<table>
<thead>
<tr>
<th>Client</th>
<th>HMSA: PQSR 2009</th>
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</thead>
<tbody>
<tr>
<td>Measure Title</td>
<td>CHRONIC KIDNEY DISEASE (CKD): MONITORING FOR ANEMIA</td>
</tr>
<tr>
<td>Disease State</td>
<td>Renal Disease</td>
</tr>
<tr>
<td>Strength of Recommendation</td>
<td>B</td>
</tr>
<tr>
<td>Organizations Providing Recommendation</td>
<td>National Kidney Foundation</td>
</tr>
<tr>
<td>Clinical Intent</td>
<td>To ensure that members with chronic kidney disease (CKD) who are not on dialysis receive a CBC or hematocrit test at least once annually.</td>
</tr>
<tr>
<td>Physician Specialties (suggested)</td>
<td>Refer to PQSR 2009 Clinical Measures by Specialty.</td>
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**Background**
- 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 checking hemoglobin in all individuals with chronic kidney disease, especially those with glomerular filtration rates < 60 mL/min/1.73 m² at least once annually.[12]

Source

Health Benchmarks, Inc.

The following items were adapted from other sources:

- Denominator definition of chronic renal disease (Kern et al. [2006], Winkelmayer et al. [2005])

### Denominator

<table>
<thead>
<tr>
<th>Denominator Definition</th>
<th>Description</th>
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<tbody>
<tr>
<td>Continuously enrolled members who have at least 1 diagnosis of chronic kidney disease (CKD) in an inpatient setting during the year prior to the measurement year, or members with at least 2 diagnoses of CKD in an outpatient setting during the 2 year period beginning 2 years prior to the start of the measurement year.</td>
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### Denominator Exclusion

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<thead>
<tr>
<th>Denominator Exclusion Definition</th>
<th>Description</th>
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<tr>
<td>Members on dialysis or in hospice care during the 0-365 days after the index date.</td>
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### Numerator

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<thead>
<tr>
<th>Numerator Definition</th>
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<tbody>
<tr>
<td>Members who had at least 1 CBC or hemoglobin/hematocrit test 0-365 days after the index date.</td>
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### Physician Attribution

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<th>Physician Attribution Description</th>
<th>Description</th>
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<tr>
<td>Score all physicians (in the selected specialties) who saw the member 0-365 days after the index date.</td>
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### References


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