Chapter 31: ICD-9-CM Coding System–

Chapter 4:Diseases of the Blood and Blood-Forming Organs

Introduction

This chapter includes codes in the three digit categories 280-289. It includes conditions such as anemia including thalassemia and Sickle-cell disease, and disorders of coagulation, white blood cells, and other blood forming organs.

Objectives

- Identify types of anemia
- Learn about thalassemia and Sickle-cell disease
- Understand coagulation defects
- Review purpura and hemorrhagic conditions
- Explain diseases of white blood cells
- Describe diseases of other blood forming organs

Guidelines and Explanations

The guidelines for this chapter are specific to anemia, specifically those associated with chronic diseases. This chapter also includes diagnoses for other disease also related to blood and blood-forming organs.

Official ICD-9-CM Guidelines for Coding and Reporting
1.C.4

a. Anemia of chronic disease

Subcategory 285.2, Anemia in chronic illness, has codes for anemia in chronic kidney disease, code 285.21; anemia in neoplastic disease, code 285.22; and anemia in other chronic illness, code 285.29. These codes can be used as the principal/first listed code if the reason for the encounter is to treat the anemia. They may also be used as secondary codes if treatment of the anemia is a component of an encounter, but not the primary reason for the encounter. When using a code from subcategory 285 it is also necessary to use the code for the chronic condition causing the anemia.

1) Anemia in chronic kidney disease

When assigning code 285.21, Anemia in chronic kidney disease, it is also necessary to assign a code from category 585, Chronic kidney disease, to indicate the stage of chronic kidney disease.

See 1.C.10.a Chronic kidney disease (CKD).

2) Anemia in neoplastic disease

When assigning code 285.22, Anemia in neoplastic disease, it is also necessary to assign the neoplasm code that is responsible for the anemia. Code 285.22 is for use for anemia that is due to the malignancy, not for anemia due to antineoplastic chemotherapy drugs. Assign the appropriate code for anemia due to antineoplastic chemotherapy.

See 1.C.2.c.1 Anemia associated with malignancy

See 1.C.2.c.2 Anemia associated with chemotherapy, immunotherapy and radiation therapy

The term "anemia" refers to a lower than normal erythrocyte count or level of hemoglobin in the circulating blood. A clinical sign rather than a diagnostic entity, anemia can be classified by three morphological variations of the erythrocyte: size (volume), hemoglobin content, and shape. These variations give clinicians clues to the specific type of anemia.

In laboratory blood tests, erythrocyte size is gauged by estimating the volume of red cells in the circulating blood. Red cell volume, or mean corpuscular volume, is estimated by dividing the patient's hematocrit (percentage of red blood cells in whole blood) by the red blood cell count. Normal values are normocytic; abnormally low values are microcytic; and abnormally high values are macrocytic.

DEFINITIONS

Anemia of chronic diseases. Anemia occurring as a result of chronic illnesses, such as end stage renal disease, chronic infections, inflammatory disorders, malignancies, or other chronic diseases.

Aplastic anemia. Failure of the bone marrow to produce sufficient red blood cells. Underlying causes can include neoplasm, toxic exposure, infections, certain drugs, or radiation.

Megalocytic anemia. Anemias of varied causes that are manifested by abnormally large red blood cells (macrocytes) that lack the normal central area of paleness. Mean corpuscular volume and mean corpuscular hemoglobin are also increased.

Pernicious anemia. Chronic, progressive anemia due to Vitamin B12 malabsorption; caused by lack of a secretion known as intrinsic factor, which is produced by the gastric mucosa of the stomach.

Hemoglobin content refers to the average amount of hemoglobin in each red blood cell. This value, called the mean cell hemoglobin, is calculated by dividing the patient's hemoglobin by the number of red blood cells. Normal values are normochromic, less than normal values are hypochromic, and greater than normal values are hyperchromic.

Shape is determined by microscopy. Normally, red blood cells have a smooth concave shape. Erythrocytes with irregular shapes are called poikilocytes, a general term meaning abnormally shaped. Terms referring to specific abnormal cell shapes include acanthocytes, leptocytes, nucleated erythrocytes, macro-ovalocytes, schistocytes, helmet cells, teardrop cells, sickle cells, and target cells.

Once the cell morphology is determined, the anemia can be classified further based on certain physiological and pathological criteria. For example, constitutional aplastic anemia (code 284.0) is classified physiologically as an anemia of hypo proliferation and pathologically as an inborn error of heredity.

Case Example

One: A 17 year old female patient with poor eating habits is diagnosed with iron deficiency anemia. She has normal periods, no abnormal bleeding, and is not pregnant. There is no discernible cause other than diet for her anemia.

The code assigned is 280.9, Iron deficiency anemia, unspecified. The term anemia with subterm iron deficiency is referenced and refers to code 280.9.

Two: The patient has chronic kidney disease, stage III with subsequent kidney disease

See 1.C.4.a.1. The codes assigned are 285.21 and 585.3. The instruction indicates that 285.21 is reported with a code from category 585. Note that the instructions within ICD-9-CM indicate that an additional code is used to report the chronic kidney disease. The choice of primary code is dependent upon the nature of the encounter, treatment of the anemia or treatment of the chronic kidney disease.

Three: The patient is currently receiving chemotherapy treatment for primary stage III breast therapy. She is otherwise healthy. Evaluation today is to treat her anemia due to antineoplastic chemotherapy.

See 1.C.4.a.2 and 1.C.2.c.2 The codes assigned are 285.3 and 174.9. It is important that the anemia be classified as due to antineoplastic chemotherapy and not anemia associated with a neoplasm. This example specifically states that the anemia is due to the antineoplastic chemotherapy. If it is unclear if the anemia is due to the chemotherapy or the neoplasm then the provider must be queried.

CODING TIP

See rubric 648 for anemia complicating pregnancy and the puerperium.

DEFINITIONS

Thalassemia. Group of inherited disorders of hemoglobin metabolism causing mild to severe anemia. It is usually found in people of Mediterranean, black, Chinese, or Asian descent.

Sickle-cell disease. Condition producing abnormal red blood cells.

Sickle-cell crisis refers to recurring acute episodes of pain involving any of the body systems, but usually the chest, bones, or abdomen. In children, vaso-occlusive crisis is the most common form, but the term "sickle-cell crisis" may refer to any one of a wide variety of sudden and potentially serious conditions.

Assign 282.62, Hb-S disease with mention of crisis, when crisis is documented. No additional code is necessary unless a condition is precipitated that is not commonly considered a symptom of crisis.

Acute chest syndrome, a severe chest pain episode, is considered an integral part of sickle-cell crisis and should not be coded separately. If the medical record states both sickle-cell anemia and sickle-cell trait, code only the sickle-cell anemia (282.6x).

GUIDELINE ASSESSMENT 31-1

Select the correct codes for each of the following diagnoses:

1. Unspecified Sickle-cell anemia _____

2. Pernicious anemia_____

3. Iron deficiency anemia due to acute blood loss_____

4. Thalassemia_____

5. Aplastic anemia_____

[NOTE TO CTE: **Not every three digit category needs to be addressed in this section. Only if there are specific diseases of note or guidelines that the coder should be aware of should a single, specific category be included.**]

Coagulation Defects (286)

The "coagulation defects" refers to deficiencies or disorders of hemostasis. A complicated process involving substances in the injured tissues, formed elements of blood (platelets, monocytes) and the coagulation proteins, coagulation requires the production of thrombin, a substance that stabilizes the platelet plug and forms the fibrin clot. Together they mechanically block the extravasation of blood from ruptured vessels.

The coagulation process can be interrupted by a genetic or disease-caused protein deficiency, interrupted by an increase in the catabolism of coagulation proteins or inhibited by antibodies directed against the coagulation proteins. There are many proteins involved in coagulation, many of which are identified by the term "factor" followed by a roman numeral. The activated form of a coagulation factor is indicated by the appropriate Roman numeral followed by the suffix "a." For example, the protein factor II (prothrombin) is activated by the enzyme thrombin; when this occurs, it is designated factor IIa.

Purpura and Other Hemorrhagic Conditions (287)

Purpura is hemorrhages of the skin. Initially red, the lesions darken to purple, fade to brownish-yellow and typically disappear in two to three weeks. Causes include allergic reactions, blood disorders, vascular abnormalities, and trauma.

Thrombocytopenia is a disorder distinguished by an abnormal decrease in the number of blood platelets and the presence of puerperal skin hemorrhages. Primary thrombocytopenia is reported with codes 287.30–287.39. Secondary thrombocytopenia (287.4) may be caused by underlying conditions such as lupus erythematosus, Gaucher's disease, tuberculosis, or may be a result of massive blood transfusion, extracorporeal circulation of the blood, drugs, and platelet alloimmunization.

Diseases of White Blood Cells (288)

Neutropenia (288.0) is an absolute neutrophil count of less than 1,500/cu ml. Also known as agranulocytosis, neutropenia frequently leads to increased susceptibility to bacterial and fungal infections. The ingestion of some drugs can bring on this condition and an additional E code must be used to identify the drug.

Eosinophilia (288.3) is an increased eosinophilic granulocyte count. Decreased white blood cell diseases are reported with codes 288.50–288.59, and increased white blood cell diseases are reported with codes 288.60–288.69.

Other Diseases of Blood and Blood-forming Organs (289)

Polycythemia, secondary (289.0) is the increase in the normal number of red blood cells. Secondary polycythemia also is known as secondary erythrocytosis, spurious polycythemia and reactive polycythemia. Spurious polycythemia, which is characterized by increased hematocrit and normal or increased erythrocyte total mass, results from a decrease in plasma volume and hemoconcentration. Reactive polycythemia is a condition characterized by excessive production of circulating erythrocytes due to an identifiable secondary condition such as hypoxia or an underlying disease such as a neoplasm.

Chronic lymphadenitis (289.1) is an inflammation of the lymph nodes. Any pathogen can cause lymphadenitis. Lymphadenitis may be generalized or restricted to regional lymph nodes and may occur with systemic infections.

Nonspecific mesenteric lymphadenitis (289.2) is a lymphadenitis occurring in the double layer of peritoneum attached to the abdominal wall, which encloses a portion or all of one of the abdominal viscera.

Hypersplenism (289.4) is a clinical syndrome characterized by splenic hyperactivity and splenomegaly. The condition results in a peripheral blood cell deficiency because the spleen traps and destroys the circulating peripheral blood cells.

Case Example

One: The patient is a 27-year-old male who presents for routine follow up of hemophilia. Diagnoses at age four he has not had any recent bleeding events.

The code assigned is 286.0. The index term hemophilia is referenced and refers to 286.0 as verified in the tabular listing. Although the patient was not diagnosed until age four the provider does not indicate that this is an acquired condition and the default code for hemophilia is appropriate.

Two: A five-year-old child brought in by his parents with purpuric lesions of the lower extremities. He has had bloody stools at home and noted swelling of the lower extremities with joint pain. The provider diagnoses Schönlein-Henoch disease.

The code assigned is 287.0. The index term disease is referenced with subterm Schönlein (-Henoch) and the code is verified in the tabular listing. Note that this eponyms may also be found with index term Schönlein (-Henoch) or Henoch (-Schönlein).

Three: A 56-year-old female patient is seen in routine follow up for her elevated while cell count without symptoms. This has been documented for at least 10 years. The provider documents her diagnosis as leukocytosis.

The code assigned is 288.60. The index term leukocytosis is referenced and the default code is verified in the tabular listing. As the provider does not indicate a specific type of leukocytosis the default or unspecified code must be used. Alternately, the index term elevation and sub term white blood cell count may be used to reference code 288.60.

GUIDELINE ASSESSMENT 31-2

Select the correct codes for each of the following diagnoses:

1. Secondary polycythemia_____
2. Neutropenia_____
3. Hemophilia C_____
4. Heparin induced thrombocytopenia (HIT)_____
5. Posttransfusion purpura_____

ANSWERS TO GUIDELINE ASSESSMENTS

Assessment 31-1

1. Unspecified Sickle-cell anemia

   282.60 Index: anemia, sickle-cell, See also Disease, sickle-cell. No other specifications given in diagnostic statement so default listing (unspecified) must be used when verifying in tabular listing.

2. Pernicious anemia

   281.0 Index: anemia, pernicious. Only one code is available in the index for pernicious anemia and is verified in the tabular.

3. Iron deficiency anemia due to acute blood loss

   285.1 Index: anemia, iron deficiency, due to blood loss, acute. The code is verified in the tabular listing. Query the provider if the documentation does not indicate acute or chronic blood loss.

4. Thalassemia

   280.40 Index: Thalassemia. No other specifications given in diagnostic state so default listing must be used when verified in tabular listing.

5. Aplastic anemia

   284.9 Index: anemia, aplastic. No other specifications given in diagnostic statement so default listing must be used when verified in tabular listing.

Assessment 31-2

1. Secondary polycythemia
2. Neutropenia
3. Hemophilia C
4. Heparin induced thrombocytopenia (HIT)
5. Posttransfusion purpura