemoglobin and kidney function. The majority of the data was derived from cross-sectional studies or baseline data from clinical trials, and was only of moderate or modest quality in terms of methodology. However, the studies were consistent in showing a trend toward lower hemoglobin levels at lower GFR levels.[12]
- There are no specific studies evaluating the relationship between frequency of hemoglobin testing and patient outcomes in those with chronic renal disease. However, it is clear that patients with Stage 3 disease and higher (GFR < 60 mL/min/1.73 m²) who are evaluated for anemia and started on erythropoietin as needed have improved health outcomes. [13-27]
Clinical Recommendations

- The National Kidney Foundation recommends following hemoglobin levels over time in all individuals with chronic kidney disease, especially those with glomerular filtration rates < 60 mL/min/1.73m². [12]
- The NKF-K/DOQI guidelines for CKD recommend that all individuals should be assessed, as part of routine health examinations, to determine whether they are at increased risk for developing CKD [1]. Individuals at high risk for kidney disease, particularly those with diabetes, hypertension, or a family history for these conditions and/or for kidney disease, should undergo formal testing. Such testing can be simply done with a urinalysis, a first morning or a random "spot" urine sample for albumin or protein and creatinine assessment, and a serum creatinine level. [12]

Source
Health Benchmarks, Inc.

Denominator
Continuously enrolled members who had at least two diagnoses of chronic kidney disease during the year prior to the measurement year.

Relevant Billing Codes:
- ICD-9 diagnosis code(s): 585, 585.1-585.5, 585.9

Denominator Exclusion
Members with at least one diagnosis of or evidence of end stage renal disease (ESRD), identified in the measurement year or year prior.

Relevant Billing Codes:
- ICD-9 diagnosis code(s): 585.6
- ICD-9 status "V" code(s): V45.1x, V56.xx
- CPT-4 code(s): 36800, 36810, 36815, 36819-36821, 36825, 36830-36833, 36838, 36145, 90918-90925, 90935-90999.

Numerator
Members who had at least one CBC or hemoglobin/hematocrit test 365 days after the index date.

Relevant Billing Codes:
- CPT-4 code(s): 80050, 85013, 85014, 85018, 85021, 85025, 85027

Interpretation of Score
High score implies better performance

Physician Attribution
Score all physicians (in the selected specialties) who saw the member 365 days after the index date

References


20. Levin, N.W., J.M. Lazarus, and A.R. Nissenson, National Cooperative rHu Erythropoietin Study in patients with chronic renal failure--an interim...


**Indicator Classification** (Adapted from Health Plan Employer Data Information Set (HEDIS®) technical specifications)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnosis</strong></td>
<td>Measures applicable to patients receiving diagnostic workups for a symptom or condition that delineate appropriate laboratory or radiological testing to be performed (e.g. evaluation of thyroid nodule; pregnancy test in patients with vaginal bleeding or abdominal pain)</td>
</tr>
<tr>
<td><strong>Effectiveness of Care</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Prevention</strong></td>
<td>Measures applicable to asymptomatic individuals that are designed to prevent the onset of the targeted condition (e.g. immunizations).</td>
</tr>
<tr>
<td><strong>Screening</strong></td>
<td>Measures applicable to asymptomatic patients who have risk factors or pre-clinical disease, but in whom the condition has not become clinically apparent (e.g. pap smears; screening for elevated blood pressure).</td>
</tr>
<tr>
<td><strong>Disease Management</strong></td>
<td>Measures applicable to individuals diagnosed with a condition that are part of the treatment or management of the condition (e.g. cholesterol reduction in patients with diabetes; radiation therapy following breast conserving surgery; appropriate follow-up after acute event).</td>
</tr>
<tr>
<td><strong>Medication Monitoring</strong></td>
<td>Measures applicable to patients taking medications with narrow therapeutic windows and / or potential preventable significant side effects or adverse reactions (e.g. thyroid stimulating hormone (TSH) testing after levothyroxine dose change; hepatic enzyme monitoring for patients using antimycotic pharmacotherapy)</td>
</tr>
<tr>
<td><strong>Medication Adherence</strong></td>
<td>Measures applicable to patients taking medications for chronic conditions that are designed to assess patient adherence to medication (e.g. adherence to lipid lowering medication).</td>
</tr>
<tr>
<td><strong>Utilization</strong></td>
<td>Measures applicable to patients receiving treatment for a symptom or condition that advocate appropriate utilization of laboratory and pharmaceutical resources (e.g. conservative use of imaging for low back pain; inappropriate use of antibiotics for viral upper respiratory infection).</td>
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Strength of Recommendation Based on a Body of Evidence

FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation based on the benefits, harms, and costs of the intervention being recommended. (USPSTF = U.S. Preventive Services Task Force)