NATIONAL QUALITY FORUM

Measure Submission and Evaluation Worksheet 5.0

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the submitting standards web page.

NQF #: 1667 NQF Project: Renal Endorsement Maintenance 2011
(for Endorsement Maintenance Review) Original Endorsement Date: Most Recent Endorsement Date:
BRIEF MEASURE INFORMATION
De.1 Measure Title: (Pediatric) ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL
Co.1.1 Measure Steward: American Medical Association - Physician Consortium for Performance Improvement
De.2 Brief Description of Measure: Percentage of calendar months within a 12-month period during which patients aged 17 years and younger with a diagnosis of ESRD receiving hemodialysis or peritoneal dialysis have a Hemoglobin level <10 g/dL
2a1.1 Numerator Statement: Calendar months during which patients have a Hemoglobin level <10 g/dL* *The hemoglobin values used for this measure should be the most recent (last) hemoglobin value recorded for each calendar month
2a1.4 Denominator Statement: All calendar months during which patients aged 17 years and younger with a diagnosis of ESRD are receiving hemodialysis or peritoneal dialysis
2a1.8 Denominator Exclusions: Documentation of medical reason(s) for patient having a Hemoglobin level <10g/dL (eg, patients who have non-renal etiologies of anemia [eg, sickle cell anemia or other hemoglobinopathies, hypersplenism, primary bone marrow disease, anemia related to chemotherapy for diagnosis of malignancy, post-operative bleeding, active bloodstream or peritoneal infection], other medical reasons)
1.1 Measure Type: Outcome 2a1. 25-26 Data Source: Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry, Paper Records 2a1.33 Level of Analysis: Clinician : Group/Practice, Clinician : Individual, Clinician : Team 1.2-1.4 Is this measure paired with another measure? No De.3 If included in a composite, please identify the composite measure (*title and NQF number if endorsed*): This measure is not a composite or paired measure.

STAFF NOTES (*issues or questions regarding any criteria*)
Comments on Conditions for Consideration:
Is the measure untested? Yes☐ No☐ If untested, explain how it meets criteria for consideration for time-limited endorsement:
1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (*check De.5*): 5. Similar/related endorsed or submitted measures (*check 5.1*): Other Criteria:
Staff Reviewer Name(s):

1. IMPACT, OPPORTUITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT

Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See guidance on evidence.
Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria. (evaluation criteria)

1a. High Impact: H☐ M☐ L☐ I ☐
(*The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.*)

De.4 Subject/Topic Areas *(Check all the areas that apply)*: Renal, Renal : End Stage Renal Disease (ESRD)
De.5 Cross Cutting Areas (*Check all the areas that apply)*:

1a.1 Demonstrated High Impact Aspect of Healthcare: Affects large numbers, A leading cause of morbidity/mortality, Frequently performed procedure, High resource use, Patient/societal consequences of poor quality, Severity of illness

1a.2 If "Other," please describe:

1a.3 Summary of Evidence of High Impact *(Provide epidemiologic or resource use data)*:
Chronic kidney disease (CKD), affects approximately 13.1% of United States adults and leads to end-stage renal disease (ESRD), cardiovascular disease (CVD), and premature death. (1)

CKD affects up to 5% of the population and 25% of those aged 70 years or older. An additional 6% of the population has signs of kidney damage, which may progress to ESRD. (2)

CKD is not recognized as a major public health concern. It is estimated that approximately 26.3 million adutls in the U.S. have non-dialysis dependent kidney disease and over 470,000 have ESRD, collectively representing over 13% of the US population. In the next 20 years, the burnden of CKD is expected to increase, with over 2 million individuals projected to be receiving renal replacement therapy (dialysis or kidney transplant) by 2030. (3)

Costs for CKD patients are now 23 percent of Medicare expenditures in the fee-for-service sector; when added to costs for ESRD patients, it appears that 31 percent of all Medicare expenditures are incurred by patients with a diagnosis of kidney disease. (4)

In 2008, 37-38 percent of prevalent dialysis patients had a hemoglobin of 11-12 g/dl, the target set by KDOQI; the mean monthly hemoglobin was 11.6 g/dl.(4)

Views of anemia treatment have evolved over the last several years, as safety concerns about targeting higher hemoglobin levels have emerged from clinical trials. The FDA´s recommended target - a range of 10-12 g/dl - is achieved by 68 percent of prevalent patients.(4)

Observational evidence relating Hb level to mortality is available. Children in the North American Pediatric Renal Transplant Cooperative Study (NAPRTCS) database from 1992 to 2001 with an Hb level less than 9.9 g/dL compared with those with an Hb level greater than 9.9 g/dL showed an elevated risk for mortality: adjusted RR, 1.52; 95% CI, 1.03 to 2.26; P < 0.05.306 The relationship between Hb level and mortality, when examined at other cutoff values for Hb, appeared continuous. Patients with more severe anemia also experienced increased risk for hospitalization (17.2% ± 1.8% versus 12.3% ± 2.1%, respectively; P < 0.01).(5)

1a.4 Citations for Evidence of High Impact cited in 1a.3: 1. Snyder JJ, Collins AJ. Association of Preventive Health Care with Atherosclerotic Heart Disease and Mortality in CKD. J Am Soc Nephrol. 2009 July; 20(7): 1614–1622.

2. Alves TP, Lewis J. Racial differences in chronic kidney disease (CKD) and end-stage renal disease (ESRD) in the United States: a social and economic dilemma. Clinical Nephrology. 2010;74(1):S72-S77.

3. Choi AI, Rodriguez RA, Bacchetti P, Bertenthal D, et al. White/Black Racial Differences in Risk of End-Stage Renal Disease and Death. Am J Med. 2009 July;122(7):672-678.

4. 1. US Renal Data System, USRDS 2010 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2010.

5. National Kidney Foundation. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease: 2007 Update of Hemoglobin Target. Am J Kidney Dis 50, No 3 (September), 2007.

1b. Opportunity for Improvement: H☐ M☐ L☐ I ☐
(*There is a demonstrated performance gap - variability or overall less than optimal performance*)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:
Anemia is a common complication of chronic kidney disease (CKD). The prevalence of anemia varies with the degree of renal impairment in predialysis 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, particular hemodialysis. Anemia reduces physical capacity, well-being, neurocognitive function, and energy level and worsens quality of life both in predialysis 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. It is plausible that reversing anemia may reduce this risk.

Strippoli GFM, Craig JC, Manno C, Schena FP. Hemoglobin Targets for the Anemia of Chronic Kidney Disease: A Meta-analysis of Randomized, Controlled Trials. J Am Soc Nephrol 15:3154-3165, 2004.

The clinical issues that impact achievement of the target hemoglobin in the pediatric population differ from the adult population. Normative, adult population data should not be used to assess performance in the pediatric population. Consideration(s) should be given to using age-specific normative data across the pediatric age range.

1b.2 Summary of Data Demonstrating Performance Gap *(Variation or overall less than optimal performance across providers)*:
[*For Maintenance – Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.*]
In 2008, 37-38 percent of prevalent dialysis patients had a hemoglobin of 11-12 g/dl, the target set by KDOQI; the mean monthly hemoglobin was 11.6 g/dl.(1)

Views of anemia treatment have evolved over the last several years, as safety concerns about targeting higher hemoglobin levels have emerged from clinical trials. The FDA´s recommended target - a range of 10-12 g/dl - is achieved by 68 percent of prevalent patients.(1)

This measure was used in the CMS Physician Quality Reporting Initiative, in the claims option and the registry option (2008). (2)

There is a gap in care as shown by this 2008 data; 36.51% of patients reported on did not receive the optimal care.(2)
10th percentile: 10.42%
25th percentile: 38.17%
50th percentile: 66.23%
75th percentile: 84.04%
90th percentile: 94.93%

The KDOQI Clinical Practice Recommendation for anemia management in pediatric patients (2007 revision) recommends that the target hemoglobin for patients on ESA therapy should be 11-12.0 gm/dL, and that hemoglobin concentration greater than 13 gm/dL should be avoided (CPM 2.1.2 and 2.1.3). For Q4 2010, 32.4% of pediatric patients had hemoglobin 11-12.0 gm/dL which is about the same as Q4 2009 and compares to 48.7% in the adult hemodialysis patient population. Pediatric patients that were diabetic, on hemodialysis, and were adequately dialyzed had the hightest percent in the 11-12.0 gm/dL range (35.8% and 36.7% respectively). The lower tail (< 10 gm/dL) of the Hemoglobin distribution in pediatric dialysis patients by patient characteristics, according to the Elab Project Q4 2010, shows opportunities for improvement with 20% of patients with hemoglobin < 10 gm/dL (increased over 2009 when 18.6% were < 10 gm/dL.). 24.5% of patients had hemoglobin = 12 gm/dL. The normal distribution curve shows a slight improvement over the past 4 years with mean hemoglobin of 11.10 ± SD 1.36. (3)

1b.3 Citations for Data on Performance Gap: [*For Maintenance – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*]

1. US Renal Data System, USRDS 2010 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2010.

2. Confidential CMS PQRI 2008 Performance Information by Measure. Jan-Sept TAP file.

3. Elab 2010 and Trends Report, Renal Network of the Upper Midwest, St. Paul, MN.

1b.4 Summary of Data on Disparities by Population Group: [*For Maintenance –Descriptive statistics for performance results for this measure by population group*]

Anemia, a common complication of CKD, is more prevalent and severe in African-American than Caucasian patients at each stage of the disease. Currently, African-Americans with CKD are less likely than Caucasian patients to receive anemia treatment before and after the onset of dialysis. Although African-Americans often require higher doses of erythropoiesis-stimulating agents, this may result from late treatment initiation, lower hemoglobin levels, or the presence of comorbidities such as diabetes and inflammation, although racial differences in response cannot be excluded.

Healthy and iron-replete African-Americans typically have lower average hemoglobin (Hb) levels than Caucasians, reflecting, among other factors, the effects of an alpha-thalassemia deletion allele (gene frequency 0.169). Iron deficiency anemia is also frequent in African- Americans, with prevalences ranging up to 19% in premenopausal black women.

In the general population as well as in all stages of CKD, anemia has been shown to be more prevalent in African-Americans than Caucasians , perhaps reflecting low Hb prior to CKD onset and/or higher prevalence of iron deficiency.

Once dialysis is initiated, African-Americans receive higher ESA doses; however, it is difficult to distinguish the effects of nutritional deficiency, lower pretreatment Hb levels, and delayed ESA initiation from possible racial-specific biological effects on ESA responsiveness.

1b.5 Citations for Data on Disparities Cited in 1b.4: [*For Maintenance – Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*]

Lea JP. The role of anemia management in improving outcomes for african-americans. Am J Nephrol 2008;28:732–743

1c. Evidence (*Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.*)
Is the measure focus a health outcome? Yes☐ No☐ If not a health outcome, rate the body of evidence.

Quantity: H☐ M☐ L☐ I☐ Quality: H☐ M☐ L☐ I☐ Consistency: H☐ M☐ L☐ I☐

Quantity	Quality	Consistency	Does the measure pass subcriterion1c?
M-H	M-H	M-H	Yes☐
L	M-H	M	Yes☐ IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise No☐
M-H	L	M-H	Yes☐ IF potential benefits to patients clearly outweigh potential harms: otherwise No☐
L-M-H	L-M-H	L	No ☐

Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service	Does the measure pass subcriterion1c? Yes☐ IF rationale supports relationship

1c.1 Structure-Process-Outcome Relationship *(Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process- health outcome; intermediate clinical outcome-health outcome)*:

This measure captures the number of calendar months during which patients have a Hemoglobin level < 10g/dL, which is a

measurement of a Hemoglobin level lower than the target range, an intermediate clinical outcome. Identifying patients with a Hemoglobin level lower than the target range is linked to improved health outcomes such as decreasing the incidence of an associated illness and attaining the highest quality and quantity of life after onset of illness.

1c.2-3 Type of Evidence *(Check all that apply)*:
Clinical Practice Guideline

1c.4 Directness of Evidence to the Specified Measure *(State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population)*:
The guideline recommendation supporting this measure, focuses on a specific patient population including dialysis and nondialysis patients with CKD receiving ESA therapy. This measure specifically focuses on patients with ESRD who are receiving hemodialysis or peritoneal dialysis. The ESRD population has severe kidney disease and are usually receiving dialysis. Therefore, the measure development work group thought it would be most beneficial to focus on this subset of patients. Although this measure does not address patients receiving ESA therapy, the same target range of 11.0 to 12.0 g/dL is being used for this patient population. The measure focuses on capturing those patients who do not achieve a Hemoglobin level within this specified target range.

1c.5 Quantity of Studies in the Body of Evidence *(Total number of studies, not articles)*: For systematic review topics, the literature searches yielded 2,756 citations. Of these, 137 articles were reviewed in full. An additional 19 were added by Work Group members. A total of 83 were extracted and of these, 51 studies are included in Summary tables [within the guideline].

National Kidney Foundation. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease: 2007 Update of Hemoglobin Target. Am J Kidney Dis 50, No 3 (September), 2007.

1c.6 Quality of Body of Evidence (*Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events*): [The NKF Work Group] refers the reader to the prior rationale outlining the [NKF] Work Group's understanding of the unique factors to be considered in the selection of the Hb target in the pediatric CKD population [published in the 2006 KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease]. Please see below:

Determination of Hb targets in pediatric patients resists definitive recommendation. QOL, so significant to the development of the child and life of the family, lends urgency to the consideration of higher Hb level thresholds. However, evidence lacks both quality and quantity, rendering assessment of both benefit and risk uncertain. Age-specific variation in normal Hb levels introduces further uncertainty. Finally, given key metabolic, growth, developmental, and psychological differences between children and adults, exclusive reliance on evidence in adults is inappropriate.(2006)

The [NKF] Work Group presents lower and upper targets for Hb levels in children using values in adults for reference. However, we add 2 significant qualifications. The first is that both the lower and upper Hb targets serve only as opinion-based CPRs, in keeping with the lack of pediatric-specific evidence. The second is that medical decision making to set Hb targets in individual patients should be informed by available evidence that is uniquely pediatric. Consideration should be given, for example, to the potential need to make adjustments for the normal age-specific Hb distribution. In weighing the potential QOL benefits of Hb targets, the available evidence in adults should be enriched by consideration of QOL issues that are crucial to children, including neurocognitive development, school attendance, exercise capacity, and family support.(2006)

A single RCT provides evidence for the benefit of treatment of anemia with ESA compared with placebo. In a blinded crossover trial of 11 children aged between 2.3 and 12.3 years, undergoing HD or PD, and with a baseline Hb level between 4.3 and 8.1 g/dL, patients were assigned to either ESA therapy (Hb > 10 g/dL) or placebo for 24 weeks. Seven patients completed both trial arms. ESA therapy was associated with partial correction of an elevated cardiac index by 6 months and a significant reduction in left ventricular mass by 12 months.

Two observational studies have examined the relationship between anemia and LVH in children with CKD. In these studies,

patients with severe LVH (left ventricular mass index > 51 g/m2) showed a statistically lower Hb level than those without LVH (Hb, 9.5 ± 1.8 versus 10.9 ± 2.3 g/dL; P = 0.027). Left ventricular compliance also was related to Hb level in children (r = –0.65; P = 0.02). The findings suggest that severe anemia in children with CKD stage 5 leads to chronic increases in cardiac workload and a consequent increase in both left ventricular end-diastolic volume and mass.
In this RCT, exercise capacity improved with ESA treatment (mean achieved Hb, 11.2 g/dL; range, 9.5 to 14.2 g/dL) compared with placebo control. Measures of capacity significantly affected included a 2-minute walking test (n = 7) and a formal treadmill testing using the Bruce protocol, full (n = 3) or modified (n = 3). Distance walked, in meters, approached but did not reach statistical significance in the ESA arm of the crossover, P = 0.06; similar results were seen from both the regular or modified treadmill data, P = 0.07.

In a nonrandomized interventional trial, 18 children with CKD stage 5 (15 patients, on HD or PD) and a Hb level less than 9.9 g/dL were administered IV or SC ESA until Hb level was greater than 9.9 g/dL; baseline Hb level of 6.5 ± 0.8 g/dL changed to a final level of 10.0 ± 0.6 g/dL; P = 0.001. Exercise time (treadmill with a modified Bruce protocol) increased significantly (before ESA, 10.3 ± 1.9 minutes; after ESA, 11.2 ± 1.9 minutes; P = 0.01), and resting oxygen consumption decreased from 7.8 ± 1.8 to 6.9 ± 1.4 mL/min/kg; P = 0.01 with the higher Hb level. However, there was no change in stroke volume, blood pressure, or any cardiac indices after the first month at the higher Hb level.

Similarly, a small cohort (n = 7) of HD patients showed an improvement in aerobic work capacity and effort tolerance, as evidenced by statistically significant changes in the workload reached, peak oxygen uptake, and average ventilatory anaerobic threshold after treatment of anemia with ESA (baseline Hb, 6.3 ± 0.9 g/dL versus final Hb, 11.2 ± 1.2 g/dL).
Finally, 10 children undergoing PD were evaluated before and 18 months after limited correction of anemia with ESA (baseline Hb, 5.9 ± 0.9 g/dL versus final Hb, 8.7 ± 1.5 g/dL). Patients showed a significant slowing of heart rate, P < 0.01, but no improvement for other cardiac parameters.(2006)

Furthermore, and as previously stated by the Work Group, we affirm the comments made regarding the choice of Hb target; in particular, that it should remain an opinion-based CPR and that any individual patient target should be chosen with consideration made for uniquely pediatric factors, including, but not restricted to, age and sex-specific Hb distribution, neurocognitive development, school attendance, exercise capacity, and family support.

With respect to adult data regarding the safety of targeting Hb levels greater than 13.0 g/dL; although the Work Group acknowledges similar concerns might exist in children, there are currently no studies to support an increased risk at Hb levels at or greater than 13.0 g/dL in this group. However, given the evidence that is available in relation to increased risk of cardiovascular death and coronary artery calcification in older children/young adults with CKD, it would seem prudent to carefully weigh the individual child's likely benefit of an incremental increase in quality of life, school performance, or exercise tolerance from a Hb level greater than 13.0 g/dL, to their uncertain, but potentially devastating, risk of a myocardial event, stroke, or loss of venous access.

National Kidney Foundation. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease: 2007 Update of Hemoglobin Target. Am J Kidney Dis 50, No 3 (September), 2007.

1c.7 Consistency of Results across Studies *(Summarize the consistency of the magnitude and direction of the effect):* There continues to be a lack of evidence to support the assignment of benefits and harms to any given level of Hb for an individual child. This difficulty is compounded by age and sex variation in Hb values in children and the need to address metabolic, growth, and developmental issues in children that are not part of the adult data sets.

Furthermore, and as previously stated by the [NKF] Work Group, we affirm the comments made regarding the choice of Hb target; in particular, that it should remain an opinion-based CPR and that any individual patient target should be chosen with consideration made for uniquely pediatric factors, including, but not restricted to, age and sex-specific Hb distribution, neurocognitive development, school attendance, exercise capacity, and family support.

With respect to adult data regarding the safety of targeting Hb levels greater than 13.0 g/dL; although the Work Group acknowledges similar concerns might exist in children, there are currently no studies to support an increased risk at Hb levels at or greater than 13.0 g/dL in this group. However, given the evidence that is available in relation to increased risk of cardiovascular death and coronary artery calcification in older children/young adults with CKD, it would seem prudent to carefully weigh the individual child's likely benefit of an incremental increase in quality of life, school performance, or exercise tolerance from a Hb level

greater than 13.0 g/dL, to their uncertain, but potentially devastating, risk of a myocardial event, stroke, or loss of venous access.

National Kidney Foundation. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease: 2007 Update of Hemoglobin Target. Am J Kidney Dis 50, No 3 (September), 2007.

1c.8 Net Benefit *(Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms)*:
Anemia reduces physical capacity, well-being, neurocognitive function, and energy level and worsens quality of life both in predialysis 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. It is plausible that reversing anemia may reduce this risk.(1)

Aiming for a Hb target within narrow boundaries in ESA-treated patients requires frequent dose adjustments in many patients. More than 60% of patients receiving ESA therapy with Hb targets between 11.0 and 12.0 g/dL require between 6 and 9 dose changes per year.23 No comparative information is available to support evidence-based guidelines for the dosing and administration of ESAtherapy to achieve a target Hb. However, descriptive information from quality improvement interventions and RCT treatment protocols may be helpful to practitioners in weighing options that may best fit patient needs and practice settings.(2)

1. Strippoli GFM, Craig JC, Manno C, Schena FP. Hemoglobin Targets for the Anemia of Chronic Kidney Disease: A Meta-analysis of Randomized, Controlled Trials. J Am Soc Nephrol 15:3154-3165, 2004.

2. National Kidney Foundation. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease: 2007 Update of Hemoglobin Target. Am J Kidney Dis 50, No 3 (September), 2007.

1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? No

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: N/A

1c.11 System Used for Grading the Body of Evidence: Other

1c.12 If other, identify and describe the grading scale with definitions: Calculation algorithm is included in data dictionary/code table attachment (2a1.30).

1c.13 Grade Assigned to the Body of Evidence: N/A

1c.14 Summary of Controversy/Contradictory Evidence: There continues to be a lack of evidence to support the assignment of benefits and harms to any given level of Hb for an individual child. This difficulty is compounded by age and sex variation in Hb values in children and the need to address metabolic, growth, and developmental issues in children that are not part of the adult data sets.

National Kidney Foundation. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease: 2007 Update of Hemoglobin Target. Am J Kidney Dis 50, No 3 (September), 2007.

1c.15 Citations for Evidence other than Guidelines*(Guidelines addressed below)*:
N/A

1c.16 Quote verbatim, the specific guideline recommendation *(Including guideline # and/or page #)*:
In the opinion of the Work Group, in pediatric dialysis and nondialysis patients with CKD receiving ESA therapy, the selected Hb target should generally be in the range of 11.0 to 12.0 g/dL.

1c.17 Clinical Practice Guideline Citation: National Kidney Foundation. KDOQI Clinical Practice Guidelines and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease: 2007 Update of Hemoglobin Target. Am J Kidney Dis 50, No 3

(September), 2007.

1c.18 National Guideline Clearinghouse or other URL:
http://www.kidney.org/professionals/KDOQI/guidelines_anemiaUP/index.htm

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? Yes

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: NKF Anemia Update Work Group Membership: John W. Adamson, MD, has served as Executive Vice President for Research and Director of the Blood Research Institute of the Blood Center of Southeastern Wisconsin in Milwaukee since 1998. He holds the position of Professor of Medicine (Hematology) at the Medical College of Wisconsin. Before moving to Milwaukee, he was Director of the Lindsley F. Kimball Research Institute of the New York Blood Center since 1989 and President of the Center from 1989 to 1997. Dr Adamson received his MD from the University of California, Los Angeles, after which he trained at the University ofWashington in Seattle and the National Institutes of Health (NIH) in Bethesda, MD, in the fields of internal medicine and hematology. Before assuming his position in New York, Dr Adamson was professor of medicine and head of the Division of Hematology at the University of Washington. Dr Adamson is a past President of the American Society of Hematology and past Chairman of its committees on scientific affairs and transfusion medicine. Dr Adamson served as a member of the Advisory Council of the National Institute of Diabetes, Digestive and Kidney Diseases of the NIH. In 1988, he was designated clinical research professor by the American Cancer Society and elected a Fellow of the American Association for the Advancement of Science. Dr Adamson is past editor-in-chief of Blood, past editor of the Journal of Cellular Physiology, and founding editor of Current Opinion in Hematology. Altogether, he has authored or co-authored more than 400 scientific publications. Consultant: Affymax; Fibrogen;Watson Speaker:Watson Grant/Research Support (no personal income): N/A Grant/Research Support (includes personal income): N/A Part-Time Employee: N/A Shares: N/A Jeffrey S. Berns, MD, earned his MD at Case Western Reserve University, then completed his internship and residency in Internal Medicine at University Hospitals of Cleveland. He completed a fellowship in Nephrology and was anAssociate Research Scientist in the Department of Physiology at Yale University. Dr Berns was recently promoted to Professor of Medicine at the University of Pennsylvania School of Medicine, where he is Director of Clinical Nephrology and Director of the Renal Fellowship Program for the Renal, Electrolyte and Hypertension Division. He has published and lectured on topics related to CKD, anemia management in patients with CKD, and other areas in clinical nephrology. He is co-editor of Drug Prescribing in Renal Failure-Dosing Guidelines for Adults. He also serves on the editorial board of Seminars in Dialysis, American Journal of Kidney Diseases, and Clinical Journal of the American Society of Nephrology. He is an active investigator in clinical trials related to anemia treatment in patients with CKD. Consultant: Amgen; Neose Speaker: N/A Grant/Research Support (no personal income): Advanced Magnetics; Hoffman LaRoche Grant/Research Support (includes personal income): N/A Part-Time Employee: N/A Shares: N/A Kai-Uwe Eckardt, MD (Work Group Co- Chair), is Professor of Medicine and Chief of Nephrology and Hypertension at the University of Erlangen–Nuremberg, Germany. He received his MD from theWestfälischeWilhelms-Universität Münster, Germany. In 1993, following postgraduate training in internal medicine, pathology, and physiology, he was appointed Assistant Professor of Physiology at the University of Regensburg, Germany. Subsequently, he continued his training in internal medicine and nephrology at the Charité, Humboldt University in Berlin, where he was appointed Associate Professor of Nephrology in 2000. His major scientific interests are in the molecular mechanisms and physiological/pathophysiological relevance of oxygen sensing and the management of anemia. Professor Eckardt is Subject Editor of Nephrology, Dialysis and Transplantation and serves on the editorial board of several other journals. He contributed to the development of the European Best Practice Guidelines for Anemia. Management and is a member of the executive committee of Kidney Disease: Improving Global Outcomes (KDIGO). Dr Eckardt is associated with the CREATE and TREAT studies. Consultant: Affymax; Amgen; Hoffman LaRoche; Ortho Biotech/Johnson & Johnson Speaker: Amgen; Hoffman LaRoche; Ortho Biotech/Johnson & Johnson Grant/Research Support (no personal income): Hoffman LaRoche; Ortho Biotech/Johnson & Johnson Grant/Research Support (includes personal income):N/A Part-Time Employee: N/A Shares: N/A Steven Fishbane, MD, currently is Chief of Nephrology and Associate Chair of the Department of Medicine atWinthrop-University Hospital (WUH) in Mineola, NY, as well as Professor of Medicine at SUNY Stony Brook School of Medicine. He is the Medical Director of WUH Dialysis Network, which includes 4 outpatient dialysis units and 3 hospital units. Dr Fishbane serves as the Chairman of the Long Island Health Network Quality Council; Chairman of the Department of Medicine Quality Improvement Program, WUH; Chairman of Clinical Guidelines Committee, WUH; Co-Chairman of WUH Patient Care Committee; and Associate Chairman of the Department of Medicine, WUH. Dr Fishbane is a member of the Network 2 Medical Review Board. Consultant: Abbott; Affymax; Amgen; Genzyme; Hoffman LaRoche; Renal Management Strategies;Watson Speaker: Abbott; Genzyme; Ortho Biotech;Watson Grant/Research Support (no personal income): Abbott; Amgen; Genentech; Genzyme; Hoffman LaRoche; Ortho Biotech; Shire; Speedel;Watson Grant/Research Support (includes personal income): N/A Part-Time Employee: N/A Shares: N/A Robert N. Foley, MD, was born in

Ireland and received his undergraduateMDfrom University College Cork. He completed Internal Medicine training in Cork, later moving to Saint John's, Newfoundland, Canada, where he completed a residency in nephrology, as well as a Masters in Clinical Epidemiology. From 1999 to 2002, Dr Foley worked at Hope Hospital, Salford, UK, and has been Director of the Chronic Disease Research Group since September of 2002. Dr Foley was also a Co-Editor of the American Journal of Kidney Diseases. His major interest is in outcomes research, especially the interplay of cardiovascular and renal disease. Dr Foley is active in anemia correction trials, as well as in the US Renal Data System Cardiovascular Special Study Center. Consultant: Amgen; Genzyme; Hoffman LaRoche; Ortho Biotech Speaker: Amgen; Hoffman LaRoche; Ortho Biotech Grant/Research Support (no personal income): Amgen; Hoffman LaRoche; Ortho Biotech Grant/Research Support (includes personal income): N/A Part-Time Employee: N/A Shares: N/A Sana Ghaddar, PhD, RD, is an Assistant professor at the American University of Beirut, Lebanon. She has more than 10 years of experience in the renal and clinical dietetics field. She was a renal dietitian and researcher at Peninsula Nephrology Inc in San Mateo, currently a division of Satellite Healthcare. She has served as a principal investigator for anemia management studies that examined the response of heme-iron polypeptide to ESAs in patients with CKD, in addition to other studies that examined patient perceptions, beliefs, and compliance with hemodialysis and nutritional therapy. She has presented her studies at national conferences, including the NKF, American Dietetic Association, and Gerontological Society of America. Dr. Ghaddar reported no relevant financial relationships. John S. Gill, MD, MS, obtained his MD from the University of British Columbia (UBC) in 1995. He completed his internal medicine training at the University of Western Ontario in 1998 and his nephrology training in 2000 at UBC. He then completed his transplantation training at Tufts–New England Medical Center in Boston, MA, and obtained a Masters in Clinical Care Research from Tufts in 2002. Dr Gill currently is assistant professor of medicine in the Division of Nephrology at UBC and has a cross appointment at Tufts–New England Medical Center. Dr Gill's research interests focus on clinical outcomes in kidney transplant recipients. He is the principal investigator and co-investigator on current Canadian Institutes of Health Research, Kidney Foundation, and Michael Smith funded studies. Dr Gill is Chair of the Canadian Society of Transplantation Work Group for Pan-Canadian database development, member of the Canadian Organ Replacement Register Advisory Board, and member of a number of NKF Committees. Consultant: Hoffman LaRoche Speaker: N/A Grant/Research Support (no personal income): N/A Grant/Research Support (includes personal income): N/A Part-Time Employee: N/A Shares: N/A Kathy Jabs, MD, is a Pediatric Nephrologist who was trained at Babies Hospital, NY, and Children's Hospital, Boston, MA. She was a faculty member at Children's Hospital in Boston (1988 to 1996) and served as Director of Dialysis and Renal Transplantation at Children's Hospital of Philadelphia (1996 to 2000). She currently is the Director of Pediatric Nephrology at Vanderbilt Children's Hospital and an Associate Professor of Pediatrics at Vanderbilt University School of Medicine, Nashville, TN. Dr Jabs has had a long-standing interest in the care of children with chronic kidney disease. Dr Jabs is associated with the CKid and FSGS studies sponsored by the NIH. Dr Jabs reported no relevant financial relationships. Francesco Locatelli, MD, FRCP, is Head of the Department of Nephrology and Dialysis at A. Manzoni Hospital, Lecco, Italy, and postgraduate Professor of Nephrology at the Universities of Brescia and Milan. He is Past President of the European Renal Association–European Dialysis and Transplant Association, the International Society of Blood Purification, and the Italian Society of Nephrology. He is an Honorary Member of the Czech, Hungarian, Polish, Romanian, and Turkish Societies of Nephrology and an International Distinguished Medalist and recipient of the Garabed Eknoyan Award of the NKF, United States (2006). He is also an honorary fellow of the Royal College of Physicians of London, UK (FRCP). He has been Chairman of the Lombardy Regional Dialysis and Transplantation Registry since 1982. He also serves as Chairman of the board of European Best Practice Guidelines and is on the board of the NKF-Dialysis Outcomes Quality Initiative and the executive board of directors of KDIGO. Dr Locatelli is President- Elect of the World Congress of Nephrology (2009), Subject Editor of Nephrology Dialysis Transplantation, Associate Editor of the Journal of Nephrology, member of the Editorial Board of Journal of the American Society of Nephrology, past Associate Editor of the American Journal of Kidney Diseases (2001 to 2004), and serves as reviewer for a number of journals (including the New England Journal of Medicine and The Lancet). He has authored more than 600 papers in the fields of hypertension, nutrition, and CKD progression; adequacy in dialysis; sodium and other electrolyte balance, immunoglobulin A nephropathy, and anemia. Consultant: Amgen; Dompé Biotec; Hoffman LaRoche; Shire Speaker: Abbott; Amgen; Bayer; Bellco; Bristol-Myers Squibb; Dompé Biotec; Fresenius; Gambro-Hospal; Hoffman LaRoche; Merck Sharp & Dohme; Novartis; Pfizer; Sanofi-Aventis;Shire Grant/Research Support (no personal income):N/A Grant/Research Support (includes personal income): N/A Part-Time Employee: N/A Shares: N/A Iain C. Macdougall, MD, is a combined medical and science graduate of Glasgow University, Scotland, from which he was awarded a First Class Honours BSc in Pharmacology in 1980. For the last 11 years, he has been Consultant Nephrologist and Honorary Senior Lecturer at King's College Hospital in London, UK. He developed both a clinical and a basic science research interest in factors affecting responsiveness to ESAs. He has served on the Working Parties responsible for both the 1999 and the 2004 versions of the European Best Practice Guidelines on Renal Anaemia Management, as well as the KDOQI Anemia Guidelines Work Group. He is a current Council member of the European Renal Association and a past member of the KDIGO Board of Directors. He has coauthored the section on renal anemia for the last 2 editions of the Oxford Textbook of Clinical Nephrology and the current edition of Comprehensive Clinical Nephrology and is a Subject Editor of Nephrology Dialysis Transplantation. Consultant: Affymax;

Amgen; Hoffman La-Roche; Ortho Biotech; Shire Speaker: Amgen; Hoffman LaRoche; Ortho Biotech; Shire Grant/Research Support (no personal income): Affymax; Amgen; Hoffman LaRoche; Ortho Biotech;Shire Grant/Research Support (includes personal income):N/A Part-Time Employee: N/A Shares: N/A Patricia Bargo McCarley, RN, MSN, NP, is a nephrology nurse practitioner at Diablo Nephrology Medical Group in Walnut Creek, CA. Ms McCarley received her BSN and MSN from Vanderbilt University. She is active in the American Nephrology Nurses Association (ANNA), having served on local, regional, and national committees. She is currently a member of the Nephrology Nursing Journal Board. Ms McCarley has authored many publications, including most recently chapters in the 2005 ANNA Nephrology Nursing Standards of Practice and Guidelines for Care and the Contemporary Nephrology Nursing: Principles and Practice (2nd edition). Consultant: N/A Speaker: Amgen Grant/Research Support (no personal income): N/A Grant/Research Support (includes personal income): N/A Part-Time Employee: N/A Shares: N/A Allen R. Nissenson, MD, FACP, is Professor of Medicine and Director of the Dialysis Program at the David Geffen School of Medicine at University of California at Los Angeles (UCLA), where he has developed a comprehensive dialysis program. He is President of the National Anemia Action Council and recently chaired a Chancellor's committee at UCLA on Financial Conflicts of Interest in Clinical Research. He is currently serving on a University of California Task Force on Institutional Conflicts of Interest in Research. Dr Nissenson is Chair of the Faculty Executive Council for the David Geffen School of Medicine at UCLA. He has served as Chair of the Southern California End-Stage Renal Disease (ESRD) Network during its organizational years in the early 1980s and is its recent President- Elect. He is Chair of the Medical Review Board. Dr Nissenson served as a Robert Wood Johnson Health Policy Fellow of the Institute of Medicine from 1994 to 1995. He is Immediate Past President of the Renal Physicians Association and has served as a member of the Advisory Group overseeing the entire NKF-Dialysis Outcomes Quality Initiative. Dr Nissenson's major research interests focus on the quality of care for patients with CKD. His research has included extensive clinical trials of new devices and drugs related to renal disease. Dr Nissenson is co-principal investigator on a recently obtained NIH Center Grant looking at issues of disparities in health care delivery for patients with CKD. He is the author of 2 dialysis textbooks, both in their fourth editions, and was the founding Editor-in-Chief of Advances in Renal Replacement Therapy (currently, Advances in Chronic Kidney Disease), an official journal of the NKF. He currently is Editorin- Chief of Hemodialysis International, the official journal of the International Society for Hemodialysis. He has more than 340 publications in the field of nephrology, dialysis, anemia management, and health care delivery and policy.Among his numerous honors is the President's Award of the NKF. Consultant: Advanced Magnetics; Affymax;Amgen; DaVita; Fibrogen; Hoffman LaRoche;Medgenics; Ortho Biotech; Prometic Speaker:Watson Grant/Research Support (no personal income):Amgen; Hoffman LaRoche; Ortho Biotech Grant/Research Support (includes personal income):N/A Part-Time Employee: N/A Shares: Advanced Magnetics Gregorio T. Obrador, MD, MPH, is Professor of Medicine and Dean at the Universidad Panamericana School of Medicine in Mexico City. He also serves as Adjunct Staff at the Division of Nephrology of the Tufts–New England Medical Center and Assistant Professor of Medicine at the Tufts University School of Medicine in Boston, MA. While doing a clinical research fellowship at the Tufts–New England Medical Center and a Master of Public Health at Harvard University, he began a line of investigation in the area of CKD. Through several publications, he and others showed that the pre-ESRD management of patients with CKD is suboptimal, and that this is an important factor for the high morbidity and mortality observed in these patients. A particular area of interest has been anemia management before the initiation of dialysis therapy. By using population registry data, he and his colleagues have reported trends in anemia and iron management. Dr Obrador has served as reviewer for several journals, including Kidney International, the Journal of the American Society of Nephrology, and the American Journal of Kidney Diseases. He also has been a member of the Advisory Board of the NKFKDOQI. Dr Obrador reported no relevant financial relationships. John C. Stivelman, MD, is Chief Medical Officer of the Northwest Kidney Centers and Associate Professor of Medicine in the Division of Nephrology, Department of Medicine, at the University ofWashington School of Medicine in Seattle. Dr Stivelman obtained his MD from the University of Pennsylvania, completed his residency in Internal Medicine at Harbor-UCLA Medical Center, and nephrology training at Brigham and Women's Hospital. Dr Stivelman has been involved in investigative efforts to optimize hematopoietic therapy for dialysis patients since the phase III recombinant erythropoietin trials in 1986. His major interests and literature contributions center on iron utilization, mechanisms of resistance of erythropoietin therapy, improved dialytic survival in disadvantaged populations, and the interaction of regulatory issues with optimization of care. Dr Stivelman has served as the Chair of the Network 6 Medical Review Board and a member of the Forum of ESRD Networks Board of Directors. He currently serves as medical director of one of Northwest Kidney Centers' free-standing facilities and as a member of the Boards of Directors of the Renal Physicians' Association and the Northwest Renal Network (Network 16). Consultant:Watson Speaker:Watson Grant/Research Support (no personal income):Amgen; Auxilium;Watson Grant/Research Support (includes personal income):N/A Part-Time Employee: N/A Shares: N/A David B. Van Wyck, MD (Work Group Co- Chair), is Professor of Medicine and Surgery at the University of Arizona College of Medicine in Tucson. After completing his undergraduate studies at Washington University, St Louis, Dr Van Wyck earned his MD at the University of Arizona College of Medicine. There, he undertook a research fellowship in Surgical Biology and completed his residency in Internal Medicine and fellowship in Nephrology. Dr Van Wyck has written or contributed to books, book chapters, articles, and abstracts on basic iron metabolism and reticuloendothelial function and on clinical aspects of iron and anemia in

patients with CKD. On the subject of anemia and kidney disease, he pursues research, provides consultation to industry including American Regent, Amgen, and DaVita, Inc, and reviews manuscripts for the major nephrology journals. Dr Van Wyck served on the original KDOQI AnemiaWork Group and assumed Co-Chair responsibilities in 2002. Frequently invited to speak, Dr Van Wyck has lectured on the molecular and cellular control of erythropoiesis and iron homeostasis, diagnostic and treatment issues in anemia and iron management, protocol development in the treatment of dialysis-associated anemia, and new approaches to iron and erythropoietin replacement therapy. Consultant: Affymax; American Regent; Amgen;DaVita; Ortho Biotech/Johnson & Johnson;Vifor Speaker: American Regent; Amgen; DaVita;Ortho Biotech/Johnson & Johnson; Vifor Grant/Research Support (no personal income):N/A Grant/Research Support (includes personal income):American Regent Part-Time Employee: DaVita Shares:N/A Colin T. White, MD, is a pediatric nephrologist at British Columbia (BC) Children's Hospital in Vancouver and clinical assistant professor at the University of BC in Canada. He completed medical school in Ottawa and Pediatrics in London, Ontario. There, he finished 3 years of pediatric nephrology training before moving to Vancouver to complete 3 more years. He has been on staff as a Pediatric Nephrologist since 2003 and is currently the Director of Dialysis at BC Children's Hospital. He has a number of research interests, including medical education, optimizing dialysis care in children, estimation of glomerular filtration rate, and CKD and its complications. Dr White's interest in anemia management is geared towards children. He is presently completing a Masters degree in Medical Education. Dr White is associated with the CKid study and various NAPRTC protocols. Consultant: Hoffman LaRoche Speaker: N/A Grant/Research Support (no personal income):Genzyme Canada Grant/Research Support (includes personal income): N/A Part-Time Employee: N/A Shares: N/A KDOQI Chair, Vice-Chair and ERT Adeera Levin, MD, FACP, is Professor of Medicine and the Co-Chair of the Clinical Investigator Program at the University of British Columbia (UBC). She received her medical degree from McMaster University and nephrology training at the University of Toronto. Dr Levin currently serves as the Director of the Kidney Function Clinic at St Paul's Hospital in Vancouver, Executive Director of the British Columbia Provincial Renal Agency, Curriculum Chair of the Kidney Research Scientist Core Education and National Training program, and KDOQI Chair at the NKF. In addition, she is a member of the KDIGO Executive Committee, International Society of Nephrology Council, and ROFAR Board of Trustees. Her research interests include early kidney disease, anemia, mineral metabolism disorders, cardiovascular diseases, and CKD progression and health outcomes. Dr. Levin is also the recipient of the UBC Martin Hoffman Award for research excellence and the Dean Whitlaw Award for Outstanding Grand Rounds. She is presently on the editorial board of the American Journal of Kidney Diseases and Nephrology Dialysis and Transplantation. Consultant: Hoffman LaRoche Speaker: Abbott; Amgen; Hoffman LaRoche;Merck Frosst; Ortho Biotech Grant/Research Support (no personal income): Abbott; Genzyme; Merck Frosst; Ortho Biotech;Shire Grant/Research Support (includes personal income):N/A Part-Time Employee: N/A Shares: N/A Michael V. Rocco, MD, MSCE, is Professor of Medicine at Wake Forest University in Winston- Salem, NC. He received his MD degree from Vanderbilt University in Nashville, TN, and also served his Internal Medicine residency at Vanderbilt. He completed a nephrology fellowship at the University of Pennsylvania in Philadelphia, PA, and received a master's degree in epidemiology at Wake Forest University. He has been on the faculty of the Wake Forest University School of Medicine since 1991 and currently holds the Vardaman M. Buckalew Jr Chair in Nephrology. He has more than 100 manuscripts and book chapters in the areas of hemodialysis, peritoneal dialysis, nutrition, chronic renal failure, and epidemiology. He has served as the clinical center Principal Investigator at Wake Forest for several NIH trials, including the HEMO Study, the Acute Renal Failure Trial Network, the Dialysis Access Consortium, and the Frequent Hemodialysis Network. Dr. Rocco has served as the Vice-Chair for KDOQI since 2003 and was the Vice-Chair for the NKF-KDOQI Hypertension Work Group. He was also a workgroup member of the Centers for Medicare & Medicaid Services (CMS) ESRD Clinical Performance Measures Quality Improvement Committee and served as the Chair of the peritoneal dialysis subcommittee. Consultant: Amgen; DaVita; Hoffman La-Roche; Renaissance Health Care Speaker: N/A Grant/Research Support (no personal income): N/A Grant/Research Support (includes personal income): N/A Part-Time Employee: N/A Shares: N/A Joseph Lau, MD, is a Professor of Medicine at Tufts University and Program Director, Evidence- based Medicine, NKF Center for CPG Development and Implementation at Tufts New England Medical Center in Boston, MA. Dr Lau completed a fellowship in Clinical Decision Making and Medical Computer Science and he holds a joint appointment as Physician and Clinical Investigator at Tufts. He is also a recipient of the Tufts School of Medicine Distinguished Faculty Award (2003) and an Agency for Healthcare Research and Quality Evidence-Based Practice Center contract. His primary research focus is evidence-based medicine and meta-analyses. Dr Lau reported no relevant financial relationships. Katrin Uhlig, MD, MS, is an Assistant Professor of Medicine at Tufts University and Program Director, Nephrology, NKF Center for CPG Development and Implementation at Tufts-New England Medical Center in Boston, MA. She completed a rheumatology fellowship at Policlinic, Munich University in Germany and a nephrology fellowship at Tufts, where she is currently a Staff Physician, Division of Nephrology. She is Co-Editor of the American Journal of Kidney Diseases. She is a recipient of the German National Merit Foundation scholarship. Her research interests include developing evidence-based CPGs, conducting systematic reviews, performing critical literature appraisal, and teaching evidence-based medicine. Dr Uhlig reported no relevant financial relationships. Amy Earley, BS, is a Research Assistant at the NKF Center for CPG Development and Implementation at Tufts–New England Medical Center in Boston, MA. She assists in the development of evidence-based clinical guidelines and conducts systematic

reviews and critical literature appraisals. Ms Earley reported no relevant financial relationships

1c.21 System Used for Grading the Strength of Guideline Recommendation: Other

1c.22 If other, identify and describe the grading scale with definitions: A modified version of the GRADE criteria was used to grade the strength of the guideline recommendations. The modified language is below.

Strong – It is strongly recommended that clinicians routinely follow the guideline for eligible patients. There is high-quality evidence that the practice results in net medical benefit to the patient.
Moderately strong – It is recommended that clinicians routinely follow this guideline for eligible patients. There is at least moderately high-quality evidence that the practice results in net medical benefit to the patient.
Clinical Practice Recommendation (CPRs) – Based on consensus of the [NKF] Work Group that following the recommendations might improve health outcomes.

1c.23 Grade Assigned to the Recommendation: Clinical Practice Recommendation

1c.24 Rationale for Using this Guideline Over Others: It is the PCPI policy to use guidelines, which are evidence-based, applicable to physicians and other health-care providers, and developed by a national specialty organization or government agency. In addition, the PCPI has now expanded what is acceptable as the evidence base for measures to include documented quality improvement (QI) initiatives or implementation projects that have demonstrated improvement in quality of care.

KDOQI was founded on the principles of structured review of the literature, with data abstraction of pertinent articles. All of the KDOQI guidelines were developed in this manner. Since the first guideline was published, additional refinement and maturation of this process has occurred. This rigorous process of guideline development has been well received as both credible and transparent. National Kidney Foundation. KDOQI Guideline Processed. http://www.kidney.org/professionals/KDOQI/guidelines_process.cfm. Accessed: May 19, 2011.

Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?
1c.25 Quantity: Moderate 1c.26 Quality: Moderate1c.27 Consistency: Moderate

Was the threshold criterion, *Importance to Measure and Report*, met?
(*1a & 1b must be rated moderate or high and 1c yes*) Yes☐ No☐
Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.
For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

2. RELIABILITY & VALIDITY - SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)
Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See guidance on measure testing.

S.1 Measure Web Page *(In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained*). Do you have a web page where current detailed specifications for this measure can be obtained? Yes

S.2 If yes, provide web page URL: www.physicianconsortium.org

2a. RELIABILITY. Precise Specifications and Reliability Testing: H☐ M☐ L☐ I ☐

2a1. Precise Measure Specifications. (*The measure specifications precise and unambiguous.*)

2a1.1 Numerator Statement *(Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome)*:
Calendar months during which patients have a Hemoglobin level <10 g/dL*

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

2a1.2 Numerator Time Window *(The time period in which the target process, condition, event, or outcome is eligible for inclusion)*:
Once during the measurement period.

2a1.3 Numerator Details *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, codes with descriptors, and/or specific data collection items/responses*:
See attached for EHR specifications.

For Claims/Administrative:
Report CPT Category II 3XXXF: Hemoglobin level < 10g/dL

2a1.4 Denominator Statement *(Brief, narrative description of the target population being measured)*:
All calendar months during which patients aged 17 years and younger with a diagnosis of ESRD are receiving hemodialysis or peritoneal dialysis

2a1.5 Target Population Category *(Check all the populations for which the measure is specified and tested if any)*: Children's Health

2a1.6 Denominator Time Window *(The time period in which cases are eligible for inclusion)*:
12 consecutive months

2a1.7 Denominator Details (*All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)*:
See attached for EHR specifications.

For Claims/Administrative: See coding tables attached for coding (ICD-9-CM, ICD-10-CM, CPT)

2a1.8 Denominator Exclusions *(Brief narrative description of exclusions from the target population)*:
Documentation of medical reason(s) for patient having a Hemoglobin level <10g/dL (eg, patients who have non-renal etiologies of anemia [eg, sickle cell anemia or other hemoglobinopathies, hypersplenism, primary bone marrow disease, anemia related to chemotherapy for diagnosis of malignancy, post-operative bleeding, active bloodstream or peritoneal infection], other medical reasons)

2a1.9 Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses)*:
Append modifier to CPT II code 3XXXF-1P

2a1.10 Stratification Details/Variables *(All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses)*:
We encourage the results of this measure to be stratified by race, ethnicity, gender, and primary language, and have included these variables as recommended data elements to be collected.

2a1.11 Risk Adjustment Type *(Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13)*: Other 2a1.12 If "Other," please describe: We account for risk adjustment by inclusion of the exceptions for this measure.

2a1.13 Statistical Risk Model and Variables *(Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.)*:
Exceptions for this measure are listed above, in section 2a1.8.

2a1.14-16 Detailed Risk Model Available at Web page URL (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:

2a1.17-18. Type of Score: Rate/proportion

2a1.19 Interpretation of Score *(Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)*: Better quality = Lower score

2a1.20 Calculation Algorithm/Measure Logic*(Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.)*:
Calculation algorithm is included in data dictionary/code table attachment (2a1.30).

2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:

2a1.24 Sampling (Survey) Methodology. If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):
This measure does not require sampling or a survey.

2a1.25 Data Source *(Check all the sources for which the measure is specified and tested*). If other, please describe:
Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry, Paper Records

2a1.26 Data Source/Data Collection Instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*): N/A

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment:

2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:
Attachment
AMA-PCPI_PKID-3_Hgblessthan10.pdf

2a1.33 Level of Analysis (*Check the levels of analysis for which the measure is specified and tested)*: Clinician : Group/Practice, Clinician : Individual, Clinician : Team

2a1.34-35 Care Setting *(Check all the settings for which the measure is specified and tested)*: Ambulatory Care : Clinician Office, Dialysis Facility, Home Health, Other:Domiciliary, Rest Home, or Custodial Care Services, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility

2a2. Reliability Testing. (*Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability*.)

2a2.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if*

a sample, characteristics of the entities included):
- Four nephrology practice sites representing various types, locations and sizes were identified to participate in testing the measures
  - The number of physicians per site ranged from 5-62 physicians
  - The sites were located in four different regions: Midwestern, Western, Eastern, and Southern
  - Patient visit volume ranged from 240-2,800 ESRD patients seen per month
- Sample size per physician organization ranged from 24-30 (as shown below) for a total of 169 ESRD patients on Peritoneal Dialysis (PD), or Hemodialysis (HD)
  - Site 1: 27 ESRD patients (3 PD patients, 24 HD patients)
  - Site 2 :40 ESRD patients (10 PD patients, 30 HD patients)
  - Site 3 :42 ESRD patients (19 PD patients, 23 HD patients)
  - Site 4 : 60 ESRD patients (30 PD patients, 30 HD patients)
- Sample selection: Data were collected from the medical records of the first up to 35 ESRD patients on each type of dialysis seen at each site after July 1, 2007.
- Data abstraction was completed for multiple patient visits per patient for a total of 2012 patient visits.
- Data abstraction was performed in 2008.

2a2.2 Analytic Method *(Describe method of reliability testing & rationale)*:
Data abstracted from patient records were used to calculate inter-rater reliability for the measure.
Patients were randomly selected from visits for chronic kidney disease
Data analysis included:
- Percent agreement
- Kappa statistic to adjust for chance agreement

2a2.3 Testing Results *(Reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:
Plan of Care for Anemia Measure (N, % Agreement, Kappa (95% Confidence Interval))
2012, 99.45% Agreement, Kappa 0.9860 (0.9778-0.9943)

This measure is highly reliable, as shown in results from the inter-abstractor analysis (above).

2b. VALIDITY. Validity, Testing, including all Threats to Validity: H☐ M☐ L☐ I ☐

2b1.1 Describe how the measure specifications *(measure focus, target population, and exclusions)* are consistent with the evidence cited in support of the measure focus (*criterion 1c)* and identify any differences from the evidence:
The guideline recommendation supporting this measure, focuses on a specific patient population including dialysis and nondialysis patients with CKD receiving ESA therapy. This measure specifically focuses on patients with ESRD who are receiving hemodialysis or peritoneal dialysis. The ESRD population has more severe kidney disease and are usually receiving dialysis. Therefore, the measure development work group thought it would be most beneficial to focus on this subset of patients. Although this measure does not address patients receiving ESA therapy, the same target range of 11.0 to 12.0 g/dL is being used for this patient population. The measure focuses on capturing those patients who do not achieve a Hemoglobin level within this specified target range.

2b2. Validity Testing. (*Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.)*

2b2.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
An expert panel was used to assess face validity of the measure. This panel consisted of 21 members, with representation from the following specialties: nephrology, pediatric nephrology, endocrinology, nursing, methodology, internal medicine, preventive medicine and family medicine.

Louis H. Diamond, MBChB, FCP (SA), FACP, FHIMSS (Work Group Co-Chair) (Nephrology, Methodology) President, Quality Healthcare Consultants, Rockville, MD
Barbara Fivush, MD (Work Group Co-Chair) (Nephrology - Pediatrics) Professor of Pediatrics, Division Chief of Pediatric Nephrology, Johns Hopkins University, Baltimore, MD
Paul M. Palevsky, MD, FACP, FCCD, FASN (Work Group Co-Chair) (Nephrology - Adult) Professor of Medicine, University of Pittsburgh School of Medicine, Chief, Renal Section, VA Pittsburgh Healthcare System, Pittsburgh, PA

Eileen D. Brewer, MD (Nephrology - Pediatrics) Professor and Head, Pediatric Renal Section, Baylor College of Medicine Chief, Renal Service, Texas Children´s Hospital, Houston, TX
John W. Foreman, MD (Nephrology - Pediatrics) Department of Pediatrics, Professor of Pediatrics, Duke University, Durham, NC
Richard S. Goldman, MD (Nephrology - Adult, Methodology) Nephrology and Internal Medicine, Albuquerque, NM
Stuart L. Goldstein, MD (Nephrology - Pediatrics) Director, Center for Acute Care Nephrology, Cincinnati Children's Hospital Medical Center; Medical Director, Pheresis Service, Professor of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, OH
John Hartman, MD (Nephrology - Adult) CEO, Visonex, LLC, Treasurer, Wisconsin Medical Society, Green Bay, WI
Richard Hellman, MD, FACP, FACE (Endocrinology, Methodology) Clinical Professor of Medicine, University of Missouri-Kansas City School of Medicine, Private Practice, Diabetes & Endocrinology, North Kansas City, MO
Jean L. Holley, MD, FACP (Nephrology - Adult) Clinical Professor of Medicine, University of Illinois, Urban-Champaign and Carle Physician Group, Urbana, IL
Edward R. Jones, MD (Nephrology - Adult) Self-Employed, Delaware Valley Nephrology Associates, Philadelphia, PA
Karen M. Kolbusz, RN, BSN, MBA, (Nursing, Joint Commission Liaison) Associate Project Director, The Joint Commission, Oakbrook Terrace, IL
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2b2.2 Analytic Method *(Describe method of validity testing and rationale; if face validity, describe systematic assessment)*:
Face validity of the measure score as an indicator of quality was systematically assessed as follows:

After the measure was fully specified, the expert panel (workgroup membership) was asked to rate their agreement with the following statement:

Please rate your agreement with the following statement for each measure- the scores obtained from the measure as specified will accurately differentiate quality across providers.

Scale 1-5, where 1=Strongly Disagree; 3=Neither Disagree nor Agree; 5=Strongly Agree

2b2.3 Testing Results *(Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment)*:
The results of the expert panel rating of the validity statement were as follows:
N =19; Mean rating = 4.37

Frequency Distribution of Ratings
1 - 1 (Strongly Disagree)
2 - 0
3 - 1 (Neither Disagree nor Agree)
4 - 6
5 - 11 (Strongly Agree)

POTENTIAL THREATS TO VALIDITY. (*All potential threats to validity were appropriately tested with adequate results.*)

2b3. Measure Exclusions. (*Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.*)

2b3.1 Data/Sample for analysis of exclusions *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
- At the time of testing, this measure did not have exclusions.

2b3.2 Analytic Method (*Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference)*:
- At the time of testing, this measure did not have exclusions.

2b3.3 Results *(Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):*
- At the time of testing, this measure did not have exclusions.

2b4. Risk Adjustment Strategy. (*For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.*)

2b4.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
We account for risk adjustment by inclusion of the exceptions for this measure.

2b4.2 Analytic Method (*Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables)*:
We account for risk adjustment by inclusion of the exceptions for this measure.

2b4.3 Testing Results *(Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata)*:
We account for risk adjustment by inclusion of the exceptions for this measure. These exceptions are newly added and were not included in existing testing data.

2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: N/A

2b5. Identification of Meaningful Differences in Performance. (*The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.*)

2b5.1 Data/Sample *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
PCPI Testing Project:
- Four nephrology practice sites representing various types, locations and sizes were identified to participate in testing the measures.
  - The number of physicians per site ranged from 5-62 physicians.
  - The sites were located in four different regions: Midwestern, Western, Eastern, and Southern.
  - Patient visit volume ranged from 240-2,800 ESRD patients seen per month.
- Sample size per physician organization ranged from 24-30 (as shown below) for a total of 169 ESRD patients on Peritoneal Dialysis (PD), or Hemodialysis (HD).
  - Site 1: 27 ESRD patients (3 PD patients, 24 HD patients)
  - Site 2 :40 ESRD patients (10 PD patients, 30 HD patients)
  - Site 3 :42 ESRD patients (19 PD patients, 23 HD patients)
  - Site 4 : 60 ESRD patients (30 PD patients, 30 HD patients)
- Sample selection: Data were collected from the medical records of the first up to 35 ESRD patients on each type of dialysis seen at each site after July 1, 2007.
- Data abstraction was completed for multiple patient visits per patient for a total of 2012 patient visits.
- Data abstraction was performed in 2008.

CMS Physician Quality Reporting Initiative 2008:
"Plan of Care for ESRD Patients with Anemia" (Measure #80)

There were 179,197 eligible instances reported in the clinical performance denominator for the 2008 program. The mean clinical performance rate was 90.55% with 676 eligible professionals submitting information for the measure.

2b5.2 Analytic Method *(Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance)*:
The inter-quartile range (IQR) was calculated, which provides a measure of the dispersion of performance.

2b5.3 Results *(Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:
PCPI Testing Project Results:
Scores on this measure: N = 2012 Mean = 74 % Range = 61%-94%

CMS Physician Quality Reporting Initiative:
This measure was used in the CMS Physician Quality Reporting Initiative, in the claims option and the registry option (2008).

There is a gap in care as shown by this 2008 data; 36.51% of patients reported on did not receive the optimal care.
10th percentile: 10.42%
25th percentile: 38.17%
50th percentile: 66.23%
75th percentile: 84.04%
90th percentile: 94.93%

The inter-quartile range (IQR) provides a measure of the dispersion of performance. The IQR is 45.9, and indicates that 50% of physicians have performance on this measure ranging from 38.17% and 84.04%. A quarter of reporting physicians have performance on this measure which is greater than 84.04%, while a quarter have performance on this measure less than 38.17%.

Confidential CMS PQRI 2008 Performance Information by Measure. Jan-Sept TAP file.

2b6. Comparability of Multiple Data Sources/Methods. (*If specified for more than one data source, the various approaches result in comparable scores.*)

2b6.1 Data/Sample *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included)*:
PCPI Testing Project:
- Two nephrology practice sites representing various types, locations and sizes which participated in the CMS PQRI Project in 2007 were identified to participate in testing the measures
- Sample size across the two physician offices as 314 patient visits
- Sample selection: Data were collected from the medical records of the first up to 35 ESRD patients on each type of dialysis seen at each site after July 1, 2007.
- Data abstraction was performed in 2008

2b6.2 Analytic Method *(Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure)*:
Data abstracted from patient records were used to calculate parallel-forms reliability for the measure.
Patients were randomly selected from visits for ESRD
Data analysis included:
- Percent agreement
- Kappa statistic to adjust for chance agreement

2b6.3 Testing Results *(Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted)*:

Plan of Care for Anemia Measure (N, % Agreement)
314, 58.3% Agreement

It should be noted that there were instances where the wrong quality data code was inserted on the claim based on the documented laboratory results available. This was likely due to the process of some dialysis facilities' practice of routine billing the first of every month. This would cause a June bill to refer to laboratory results from May. This test was run in the first year of the program implementation which may have affected results as well.

2c. Disparities in Care: H☐ M☐ L☐ I ☐ NA☐ (*If applicable, the measure specifications allow identification of disparities.*)

2c.1 If measure is stratified for disparities, provide stratified results *(Scores by stratified categories/cohorts)*: We encourage the results of this measure to be stratified by race, ethnicity, gender, and primary language, and have included these variables as recommended data elements to be collected.

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:
The PCPI advocates that performance measure data should, where possible, be stratified by race, ethnicity, and primary language to assess disparities and initiate subsequent quality improvement activities addressing identified disparities, consistent with recent national efforts to standardize the collection of race and ethnicity data. A 2008 NQF report endorsed 45 practices including stratification by the aforementioned variables.(1) A 2009 IOM report "recommends collection of the existing Office of Management and Budget (OMB) race and Hispanic ethnicity categories as well as more fine-grained categories of ethnicity(referred to as granular ethnicity and based on one's ancestry) and language need (a rating of spoken English language proficiency of less than very well and one's preferred language for health-related encounters)."(2)

References:
(1)National Quality Forum Issue Brief (No.10). Closing the Disparities Gap in Healthcare Quality with Performance Measurement and Public Reporting. Washington, DC: NQF, August 2008.

(2)Race, Ethnicity, and Language Data: Standardization for Health Care Quality Improvement. March 2010. AHRQ Publication No. 10-0058-EF. Agency for Healthcare Research and Quality, Rockville, MD. Available at: http://www.ahrq.gov/research/iomracereport. Accessed May 25, 2010.

2.1-2.3 Supplemental Testing Methodology Information:

Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met?
(*Reliability and Validity must be rated moderate or high*) Yes☐ No☐
Provide rationale based on specific subcriteria:

If the Committee votes No, STOP

3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)

C.1 Intended Purpose/ Use *(Check all the purposes and/or uses for which the measure is intended)*: Professional Certification or Recognition Program, Public Reporting, Quality Improvement (Internal to the specific organization)

3.1 Current Use *(Check all that apply; for any that are checked, provide the specific program information in the following questions)*: Public Reporting, Professional Certification or Recognition Program, Quality Improvement (Internal to the specific organization)

3a. Usefulness for Public Reporting: H☐ M☐ L☐ I ☐
(*The measure is meaningful, understandable and useful for public reporting.*)

3a.1. Use in Public Reporting - disclosure of performance results to the public at large *(If used in a public reporting program, provide name of program(s), locations, Web page URL(s)).* If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: [*For Maintenance – If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.*]
The PCPI, RPA, and ASPN believe that the reporting of participation information is a beneficial first step on a trajectory toward the public reporting of performance results, which is appropriate since the measure has been tested and the reliability of the performance data has been validated. This measure is intended for use in public reporting, in the future. NQF endorsement will facilitate our ongoing progress toward this public reporting objective.

3a.2.Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting. If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results: The PCPI, RPA, and ASPN believe that the reporting of participation information is a beneficial first step on a trajectory toward the public reporting of performance results, which is appropriate since the measure has been tested and the reliability of the performance data has been validated. NQF endorsement will facilitate our ongoing progress toward this public reporting objective.

3.2 Use for other Accountability Functions (payment, certification, accreditation). If used in a public accountability program, provide name of program(s), locations, Web page URL(s): This measure may be used in a Maintenance of Certification program.

3b. Usefulness for Quality Improvement: H☐ M☐ L☐ I ☐
(*The measure is meaningful, understandable and useful for quality improvement.*)

3b.1. Use in QI. If used in quality improvement program, provide name of program(s), locations, Web page URL(s):
[*For Maintenance – If not used for QI, indicate the reasons and describe progress toward using performance results for improvement*].
All PCPI measures are suitable for use in quality improvement initiatives and are made freely available on the PCPI website and through the implementation efforts of medical specialty societies and other PCPI members. The PCPI strongly encourages the use of its measures in QI initiatives and seeks to provide information on such initiatives to PCPI members.

3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement. If usefulness was demonstrated *(e.g., QI initiative),* describe the data, method and results:
The PCPI, RPA and ASPN believe that the use of PCPI measures in quality improvement initiatives is a beneficial way to gather scientific data with which to improve physician performance. This is appropriate since the measure has been tested and the reliability of the performance data has been validated. NQF endorsement will facilitate our ongoing progress toward this quality improvement objective.

Overall, to what extent was the criterion, *Usability*, met? H☐ M☐ L☐ I ☐
Provide rationale based on specific subcriteria:

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)

4a. Data Generated as a Byproduct of Care Processes: H☐ M☐ L☐ I ☐

4a.1-2 How are the data elements needed to compute measure scores generated? *(Check all that apply).*
Data used in the measure are:
generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition

4b. Electronic Sources: H☐ M☐ L☐ I ☐

4b.1 Are the data elements needed for the measure as specified available electronically *(Elements that are needed to compute measure scores are in defined, computer-readable fields)*: ALL data elements in electronic health records (EHRs)

4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources:

4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H☐ M☐ L☐ I ☐

4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:
We are not aware of any unintended consequences related to this measurement.

4d. Data Collection Strategy/Implementation: H☐ M☐ L☐ I ☐

A.2 Please check if either of the following apply (*regarding proprietary measures*):
4d.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues *(e.g., fees for use of proprietary measures)*:
The original measure was very similar to the updated measure. The original measure combined the outcome measure with a plan of care measure, while the updated measure split these two out. Additionally, the original measure had different hemoglobin cut-off values. There is no reason to think that a different hemoglobin cut-off value would change the measure testing results.
Finally, the best practices of care is the same in both pediatric and adult populations.

Overall, to what extent was the criterion, *Feasibility*, met? H☐ M☐ L☐ I ☐
Provide rationale based on specific subcriteria:

OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement? Yes☐ No☐
Rationale:

If the Committee votes No, STOP.
If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

5. COMPARISON TO RELATED AND COMPETING MEASURES

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure before a final recommendation is made.

5.1 If there are related measures *(either same measure focus or target population)* or competing measures *(both the same measure focus and same target population*), list the NQF # and title of all related and/or competing measures:

5a. Harmonization

5a.1 If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?

5a.2 If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden:

5b. Competing Measure(s)

5b.1 If this measure has both the same measure focus and the same target population as NQF-endorsed measure(s): Describe why this measure is superior to competing measures *(e.g., a more valid or efficient way to measure quality);* OR provide a rationale for the additive value of endorsing an additional measure. *(Provide analyses when possible)*:
There is a competing measure that is currently out for NQF vote.

Our measure is specified at the clinician level, but measure results can be aggregated at a higher level of measurement.

We have developed and will maintain specifications for multiple data sources, including Electronic Health Records (EHRs) and Claims-Based Reporting. Our specifications for EHRs are developed in accordance with the terminology standards (eg, SNOMED, RxNorm, LOINC) named in the Meaningful Use Program (CMS EHR Incentive Program).

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner): American Medical Association - Physician Consortium for Performance Improvement, 515 N. State St., Chicago, Illinois, 60654

Co.2 Point of Contact: Mark, Antman, DDS, MBA, mark.antman@ama-assn.org, 312-464-5056-

Co.3 Measure Developer if different from Measure Steward: American Medical Association - Physician Consortium for Performance Improvement, 515 N. State St., Chicago, Illinois, 60654

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Co.5 Submitter: Diedra, Joseph, MPH, diedra.joseph@ama-assn.org, 312-464-4904-, American Medical Association - Physician Consortium for Performance Improvement

Co.6 Additional organizations that sponsored/participated in measure development:
Renal Physicians Association, American Society of Pediatric Nephrology

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ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development

Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

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Alvin H. Moss, MD (Nephrology - Adult) Professor of Medicine, West Virginia University, Morgantown, WV
Sharon A. Perlman, MD (Nephrology - Pediatrics) USF Pediatric Nephrology, All Children´s Hospital, St. Petersburg, FL
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Bradley Warady, MD (Nephrology - Pediatrics) Chief, Pediatric Nephrology, Children´s Mercy Hospitals and Clinics, Kansas City, MO
Steven J. Wassner, MD, FAAP (Nephrology - Pediatrics) Professor of Pediatrics, Vice-Chair for Education, Chief, Division of Nephrology & Hypertension, Hershey, PA
Jerry Yee, MD (Nephrology - Adult) Division Head, Nephrology and Hypertension, Henry Ford Hospital, Detroit, MI

PCPI measures are developed through cross-specialty, multi-disciplinary work groups. All medical specialties and other health care professional disciplines participating in patient care for the clinical condition or topic under study are invited to participate as equal contributors to the measure development process. In addition, the PCPI strives to include on its work groups individuals representing the perspectives of patients, consumers, private health plans, and employers. This broad-based approach to measure development ensures buy-in on the measures from all stakeholders and minimizes bias toward any individual specialty or stakeholder group. All work groups have at least two co-chairs who have relevant clinical and/or measure development expertise and who are responsible for ensuring that consensus is achieved and that all perspectives are voiced.

Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward: This is a new measure submission.

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.3 Year the measure was first released:
Ad.4 Month and Year of most recent revision:
Ad.5 What is your frequency for review/update of this measure? Every 3 years or as new evidence becomes available that materially affects the measures.
Ad.6 When is the next scheduled review/update for this measure?

Ad.7 Copyright statement: Physician Performance Measures (Measures) and related data specifications have been developed by the American Medical Association (AMA) convened Physician Consortium for Performance Improvement® (PCPI™).

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Ad.8 Disclaimers:

Ad.9 Additional Information/Comments: The next scheduled review/update for this measure will be in 2014.

The following updates were made on 11/09/11:

Specifications:
2a1.35 "Other" care settings added

Importance:
1b.2 Added pediatric performance gap data
1b.3 Added citation for pediatric performance gap data

Date of Submission (*MM/DD/YY*): 06/08/2011

PCPI eSpecification

Clinical Topic	**Pediatric Kidney Disease**
Measure Title	**ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL**
Measure #	**PKID-3**
Measure Description	Percentage of calendar months within a 12-month period during which patients aged 17 years and younger with a diagnosis of ESRD receiving hemodialysis or peritoneal dialysis have a hemoglobin (Hgb) level <10 g/dL Note: For this measure, a lower score indicates higher quality
Measurement Period	Twelve consecutive months
Initial Patient Population	Patient Age: Patient aged 17 years and younger starts before the start of the measurement period Diagnosis Active: Patient has a diagnosis of ESRD starts before or during the measurement period Procedure Performed: Patient receiving hemodialysis or peritoneal dialysis during the measurement period
Denominator Statement	All calendar months during which patients aged 17 years and younger with a diagnosis of ESRD are receiving hemodialysis or peritoneal dialysis
Numerator Statement	Calendar months during which patients have a hemoglobin (Hgb) level <10 g/dL* *The hemoglobin value used for this measure should be the most recent (last) hemoglobin result recorded for each calendar month
Denominator Exceptions	Documentation of medical reason(s) for patient having a hemoglobin (Hgb) level <10g/dL (eg, patients who have non-renal etiologies of anemia [eg, sickle cell anemia or other hemoglobinopathies, hypersplenism, primary bone marrow disease, anemia related to chemotherapy for diagnosis of malignancy, post-operative bleeding, active bloodstream or peritoneal infection], other medical reasons)

Pediatric Kidney Disease
DRAFT Data Elements for PCPI eSpecification
Measure #3: ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

QDM* Standard Category	QDM* Data Type	Standard Terminology	Constraints	Value Set Name	Value of Data Element	Data Source	Comments
Measure Timing	N/A	N/A	TBD by Measure Implementer	Measurement Start Date			
Measure Timing	N/A	N/A	12 months from Measurement Start Date	Measurement End Date			
Individual Characteristic	Patient Characteristic	TBD	during measurement period	Gender		• Electronic Administrative Claims • Electronic Health Record (EHR)	This data element is collected for the purpose of stratifying results in an effort to highlight disparities.
Individual Characteristic	Patient Characteristic	TBD	during measurement period	Race		• Electronic Health Record (EHR)	This data element is collected for the purpose of stratifying results in an effort to highlight disparities.
Individual Characteristic	Patient Characteristic	TBD	during measurement period	Ethnicity		• Electronic Health Record (EHR)	This data element is collected for the purpose of stratifying results in an effort to highlight disparities.
Individual Characteristic	Patient Characteristic	TBD	during measurement period	Primary Language		• Electronic Health Record (EHR)	This data element is collected for the purpose of stratifying results in an effort to highlight disparities.
Individual Characteristic	Patient Characteristic	LN	starts before the start of measurement period	Date of birth		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Individual Characteristic	Patient Characteristic	Calculated	starts before the start of measurement period	Age	≤ 17	• Electronic Administrative Claims • Electronic Health Record (EHR)	Measurement start date minus Date of Birth must be greater than or equal to 18 years.
Condition / Diagnosis / Problem	Diagnosis, Active	I9, I10, SNM	starts before or during measurement period	End Stage Renal Disease (ESRD)		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Procedure	Procedure, Performed	SNM, CPT	during measurement period	Hemodialysis		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Procedure	Procedure, Performed	SNM, CPT	during measurement period	Peritoneal Dialysis		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Laboratory Test	Laboratory Test, Performed	LN, CPT	during each calendar month during measurement period	Hemoglobin		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Laboratory Test	Laboratory Test, Result	LN, CPT	most recent (last) result during calendar month during measurement period	Hemoglobin	<10 g/dL	• Electronic Administrative Claims • Electronic Health Record (EHR)	This will be the most recent (last) result available at the time of reporting during the calendar month.
Negation Rationale	Laboratory Test, Result Not Achieved	SNM	during measurement period	Medical reason(s)		• Electronic Health Record (EHR)	
Condition / Diagnosis / Problem	Diagnosis, Active	I9, I10, SNM	starts before or during measurement period	Sickle cell anemia		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Condition / Diagnosis / Problem	Diagnosis, Active	I9, I10, SNM	starts before or during measurement period	Hemoglobinopathies		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Condition / Diagnosis / Problem	Diagnosis, Active	I9, I10, SNM	starts before or during measurement period	Hypersplenism		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Condition / Diagnosis / Problem	Diagnosis, Active	I9, I10, SNM	starts before or during measurement period	Primary bone marrow disease		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Condition / Diagnosis / Problem	Diagnosis, Active	I9, I10, SNM	starts before or during measurement period	Anemia Due to Chemotherapy		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Condition / Diagnosis / Problem	Diagnosis, Active	I9, I10, SNM	starts before or during measurement period	Blood Loss due to Major Surgery		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Condition / Diagnosis / Problem	Diagnosis, Active	I9, I10, SNM	starts before or during measurement period	Peritoneal Infection		• Electronic Administrative Claims • Electronic Health Record (EHR)	
Condition / Diagnosis / Problem	Diagnosis, Active	I9, I10, SNM	starts before or during measurement period	Bloodstream Infection		• Electronic Administrative Claims • Electronic Health Record (EHR)	

**For this measure, a lower score indicates a higher quality.

*The Quality Data Model (QDM), Version 2.1, was developed by National Quality Forum (NQF).

PCPI eSpecification

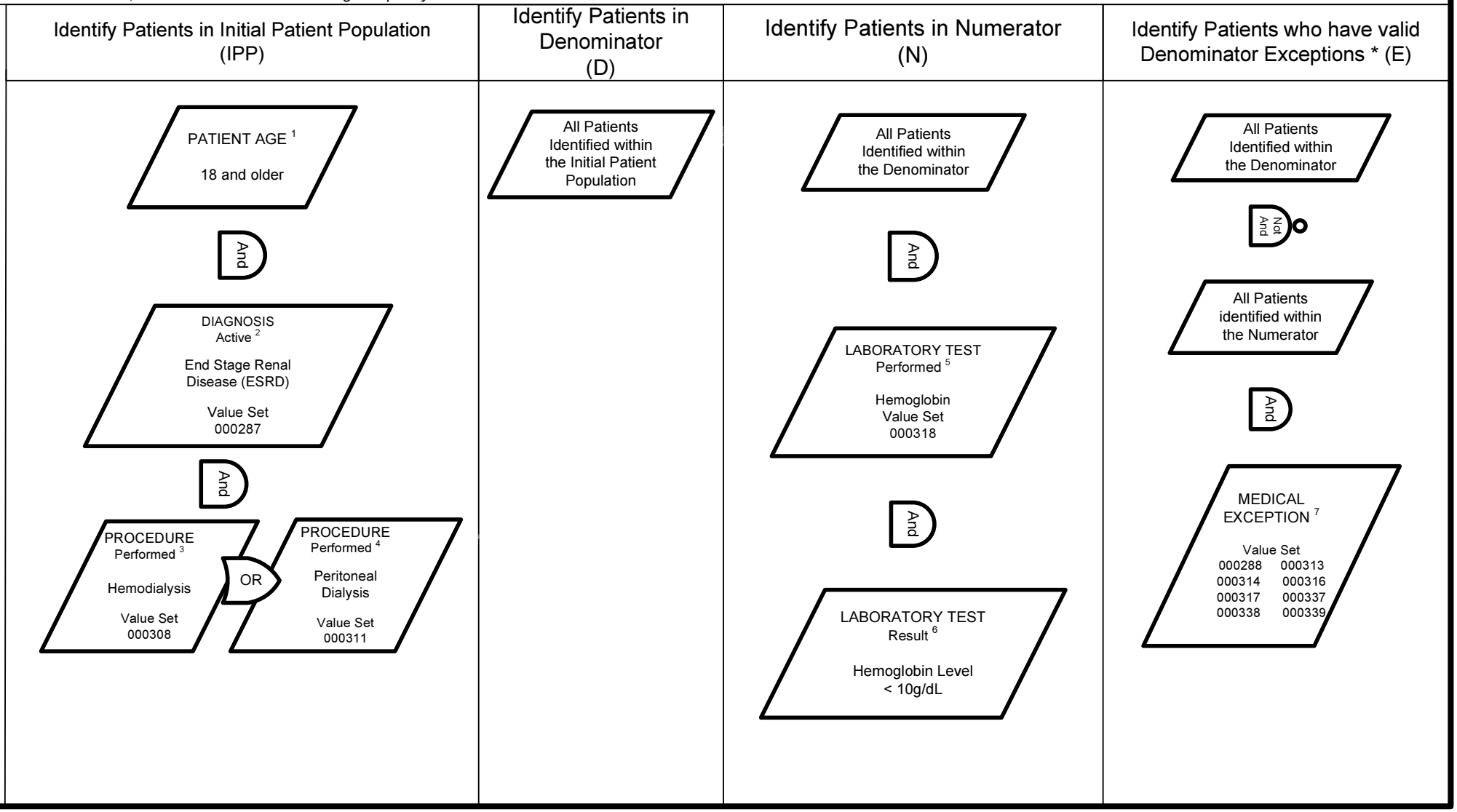
Measure Logic for Adult Kidney Disease : ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

Measure Description: Percentage of calendar months within a 12-month period during which patients aged 17 years and younger with a diagnosis of ESRD receiving hemodialysis or peritoneal dialysis have a hemoglobin (Hgb) level <10 g/dL

Measurement Period: 12 Consecutive Months

PCPI Measure #: PKID-3

●*For this measure, a lower score indicates a higher quality.*



PARAMETER SPECIFICATIONS (Value Sets are found in the Coding Appendices):

IPP: [1] Patient Age: measurement start date minus birth date (value set 000307) ≤ 17 years starts before the start of measurement period; [2] Diagnosis, Active: starts before or during measurement period; [3 4] Procedure, Performed: during measurement period;

N: [5] Laboratory Test, Performed: during each calendar month during measurement period; [6] Laboratory Test, Result: most recent (last) result during calendar month < 10g/dL, during measurement period;

E: [7] Medical Exception: value set 000288 during measurement period – all other value sets in (E) starts before or during measurement period;

*Coded examples are NOT intended to be an exhaustive list. Exceptions will vary for each patient and situation.

Basic Measure Calculation:

$$\frac{(N)}{(D) - (E)} = \%$$

The PCPI strongly recommends that exception rates also be computed and reported alongside performance rates as follows:

Exception Calculation:

$$\frac{(E)}{(D)} = \%$$

Exception Types:
E= E1 (Medical Exceptions) + E2 (Patient Exceptions) + E3 (System Exceptions)
For patients who have more than one valid exception, only one exception should be be counted when calculating the exception rate

Initial Patient Population (IPP)	Denominator (D)	Numerator (N)	Denominator Exceptions (E)
Definition: The initial patient population identifies the general group of patients that the performance measureis designed to address; usually focused on a specific clinical condition (e.g., coronary artery disease, asthma). For example, a patient aged 18 years and older with a diagnosis of CADwho has at least 2 Visits during the measurement period.	**Definition:** The denominator defines the specific group of patients for inclusion in a specific performance measure based on specific criteria (e.g., patient's age, diagnosis, prior MI). In some cases, the denominator may be I dentical to the initial patient population.	**Definition:** The numerator defines the group of patients in the denominator for whom a process or outcome of care occurs (e.g., flu vaccine received).	**Definition:** Denominator exceptions are the valid reasons why patients who are included in the denominator population did not receive a process or outcome of care (described in the numerator). Patients may have Denominator Exceptions for medical reasons (e.g., patient has an egg allergy so they did not receive flu vaccine); patient reasons (e.g., patient declined flu vaccine); or system reasons (e.g., patient did not receive flu Vaccine due to vaccine shortage). These cases are removed from the denominator population for the performance calculation, however the number of patients with valid exceptions should be calculated and reported. This group of patients constitutes the Denominator Exception reporting population – patients for whom the numerator was not achieved and a there is a valid Denominator Exception.
Find the patients who meet the Initial Patient Population criteria (IPP)	Find the patients who qualify for the denominator (D): o From the patients within the Patient Population criteria (IPP) select those people who meet Denominator selection criteria. (In some cases the IPP and D are identical).	Find the patients who qualify for the Numerator (N): o From the patients within the Denominator (D) criteria, select those people who meet Numerator selection criteria. o Validate that the number of patients in the numerator is less than or equal to the number of patients in the denominator	From the patients who did not meet the Numerator criteria, determine if the patient meets any criteria for the Denominator Exception (E1 + E2+E3). If they meet any criteria, they should be removed from the Denominator for performance calculation. As a point of reference, these cases are removed from the denominator population for the performance calculation, however the number of patients with valid exceptions should be calculated and reported.

PEDIATRIC KIDNEY DISEASE
Coding Spreadsheet for PCPI eSpecification
PKID-3 : ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000307	PKID	3	IPP	Birth Date	Individual Characteristic	LN	21112-8	Birth date: TmStp:Pt:^Patient:Qn:
000287	PKID	3	IPP	End Stage Renal Disease (ESRD)	Condition / Diagnosis / Problem	I9	585.6	End Stage Renal Disease [Chronic Kidney Disease, Stage V (requiring chronic dialysis)]
000287	PKID	3	IPP	End Stage Renal Disease (ESRD)	Condition / Diagnosis / Problem	I10	N18.6	End Stage Renal Disease (chronic kidney disease requiring chronic dialysis)
000287	PKID	3	IPP	End Stage Renal Disease (ESRD)	Condition / Diagnosis / Problem	SNM	46177005	end stage renal disease
000287	PKID	3	IPP	End Stage Renal Disease (ESRD)	Condition / Diagnosis / Problem	SNM	236435004	end stage renal failure on dialysis
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90957	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90958	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90959	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90960	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90961	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90962	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90965	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90966	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90969	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90970	
000308	PKID	3	IPP	Hemodialysis	Procedure	CPT	90989	
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	302497006	Hemodialysis
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	233578004	Continuous hemodialysis
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	233579007	Continuous arteriovenous hemodialysis
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	233580005	Continuous venovenous hemodialysis
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	427053002	Extracorporeal albumin hemodialysis
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	67970008	Hemodialysis, maintenance at home
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	68341005	Hemodialysis, supervision at home
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	57274006	Initial hemodialysis
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	233575001	Intermittent hemodialysis
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	233576000	Intermittent hemodialysis with sequential ultrafiltration
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	233577009	Intermittent hemodialysis with continuous ultrafiltration
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	11932001	Stabilizing hemodialysis
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	233589006	continuous arteriovenous hemodiafiltration
000308	PKID	3	IPP	Hemodialysis	Procedure	SNM	233590002	continuous venovenous hemodiafiltration
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90945	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90947	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90957	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90958	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90959	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90960	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90961	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90962	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90965	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90966	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90969	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90970	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	CPT	90989	
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	71192002	peritoneal dialysis
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	428648006	automated peritoneal dialysis
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	225230008	chronic peritoneal dialysis
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	238318009	continuous ambulatory peritoneal dialysis
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	238319001	continuous cycling peritoneal dialysis
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	238321006	intermittent peritoneal dialysis
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	238323009	night-time intermittent peritoneal dialysis
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	73257006	peritoneal dialysis catheter maintenance

PEDIATRIC KIDNEY DISEASE
Coding Spreadsheet for PCPI eSpecification
PKID-3 : ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	14684005	peritoneal dialysis excluding cannulation
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	676002	peritoneal dialysis including cannulation
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	225231007	stab peritoneal dialysis
000311	PKID	3	IPP	Peritoneal Dialysis	Procedure	SNM	238322004	tidal peritoneal dialysis
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	10346-5	Hemoglobin A
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	14775-1	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	20509-6	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	30313-1	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	30350-3	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	30351-1	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	30352-9	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	30353-7	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	30354-5	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	33025-8	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	33026-6	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	33509-1	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	35183-3	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	40719-7	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	43113-0	Hemoglobin panel
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	42810-2	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4588-0	Hemoglobin H/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	44920-7	Hemoglobin C/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	44921-5	Hemoglobin D/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	44922-3	Hemoglobin E/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	44923-1	Hemoglobin S/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4534-4	Cyanmethemoglobin/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4683-9	Sulfhemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4536-9	Deoxyhemoglobin/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4546-8	Hemoglobin A/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4547-6	Hemoglobin A1/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4550-0	Hemoglobin A2
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4551-8	Hemoglobin A2/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4552-6	Hemoglobin A2/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4553-4	Hemoglobin A2/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4554-2	Hemoglobin A2/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4555-9	Hemoglobin A3/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4561-7	Hemoglobin C/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4562-5	Hemoglobin C/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4563-3	Hemoglobin C/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4569-0	Hemoglobin D/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4571-6	Hemoglobin D-Punjab
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4580-7	Hemoglobin F1/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4573-2	Hemoglobin E/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4574-0	Hemoglobin E/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4575-7	Hemoglobin E/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4576-5	Hemoglobin F/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4578-1	Hemoglobin F-Texas
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4582-3	Hemoglobin G-Coushatta
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4587-2	Hemoglobin H/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4625-0	Hemoglobin S/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4633-4	Hemoglobin F/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4635-9	Hemoglobin.free
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4636-7	Hemoglobin.free

PEDIATRIC KIDNEY DISEASE
Coding Spreadsheet for PCPI eSpecification
PKID-3 : ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4638-3	Hemoglobin.thermolabile/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	46423-0	Hemoglobin distribution width
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	4685-4	Sulfhemoglobin/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	48343-8	Hemoglobin.other/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	47278-7	Erythrocyte mean corpuscular hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	47279-5	Erythrocyte mean corpuscular hemoglobin concentration
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	48711-6	Hemoglobin.free^post transfusion reaction
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	48725-6	Hemoglobin^pre therapeutic phlebotomy
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	49137-3	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	50559-4	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	50765-7	Hemoglobin Hasharon/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	51196-4	Hemoglobin A1/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	51613-8	Hemoglobin J/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	51614-6	Hemoglobin M/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	51615-3	Hemoglobin A2+C/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	51616-1	Hemoglobin A2+E/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	53223-4	Hemoglobin G/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	53553-4	Estimated average glucose
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	53857-9	Hemoglobin F
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	54068-2	Hemoglobin O-Arab/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	54069-0	Hemoglobin Barts/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	54070-8	Hemoglobin D/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	54071-6	Hemoglobin E/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	54072-4	Hemoglobin A/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	54073-2	Hemoglobin C/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	54074-0	Hemoglobin F/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	54209-2	Hemoglobin C-Harlem/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	54289-4	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	55370-1	Hemoglobin A2+C+E+O/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	55371-9	Hemoglobin A2+E+O/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	55372-7	Hemoglobin Constant Spring/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	55373-5	Hemoglobin D+G/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	55374-3	Hemoglobin N+I/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	55782-7	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	55942-7	Methemoglobin/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	56040-9	Methemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	56476-5	Hemoglobin S/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	58453-2	Hemoglobin.gastrointestinal
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	5913-9	Hemoglobin F/Hemoglobin.total
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	59260-0	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	59467-1	Erythrocyte mean corpuscular hemoglobin concentration
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	59468-9	Erythrocyte mean corpuscular hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	61180-6	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	62243-1	Erythrocyte mean corpuscular hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	62246-4	Erythrocyte mean corpuscular hemoglobin concentration
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	718-7	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	719-5	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	721-1	Hemoglobin.free
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	722-9	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	723-7	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	724-5	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	726-0	Hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	727-8	Hemoglobin distribution width

PEDIATRIC KIDNEY DISEASE
Coding Spreadsheet for PCPI eSpecification
PKID-3 : ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	785-6	Erythrocyte mean corpuscular hemoglobin
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	786-4	Erythrocyte mean corpuscular hemoglobin concentration
000318	PKID	3	N	Hemoglobin	Laboratory Test	LN	9749-3	Hemoglobin F
000288	PKID	3	E	Medical Exception	Negation Rationale	SNM	501000124106	Exclusion from performance measure for medical reason (finding)
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.41	Sickle-cell thalassemia without crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.42	Sickle-cell thalassemia with crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.49	Other Thalassemia
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.5	Sickle-cell Trait
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.60	Sickle-cell disease, Unspecified
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.61	Hb-SS disease without crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.62	Hb-SS disease with crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.63	Sickle-cell/Hb-C Disease without Crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.64	Sickle-cell/Hb-C Disease with Crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.68	Other Sickle-cell disease without Crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I9	282.69	Other Sickle-cell disease with Crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.00	Hb-SS disease with crisis, unspecified
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.01	Hb-SS disease with acute chest syndrome
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.02	Hb-SS disease with splenic sequestration
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.1	Sickle-cell disease without crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.20	Sickle-cell/Hb-C Disease without Crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.211	Sickle-cell/Hb-C Disease with acute chest syndrome
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.212	Sickle-cell/Hb-C Disease with splenic sequestration
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.219	Sickle-cell/Hb-C Disease with crisis, unspecified
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.3	Sickle-cell trait
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.40	Sickle-cell thalassemia without crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.411	Sickle-cell thalassemia with acute chest syndrome
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.412	Sickle-cell thalassemia with splenic sequestration
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.419	Sickle-cell thalassemia with crisis, unspecified
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.80	Other sickle-cell disorders without crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.811	Other sickle-cell disorders with acute chest syndrome
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.812	Other sickle-cell disorders with splenic sequestration
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	I10	D57.819	Other sickle-cell disorders with crisis, unspecified
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	7391009	Hemoglobin D trait
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	16402000	sickle cell trait
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	416214006	sickle cell-hemoglobin D disease without crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	416484003	sickle cell-hemoglobin E disease with crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	416638004	sickle cell-hemoglobin E disease without crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	417517009	sickle cell-hemoglobin C disease with crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	417683006	sickle cell-hemoglobin C disease without crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	417748003	sickle cell-hemoglobin D disease with crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	127040003	Hb SS disease
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	127045008	sickle cell anemia with coexistent alpha-thalassemia
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	127046009	sickle cell trait with coexistent alpha-thalassemia
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	234391009	sickle cell anemia with high hemoglobin F
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	416180004	hemoglobin SS disease without crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	416417002	hereditary hemoglobin S
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	417357006	sickling disorder due to hemoglobin S
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	417425009	hemoglobin SS disease with crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	440206000	hemoglobin SS disease with vasoocclusive crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	444108000	acute sickle cell splenic sequestration crisis
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	25472008	sickle cell-hemoglobin D disease
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	35434009	sickle cell-hemoglobin C disease

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PKID-3 : ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	36472007	sickle cell-thalassemia disease
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	47024008	sickle cell-hemoglobin E disease
000313	PKID	3	E	Sickle Cell Anemia	Condition / Diagnosis / Problem	SNM	127041004	sickle cell-beta-thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I9	282.49	Other Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I9	282.7	Other Hemoglobinopathies
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I9	284.01	Constitutional red blood cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I9	284.09	Other constitutional aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I9	284.81	Red Cell Aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I9	284.89	Other specified aplastic anemias
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I9	284.9	Aplastic anemia, unspecified
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I9	285.0	Sideroblastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I9	285.21	Anemia in chronic kidney disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D56.0	Alpha thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D56.1	Beta thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D56.2	Delta-beta Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D56.3	Thalassemia minor
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D56.8	Other thalassemias
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D56.9	Thalassemia, Unspecified
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D58.2	Other Hemoglobinopathies
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D60.0	chronic acquired pure red cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D60.1	Transient acquired pure red cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D60.8	Other acquired pure red cell aplasias
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D60.9	Acquired pure red cell aplasia, unspecified
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D61.01	Constitutional (pure) red blood cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D61.09	Other constitutional aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D61.3	Idiopathic aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D61.9	Aplastic anemia, unspecified
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D63.1	Anemia in chronic kidney disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D64.0	Hereditary sideroblastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D64.1	Secondary sideroblastic anemia due to disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	I10	D64.3	Other sideroblastic anemias
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	18273004	unstable hemoglobin disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	18662002	acquired Heinz body anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	36467003	alpha^+^ Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	40108008	thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	25065001	Hemoglobin E disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	32117000	sulfhemoglobinemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	46248003	Hemoglobin E trait
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	51053007	Hemoglobin C disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	57020009	Stokvis' disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	61777009	thalassemia-hemoglobin C disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	66729008	Hemoglobin D disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	68913001	alpha Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	74912001	Hemoglobin M disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	75063005	hemoglobinopathy with erythrocytosis
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	76050008	Hemoglobin C trait
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	80141007	hemoglobinopathy
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	84260001	hemoglobinopathy with cyanosis
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	85422000	alpha^+^ Thalassemia, nondeletion type
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	86242003	alpha^+^ Thalassemia, deletion type
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	123772008	homozygous hemoglobinopathy
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	123773003	heterozygous hemoglobinopathy
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	127038008	hereditary hemoglobinopathy due to globin chain mutation

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PKID-3 : ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	127039000	acquired hemoglobinopathy
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191187006	alpha trait thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191201002	hereditary persistence of fetal hemoglobin
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191202009	hemoglobin Zurich disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234385007	alpha thalassemia-2 trait
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234392002	hemoglobin E/beta thalassemia disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	427306008	hereditary hemoglobinopathy
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	445542007	hemoglobin O-Arab trait
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	66055002	alpha^0^ Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	5300004	hemoglobin Bart's hydrops syndrome
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234386008	hemoglobin Constant Spring trait
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	48553001	Hemoglobin H disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234383000	homozygous alpha thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	277918006	alpha thalassemia-mental retardation syndrome
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234389001	Alpha-beta thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	65959000	beta Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191189009	beta thalassemia intermedia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	269175006	beta thalassemia trait
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	79592006	beta^+^ Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	47084006	beta^+^ Thalassemia, normal Hb A>2<, type 1, silent
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	15326009	beta^+^ Thalassemia, normal Hb A>2<, type 2
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	39586009	HPFH A gamma beta^+^ thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	5967006	A>gamma< beta^+^ HPFH AND beta^0^ thalassemia in cis
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	61395005	HPFH G gamma beta^+^ thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	127042006	sickle cell-beta^+^-thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	86715000	beta^0^ Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	27080008	beta^0^ Thalassemia, deletion type
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	111572002	beta^0^ Thalassemia, nondeletion type
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	76336008	delta beta^0^ Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	89810003	^A^gamma delta beta^0^ thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	73190000	epsilon gamma delta beta^0^ Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	54006005	HPFH delta beta^0^ thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	127044007	sickle cell-delta beta^0^-thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	127043001	sickle cell-beta^0^-thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	934007	thalassemia intermedia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	16360009	delta beta Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	16427007	delta Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	16964007	hereditary persistence of fetal hemoglobin thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	19442009	heterozygous thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	23371004	epsilon gamma delta beta Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	26682008	homozygous beta thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	32855007	HPFH unlinked to beta-globulin gene cluster
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	38959009	methemoglobinemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	56205004	HPFH nondeletion type
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	62074008	delta^0^ Thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	69216008	Hb Lepore thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	70517008	HNSHA due to NADH-methemoglobin reductase deficiency
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	75451007	thalassemia major
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	84188003	thalassemia syndrome
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	85557000	HPFH deletion type
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	89459006	HPFH linked to beta-globulin gene cluster
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	123768009	hereditary methemoglobinemia, enzymatic type
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	127036007	cytochrome b>3< deficiency

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PKID-3 : ESRD Patients Receiving Dialysis: Hemoglobin Level < 10g/dL

Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	127037003	toxic methemoglobinemia with cyanosis
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234396004	congenital methemoglobinemia with abnormal methemoglobins
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	293287009	toxic methemoglobinuria
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	294303000	acquired methemoglobinuria
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	295315008	acquired methemoglobinemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	307343001	acquired hemoglobin H disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191388008	familial methemoglobinemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191389000	idiopathic methemoglobinemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191390009	drug-induced methemoglobinemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234345001	von Jaksch's anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234387004	hemoglobin Lepore trait
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234388009	delta-beta-Lepore thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234390005	gamma thalassemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234393007	low affinity hemoglobin
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234394001	high affinity hemoglobin
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234395000	congenital methemoglobinaema with defective methemoglobin-reducing system
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234397008	methemoglobin reductase deficiency
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	267550008	congenital methemoglobinemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	406593009	methemoglobinemia due to nitrate poisoning
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	414027002	disorder of hematopoietic structure
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	306058006	aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	55907008	acquired aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234376007	acquired red cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	90414007	chronic acquired pure red cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234370001	pure red cell aplasia, acquired
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191255003	transient acquired pure red cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	421102007	aplastic anemia associated with AIDS
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	413565006	aplastic anemia associated with metabolic alteration
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191244003	aplastic anemia due to chronic disease
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191246001	aplastic anemia due to infection
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	240486003	parvoviral aplastic crisis
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191247005	aplastic anemia due to radiation
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191248000	aplastic anemia due to toxic cause
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	28975000	constitutional aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	267524009	constitutional aplastic anemia with malformation
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	30575002	Fanconi's anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	46760003	Estren-Dameshek anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191256002	idiopathic aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	77084001	immunologic aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	50220002	cellular immunologic aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	14024008	humoral immunologic aplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	50715003	pure red cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	57192008	acute pure red cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234371002	congenital pure red cell aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	267525005	constitutional red cell aplasia and hypoplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234372009	congenital red cell hypoplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234373004	constitutional red cell hypoplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	88854002	Diamond-Blackfan anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	234375006	transient erythroblastopenia of childhood
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	304132006	hematopoietic aplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	41614006	hypoplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	109996008	refractory anemia (clinical)

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Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	189509003	refractory anemia without sideroblasts, so stated
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	398623004	refractory anemia with excess blasts (clinical)
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	415283002	refractory anemia with excess blasts-1
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	415284008	refractory anemia with excess blasts-2
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	110000005	refractory anemia with excess blasts in transformation (clinical)
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	109998009	refractory anemia with ringed sideroblasts (clinical)
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	415285009	refractory cytopenia with multilineage dysplasia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	415286005	refractory cytopenia with multilineage dysplasia and ringed sideroblasts
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	191251007	transient hypoplastic anemia
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	109992005	polycythemia vera (clinical)
000314	PKID	3	E	Other Hemoglobinopathies	Condition / Diagnosis / Problem	SNM	127066000	familial polycythemia vera
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.00	Lymphoid leukemia, Acute, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.01	Lymphoid leukemia, Acute, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.02	Lymphoid leukemia, Acute, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.10	Lymphoid leukemia, Chronic, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.11	Lymphoid leukemia, Chronic, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.12	Lymphoid leukemia, Chronic, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.20	Lymphoid leukemia, Subacute, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.21	Lymphoid leukemia, Subacute, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.22	Lymphoid leukemia, Subacute, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.80	Lymphoid leukemia, Other lymphoid leukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.81	Lymphoid leukemia, Other lymphoid leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.82	Lymphoid leukemia, Other lymphoid leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.90	Lymphoid leukemia, Unspecified lymphoid leukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.91	Lymphoid leukemia, Unspecified lymphoid leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	204.92	Lymphoid leukemia, Unspecified lymphoid leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.00	Myeloid leukemia, Acute, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.01	Myeloid leukemia, Acute, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.02	Myeloid leukemia, Acute, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.10	Myeloid leukemia, Chronic, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.11	Myeloid leukemia, Chronic, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.12	Myeloid leukemia, Chronic, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.20	Myeloid leukemia, Subacute, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.21	Myeloid leukemia, Subacute, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.22	Myeloid leukemia, Subacute, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.30	Myeloid sarcoma, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.31	Myeloid sarcoma, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.32	Myeloid sarcoma, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.80	Other myeloid leukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.81	Other myeloid leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.82	Other myeloid leukemia, in relapse

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Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.90	Unspecified myeloid leukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.91	Unspecified myeloid leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	205.92	Unspecified myeloid leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.00	Monocytic leukemia, Acute, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.01	Monocytic leukemia, Acute, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.02	Monocytic leukemia, Acute, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.10	Monocytic leukemia, Chronic, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.11	Monocytic leukemia, Chronic, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.12	Monocytic leukemia, Chronic, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.20	Monocytic leukemia, Subacute, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.21	Monocytic leukemia, Subacute, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.22	Monocytic leukemia, Subacute, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.80	Monocytic leukemia, Other monocytic leukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.81	Monocytic leukemia, Other monocytic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.82	Monocytic leukemia, Other monocytic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.90	Unspecified monocytic leukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.91	Unspecified monocytic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	206.92	Unspecified monocytic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.00	Other specified leukemia, Acute erythremia and erythroleukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.01	Other specified leukemia, Acute erythremia and erythroleukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.02	Other specified leukemia, Acute erythremia and erythroleukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.10	Chronic erythremia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.11	Chronic erythremia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.12	Chronic erythremia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.20	Megakaryocytic leukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.21	Megakaryocytic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.22	Megakaryocytic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.80	Other specified leukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.81	Other specified leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	207.82	Other specified leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.00	Leukemia of unspecified cell type, Acute, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.01	Leukemia of unspecified cell type, Acute, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.02	Leukemia of unspecified cell type, Acute, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.10	Leukemia of unspecified cell type, Chronic, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.11	Leukemia of unspecified cell type, Chronic, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.12	Leukemia of unspecified cell type, Chronic, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.20	Leukemia of unspecified cell type, Subacute, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.21	Leukemia of unspecified cell type, Subacute, in remission

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Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.22	Leukemia of unspecified cell type, Subacute, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.80	Other leukemia of unspecified cell type, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.81	Other leukemia of unspecified cell type, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.82	Other leukemia of unspecified cell type, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.90	Unspecified leukemia, without mention of having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.91	Unspecified leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I9	208.92	Unspecified leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.00	Acute lymphoblastic leukemia not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.01	Acute lymphoblastic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.02	Acute lymphoblastic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.10	Chronic lymphocytic leukemia of B-cell type not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.11	Chronic lymphocytic leukemia of B-cell type in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.12	Chronic lymphocytic leukemia of B-cell type in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.30	Prolymphocytic leukemia of B-cell type not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.31	Prolymphocytic leukemia of B-cell type, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.32	Prolymphocytic leukemia of B-cell type, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.40	Hairy cell leukemia not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.41	Hairy cell leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.42	Hairy cell leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.50	Adult T-cell lymphoma/leukemia (HTLV-1-associated) not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.51	Adult T-cell lymphoma/leukemia (HTLV-1-associated), in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.52	Adult T-cell lymphoma/leukemia (HTLV-1-associated), in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.60	Prolymphocytic leukemia of T-cell type not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.61	Prolymphocytic leukemia of T-cell type, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.62	Prolymphocytic leukemia of T-cell type, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.a0	Mature B-cell leukemia Burkitt-type not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.a1	Mature B-cell leukemia Burkitt-type, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.a2	Mature B-cell leukemia Burkitt-type, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.z0	Other lymphoid leukemia not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.z1	Other lymphoid leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.z2	Other lymphoid leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.90	Lymphoid leukemia, unspecified not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.91	Lymphoid leukemia, unspecified, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C91.92	Lymphoid leukemia, unspecified, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.00	Acute myeloblastic leukemia, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.01	Acute myeloblastic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.02	Acute myeloblastic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.10	Chronic myeloid leukemia, BCR/ABL-positive, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.11	Chronic myeloid leukemia, BCR/ABL-positive, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.12	Chronic myeloid leukemia, BCR/ABL-positive, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.20	Atypical chronic myeloid leukemia, BCR/ABL-negative, not having achieved remission

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Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.21	Atypical chronic myeloid leukemia, BCR/ABL-negative, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.22	Atypical chronic myeloid leukemia, BCR/ABL-negative, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.30	Myeloid sarcoma, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.31	Myeloid sarcoma, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.32	Myeloid sarcoma, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.40	Acute promyelocytic leukemia, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.41	Acute promyelocytic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.42	Acute promyelocytic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.50	Acute myelomonocytic leukemia, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.51	Acute myelomonocytic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.52	Acute myelomonocytic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.60	Acute myeloid leukemia with 11q23-abnormality not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.61	Acute myeloid leukemia with 11q23-abnormality in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.62	Acute myeloid leukemia with 11q23-abnormality in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.a0	Acute myeloid leukemia with multilineage dysplasia, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.a1	Acute myeloid leukemia with multilineage dysplasia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.a2	Acute myeloid leukemia with multilineage dysplasia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.z0	Other myeloid leukemia not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.z1	Other myeloid leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.z2	Other myeloid leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.90	Myeloid leukemia, unspecified, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.91	Myeloid leukemia, unspecified in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C92.92	Myeloid leukemia, unspecified in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.00	Acute monoblastic/monocytic leukemia, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.01	Acute monoblastic/monocytic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.02	Acute monoblastic/monocytic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.10	Chronic myelomonocytic leukemia not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.11	Chronic myelomonocytic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.12	Chronic myelomonocytic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.30	Juvenile myelomonocytic leukemia, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.31	Juvenile myelomonocytic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.32	Juvenile myelomonocytic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.z0	Other monocytic leukemia, not in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.z1	Other monocytic leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.90	Monocytic leukemia, unspecified, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.91	Monocytic leukemia, unspecified in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C93.92	Monocytic leukemia, unspecified in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.00	Acute erythroid leukemia, not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.01	Acute erythroid leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.02	Acute erythroid leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.20	Acute megakaryoblastic leukemia not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.21	Acute megakaryoblastic leukemia, in remission

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Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.22	Acute megakaryoblastic leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.30	Mast cell leukemia not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.31	Mast cell leukemia, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.32	Mast cell leukemia, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.40	Acute panmyelosis with myelofibrosis not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.41	Acute panmyelosis with myelofibrosis, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.42	Acute panmyelosis with myelofibrosis, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.6	Myelodysplastic disease, not classified
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.80	Other specified leukemias not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.81	Other specified leukemias, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C94.82	Other specified leukemias, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C95.00	Acute leukemia of unspecified cell type not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C95.01	Acute leukemia of unspecified cell type, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C95.02	Acute leukemia of unspecified cell type, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C95.10	Chronic leukemia of unspecified cell type not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C95.11	Chronic leukemia of unspecified cell type, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C95.12	Chronic leukemia of unspecified cell type, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C95.90	Leukemia, unspecified not having achieved remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C95.91	Leukemia, unspecified, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	I10	C95.92	Leukemia, unspecified, in relapse
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	3947004	high oxygen affinity hemoglobin polycythemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	404151004	leukemic infiltration of skin in myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188768003	myelomonocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188770007	subacute myelomonocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	307617006	neutrophilic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188736006	subacute myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	427056005	subacute leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188725004	lymphoid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188729005	adult T-cell leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188728002	aleukemic lymphoid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	404123008	leukemic infiltration of skin (T-cell prolymphocytic leukemia)
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188726003	subacute lymphoid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	426370008	subacute lymphoid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188732008	myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188741003	aleukemic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	430338009	smoldering chronic lymphocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277551008	splenic lymphoma with villous lymphocytes
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277545003	T-cell chronic lymphocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	404122003	leukemic infiltration of skin (chronic T-cell lymphocytic leukemia)
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188745007	chronic monocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	92818009	chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413389003	accelerated phase chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277589003	atypical chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413656006	blastic phase chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413842007	chronic myeloid leukemia in lymphoid blast crisis
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413843002	chronic myeloid leukemia in myeloid blast crisis
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	92817004	chronic myeloid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413847001	chronic phase chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277587001	juvenile chronic myeloid leukemia

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Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	445227008	juvenile myelomonocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	404153001	leukemic infiltration of skin in chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	415287001	relapsing chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	127225006	chronic myelomonocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93142004	leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	426217000	aleukemic leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93169003	lymphoid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	426248008	aleukemic lymphoid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	94716000	myeloid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	425749006	subacute myeloid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	92812005	chronic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	92811003	chronic leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	92814006	chronic lymphoid leukemia, disease
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277473004	B-cell chronic lymphocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277474005	B-cell chronic lymphocytic leukemia variant
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277549009	chronic lymphocytic prolymphocytic leukemia syndrome
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	92813000	chronic lymphoid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	118613001	hairy cell leukemia (clinical)
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	307341004	atypical hairy cell leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93151007	hairy cell leukemia of spleen
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277568007	hairy cell leukemia variant
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	404139001	leukemic infiltration of skin in hairy-cell leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93152000	leukemic reticuloendotheliosis of extranodal AND/OR solid organ site
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93144003	leukemic reticuloendotheliosis of intra-abdominal lymph nodes
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93145002	leukemic reticuloendotheliosis of intrapelvic lymph nodes
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93146001	leukemic reticuloendotheliosis of intrathoracic lymph nodes
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188648000	leukemic reticuloendotheliosis of lymph nodes of axilla and upper limb
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93147005	leukemic reticuloendotheliosis of lymph nodes of axilla AND/OR upper limb
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188645002	leukemic reticuloendotheliosis of lymph nodes of head, face and neck
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93148000	leukemic reticuloendotheliosis of lymph nodes of head, face AND/OR neck
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188649008	leukemic reticuloendotheliosis of lymph nodes of inguinal region and lower limb
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93149008	leukemic reticuloendotheliosis of lymph nodes of inguinal region AND/OR lower limb
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93150008	leukemic reticuloendotheliosis of lymph nodes of multiple sites
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188651007	leukemic reticuloendotheliosis of spleen
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277569004	large granular lymphocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277570003	lymphoma with spill
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	110006004	prolymphocytic leukemia (clinical)
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277619001	B-cell prolymphocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277567002	T-cell prolymphocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277550009	Richter's syndrome
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	430338009	smoldering chronic lymphocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277551008	splenic lymphoma with villous lymphocytes
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277545003	T-cell chronic lymphocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	404122003	leukemic infiltration of skin (chronic T-cell lymphocytic leukemia)
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188745007	chronic monocytic leukemia

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Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	92818009	chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413389003	accelerated phase chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277589003	atypical chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413656006	blastic phase chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413842007	chronic myeloid leukemia in lymphoid blast crisis
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413843002	chronic myeloid leukemia in myeloid blast crisis
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	92817004	chronic myeloid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413847001	chronic phase chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277587001	juvenile chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	445227008	juvenile myelomonocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	404153001	leukemic infiltration of skin in chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	415287001	relapsing chronic myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	127225006	chronic myelomonocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93142004	leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	426217000	aleukemic leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93169003	lymphoid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	426248008	aleukemic lymphoid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	94716000	myeloid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93720005	primary malignant neoplasm of bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	91855006	acute leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	91854005	acute leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	91856007	acute lymphoid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	425941003	pre B-cell acute lymphoblastic leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	427642009	t-cell acute lymphoblastic leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	91860005	acute myeloid leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	91858008	acute monocytic leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	426124006	acute myeloid leukemia with maturation, FAB M2, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	427658007	acute myelomonocytic leukemia, FAB M4, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	425869007	acute promyelocytic leukemia, FAB M3, in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	426642002	erythroleukemia, FAB M6 in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	91857003	acute lymphoid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	278453007	acute biphenotypic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	371012000	acute lymphoblastic leukemia, transitional pre-B-cell
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	110007008	adult T-cell leukemia/lymphoma
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277571004	B-cell acute lymphoblastic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277573001	common acute lymphoblastic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277574007	null cell acute lymphoblastic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	425688002	philadelphia chromosome-positive acute lymphoblastic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277572006	pre B-cell acute lymphoblastic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277575008	T-cell acute lymphoblastic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	404124002	leukemic infiltration of skin (T-cell lymphoblastic leukemia)
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	91861009	acute myeloid leukemia, disease
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277604002	acute eosinophilic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277602003	acute megakaryoblastic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	94148006	megakaryocytic leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413442004	acute monocytic/monoblastic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277601005	acute monoblastic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	413441006	acute monocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	110005000	acute myelomonocytic leukemia, FAB M4
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	285839005	acute myelomonocytic leukemia - eosinophilic variant
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	110004001	acute promyelocytic leukemia, FAB M3
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	285769009	acute promyelocytic leukemia - hypogranular variant

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Value Set ID	Clinical Topic	Topic Indicator	Measure Component	Standard Concept	Standard Category	Taxonomy	Code	Code Descriptor
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	278189009	hypergranular promyelocytic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	307592006	basophilic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93451002	Erythroleukemia, FAB M6
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	93450001	erythroleukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	404152006	leukemic infiltration of skin in acute myeloid leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	94719007	myeloid sarcoma
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	94718004	myeloid sarcoma in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	414824005	neoplasm of bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	95210003	plasma cell leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	95209008	plasma cell leukemia in remission
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	127035006	bone marrow disorder
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	303266002	aplastic bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	307762000	bone marrow depression
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	10138007	bone marrow hyperplasia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	57375005	eosinophilic hyperplasia of bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	68164004	erythroid hyperplasia of bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	123616008	granulocytic hyperplasia of bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	83525004	megakaryocytic hyperplasia of bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	123725008	mild bone marrow hyperplasia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	123726009	moderate bone marrow hyperplasia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	70918005	myeloid hyperplasia of bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	20888002	neutrophilic hyperplasia of bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	123728005	recurrent bone marrow hyperplasia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	123727000	severe bone marrow hyperplasia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	234522008	disease relapse in transplant marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	405544006	drug-induced hypoplasia of bone marrow
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188733003	chronic eosinophilic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	188734009	chronic neutrophilic leukemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	52967002	myelofibrosis
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	109991003	acute panmyelosis with myelofibrosis
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	307651005	myelosclerosis with myeloid metaplasia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	2694001	myelophthisic anemia
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	425333006	myeloproliferative disorder
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	109993000	chronic myeloproliferative disorder (clinical)
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	109995007	myelodysplastic syndrome (clinical)
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	307340003	monosomy 7 syndrome
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	277597005	myelodysplastic syndrome with isolated del(5q)
000316	PKID	3	E	Primary Bone Marrow Disease	Condition / Diagnosis / Problem	SNM	414791003	myelodysplastic syndrome, unclassified by WHO classification
000317	PKID	3	E	Anemia Due to Chemotherapy	Condition / Diagnosis / Problem	I9	285.3	Antineoplastic chemotherapy induced anemia
000317	PKID	3	E	Anemia Due to Chemotherapy	Condition / Diagnosis / Problem	I10	D64.81	Anemia due to antineoplastic chemotherapy
000317	PKID	3	E	Anemia Due to Chemotherapy	Condition / Diagnosis / Problem	SNM	429564000	anemia due to chemotherapy
000337	PKID	3	E	Hypersplenism	Condition / Diagnosis / Problem	I9	289.4	Hypersplenism
000337	PKID	3	E	Hypersplenism	Condition / Diagnosis / Problem	I10	D73.1	Hypersplenism
000337	PKID	3	E	Hypersplenism	Condition / Diagnosis / Problem	SNM	58381000	Hypersplenism (disorder)
000338	PKID	3	E	Peritoneal Infection	Condition / Diagnosis / Problem	I9	567.9	Unspecified Peritonitis
000338	PKID	3	E	Peritoneal Infection	Condition / Diagnosis / Problem	I10	K65.9	Peritonitis, Unspecified
000338	PKID	3	E	Peritoneal Infection	Condition / Diagnosis / Problem	SNM	129129003	Infectious peritonitis (disorder)
000339	PKID	3	E	Bloodstream Infection	Condition / Diagnosis / Problem	I9	996.62	Infection and inflammatory reaction due to internal prosthetic device, implant, and graft; Due to vascular device, implant and graft
000339	PKID	3	E	Bloodstream Infection	Condition / Diagnosis / Problem	I10	T82.7XXA	Infection and inflammatory reaction due to other cardiac and vascular devices, implants and grafts
000339	PKID	3	E	Bloodstream Infection	Condition / Diagnosis / Problem	SNM	431193003	Infection of bloodstream (disorder)