Note to instructors: This answer key contains the odd-only answers and rationales that are printed in the back of the workbook. They have been updated to reflect 2017 codes and guidelines, and you may share this key with your students if you wish.

Chapter 1: Certain Infectious and Parasitic Diseases

1. **First-Listed Diagnosis: A56.09** Cervicitis, chlamydial
Secondary Diagnoses: None indicated by the documentation provided
Rationale: ICD-10-CM has a combination code that includes the diagnosis of cervicitis and the causative infectious agent chlamydia.

3. **First-Listed Diagnosis: B18.1** Hepatitis, viral, chronic, Type B
Secondary Diagnoses: K74.60 Cirrhosis of liver;
F11.21 Addiction, heroin, see Dependence, drug, opioid in remission
Rationale: The suspected liver failure is not coded because conditions documented as suspected are not coded for outpatient encounters, guideline IV.H., Uncertain diagnosis

5. **First-Listed Diagnosis: A46** Erysipelas
Secondary Diagnoses: None indicated by the documentation provided
Rationale: For the single diagnosis treated during this visit, see the Index entry term erysipelas, or the main term cellulitis, subterm erysipelatous—see Erysipelas.

7. **First-Listed Diagnosis: A54.01** Urethritis, gonococcal or Cystitis, gonococcal
Secondary Diagnoses: None indicated by the documentation provided
Rationale: ICD-10-CM provides a combination code that includes both sites of the infection and the infectious organism.

9. **First-Listed Diagnosis: G14** Syndrome, postpolio
Secondary Diagnoses: None indicated by the documentation provided
Rationale: Another code B91, sequela of poliomyelitis, is not used as a specific diagnosis is provided, postpolio syndrome. There is an Excludes1 note present at B91 and G14 to indicate these two codes may not be assigned together. Postpolio syndrome is a specific condition and it is more descriptive of the patient than having a sequela of poliomyelitis and for that reason coded to G14 instead of B91. The atrophy of the muscles is not coded separately as it is a symptom of the postpolio syndrome.

11. **Principal Diagnosis: A41.59** Sepsis, gram negative (organism)
Secondary Diagnoses: N39.0 Infection, urinary tract;
B96.1 Infection, bacterial, as cause of disease classified, Klebsiella;
E87.1 Hyponatremia;
E87.6 Hypokalemia;
C77.3 Neoplasm, malignant, secondary, axilla and upper limb lymph nodes;
Z85.3 History, personal malignant neoplasm, breast
(If information about the surgery (mastectomy, right or left) and acquired absence of breast is available, two additional codes could be added.)
Principal Procedure: None Indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: In this scenario the diagnosis of severe sepsis was not made. For that reason no additional codes were added. In the Index under the main term of Sepsis, there is no subterm for Klebsiella but Klebsiella is a gram negative organism so A41.59 was chosen instead of A41.50, which represents gram

negative sepsis, unspecified. In ICD-10-CM septicemia is referred to as sepsis as the main term. With the urinary tract infectious organism of Klebsiella identified, the coder must follow the instructional note under N39.0 to use an additional code to identify the Infectious organism. The coder must use the main term Infection, bacterial, as cause of disease classified, Klebsiella to locate the additional code of B96.1. Otherwise, if the coder used Infection, Klebsiella without following the "as cause of disease classified elsewhere," an incorrect code would be assigned for another bloodstream infection, not the cause of the urinary infection.

13. **First-Listed Diagnosis: B60.13** Keratoconjunctivitis, Acanthamoeba
Secondary Diagnoses: None indicated by the documentation provided
Rationale: There was a single reason for the office visit that was found to be the keratoconjunctivitis that was coded as the first-listed diagnosis code.

15. **First-Listed Diagnosis: A02.0** Poisoning, food, due to salmonella, with gastroenteritis
Secondary Diagnoses: E86.0 Dehydration
Rationale: The main reason for the emergency department encounter was determined to be the salmonella food poisoning that produced the complication of dehydration. ICD-10-CM has a combination code that identifies salmonella food poisoning with gastroenteritis, so an individual code for the gastroenteritis is not necessary. A secondary code for the dehydration is added to identify the complication of the food poisoning.

17. **Principal Diagnosis: A37.01** Whooping cough due to Bordetella pertussis with pneumonia
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The child was in the hospital for a single reason, the diagnosis of whooping cough with complicating pneumonia. ICD-10-CM has a combination code to include both conditions. No other diagnoses were identified during the hospital stay. No procedures were performed.

Chapter 2: Neoplasms

1. **Principal Diagnosis: C34.01** Neoplasm, bronchus, main, malignant primary, right
Secondary Diagnoses: C79.51 Neoplasm, bone, malignant secondary;
J43.9 Emphysema;
Z87.891 History, personal, nicotine dependence
Principal Procedure: Endoscopic biopsy of bronchus **0BB38ZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	B	Respiratory System
Root Operation	B	Excision
Body Part	3	Main Bronchus, Right
Approach	8	Via Natural or Artificial Opening Endoscopic
Device	Z	No Device
Qualifier	X	Diagnostic
INDEX: Excision, main bronchus, right		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission was to evaluate the patient's lung disease, which was found to be complicated by the fact the patient now had lung cancer proven by a bronchoscopic biopsy. Further imaging studies confirmed the presence of metastatic lesions in the bones. The patient's pre-existing conditions that were relevant to this hospital admission were also coded, including the emphysema and the history of smoking. The biopsy is coded in ICD-10-PCS as an excision procedure of the site with the qualifier of X to indicate the excision was a diagnostic procedure. The nuclear medicine bone scan may be coded according to department policy of the types of surgical versus diagnostic procedures to be coded.

3. **Principal Diagnosis: E87.1** Dehydration, hypotonic
Secondary Diagnoses: C18.7 Neoplasm, sigmoid colon, malignant, primary;
C78.7 Neoplasm, liver and intrahepatic bile duct, malignant, secondary;
Z51.5 Palliative care;
Z66 DNR (do not resuscitate status)
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study for the principal diagnosis was the hypotonic dehydration in a patient with cancer of the sigmoid colon metastatic to the liver. The patient chose palliative care and a do-not-resuscitate status prior to being discharged to home hospice care. No procedures were performed.

5. **First-Listed Diagnosis: D06.9** Neoplasm, cervix, Ca in situ
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The patient's diagnosis of Ca *in situ* of the uterine cervix was confirmed by the outpatient procedure and the reason for the outpatient visit. The outpatient procedure would be coded with CPT procedure codes by the hospital coders.

7. **First-Listed Diagnosis: C43.39** Melanoma (malignant), skin, forehead
Secondary Diagnoses: Z80.8 History, family, malignant neoplasm, specified site NEC;
Z77.123 Contact, radiation, naturally occurring
Rationale: Although there was no more malignant tissue found, because the treatment was directed at the site of the melanoma, the code for the malignant melanoma is assigned as the first-listed diagnosis. The other conditions or facts relevant to the scenario, the family history and exposure to sun, are coded as additional diagnoses. The outpatient surgical procedure would be coded with CPT procedure codes by the outpatient coders.

9. **First-Listed Diagnosis: C79.51** Neoplasm, bone, malignant, secondary
Secondary Diagnoses: C79.31 Neoplasm, brain, malignant secondary;
C50.912 Neoplasm, breast, left, female, malignant, primary
Rationale: This is not an admission for chemotherapy as the Aredia is used for palliative treatment of bone metastases and not to treat the cancer. The metastatic site of bone cancer is listed first as it is the site where treatment was directed during this encounter. The other metastatic sites and the primary site of the malignancy is also coded. The procedure for chemotherapy for an outpatient would be coded with CPT or HCPCS by the outpatient coders.

11. **Principal Diagnosis: C18.4** Neoplasm, intestine, large, colon, transverse, malignant, primary
Secondary Diagnoses: D63.0 Anemia in neoplastic disease
Principal Procedure: Blood transfusion **30233N1**

Character	Code	Explanation
Section	3	Administration
Body System	0	Circulatory
Root Operation	2	Transfusion
Body Part	3	Peripheral Vein
Approach	3	Percutaneous
Substance	N	Red Blood Cells
Qualifier	1	Nonautologous
INDEX: Transfusion, vein, peripheral, blood, red cells		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission was for the management of anemia and the anemia was the only condition treated, but the ICD-10-CM coding guidelines state the code for the malignancy is listed first. A secondary code of anemia in neoplastic disease is coded as well. The transfusion code in ICD-10-PCS is found under the main term of transfusion in the Index. The coder must know the site of the administration (in this scenario, the peripheral vein) and the substance infused (in this scenario, red blood cells).

13. **Principal Diagnosis: C71.3** Glioblastoma, giant cell, specified site, see Neoplasm, brain, parietal lobe, malignant, primary
Secondary Diagnoses: C78.01 Neoplasm, lung, right, malignant, secondary;

F17.128 Dependence, drug, nicotine, cigarettes with specified disorder;
R73.03 Prediabetes
Principal Procedure: Biopsy brain **00B73ZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	0	Central Nervous System
Root Operation	B	Excision
Body Part	7	Cerebral Hemisphere
Approach	3	Percutaneous
Device	Z	No Device
Qualifier	X	Diagnostic
INDEX: Biopsy, see Excision with qualifier diagnostic. Body part key states for parietal lobe to use cerebral hemisphere		

Secondary Procedure(s): Bronchoscopy with biopsy **0BBK8ZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	B	Respiratory System
Root Operation	B	Excision
Body Part	K	Lung, Right
Approach	8	Via Natural or Artificial Opening Endoscopic
Device	Z	No Device
Qualifier	X	Diagnostic
INDEX: Bronchoscopy, with biopsy see Excision, lung		

Rationale: After study, it was concluded that the patient's symptoms were caused by the brain tumor or the glioblastoma. Other studies identified a metastatic carcinoma of the right lung. The other conditions addressed during this hospital stay were the nicotine dependence and the prediabetes. Two procedures were performed, both diagnostic procedures. The biopsy of the parietal area of the brain was done through a burr hole which would have the approach as percutaneous (through the skin) with the 7th character of X for diagnostic. The second procedure was a bronchoscopy with biopsy of the lung which is another excision for the root operation with the approach as via natural or artificial opening endoscopic with the 7th character of X for diagnostic.

15. **First-Listed Diagnosis: C50.912** Neoplasm, breast, malignant, female, primary left
Secondary Diagnoses: Z17.0 Status, estrogen receptor, positive
Z79.899 Long-term drug therapy, drug, specified NEC (Herceptin)
Rationale: The breast cancer is still coded as a primary site, not a history of breast cancer code, because the disease is still under treatment with the Herceptin. The positive estrogen receptor status is a relevant secondary diagnosis to be coded.

17. **Principal Diagnosis: C50.211** Neoplasm, breast, female, upper-inner quadrant, malignant, primary
Secondary Diagnoses: Z80.3 History, family, malignant neoplasm, breast
Principal Procedure: Breast lumpectomy, right **0HBT0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	H	Skin and Breast
Root Operation	B	Excision
Body Part	T	Breast, Right
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Lumpectomy, see Excision, breast		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted for the sole purpose of performing the lumpectomy for the suspected carcinoma of the breast that was confirmed by pathological diagnosis. The family history of breast cancer in this patient is relevant and used as an additional diagnosis code. A lumpectomy is known to be a partial excision of the breast, not a total removal of the breast. Therefore, the ICD-10-PCS definition of excision meets the description of this procedure and is coded. The lumpectomy is a therapeutic procedure to remove the breast tissue, not a diagnostic procedure.

19. **Principal Diagnosis: D09.0** Neoplasm, bladder, wall, anterior, Ca in situ
Secondary Diagnoses: E11.9 Diabetes, type 2;
I10 Hypertension
Principal Procedure: Fulguration, see Destruction of bladder anterior wall lesion **0T5B8ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	T	Urinary System
Root Operation	5	Destruction

Body Part	B	Bladder
Approach	8	Via Natural or Artificial Opening Endoscopic
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Fulguration, see Destruction, bladder 0T5B		

Secondary Procedure: Biopsy of bladder **0TBB8ZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	T	Urinary system
Root Operation	B	Excision
Body Part	B	Bladder
Approach	8	Via Natural or Artificial Opening Endoscopic
Device	Z	No Device
Qualifier	X	Diagnostic
INDEX: Biopsy, see Excision with qualifier diagnostic, bladder 0TBB		

Rationale: The reason for admission after study and the reason for the procedures was the carcinoma *in situ* of the bladder that is coded as D09.0 regardless of the site treated within the bladder. The patient was also treated for his established type 2 diabetes and hypertension. If documentation in the health record confirmed the patient's diabetes is treated with oral hypoglycemic drugs, code Z79.84 would be assigned. There is no mention of treatment with insulin either. The procedures were performed as a "transurethral" procedure, which is the approach using character 8 for via natural or artificial opening endoscopic. The fulguration of the bladder tumor is coded to the root operation of destruction in ICD-10-PCS. The biopsy of the second site within the bladder is coded to the root of excision with the seventh character using the diagnostic X character.

Chapter 3: Diseases of Blood and Blood-forming Organs and Certain Disorders Involving the Immune Mechanism

1. **Principal Diagnosis: D57.811** Disease, sickle cell Hb-SE, with crisis, with acute chest syndrome
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted with consequences of his known Hb-SE sickle cell disease. ICD-10-CM provides a combination code that includes the type of sickle cell disease as well as the acute chest syndrome due to the sickle cell crisis that prompted the hospital admission in this scenario.

3. **Principal Diagnosis: D50.9** Anemia, iron deficiency
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Bone marrow biopsy **07DR3ZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	7	Lymphatic and Hemi Systems
Root Operation	D	Extraction
Body Part	R	Bone Marrow, Iliac
Approach	3	Percutaneous
Device	Z	No Device
Qualifier	X	Diagnostic
INDEX: Extraction, bone marrow, iliac		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The coding in this exercise is limited to the coding of the diagnosis established and procedure provided by the consultant. The single diagnosis of iron deficiency anemia is coded. The procedure for a bone marrow biopsy is an extraction of bone marrow from the iliac as the root operation is defined in ICD-10-CM. Biopsy is not coded as an excision because it does not meet the definition of excision in ICD-10-PCS—that is, cutting out a portion of a body part. Aspiration is not the root operation for this case because it does not meet the definition of taking or letting out fluids or gasses from a body part. In this example, the bone marrow is extracted or pulled out of a body part.

5. **Principal Diagnosis: D59.1** Anemia, hemolytic, autoimmune
Secondary Diagnoses: M32.9 Lupus, erythematous, systemic
Principal Procedure: Splenectomy **07TP0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical

Body System	7	Lymphatic and Hemi Systems
Root Operation	T	Resection
Body Part	P	Spleen
Approach	0	Open
Device	Z	No Device
Qualifier	Z	Diagnostic
INDEX: Splenectomy, see Resection, lymphatic and hemi system, spleen		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted to the hospital for surgery (splenectomy) as treatment for the patient's autoimmune hemolytic anemia. The patient's underlying condition of systemic lupus erythematosus was also treated and therefore coded as a secondary diagnosis. The splenectomy, or the removal of the entire spleen, meets the definition of resection in ICD-10-PCS and is coded using the main term in the Index that refers the coder to resection, spleen and table 07TP.

7. **First-Listed Diagnosis: K29.40** Gastritis, atrophic (chronic)(without bleeding)
Secondary Diagnoses: D51.0 Anemia, pernicious;
D80.1 Agammaglobulinemia
Rationale: The patient's complaint of chest pain was attributed to her chronic atrophic gastritis that is then the main reason for the outpatient visit and listed as the first-listed diagnosis code. The patient's other medical conditions that were evaluated were also coded as secondary diagnoses.

9. **Principal Diagnosis: D66** Hemophilia, A
Secondary Diagnoses: M36.2 Arthritis, in hemophilia NEC
Principal Procedure: Therapeutic plasmapheresis **6A550Z3**

Character	Code	Explanation
Section	6	Extracorporeal Therapies
Physiological Systems	A	Physiological Systems
Root Operation	5	Pheresis
Body System	5	Circulatory
Duration	0	Single
Qualifier	Z	No qualifier
Qualifier	3	Plasma
INDEX: Plasmapheresis, therapeutic		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was for the patient's first course of plasmapheresis or extracorporeal immunoadsorption. The condition requiring treatment by plasmapheresis was the patient's hemophilia A condition. The patient also had arthritis due to the hemophilia, which was evaluated during the hospital stay. The procedure performed is coded using the main term of plasmapheresis, which was a single treatment during this hospital stay.

11. **Principal Diagnosis: L89.153** Ulcer, pressure, sacral, stage 3
Secondary Diagnoses: R15.9 Incontinence, feces;
L89.212 Ulcer, pressure, hip, stage 2 (6th character of 2 for right hip);
D62 Anemia, posthemorrhagic, acute;
E11.9 Diabetes, type 2;
I10 Hypertension;
M47.26 Osteoarthritis, spine, see Spondylosis with radiculopathy (back pain), lumbar region
G89.29, Pain, chronic, specified NEC (back)
Principal Procedure: Diverting colostomy **0D1M0Z4**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	D	Gastrointestinal System
Root Operation	1	Bypass
Body Part	M	Descending Colon
Approach	0	Open
Device	Z	No Device
Qualifier	4	Cutaneous
INDEX: Colostomy, see Bypass, gastrointestinal system		

Secondary Procedure: Blood transfusion, red cells **30233N1**

Character	Code	Explanation
Section	3	Administration
Physiological System	0	Circulatory
Root Operation	2	Transfusion
Body Part	3	Peripheral Vein
Approach	3	Percutaneous
Substance	N	Red Blood Cells

Qualifier	1	Nonautologous
INDEX: Transfusion, vein, peripheral, blood, red cells		

Rationale: The principal diagnosis assigned to this case could be debated as either the anemia or the pressure ulcers and could be different in another patient with a similar scenario. In this scenario it was thought that the pressure ulcers were the reason the patient was admitted to the hospital. The ulcers were bleeding, causing the anemia and complicated by the fecal incontinence, which could not be controlled, that was further damaging her skin and pressure ulcers. For this reason, the colostomy was done to eliminate the fecal incontinence and prevent further damage to the skin and the pressure ulcers, which would hopefully heal and no longer bleed, eliminating the anemia. The patient's other conditions were evaluated and treated during the hospital stay, so all were coded as secondary diagnoses. If the documentation in the record identified the type of medication used to treat the diabetes, a code for insulin use or oral hypoglycemic drugs would be assigned. The colostomy meets the definition of bypass in ICD-10-PCS to alter the route of a tubular body part, the descending colon. The approach was Open and the end point of the colostomy was the skin or cutaneous tissue identified in the 7th character for a qualifier. A transfusion was also completed and coded as a secondary procedure using the main term transfusion through a peripheral vein.

13. **First-Listed Diagnosis: N18.6** Disease, renal, end stage
Secondary Diagnoses: D63.1 Anemia, in, end-stage renal disease;
Z99.2 Dependence on renal dialysis
Rationale: In this scenario it appears the main reason for the outpatient visit was to receive treatment for the anemia due to the ESRD. However, there is a Tabular instruction note under code D63.1 to code first the underlying chronic kidney disease. For this reason, the N18.6 code for ESRD is assigned as the first-listed code and the anemia and dependence on dialysis are coded as secondary diagnoses.

15. **Principal Diagnosis: R55** Syncope
Secondary Diagnoses: D56.1 Thalassemia, beta, major
Principal Procedure: Blood transfusion, red cells **30233N1**

Character	Code	Explanation
Section	3	Administration
Physiological System	0	Circulatory
Root Operation	2	Transfusion
Body Part	3	Peripheral Vein
Approach	3	Percutaneous
Substance	N	Red Blood Cells
Qualifier	1	Nonautologous
INDEX: Transfusion, vein, peripheral, blood, red cells		

Secondary Procedure(s): None indicated by the documentation provided

Rationale: The cause for the syncope could not be determined and was not thought to be caused by the thalassemia and, therefore, the symptom code of syncope is listed as the principal diagnosis. The secondary diagnosis of thalassemia is listed as a diagnosis code. The patient's other symptoms (splenomegaly, fatigue, and reduced appetite) are classic symptoms of the thalassemia and therefore not coded. The procedure of the transfusion of the packed red blood cells is coded under the root operation of administration.

17. **Principal Diagnosis: D50.8** Anemia, nutritional, with poor iron absorption
Secondary Diagnoses: H25.9 Cataract, senile
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for the clinic visit was to investigate his abnormal hematocrit that proved to be nutritional anemia with poor iron absorption. The doctor also documented the senile cataract as a current condition.

Chapter 4: Endocrine, Nutritional, and Metabolic Diseases

1. **Principal Diagnosis: E10.65** Diabetes mellitus, type 1 with hyperglycemia
Secondary Diagnoses: E10.3299 Diabetes mellitus, type 1 with retinopathy, nonproliferative, mild
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted with diabetes that was found after study to be uncontrolled. Diabetes found to be out of control is coded to diabetes by type with hyperglycemia. There is an Index entry for diabetes, out of control, code to Diabetes, by type, with hyperglycemia. The patient also has retinopathy due to her diabetes that is found under Index term diabetes, type 2, with retinopathy, nonproliferative, mild. Although not addressed in the guideline, code Z79.4, long term (current) use of insulin, is not assigned with codes from E10 for type 1 diabetes mellitus. Instead the classification provides a use additional code note to identify any insulin use in all the diabetes categories with the exception of E10 for type 1 diabetes mellitus. The Z79.4 code would not be assigned with type 1 cases because insulin is required or expected to be used with type 1 diabetic patients.

3. **Principal Diagnosis: T85.614A** Complication, insulin pump, mechanical breakdown, initial encounter
Secondary Diagnoses: T38.3 X6A Table of Drugs and Chemicals, insulin, underdosing, initial encounter;
E10.10 Diabetes, type 1, with ketoacidosis
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was the fact the insulin pump had a mechanical breakdown that is coded as a complication of the device. This was the initial encounter for treatment so the 7th character of A is used. The fact the insulin pump was not working produced the ketoacidosis because not enough insulin was being administered. This produced a clinical scenario of underdosing of the insulin. The underdosing of insulin code is found in the Table of Drugs and Chemical under "insulin" with the code chosen from the underdosing column. The patient had diabetic ketoacidosis as a result and this was coded as a secondary code.

5. **First-Listed Diagnosis: E21.0** Hyperparathyroidism, primary
Secondary Diagnoses: D35.1 Adenoma, see Neoplasm, benign by site—Neoplasm, parathyroid, benign
Rationale: The reason for the visit was evaluation of the abnormal test results that were determined to be caused by the primary hyperparathyroidism. The patient is also known to have the parathyroid adenoma that was addressed with the discussion about surgery.

7. **Principal Diagnosis: E10.65** Diabetes mellitus, type 1, with hyperglycemia
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Insertion of Insulin pump, subcutaneous abdominal tissue **0JH80VZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	J	Subcutaneous Tissue and Fascia
Root Operation	H	Insertion
Body Part	8	Subcutaneous Tissue and Fascia, Abdomen

Approach	0	Open
Device	V	Infusion Device, Pump
Qualifier	Z	No Qualifier
INDEX: Insertion of device in, subcutaneous tissue and fascia, abdomen		

Secondary Procedure: Injection of insulin **3E013VG**

Character	Code	Explanation
Section	3	Administration
Physiological systems	E	Physiological Systems and Anatomical Regions
Root Operation	0	Introduction
Body System/Region	1	Subcutaneous Tissue and Fascia
Approach	3	Percutaneous
Substance	V	Hormone
Qualifier	G	Insulin
INDEX: Introduction of substance in or on subcutaneous tissue (hormone) insulin		

Rationale: The only reason for admission after study was to insert an insulin pump to help take care of the patient's uncontrolled type 1 diabetes. The uncontrolled status is coded to diabetes with hyperglycemia. There were no other complications documented for this encounter. The placement of the insulin pump meets the definition of insertion of a device in ICD-10-PCS. The device is inserted into the subcutaneous tissue of the abdomen or trunk. The injection of insulin is coded in this example as performed as part of the insertion of the insulin pump.

9. **Principal Diagnosis: E66.01** Obesity, morbid
Secondary Diagnoses: I10 Hypertension;
E11.44 Diabetes, type 2 with diabetic amyotrophy;
E78.5 Dyslipidemia;
Z96.653 Presence, knee joint implant (bilateral);
Z68.43 Body mass index adult 50–59
Principal Procedure: Gastric banding **0DV64CZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	D	Gastrointestinal System
Root Operation	V	Restriction

Body Part	6	Stomach
Approach	4	Percutaneous Endoscopic
Device	C	Extraluminal Device
Qualifier	Z	No Qualifier
INDEX: Banding, see Restriction, stomach; insertion of port is part of procedure		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient's reason for admission after study was the morbid obesity to be treated with the gastric banding procedure. The patient's multiple other conditions were evaluated or treated during the hospital stay and coded as secondary diagnoses. In ICD-10-PCS the gastric banding procedure meets the definition of restriction of the body part of stomach. The banding is done with an extraluminal device placed internally on the outside of the stomach organ. This procedure was done laparoscopically, so the approach is listed as percutaneous endoscopic.

11. **Principal Diagnosis: E89.1** Postprocedural hypoinsulinemia
Secondary Diagnoses: E13.9 Diabetes, secondary or Diabetes, postpancreatectomy, see Diabetes, specified type NEC;
Z90.411 Absence, pancreas, acquired, partial;
Z79.4 Long term use of drug, insulin
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient's type of diabetes is a "secondary" type as the result of his partial pancreatectomy. The guidelines concerning secondary diabetes mellitus due to pancreatectomy state the hypoinsulinemia is listed first followed by the diabetes code (Guideline 1.C.4.a.6.b.1). Other conditions are coded as secondary diagnosis including the absence of part of the pancreas and the long term use of insulin.

13. **Principal Diagnosis: E10.11** Diabetes, type 1, with ketoacidosis with coma
Secondary Diagnoses: E10.21 Diabetes, type 1, with nephropathy;
E10.3419 Diabetes, type 1, with retinopathy, nonproliferative, severe with macular edema;
N39.0 Infection, urinary tract;
B96.20 Infection, Escherichia coli (E. Coli);
Z87.440 History, urinary tract infection;
F10.229 Dependence, alcohol with intoxication;
Z91.19 Noncompliance with medical treatment
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: While the patient had several complications of her diabetes mellitus, the reason for admission after study for this hospital stay was the diabetic ketoacidosis as documented by the physician. Multiple diabetes codes can be used to identify the various organ systems affected. The alcohol dependence was coded with intoxication as evidenced by the positive blood alcohol level.

15. **Principal Diagnosis: E76.1** Mucopolysaccharidosis, type II; Syndrome, Hunter's
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The single diagnosis coded, the principal diagnosis, is E76.1 for Mucopolysaccharidosis which

is the main term that can be used in the Index. The main term of syndrome, Hunter's may also be used. The symptoms described as known to be due to the condition identified and therefore not coded separately.

17. **Principal Diagnosis: E11.52** Diabetes, type 2, gangrene
Secondary Diagnoses: E11.3599 Diabetes, type 2, retinopathy, proliferative
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: ICD-10-CM provides combination codes for the diabetes with gangrene and the diabetes with proliferative retinopathy with no required additional codes. The combination code includes both conditions in one code. The diabetic gangrene code is listed first as it is the focus of attention on the day of the visit.

Chapter 5: Mental, Behavioral, and Neurodevelopmental Disorders

1. **Principal Diagnosis: F10.231** Dependence, alcohol with withdrawal delirium
Secondary Diagnoses: F10.251 Dependence, alcohol with alcohol-induced psychotic disorder with hallucinations;
F17.210 Dependence, nicotine, cigarettes (uncomplicated)
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The physician stated the reason for admission was the impending delirium tremens, so listed as the principal diagnosis. Alcohol dependence and nicotine dependence (smoking) were also evaluated and treated, so they are included as secondary diagnoses.

3. **Principal Diagnosis: F14.20** Dependence, drug, cocaine, (uncomplicated)
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Detoxification Services **HZ2ZZZZ**

Character	Code	Explanation
Section	H	Substance Abuse Treatment
Body System	Z	None
Root Type	2	Detoxification Services
Type Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
INDEX: Detoxification Services, for substance abuse		

Secondary Procedure: Narcosynthesis **GZGZZZZ**

Character	Code	Explanation
Section	G	Mental Health
Body System	Z	None
Root Type	G	Narcosynthesis
Type Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None

INDEX: Narcosynthesis

Rationale: The principal diagnosis of cocaine dependence was assigned due to the reason for admission being the need for drug detoxification. No secondary diagnoses were present. The procedures of detoxification and narcosynthesis were coded with the detoxification as principal because it was most closely tied to the reason for admission.

5. **Principal Diagnosis: F41.0** Disorder, panic
Secondary Diagnoses: R07.89 Pain, chest, non-cardiac
Principal Procedure: None indicated by documentation provided
Secondary Procedure(s): None indicated by documentation provided
Rationale: The reason for admission after study was the panic disorder so listed as principal diagnosis. The secondary diagnosis of non-cardiac chest pain was listed by the physician, which is coded even though it has resolved.

7. **Principal Diagnosis: F11.23** Dependence, drug, opioid with withdrawal
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Drug detoxification **HZ2ZZZZ**

Character	Code	Explanation
Section	H	Substance Abuse Treatment
Body System	Z	None
Root Type	2	Detoxification Services
Type Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
INDEX: Detoxification Services, for substance abuse		

Secondary Procedure: Individual substance abuse counseling, motivational **HZ37ZZZ**

Character	Code	Explanation
Section	H	Substance Abuse Treatment
Body System	Z	None
Root Type	3	Individual Counseling
Type Qualifier	7	Motivational Enhancement
Qualifier	Z	None
Qualifier	Z	None

Qualifier	Z	None
INDEX: Substance Abuse Treatment, individual, motivational		

Rationale: The ICD-10-CM combination code for the drug dependence and withdrawal is listed as the principal diagnosis and the reason for admission after study. Two procedures are performed with the detoxification procedure most closely described as related to the principal diagnosis.

9. **First-Listed Diagnosis: F20.0** Schizophrenia, paranoid
Secondary Diagnoses: T43.3X6A Table of Drugs and Chemicals, Perphenazine, underdosing;
Z91.120 Underdosing, intentional, due to financial hardship
Rationale: This is an example of a patient with a condition that worsens or exacerbates due to the patient not taking the prescribed medication to manage the condition. The first listed diagnosis is the condition that worsens. Additional diagnoses are used to identify the drug that was underdosed from the Table of Drugs and Chemicals and the reason related to the underdosing by the patient, due to financial hardship.

11. **Principal Diagnosis: F33.2** Disorder, depressive, recurrent, current episode, severe
Secondary Diagnoses: S13.4XXA Sprain, cervical, initial encounter;
X83.8XXA Index to External causes, suicide, hanging;
Y92.015 Index to External causes, place of occurrence, residence, house, garage;
G89.4 Syndrome, chronic pain;
F11.20 Dependence, drug, methadone, see opioid (uncomplicated);
J18.9 Pneumonia
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for his admission to the psychiatric unit was the recurrent depressive disorder. This episode was severe. The secondary diagnoses that were treated included the cervical sprain, chronic pain syndrome, drug dependence. (Note: the patient is taking methadone so he is still dependent on opioids.) The external cause codes for the hanging suicide attempt and the place of occurrence identified are also coded as the two facts known about the external cause of the event.

13. **First-Listed Diagnosis: F20.81** Disorder, Schizophreniform disorder
Secondary Diagnoses: F91.2 Disorder, Conduct, adolescent-onset type;
F90.1 Disorder, Attention-deficit hyperactivity, hyperactive type;
F81.9 Disability, learning;
F63.1 Pyromania;
Z81.8 History, Family mental disorders
Rationale: In addition to the diagnoses listed by the physician at the end of the scenario, the patient is also described with the diagnosis of pyromania and having a history of family mental illness/disorders.

15. **Principal Diagnosis: F43.12** Disorder, post-traumatic stress, chronic
Secondary Diagnoses: R45.851 Ideation, suicidal
Principal Procedures: Individual supportive individual psychotherapy **GZ56ZZZ**

Character	Code	Explanation
Section	G	Mental Health Services
Body System	Z	None

Root Type	5	Individual Psychotherapy
Type Qualifier	6	Supportive
Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
INDEX: Psychotherapy, individual, mental health services, supportive		

Secondary Procedure(s): Individual cognitive-behavioral psychotherapy **GZ58ZZZ**

Character	Code	Explanation
Section	G	Mental Health Services
Body System	Z	None
Root Type	5	Individual Psychotherapy
Type Qualifier	8	Cognitive Behavioral
Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
INDEX: Psychotherapy, individual, mental health services, cognitive-behavioral		

Rationale: The scenario describes a patient with both post-traumatic stress disorder (PTSD) and suicide ideation that were treated during the hospital stay. The PTSD appears to be the reason for admission after study and, therefore, the principal diagnosis with the additional diagnosis coded for the suicide ideation. The two psychotherapy services provides were also coded and either one could probably be listed as principal.

17. **Principal Diagnosis: F33.9** Disorder, depressive, major, recurrent
Secondary Diagnoses: F41.9 Disorder, anxiety;
F45.0 Disorder, somatization
Principal Procedure: Medication management **GZ3ZZZZ**

Character	Code	Explanation
Section	G	Mental Health Services
Body System	Z	None
Root Type	3	Medication management
Type Qualifier	Z	None

Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
INDEX: Medical Management		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted because she was not responding to outpatient therapy for her known major depression that was described as recurrent. The physician added the secondary diagnoses of anxiety disorder and somatization disorder, which were coded. The physician described the procedure performed as medication management. All of the diagnoses were accessed in the Alphabetic Index under the main term of "disorder."

Chapter 6: Diseases of the Nervous System

1. **First-Listed Diagnosis: G30.1** Disease, Alzheimer's, late onset, with behavioral disturbance
Secondary Diagnoses: F02.81 Disease, Alzheimer's, late onset, with behavioral disturbances;
Z91.83 Wandering
Rationale: The main reason the patient was brought to the physician's office was for management of her symptoms caused by the Alzheimer's dementia. Coding notes require the coder to code first the Alzheimer's disease followed by codes for the manifestation of the disease.

3. **Principal Diagnosis: G20** Parkinson's disease, see Parkinsonism
Secondary Diagnoses: L02.212 Abscess, cutaneous, see Abscess, by site, back
Principal Procedure: Drainage, subcutaneous tissue and fascia, back **0J970ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	J	Subcutaneous Tissue and Fascia
Root Operation	9	Drainage
Body Part	7	Subcutaneous Tissue and Fascia, Back
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Incision, abscess, see Drainage, subcutaneous, back		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was the patient's Parkinsonism, but a secondary condition (abscess) was surgically treated. The other symptoms described in the scenario (rigidity, loss of speech, and loss of ambulation) are not coded as these are integral conditions to the Parkinsonism disease. The incision and drainage procedure performed is coded to the root operation of drainage as it is the objective of the procedure.

5. **Principal Diagnosis: A41.9** Sepsis
Secondary Diagnoses: R65.21 Sepsis, severe, with septic shock;
N17.9 Failure, renal, acute;
K72.00 Failure, hepatic acute;
G31.83 Lewy body dementia;
F02.80 Dementia without behavioral disturbance;
J69.0 Pneumonia, aspiration, due to food;
R13.10 Difficulty, swallowing, see Dysphagia;
L89.153 Ulcer, pressure, sacrum, stage III;
Z74.01 Status, bed, confinement;
Z66 DNR
Z51.5, Palliative care
Principal Procedure: None indicated by the documentation provided

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The diagnosis of severe sepsis and shock requires codes for the blood stream infection (sepsis) severe sepsis status with shock (specifically the organ failure, renal and hepatic). In addition the patient's dementia, dysphagia, pressure ulcer, bed confinement status, and DNR status were also managed and therefore coded for this hospital stay. The dementia code is added because of the use additional code note that appears under category G31, other degenerative diseases of the nervous system, not elsewhere classified. The family elected hospice care with no further aggressive care. No procedures were performed.

7. **First-Listed Diagnosis: G51.0** Palsy, Bell's or facial nerve
Secondary Diagnoses: E11.9 Diabetes, type 2;
Z79.84 Long-term drug therapy, oral hypoglycemic drugs (glipizide)
F17.210 Dependence, drug, nicotine, cigarettes
Rationale: The primary reason the patient was in the physician's office was to diagnosis the condition that was causing the symptoms she was experiencing, that is, Bell's Palsy. Her other conditions were also evaluated and therefore coded and reported.

9. **Principal Diagnosis: G45.9** Attack, transient ischemic
Secondary Diagnoses: I69.354 Sequela, infarction, cerebral, hemiplegia, left nondominant;
I10 Hypertension, essential;
E11.22 Diabetes, type 2, with chronic kidney disease;
N18.2 Disease, kidney, chronic, stage 2
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted with diagnosis of a possible stroke but it was determined after study the patient had suffered a transient ischemic attack (TIA). The symptoms the patient was experiencing on admission are not coded separately with a TIA. However, the residuals of the original stroke are coded. The patient's other medical conditions were also evaluated and treated during the hospital stay and, therefore, are coded. If there was documentation in the health record on what type of medication was used to treat the diabetes (insulin or oral hypoglycemic medications), an additional code could be assigned.

11. **Principal Diagnosis: G90.01** Syndrome, carotid, sinus
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Insertion of dual chamber cardiac pacemaker generator **0JH606Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	J	Subcutaneous Tissue and Fascia
Root Operation	H	Insertion
Body Part	6	Subcutaneous Tissue and Fascia, Chest
Approach	0	Open
Device	6	Pacemaker Dual Chamber
Qualifier	Z	No Qualifier

INDEX: Pacemaker, Dual Chamber, Chest

Secondary Procedure: Insertion of pacemaker lead into right atrium **02H63JZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	H	Insertion
Body Part	6	Atrium, Right
Approach	3	Percutaneous
Device	J	Cardiac Lead, Pacemaker
Qualifier	Z	No Qualifier
INDEX: Insertion of device in, Atrium, right		

Secondary Procedure: Insertion of lead into right ventricle **02HK3JZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	H	Insertion
Body Part	K	Ventricle, Right
Approach	3	Percutaneous
Device	J	Cardiac Lead, Pacemaker
Qualifier	Z	No Qualifier
INDEX: Insertion of device in, Ventricle, right		

Rationale: That patient was admitted to the hospital for a singular reason, the carotid sinus syndrome. The procedure performed involved the insertion of three devices, the cardiac pacemaker generator into the subcutaneous tissue of the chest and the insertion of two pacemaker leads, one into the right atrium and one into the right ventricle.

13. **Principal Diagnosis: T60.3X1S** Table of Drugs, Herbicide NEC, poisoning, accidental
Secondary Diagnoses: G62.2 Polyneuropathy, due to, toxic agent NEC,
Principal Procedure: None indicated by the documentation provided

Secondary Procedure(s): None indicated by the documentation provided
Rationale: This patient's scenario does not describe a current episode of herbicide toxicity. Instead the patient is experiencing conditions as a result of the toxicity. For this reason, the coder should assign the 7th character S for Sequelae of the herbicide poisoning. Under the code for G62.2 is an instruction in the Tabular List to code first (T51–T65) to identify toxic agent from the Table of Drugs and Chemicals. There were no procedures performed to be coded.

15. **Principal Diagnosis: G00.1** Meningitis, bacterial, pneumococcal
Secondary Diagnoses: J13 Pneumonia, Streptococcus pneumonia;
H66.003 Otitis, media, suppurative, acute, bilateral
Principal Procedure: Diagnostic lumbar puncture **009U3ZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	0	Central Nervous System
Root Operation	9	Drainage
Body Part	U	Spinal Canal
Approach	3	Percutaneous
Device	Z	No Device
Qualifier	X	Diagnostic
INDEX: Drainage, spinal canal		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient's symptoms at the time of admission were caused by the bacterial meningitis that is coded as the principal diagnosis. The patient was also diagnosed and treated for pneumonia and otitis media during the admission, which were therefore coded as secondary diagnoses. One procedure was performed, a diagnostic spinal puncture.

17. **Principal Diagnosis: G61.0** Syndrome, Guillain-Barre or Guillain-Barre Disease or Syndrome
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Plasmapheresis **6A550Z3**

Character	Code	Explanation
Section	6	Extracorporeal Therapies
Body System	A	Physiological Systems
Root Operation	5	Pheresis
Body Part	5	Circulatory
Approach	0	Single

Device	Z	No Qualifier
Qualifier	3	Plasma
INDEX: Plasmapheresis		

Secondary Procedure: Diagnostic lumbar puncture **009U3ZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	0	Central Nervous System
Root Operation	9	Drainage
Body Part	U	Spinal Canal
Approach	3	Percutaneous
Device	Z	No Device
Qualifier	X	Diagnostic
INDEX: Puncture, see Drainage, spinal canal		

Rationale: The patient's symptoms and history of a viral infection along with the physical examination and diagnostic studies led both physicians to conclude the patient was having an initial attack of Guillain-Barre Syndrome. The coding of this condition is straight forward using the main terms of "syndrome" or "Guillain-Barre." Two procedures were performed. The therapeutic procedure of plasmapheresis was listed first with the diagnostic procedure listed second. The ICD-10-PCS Index includes the complete code for the plasmapheresis. The code for the spinal tap may first be located under the main term of "puncture" that states see drainage. The coder must recognize that the procedure is a puncture of the spinal canal, not the spinal cord. The qualifier of X is used because the spinal tap/puncture is a diagnostic procedure to establish a diagnosis.

Chapter 7: Diseases of the Eye and Adnexa

1. **First-Listed Diagnosis: H40.10X1** Glaucoma, open angle (bilateral), mild
Secondary Diagnoses: None indicated by the documentation provided
Rationale: When a patient has bilateral glaucoma, and both eyes are documented as being the same type and stage, and ICD-10-CM does not provide a code for bilateral (i.e., H40.10), coder should report only one code for the type of glaucoma with the appropriate seventh character for the stage (i.e., 1 = mild).

3. **First-Listed Diagnosis: H11.052** Pterygium, peripheral, progressive, left eye
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The symptom the patient described to the physician as the reason for the visit was diagnosed as pterygium and was the first-listed diagnosis.

5. **First-Listed Diagnosis: E11.3392** Diabetes, type 2 with retinopathy, nonproliferative, moderate without macular edema
Z79.84 Long-term drug therapy, oral hypoglycemic
Secondary Diagnoses: None indicated by the documentation provided
Rationale: ICD-10-CM contains combination codes for diabetes including the type of diabetes, the body system affected, and the specific condition related to the diabetes.

7. **Principal Diagnosis: H16.072** Ulcer, cornea, perforated, left
Secondary Diagnoses: Z94.7 Transplant (status), cornea;
Q90.9 Syndrome, Down
Principal Procedure: Keratoplasty, see Replacement, cornea, left **08R93KZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	8	Eye
Root Operation	R	Replacement
Body Part	9	Cornea, Left
Approach	3	Percutaneous
Device	K	Nonautologous Tissue Substitute
Qualifier	Z	No Qualifier
INDEX: Keratoplasty, see Replacement, cornea, left **08R93KZ**		

Secondary Procedure: Removal of previous corneal tissue (device), eye left **08P13KZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	8	Eye

Root Operation	P	Removal
Body Part	1	Eye, Left
Approach	3	Percutaneous
Device	K	Nonautologous Tissue Substitute
Qualifier	Z	No Qualifier
INDEX: Removal of device, eye, left		

Rationale: The reason for admission after study, the principal diagnosis, is the corneal ulcer. The surgical procedure is a replacement of the cornea for the second time. The cornea is replaced with donor material, not repaired or supplemented according to PCS definitions of those procedures. The other conditions present are coded as secondary diagnoses. A corneal transplant is a replacement procedure where a body part is replaced by a device, in this case, a tissue substitute. A removal procedure is coded for taking out the device (corneal tissue) used in a previous replacement procedure for that the second corneal replacement can be performed.

9. **First-Listed Diagnosis: H25.11** Cataract, nuclear, sclerosis, see Cataract, senile nuclear
Secondary Diagnoses: H40.2213 Glaucoma, angle closure, chronic, right, severe stage
Rationale: The reason for the office visit was to consider what could be done to correct his eye conditions, specifically the cataract and glaucoma. Since both conditions were addressed, either could be listed as the first-listed diagnosis code.

11. Ophthalmic Diagnosis: **H44.011** Panophthalmitis
Principal Procedure: Sclerotomy **08943ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	8	Eye
Root Operation	9	Drainage
Body Part	4	Vitreous, Right
Approach	3	Percutaneous
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Sclerotomy, see Drainage, eye, vitreous		

Secondary Procedure: Injection of antibiotic, eye **3E0C329**

Character	Code	Explanation

Section	3	Administration
Physiological System	E	Physiological Systems and Anatomical Regions
Root Operation	0	Introduction
Body System/Region	C	Eye
Approach	3	Percutaneous
Substance	2	Anti-infective
Qualifier	9	Other Anti-infective
INDEX: Introduction of substance into eye, anti-infective		

Rationale: Only the ophthalmic diagnosis code was coded in this example in a patient with other unknown conditions, so the principal diagnosis code could not be identified. The ophthalmic procedures performed include the drainage of the vitreous and an injection or introduction of substance into the eye, that is, anti-infective agents.

13. **First-Listed Diagnosis: H40.31X2** Glaucoma secondary to trauma, moderate stage, right
Secondary Diagnoses: T26.91XS Burn, chemical, see Corrosion by site, eye, sequela
Rationale: This is an example of the sequela of an eye injury, so the current condition (glaucoma) is listed first with identification of the original injury with the injury code using the seventh character of S for sequela. The ICD-10-CM first listed diagnosis code included two facts—the glaucoma is due to the original trauma and is present in the moderate stage.

15. **First-Listed Diagnosis: H44.511** Glaucoma, absolute
Secondary Diagnoses: H57.11 Pain, ocular, right eye
Rationale: The eye pain may be identified as the main reason for the clinic visit but the cause of the pain is known to be the absolute glaucoma. Because the ocular pain is not always present with the glaucoma, the pain code should be used to further explain the conditions evaluated during the clinic visit and used in making the decision to perform the upcoming surgery.

17. **First-Listed Diagnosis: H43.12** Hemorrhage, vitreous, left
Secondary Diagnoses: H33.42 Detachment, retina, traction, left;
I10 Hypertension;
R94.31 Abnormal, electrocardiogram;
I09.9 Rheumatic, heart, see Disease, heart, rheumatic
Rationale: The main reason the patient came to the ophthalmologist's office was to check on the status of her left eye vitreous hemorrhage; therefore, it is coded as the first diagnosis. The retinal detachment coded as an additional diagnosis. The medical conditions acknowledged by the ophthalmologist that required further evaluation by the primary care physician were also coded as secondary diagnoses.

Chapter 8: Diseases of the Ear and Mastoid Process

1. **First-Listed Diagnosis: H90.41** Loss, hearing, see also Deafness, sensorineural, unilateral (right ear)
Secondary Diagnoses: W42.9XXA Index to External Causes, Main term, Noise
Rationale: The main reason for the clinic visit is the hearing loss on the right side, identified as sensorineural type. There was no hearing loss identified on left side. The external cause code is optional as there is no national requirement for reporting external causes of injuries or conditions.

3. **First-Listed Diagnosis: H81.13** Vertigo, benign paroxysmal (positional)
Secondary Diagnoses: None indicated by the documentation provided.
Rationale: The patient was seen for one condition that had been evaluated by diagnostic testing, the vertigo, as stated by the physician. In ICD-10-CM the fifth character of "3" is used to describe a bilateral condition.

5. **First-Listed Diagnosis: H72.02** Perforation, tympanic (membrane), central, left ear
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The patient had a single reason for coming to the emergency department, which was found to have been caused by a perforation of his left tympanic membrane. The ICD-10-CM diagnosis code includes the laterality of left ear.

7. **First-Listed Diagnosis: H60.42** Cholesteatoma, external ear, left
Secondary Diagnoses: H66.92 Otitis, media, chronic, left
Rationale: The left side conditions of the cholesteatoma and otitis media can be identified with the laterality included in the ICD-10-CM diagnosis codes.

9. **First-Listed Diagnosis: H66.005** Otitis, media, suppurative, acute, recurrent, left
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The emergency department physician identifies the reason for the patient's symptoms to be the acute otitis media that is coded as the single reason for the emergency department visit. The ICD-10-CM diagnosis codes allow for the laterality to be identified with the code as occurring on the left side.

11. **First-Listed Diagnosis: H60.21** Otitis, externa, malignant, right
Secondary Diagnoses: E11.65 Diabetes, type 2, with, hyperglycemia
Rationale: The main reason for the office visit was to re-examine the patient's symptoms related to his ear disease and provide further management. The patient's uncontrolled diabetes mellitus was also addressed as important in the patient's overall condition. The possible osteomyelitis is not coded because of the coding guideline that states in the outpatient setting uncertain diagnosis is not coded as if it existed. ICD-10-CM allows for the laterality to be identified with the otitis codes. The patient's uncontrolled diabetes is identified with the code for the type of diabetes present with hyperglycemia. If the type of medication (insulin or oral hypoglycemic medications) was identified in the record that was used to treat the diabetes, an additional code from Z79 category would be assigned.

13. **First-Listed Diagnosis: H81.09** Meniere's Disease, unspecified
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The patient in this example was seen in her physician's office for a known problem, Meniere's disease. The patient was treated for the condition. ICD-10-CM diagnosis codes for Meniere's disease allow for the laterality to be identified, but in this example, the physician did not describe the condition are present in the right, left or both ears so the condition was coded as unspecified as to which side of the body it was present.

15. **First-Listed Diagnosis: H81.23** Neuronitis, vestibular, bilateral
Secondary Diagnoses: None indicated by the documentation provided
Rationale: This scenario describes a follow up visit in the consultant's office after an emergency department visit. The consultant identified the cause of the patient's symptoms as bilateral vestibular neuronitis, which can be coded in ICD-10-CM with the bilateral nature of the disease identified.

17. **First-Listed Diagnosis: H61.012** Perichondritis, ear, acute, left
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The physician concluded the patient had acute perichondritis of the left external ear (pinna) based on the patient's history of ear cartilage piercing and the physical appearance of the area as well as the culture results.

Chapter 9: Diseases of the Circulatory System

1. **Principal Diagnosis: I21.19** Infarction, myocardium, ST elevation, inferior
Secondary Diagnoses: I25.10 Arteriosclerosis, coronary;
I25.83 Arteriosclerosis, coronary, due to lipid rich plaque;
I48.91 Fibrillation, atrial
Principal Procedure: Combined right and left heart catheterization **4A023N8**

Character	Code	Explanation
Section	4	Measurement and Monitoring
Body System	A	Physiological Systems
Root Operation	0	Measurement
Body System	2	Cardiac
Approach	3	Percutaneous
Function Device	N	Sampling and Pressure
Qualifier	8	Bilateral (Right and Left Heart)
INDEX: Catheterization, heart, see Measurement, cardiac		

Secondary Procedure: Combined right and left heart angiocardiography **B2161ZZ**

Character	Code	Explanation
Section	B	Imaging
Body System	2	Heart
Root Type	1	Fluoroscopy
Body Part	6	Heart, Right and Left
Contrast	1	Low Osmolar
Qualifier	Z	None
Qualifier	Z	None
INDEX: Angiocardiography, see Fluoroscopy, heart		

Secondary Procedure: Multiple Vessel Coronary arteriography **B2111ZZ**

Character	Code	Explanation
Section	B	Imaging
Body System	2	Heart

Root Type	1	Fluoroscopy
Body Part	1	Coronary Arteries, Multiple
Contrast	1	Low Osmolar
Qualifier	Z	None
Qualifier	Z	None
INDEX: Arteriography, see Fluoroscopy, heart		

Rationale: The statement in this scenario is the chest pain was determined to be the result of an inferior wall myocardial infarction, and he was treated for it. The code I21.19 is the principal diagnosis code. The coronary artery disease was found to be present in the coronary angiography. A "code first coronary atherosclerosis note" is present at code I25.83 so code I25.10 is listed before the I25.83 code. The statement of atrial fibrillation was coded with I48.91 but could be coded differently if the doctor had described the atrial fibrillation as paroxysmal, persistent, or chronic. Three cardiac diagnostic procedures were performed as typically is done with the radiology modality of fluoroscopy: left and right heart catheterization is a measurement of cardiac function, specifying sampling and pressure measurements. Both the left and right sides of the heart were examined with the angiocardiography using low osmolar contrast material. Multiple coronary arteries were examined (arteriography) by fluoroscopy to arrive at the diagnosis of coronary artery disease, again with low osmolar contrast.

3. **First-Listed Diagnosis: I69.351** Hemiplegia, following, cerebrovascular disease, cerebral infarction
Secondary Diagnoses: I69.321 Dysphasia, following, cerebrovascular disease, cerebral infarction;
I10 Hypertension;
I48.91 Fibrillation, atrial
Rationale: The patient has two sequela conditions or neurologic deficits as a result of having a cerebral infarction six months ago. It appears she was being evaluated for both conditions, so either one of the I69 category codes could be listed first. She was also treated for hypertension and atrial fibrillation that are coded as additional diagnoses.

5. **First-Listed Diagnosis: I46.9** Arrest, cardiac
Secondary Diagnoses: I11.9 Hypertension, heart (disease);
Y93.H1 External cause code—Activity, shoveling, snow;
Y92.014 Place of occurrence, residence, house, single family, driveway
Y99.8 External cause status, specified NEC;
Principal Procedure: Cardioversion type of cardiopulmonary resuscitation **5A2204Z**

Character	Code	Explanation
Section	5	Extracorporeal Assistance and Performance
Body System	A	Physiological Systems
Root Operation	2	Restoration
Body System	2	Cardiac

Duration	0	Single
Qualifier	4	Rhythm
Qualifier	Z	None
INDEX: Resuscitation, cardioversion		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: This case is an outpatient visit in the emergency room. The physician describes the myocardial infarction as "probable." Probable conditions are not coded for outpatient cases. See Coding Guideline IV.H. For these reasons the cardiac arrest is listed as the first diagnosis. The known hypertensive heart disease is also coded. The family said the patient had an enlarged heart but it was not coded because it is not stated as a diagnosis by the physician. The external cause codes are not required by a national standard but may be coded according to state regulations or internal hospital coding policies.

7. **Principal Diagnosis: I25.10** Atherosclerosis, coronary artery
Secondary Diagnoses: I24.9 Syndrome, coronary, acute
Principal Procedure: PTCA of one site **02703DZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	7	Dilation
Body Part	0	Coronary Artery, One Artery
Approach	3	Percutaneous
Device	D	Intraluminal Device
Qualifier	Z	No Qualifier
INDEX: PTCA, see dilation, heart and great vessels		

Secondary Procedure: Cardiac catheterization, left **4A023N7**

Character	Code	Explanation
Section	4	Measurement and Monitoring
Body System	A	Physiological Systems
Root Operation	0	Measurement
Body Part	2	Cardiac

Approach	3	Percutaneous
Function/Device	N	Sampling and Pressure
Qualifier	7	Left Heart
INDEX: Catheterization, heart, see Measurement, cardiac		

Secondary Procedure: Coronary arteriogram **B2111ZZ**

Character	Code	Explanation
Section	B	Imaging
Body System	2	Heart
Root Operation	1	Fluoroscopy
Body Part	1	Coronary Arteries Multiple
Contrast	1	Low Osmolar
Qualifier	Z	None
Qualifier	Z	None
INDEX: Arteriography, see Fluoroscopy, Heart		

Secondary Procedure: Infusion of platelet inhibitor **3E033PZ**

Character	Code	Explanation
Section	3	Administration
Physiological System	E	Physiological Systems and Anatomical Regions
Root Operation	0	Introduction
Body System	3	Peripheral Vein
Approach	3	Percutaneous
Substance	P	Platelet Inhibitor
Qualifier	Z	None
INDEX: Infusion, see Introduction of substance in or on		

Rationale: The patient's reason for admission was the acute coronary syndrome but after study it was determined to be due to arteriosclerotic coronary artery disease. For this reason, code I25.10 is listed as principal with an additional code for the acute coronary syndrome, I24.9. Four procedures were performed: Dilation of the coronary artery with insertion of a stent (PTCA), the diagnostic cardiac

catheterization to measure intracardiac pressures and to take samples, imaging of the coronary arteries with fluoroscopy (arteriogram) and infusion of the Integrilin or the platelet inhibitor. The PTCA with the insertion of the coronary stent is the therapeutic procedure related to the principal diagnosis and therefore listed as the principal procedure.

9. **Principal Diagnosis: I82.431** Thrombosis, vein, popliteal
Secondary Diagnoses: I50.9 Failure, heart, congestive
Principal Procedure: Intravascular ultrasound, popliteal vein **B54BZZ3**

Character	Code	Explanation
Section	B	Imaging
Body System	5	Veins
Root Type	4	Ultrasonography
Body Part	B	Lower Extremity Veins, Right
Contrast	Z	None
Qualifier	Z	None
Qualifier	3	Intravascular
INDEX: Ultrasonography, vein, lower extremity, right, intravascular		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The diagnostic ultrasound study located the presence of a thrombus in the right popliteal artery that explained the symptoms the patient was experiencing and therefore it is coded as the principal diagnosis. The patient's heart failure was also coded. The only procedure performed was the imaging study of an intravascular ultrasound, which may or may not be coded according to hospital coding guidelines.

11. **Principal Diagnosis: I50.42** Failure, heart, systolic combined with diastolic, chronic
Secondary Diagnoses: J96.10 Failure, respiratory, chronic;
I10 Hypertension;
Z99.81 Dependence, oxygen;
S52.502A Fracture, traumatic, radius, lower end;
N39.0 Infection, urinary;
Z87.440 History, personal, urinary (tract) infection;
Z51.5 Palliative care;
W18.11 XA External cause, fall, from toilet;
Y92.013 External cause, place of occurrence, residence, house, single family, bedroom;
Y99.8 External cause status, specified
Principal Procedure: Application wrist splint **2W3DX1Z**

Character	Code	Explanation
Section	2	Placement
Anatomical Regions	W	Anatomical Regions

Root Operation	3	Immobilization
Body Region	D	Lower Arm Left
Approach	X	External
Device	1	Splint
Qualifier	Z	No Qualifier
INDEX: Splinting, musculoskeletal, see Immobilization, anatomical regions		

Secondary Procedure: None indicated by the documentation provided
Rationale: The patient was admitted for treatment of her congestive heart failure, specifically the chronic combined systolic with diastolic type. Code I50.42 includes all of these descriptions. A second code for "congestive" heart failure (I50.9) is not necessary because the code I50.42 description includes congestive in (parentheses) as part of that code. All of the stated other medical conditions present are coded including the fact that palliative care was accepted. The external cause codes are not required by a national standard but may be coded according to state regulations or internal hospital coding policies.

13. **Principal Diagnosis: I50.32** Failure, heart, diastolic (congestive)
Secondary Diagnoses: I10 Hypertension;
E11.40 Diabetes, type 2, with neuropathy
Rationale: The main reason the physician went to the nursing home to see the patient was to evaluate the patient's difficulty breathing and fatigue. The physician diagnosed the patient as having chronic congestive diastolic heart failure, which is combined into one code and listed as the principal diagnosis or the first code. The patient's diabetes with neuropathy is also coded with a combination code in ICD-10-CM. Hypertension was also evaluated and coded. If the documentation in the health record indicated what type of medication was used to treat the diabetes (insulin or oral hypoglycemic medication), an additional code from category Z79 would be used.

15. **Principal Diagnosis: I21.09** Infarct, myocardium, ST elevation, anterior
Secondary Diagnoses: I25.10 Disease, artery, coronary
Principal Procedures: PTCA of 2 sites with intraluminal stents **O2713DZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	7	Dilation
Body Part	1	Coronary Artery, Two Arteries
Approach	3	Percutaneous
Device	D	Intraluminal Device
Qualifier	Z	No Qualifier

INDEX: PTCA, see Dilation, heart and great vessels

Secondary Procedure: PTCA of 1 site **02703ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	7	Dilation
Body Part	0	Coronary Artery, One Artery
Approach	3	Percutaneous
Device	Z	No Device
Qualifier	Z	No qualifier
INDEX: PTCA, see Dilation, heart and great vessels		

Rationale: The patient's reason for transfer and reason for admission after study at Hospital B was the STEMI that continued to be treated and evaluated. The diagnosis of coronary artery disease was established upon the completion of the cardiac studies at Hospital A and continued to be the reason for the further study and treatment at Hospital A. For the procedures, a total of three vessels were treated with PTCA or angioplasty. Of the three vessels angioplastied, two stents were inserted into two coronary arteries. This requires two procedure codes: dilation of two coronary artery sites with intraluminal device inserted and dilation of one coronary artery site that did not have a device inserted.

17. **Principal Diagnosis: I08.3** Stenosis, aortic (valve), rheumatic, with mitral valve disease, with tricuspid valve disease
Secondary Diagnoses: I50.32 Failure, heart, diastolic, chronic (congestive);
I12.0 Hypertensive kidney with stage 5 chronic kidney disease or end-stage renal disease;
N18.6 Disease, renal, End stage;
Z99.2 Dependence on renal dialysis;
D63.1 Anemia in chronic kidney disease;
E78.5 Hyperlipidemia, unspecified;
Z86.19 History, Personal, hepatitis C
Principal Procedure: Replacement of aortic valve with porcine graft **02RF08Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	R	Replacement
Body Part	F	Aortic Valve

Approach	0	Open
Device	8	Zooplastic Tissue (Porcine)
Qualifier	Z	No Qualifier
INDEX: Replacement, valve, aortic		

Secondary Procedure: Supplement mitral valve with annuloplasty ring **02UG0JZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	U	Supplement
Body Part	G	Mitral Valve
Approach	0	Open
Device	J	Synthetic Substitute
Qualifier	Z	No Qualifier
INDEX: Annuloplasty ring is supplementing the function of the mitral valve. Annuloplasty, see Supplement, heart and great vessels.		

Secondary Procedure: Cardiopulmonary Bypass **5A1221Z**

Character	Code	Explanation
Section	5	Extracorporeal Assistance and Performance
Physiological Systems	A	Physiological Systems
Root Operation	1	Performance
Body System	2	Cardiac
Duration	2	Continuous
Function	1	Output
Qualifier	Z	No Qualifier
INDEX: Bypass, cardiopulmonary		

Rationale: Multiple heart valve disease specified as rheumatic or unspecified are assigned as rheumatic disorders. There are several ways to locate the I08 code in the Alphabetic Index, for example, under

insufficiency or stenosis. The important fact is to find the combined code for the multiple valves involved. (The anemia code is a manifestation code and must be sequence after the code for the underlying disease, the chronic kidney disease.)The procedure performed was the replacement of the aortic valve with a porcine valve, which is from an animal or referred to as zooplastic tissue in ICD-10-PCS. Another term, bioprosthesis valve means it is a porcine valve. Operative reports may also refer to this type of valve as a bioprosthesis. Replacement involves removing the natural valve as integral to the procedure. The mitral valve was repaired with an annuloplasty ring, which is a supplement type procedure in ICD-10-PCS as it supports the structure of the mitral valve. The tricuspid valve was examined but not repaired in this case.

19. **Principal Diagnosis: I25.110** Disease, artery, coronary, with angina pectoris, see Arteriosclerosis, coronary. Arteriosclerosis, coronary, native vessel, with angina pectoris, unstable
Secondary Diagnoses: F17.210 Dependence, nicotine, cigarettes
Principal Procedure: Aortocoronary bypass, three sites **021209W**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	1	Bypass
Body Part	2	Coronary Artery, Three Arteries
Approach	0	Open
Device	9	Autologous Venous Tissue
Qualifier	W	Aorta
INDEX: Bypass, artery, coronary, three sites		

Secondary Procedure: Excision of left greater saphenous vein **06BQ0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	6	Lower Veins
Root Operation	B	Excision
Body Part	Q	Greater Saphenous Veins Left
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Excision, vein, greater saphenous, left		

Secondary Procedure: Cardiopulmonary Bypass **5A1221Z**

Character	Code	Explanation
Section	5	Extracorporeal Assistance and Performance
Physiological Systems	A	Physiological Systems
Root Operation	1	Performance
Body System	2	Cardiac
Duration	2	Continuous
Function	1	Output
Qualifier	Z	No Qualifier
INDEX: Bypass, cardiopulmonary		

Rationale: ICD-10-CM provides a combination code for coronary artery disease when present with angina pectoris. The Alphabetic Index entry of disease, artery, coronary, with angina pectoris, leads the coder to see Arteriosclerosis, coronary. The complete entry is arteriosclerosis, coronary, native vessel, with angina pectoris, unstable. The only other diagnosis given for this patient was her nicotine dependence that was coded. Three procedures are coded with ICD-10-PCS including the aortocoronary bypass with excision of the greater saphenous veins for the grafting and the cardiopulmonary bypass used during the surgery.

21. **First-Listed Diagnosis: I69.320** Sequelae, stroke NOS, aphasia
Secondary Diagnoses: I69.392 Sequelae, stroke NOS, facial weakness
Rationale: The aphasia due to the past stroke appears to be the main reason for the visit and is listed as the first diagnosis code. The aphasia is a neurologic deficit or sequelae of the previous stroke. The facial weakness is also coded as sequelae of the stroke. Another Index entry is not helpful to code this scenario because the main term of "aphasia" with entry for "following, cerebrovascular disease" does not have a subterm for "stroke."

23. Principal (Nursing Home) Diagnosis: **I69.398** Sequelae, stroke, specified effect; Use additional code to identify sequelae present
Secondary Diagnoses: G40.909 Disorder, seizure
Rationale: The patient's seizure disorder was stated as caused by the stroke that occurred ten months ago and is considered a "sequelae" of the stroke. Using the Alphabetic Index main term of sequelae, stroke with the listing of neurological deficits under that entry, is the most efficient way to code the condition in ICD-10-CM. However, in this scenario, there is no entry for "seizure disorder" but it is a specified condition, and there is an entry for specified effect NEC. Under code I69.398, there is a note to "use additional code" to identify the sequelae. A secondary code is assigned for G40.909 to identify the seizure disorder as the specified effect.

25. **Principal Diagnosis: I49.5** Syndrome, sick sinus
Secondary Diagnoses: I50.9 Failure, heart
Principal Procedure: Insertion, dual chamber pacemaker generator **0JH606Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	J	Subcutaneous Tissue and Fascia
Root Operation	H	Insertion
Body Part	6	Subcutaneous Tissue and Fascia, Chest
Approach	0	Open
Device	6	Pacemaker, Dual Chamber
Qualifier	Z	No Qualifier
INDEX: Insertion of device in, subcutaneous tissue and fascia, chest		

Secondary Procedure: Insertion, pacemaker lead into right atrium **02H63JZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	H	Insertion
Body Part	6	Atrium, Right
Approach	3	Percutaneous
Device	J	Cardiac Lead, Pacemaker
Qualifier	Z	No Qualifier
INDEX: Insertion of device in, atrium right		

Secondary Procedure: Insertion, pacemaker lead into right ventricle **02HK3JZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	H	Insertion
Body Part	K	Ventricle, Right

Approach	3	Percutaneous
Device	J	Cardiac Lead, Pacemaker
Qualifier	Z	No Qualifier
INDEX: Insertion of device in, ventricle right		

Rationale: The reason for admission after study and the principal diagnosis is the sick sinus syndrome, found easily in the Alphabetic Index to Diseases under the main term of syndrome. The patient's congestive heart failure is also treated and coded as a secondary diagnosis. The procedure performed is the insertion of a dual-chamber pacemaker that is coded in ICD-10-PCS as three procedures. The root operation for all three procedures is "Insertion of device in" subcutaneous tissue and fascia (body part value 6, pacemaker dual chamber, device 6), right atrium (body part value 6, device cardiac lead pacemaker J) and right ventricle (body part value K, device cardiac lead pacemaker J). The approach for placing the pacemaker generator in the chest subcutaneous tissue is open. The insertion of the leads into the heart was done by percutaneous approach by puncturing into the subclavian vein for inserting the leads. There is no qualifier (7th character) required for any of the three procedures.

Chapter 10: Diseases of the Respiratory System

1. **Principal Diagnosis: J44.1** Disease, lung, obstructive, with acute exacerbation
Secondary Diagnoses: Z87.891 History, personal, nicotine dependence
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted with symptoms of acute respiratory insufficiency that were determined to be an acute exacerbation of the chronic obstructive lung disease. The respiratory insufficiency is a symptom of and integral to COPD and not coded separately. The history of smoking was addressed and coded as a secondary diagnosis.

3. **First-Listed Diagnosis: J45.909** Asthma, childhood
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The reason for the office visit was to treat the patient for his childhood asthma. The allergic rhinitis is not coded separately—the Tabular List includes a note under category J45 Asthma. Also the Index includes the entry for rhinitis, allergic, with asthma for code J45.909.

5. **Principal Diagnosis: J18.9** Pneumonia
Secondary Diagnoses: D61.810 Pancytopenia, antineoplastic, chemotherapy induced;
T45.1X5A Table of Drugs and chemical, antineoplastic, adverse effect;
C90.00 Myeloma;
Principal Procedure: Blood transfusion **30233N1**

Character	Code	Explanation
Section	3	Administration
Body System	0	Circulatory
Root Operation	2	Transfusion
Body Part	3	Peripheral Vein
Approach	3	Percutaneous
Substance	N	Red Blood Cells
Qualifier	1	Nonautologous
INDEX: Transfusion, vein, peripheral, blood, red cells		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study, and therefore the principal diagnosis, was the patient's pneumonia. The patient's other conditions, the multiple myeloma as a result of the chemotherapy and the anxiety, were also coded. The pancytopenia is an adverse effect of the chemotherapy. In order to identify the drug involved, the coder would access the Table of Drugs and Chemicals for the substance of antineoplastic agent or chemotherapy and select the code for adverse effect from the column for adverse. The code would require a 7th character of A for the initial encounter for care. The blood transfusion of packed red blood cells would be coded as a procedure. The patient was recommended to have an evaluation for his anxiety (F41.9) but the psychiatric consultation was refused by the patient. In order to code anxiety as a diagnosis, the physician should be asked to clarify the patient's diagnosis.

7. **First-Listed Diagnosis: J02.0** Pharyngitis, streptococcal
Secondary Diagnoses: H66.003 Otitis, media, suppurative acute
Rationale: Because this is an outpatient visit the "possible" early tonsillar abscess is not coded as confirmed. Instead the conditions known for certain are the diagnosis codes reported for the outpatient visit including the streptococcal pharyngitis listed first because the patient was complaining of a sore throat and the otitis media also diagnosed and treated.

9. **First-Listed Diagnosis: J01.10** Sinusitis, frontal, acute
Secondary Diagnoses: J01.00 Sinusitis, maxillary, acute
Rationale: The reason for the office visit was the patient's acute sinusitis that explained the signs and symptoms the patient was experiencing. ICD-10-CM has separate codes for acute frontal and acute maxillary sinusitis. Either code could be listed as the first diagnosis code. In this scenario the codes were assigned for the conditions in sequence of how the physician documented the two conditions.

11. **Principal Diagnosis: R09.1** Pleurisy
Secondary Diagnoses: M32.14 Lupus, erythematosus, systemic with organ involvement, renal (nephritis);
E86.0 Dehydration;
R19.7 Diarrhea;
E87.1 Hyponatremia;
E87.6 Hypokalemia;
R79.89 Azotemia
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted to the hospital because of respiratory symptoms that were determined to be pleurisy. For this reason, pleurisy was listed as the principal diagnosis code. It was not certain that the pleurisy was related to her lupus. However she was known to have nephritis due to her lupus and it was treated, as were other conditions including dehydration, diarrhea, hyponatremia, hypokalemia, and azotemia.

13. **Principal Diagnosis: J12.9** Pneumonia, viral
Secondary Diagnoses: E86.0 Dehydration
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The physician's conclusion in the discharge summary was that the patient had "pneumonia, possibly viral origin, complicated by dehydration." For this reason the viral pneumonia is coded as principal diagnosis because "possible" diagnoses are coded as if confirmed for an inpatient. The additional code for dehydration was added.

15. **Principal Diagnosis: C34.12** Neoplasm, lung, upper lobe
Secondary Diagnoses: J91.0 Effusion, pleural, malignant
Principal Procedure: Thoracentesis for drainage **0W9B3ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	W	Anatomical regions, general
Root Operation	9	Drainage

Body Part	B	Pleural cavity, left
Approach	3	Percutaneous
Device	Z	No Qualifier
Qualifier	Z	No Qualifier
INDEX: Thoracentesis or Drainage, pleural cavity		

Secondary Procedure(s): None indicated by documentation provided
Rationale: The reason for admission for this patient was the malignant pleural effusion due to his lung cancer. There is an instruction note under code J91.0 to "code first the underlying neoplasm." For this reason the malignant neoplasm of the lung was coded as principal diagnosis. A therapeutic thoracentesis was performed to remove fluid, and this objective meets the definition of drainage performed in the pleural cavity. There is no indication that a drainage tube was left in place after the thoracentesis so no qualifier is used for device for this procedure code.

17. **Principal Diagnosis: J69.0** Pneumonia, aspiration
Secondary Diagnoses: J96.00 Failure, respiratory, acute;
J44.9 Bronchitis, chronic, obstructive
Principal Procedure: Intermittent positive pressure breathing **5A09458**

Character	Code	Explanation
Section	5	Extracorporeal Assistance & Performance
Physiological Systems	A	Physiological Systems
Root Operation	0	Assistance
Body Part	9	Respiratory
Duration	4	24-96 Consecutive Hours
Function	5	Ventilation
Qualifier	8	Intermittent Positive Airway Pressure
INDEX: Intermittent positive airway pressure, 24–96 hours		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted with symptoms of three conditions (chronic lung disease, aspiration pneumonia, and respiratory failure) all present on admission, and any could have been the reason after study for the admission to the hospital. In order to determine the correct principal diagnosis, a physician query is appropriate in this scenario. The physician stated the aspiration pneumonia was the patient's principal diagnosis because it was one of the main reasons for the admission and required the greatest intensity of care and use of resources. The other two conditions were then coded as secondary diagnoses. The patient's respiratory procedure was intermittent positive pressure airway breathing and coded using that title in the ICD-10-PCS Index that led to the appropriate table for the code identification.

19. Diagnosis for the operative procedure: **J96.21** Failure, respiratory, acute on chronic, with, hypoxia
Secondary Diagnoses: J43.1 Emphysema, panlobular;
J15.6 Pneumonia, gram-negative;
Z99.11 Dependence, on, respirator or ventilator
Principal Procedure: Tracheostomy **0B110F4**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	B	Respiratory System
Root Operation	1	Bypass
Body Part	1	Trachea
Approach	0	Open
Device	F	Tracheostomy Device
Qualifier	4	Cutaneous
INDEX: Tracheostomy, see Bypass, respiratory system (trachea)		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The instruction for this exercise was to code the reason for the procedure as the first diagnosis so the acute on chronic respiratory failure with hypoxia was coded first. The patient's underlying conditions of panlobular emphysema, gram-negative pneumonia and dependence on the respirator were also coded. The tracheostomy is a bypass procedure according to the definitions of the root operations in ICD-10-PCS. The device that remains in the patient after the procedure is the tracheostomy device that is identified in the 6th character for device. The 7th character of "cutaneous" is used with the tracheostomy. A bypass procedure in ICD-10-PCS is coded by identifying the body part bypassed "from" (trachea) and the body part bypassed "to" which would be the skin of the neck or the value 4 for cutaneous.

Chapter 11: Diseases of the Digestive System

1. **Principal Diagnosis: K80.10** Calculus, gallbladder, with cholecystitis, chronic
Secondary Diagnoses: Z53.31 Procedure, converted, laparoscopic to open
Principal Procedure: Open cholecystectomy **0FT40ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	F	Hepatobiliary System and Pancreas
Root Operation	T	Resection
Body Part	4	Gallbladder
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Cholecystectomy, see Resection, gallbladder		

Secondary Procedure: Laparoscopy attempt **0FJ44ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	F	Hepatobiliary System and Pancreas
Root Operation	J	Inspection
Body Part	4	Gallbladder
Approach	4	Percutaneous Endoscopic
Device	Z	No Device
Qualifier	Z	No qualifier
INDEX: Laparoscopy, see Inspection		

Rationale: There is one reason for admission and therefore it is the principal diagnosis. The conversion of the laparoscopic to an open procedure is also coded. ICD-10-PCS guideline B3.2.d states during the same operative episode multiple procedures are coded if the intended root operation is attempted using one approach but is converted to a different approach. For example, laparoscopic converted to open cholecystectomy is coded as an open resection and the laparoscopic attempt is coded as a percutaneous endoscopic inspection.

3. **Principal Diagnosis: K40.90** Hernia, inguinal
Secondary Diagnoses: R07.2 Pain, chest, precordial;
I10 Hypertension;
J44.9 Disease, lung, obstructive;
Z53.09 Canceled procedure, because of contraindication
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was the inguinal hernia and listed as the principal diagnosis even though the surgery was canceled. The reason for the canceled surgery (chest pain) and the other conditions treated (hypertension and COPD) were coded as secondary diagnoses as conditions evaluated or treated. The canceled procedure because of contraindication is coded to explain why the surgery was not performed.

5. **Principal Diagnosis: K52.9** Gastroenteritis
Secondary Diagnoses: E86.0 Dehydration;
J18.9 Pneumonia;
K44.9 Hernia, hiatal;
K21.0 Esophagitis, reflux
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: When asked the physician stated the main reason for the hospital stay was the gastroenteritis, so it is coded as the principal diagnosis. The other conditions that were present, evaluated, and treated during the hospital stay were coded as secondary diagnoses.

7. **Principal Diagnosis: I86.4** Varix, gastric
Secondary Diagnoses: K92.0 Hematemesis;
I85.00 Varix, esophagus;
F10.20 Alcoholism;
K70.30 Cirrhosis, alcoholic;
K70.10 Hepatitis, alcoholic
Principal Procedure: Transjugular intrahepatic portosystemic (venous) shunt (TIPS) **06183DY**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	6	Lower Veins
Root Operation	1	Bypass
Body Part	8	Portal Vein
Approach	3	Percutaneous
Device	D	Intraluminal Device
Qualifier	Y	Lower Vein
INDEX: Shunt creation, see Bypass vein portal (between portal and hepatic veins)		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The upper GI bleeding was found after study to be due to a gastric varix that was then coded as the principal diagnosis. The other findings of the study and the patient's known diseases were coded as secondary diagnoses. The procedure performed, known as TIPS, is the creation of a shunt between the portal and hepatic veins, which meets the definition in ICD-10-PCS as a bypass, the rerouting of the contents of a tubular body part with the body part identify the part bypassed "from" and the qualifier as the part bypassed "to."

9. **Principal Diagnosis: K85.90** Pancreatitis, acute
Secondary Diagnoses: K86.1 Pancreatitis, chronic;
F10.229 Alcoholic, intoxication, with dependence
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: When a patient has both the acute and chronic forms of the same disease (pancreatitis) and there are individual codes to identify each condition, the acute diagnosis code is selected as the principal diagnosis with the chronic condition coded as a secondary diagnosis. In this scenario, the acute pancreatitis is the principal diagnosis and the secondary diagnoses are the chronic pancreatitis and the chronic alcoholism. If the physician had indicated the pancreatitis was alcohol induced there would be a more specific code for the pancreatitis. The neurologist evaluated the patient for a "seizure disorder" but none was found, and no medications were prescribed for it, so it was not coded.

11. **Principal Diagnosis: K55.029** Gangrene, intestine see also Infarct, intestine, small
Secondary Diagnoses: K55.049 Infarction, intestine, large;
J96.00 Failure, respiratory, acute;
A41.51 Sepsis, Escherichia coli;
R65.20 Sepsis, severe;
I10 Hypertension;
E03.9 Hypothyroidism;
Z51.5 Palliative Care
Principal Procedure: Exploratory laparotomy **0WJG0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	W	Anatomical Regions, General
Root Operation	J	Inspection
Body Part	G	Peritoneal Cavity
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Laparotomy, exploratory, see Inspection, peritoneal cavity		

Secondary Procedure: Mechanical ventilation **5A1945Z**

Character	Code	Explanation
Section	5	Extracorporeal Assistance and Performance
Physiological system	A	Physiological Systems
Root Operation	1	Performance
Body System	9	Respiratory
Duration	4	24-96 Consecutive Hours
Function	5	Ventilation
Qualifier	Z	No Qualifier
INDEX: Mechanical ventilation, see Performance, respiratory		

Secondary Procedure(s): Endotracheal intubation **0BH17EZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Physiological System	B	Respiratory System
Root Operation	H	Insertion
Body Part	1	Trachea
Duration	7	Via natural or artificial opening
Function	E	Intraluminal device, endotracheal airway
Qualifier	Z	No Qualifier
INDEX: Intubation, airway – see Insertion of device in, Trachea 0BH1-		

Rationale: The patient was admitted to the hospital for abdominal pain, nausea, and vomiting and was found, after study including surgery, to have gangrene or an infarction of the small and large intestine. The small intestine infarction was selected as the principal diagnosis. The other diagnoses listed as the physician's final diagnoses were coded as secondary diagnoses. The exploratory laparotomy procedure that did not involve any other procedure such as a resection or excision was coded as Inspection in ICD-10-PCS because that met the definition of manually and visually exploring a body part. The mechanical ventilation was coded as extracorporeal performance for the 24 hours it was performed. The endotracheal intubation procedure is also coded.

13. **First-Listed Diagnosis: K21.9** Reflux, gastroesophageal
Secondary Diagnoses: K44.9 Hernia, hiatal;
K26.7 Ulcer, duodenum, chronic

R19.5 Abnormal, stool (bloody, guaiac-positive)
Rationale: The diagnoses are coded in the sequence as listed by the physician as reasonable explanations for the patient's symptoms and complaints. The diagnosis of R19.5, abnormal stool, was added because it was a complaint of the patient that was evaluated with a recommendation to discontinue the Pepto-Bismol medication. The procedures are coded with CPT and HCPCS coding systems for outpatient visits.

15. **Principal Diagnosis: K70.30** Disease, liver, alcoholic, cirrhosis
Secondary Diagnoses: I85.11 Varix, esophageal, in cirrhosis of liver, bleeding;
F10.239 Dependence, alcohol, with withdrawal;
D69.6 Thrombocytopenia
Principal Procedure: EGD **0DJ08ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	D	Gastrointestinal System
Root Operation	J	Inspection
Body Part	0	Upper Intestinal Tract
Approach	8	Via Natural and Artificial Endoscopic
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: EGD (esophagogastroduodenoscopy)		

Secondary Procedure: Detoxification **HZ2ZZZZ**

Character	Code	Explanation
Section	H	Substance Abuse Treatment
Body System	Z	None
Root Type	2	Detoxification
Type qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
Qualifier	Z	None
INDEX: Detoxification services for substance abuse		

Rationale: The patient was admitted for GI bleeding that was found to be due to bleeding esophageal varices in alcoholic liver cirrhosis so the cirrhosis coded as the principal diagnosis. The patient's underlying medical conditions of bleeding esophageal varices, alcohol dependence with withdrawal, and thrombocytopenia were coded as secondary diagnoses. The principal procedure was the EGD with no other procedures performed through the scope that was done to evaluate the bleeding source. The management of the withdrawal symptoms was coded with the procedure of detoxification.

17. **Principal Diagnosis: K40.91** Hernia, inguinal, unilateral, recurrent
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Right inguinal hernia repair **0YQ50ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Y	Anatomical Regions, Lower Extremities
Root Operation	Q	Repair
Body Part	5	Inguinal Region Right
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Herniorrhaphy, see Repair, anatomical regions, lower extremities		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The single reason for the hospital admission was the recurrent inguinal hernia, so it was listed as the principal diagnosis. The surgery performed was an inguinal herniorrhaphy. In the ICD-10-PCS Index, the term herniorrhaphy states "with synthetic substitute, see Supplement" or "see Repair, anatomical regions, general or lower extremities." Because there was no synthetic material used to repair the inguinal hernia in this scenario, such as mesh, the correct root operation would be repair. On the ICD-10-PCS table 0WQ, there is no body part for inguinal area, the coder should refer to the table 0YQ that does include the inguinal region. This was an open procedure performed through an incision.

19. **Principal Diagnosis: K56.5** Obstruction, intestine, with adhesions
Secondary Diagnoses: E03.9 Hypothyroidism;
I10 Hypertension;
E78.5 Hyperlipidemia;
F43.0 Reaction, stress, acute
Principal Procedure: Lysis/release of small intestine **0DN80ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	D	Gastrointestinal System

Root Operation	N	Release
Body Part	8	Small intestine
Approach	0	Open
Device	Z	No device
Qualifier	Z	No Qualifier
INDEX: Lysis, see Release, intestine, small		

Secondary Procedure: Placement of Seprafilm adhesion barrier **3E0M05Z**

Character	Code	Explanation
Section	3	Administration
Physiological system	E	Physiological system and anatomical regions
Root Operation	0	Introduction
Body system/region	M	Peritoneal cavity
Approach	0	Open
Substance	5	Adhesion barrier
Qualifier	Z	No qualifier
INDEX: Introduction of substance in or on, peritoneal cavity, adhesion barrier		

Rationale: The patient was admitted to the hospital with signs and symptoms of gastrointestinal disease with dilated loops of the small bowel trapped between the abdominal wall and intestines. During surgery it was determined the patient had a small bowel obstruction due to adhesions that were lysed. The principal diagnosis is the small bowel obstruction with adhesions. All of the patient's other medical conditions that were evaluated and treated were coded as secondary diagnoses. The elevated blood pressure reading was not assigned a code as it was stated this was thought to be due to the stress reaction the patient was having concerning her condition and impending surgery. In ICD-10-PCS the main term of lysis for an operative procedure directs the coder to the term of release of the body part being released. The application of the adhesion barrier to reduce further adhesions from forming is coded to the root operation of introduction. If the coder had used the main term of application, it would have directed the coder to the main term of introduction of substance in or on and the coder would pick the anatomic site where the substance was introduced.

21. **Principal Diagnosis: K26.0** Ulcer, duodenum, acute with hemorrhage
Secondary Diagnoses: K44.9 Hernia, hiatal
Principal Procedure: Cauterization bleeding points in duodenum **0D598ZZ**

Character	Code	Explanation

Section	0	Medical and Surgical
Body System	D	Gastrointestinal System
Root Operation	5	Destruction
Body Part	9	Duodenum
Approach	8	Via Natural or Artificial Opening Endoscopic
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Cauterization, see Destruction, duodenum		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted to the hospital because of vomiting blood. After study with the performance of an EGD and cauterization of bleeding points in the duodenum, the diagnosis of acute hemorrhaging duodenal ulcer was made, and this was listed as the principal diagnosis. A secondary diagnosis of hiatal hernia was also assigned based on the findings of the EGD procedure. The endoscopic procedure included cauterization of the bleeding points within the duodenum. In ICD-10-PCS the main term of cauterization leads the coder to the root operation Destruction to identify the body part involved. No other procedures were performed.

Chapter 12: Diseases of the Skin and Subcutaneous Tissue

1. **Principal Diagnosis: L89.313** Ulcer, pressure, stage 3, buttock, right
Secondary Diagnoses: L97.411 Ulcer, lower limb, heel, right, skin breakdown only
I70.203 Arteriosclerosis, extremities, leg, bilateral
Principal Procedure: Debridement of hip **0KBN0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	K	Muscle
Root Operation	B	Excision
Body Part	N	Hip Muscle, Right
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Debridement, excisional, see Excision, muscle		

Secondary Procedure: Debridement foot **0HBMXZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	H	Skin and Breast
Root Operation	B	Excision
Body Part	M	Skin, Right Foot
Approach	X	External
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Debridement, excisional, see Excision, skin		

Rationale: The reason for admission after study was the severe decubitus ulcer of the right buttock so it was selected as the principal diagnosis. The chronic ulcer and the atherosclerosis were coded as secondary diagnoses. The pressure ulcer code includes the site, laterality and stage. The non-pressure ulcer code for the condition on the right foot includes the site and laterality with the depth of the wound instead of the stage. Excisional debridement procedures are coded in ICD-10-PCS according to the root operation Excision and the depth of the wound, such as skin or muscle.

3. **First-Listed Diagnosis: L23.2** Dermatitis, contact, allergic, due to cosmetics
Secondary Diagnoses: L70.0 Acne, cystic
Rationale: The patient came to the doctor's office because of inflammation and irritation on her eyelids and under eyebrows. The doctor diagnosed this as contact dermatitis due to cosmetics, so this was listed as the first diagnosis. The physician also evaluated the patient's cystic acne during this visit and this would be coded as a secondary diagnosis.

5. **Dermatology Diagnosis: L56.5** DSAP; Porokeratosis, disseminated superficial actinic
Secondary Dermatology Diagnoses: X32. X X XA External Cause Index, exposure, sunlight
Dermatology Procedure: Biopsy skin right lower arm **0HBDXZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	H	Skin and Breast
Root Operation	B	Excision
Body Part	D	Skin, right lower arm
Approach	X	External
Device	Z	No device
Qualifier	X	Diagnostic
INDEX: Biopsy, see Excision, with qualifier diagnostic		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The dermatology diagnosis was DSAP that was determined to be the type of lesion present on the patient's skin. A secondary code from the external cause chapter, identifying the cause of the lesions as sun exposure, is optional. If the procedure, skin biopsy, was performed for an inpatient, it would be coded to the root operation of excision with the qualifier of diagnostic.

7. **First-Listed Diagnosis: L23.81** Dermatitis, contact, allergic, dander
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The single reason for the patient coming to the office for this visit was determined to be contact dermatitis resulting from exposure to animal dander. There is one code for this condition regardless of the sites on which it occurs.

9. **First-Listed Diagnosis: E10.621** Diabetes, type I, with foot ulcer
Secondary Diagnoses: L97.411 Ulcer, lower limb, heel, right, with skin breakdown only
Rationale: The first-listed code is the diabetes code that includes the foot ulcer. A note appears under code E10.621to use an additional code for the site of the ulcer and the skin breakdown, L97.411.

11. **Dermatology Diagnosis: C44.41** Neoplasm, scalp, basal cell carcinoma
Secondary Dermatology Diagnoses: L57.0 Keratosis, actinic
Principal Procedure: Punch biopsy, skin, scalp **0HB0XZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	H	Skin and Breast
Root Operation	B	Excision
Body Part	0	Skin, scalp
Approach	X	External
Device	Z	No device
Qualifier	X	Diagnostic
INDEX: Punch biopsy, see Excision with qualifier diagnostic		

Secondary Procedure: Excision, skin, scalp **0HB0XZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	H	Skin and Breast
Root Operation	B	Excision
Body Part	0	Skin, Scalp
Approach	X	External
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Excision, skin, scalp		

Rationale: The lesion that was biopsied was a basal cell carcinoma of the skin. The second lesion that was removed was an actinic keratosis. Either condition could have been listed first, with the procedure performed for the first listed condition listed as the first procedure. In ICD-10-PCS, the procedure code for the biopsy requires the use of the X character for the qualifier.

13. **Principal Diagnosis: L03.311** Cellulitis, abdominal wall
Secondary Diagnoses: R78.81 Bacteremia;
B96.5 Infection, pseudomonas, as cause of disease classified elsewhere;
I87.2 Dermatitis, stasis;
L03.115 Cellulitis, lower limb, right;
L03.116 Cellulitis, lower limb, left;
K70.30 Cirrhosis, alcoholic;

E88.09 Hypoalbuminemia;
E66.01 Obesity, morbid
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted because of the cellulitis of his abdominal wall which after study still proved to be the principal diagnosis. The physician's stated discharge diagnoses provide the secondary diagnoses to be coded. A second code is needed to report the pseudomonas infection as the bacteremia code does not specify the organism involved. Even though the physician identified the patient as having alcoholic cirrhosis, the physician did not document alcohol abuse or dependence. Therefore, it was not coded. However, the physician could be asked for clarification to decide if it should be coded.

15. **Principal Diagnosis: L89.154** Ulcer, pressure, sacral region, stage 4
Secondary Diagnoses: I50.32 Failure, heart, diastolic, chronic;
I25.10 Arteriosclerosis, coronary;
I25.82 Occlusion, coronary, chronic total
Principal Procedure: Debridement **0QBS0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Q	Lower Bones
Root Operation	B	Excision
Body Part	S	Coccyx
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Debridement, excisional was done down to the coccyx bone, the body system is lower bones, see Excision, coccyx		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted to the hospital for surgical treatment of her stage 4 sacral pressure ulcer, so it is listed as the principal diagnosis. The physician documents the other medical conditions that were treated during the stay and therefore coded as secondary diagnoses. The debridement procedure is an excision procedure in ICD-10-PCS and the body part involved is the bone involved in the debridement procedure.

17. **First-Listed Diagnosis: L10.2** Pemphigus, foliaceous
Secondary Diagnoses: I10 Hypertension (essential)
Rationale: The reason for the dermatology clinic visit was the recurrence of pemphigus foliaceus. After updating the patient's history and conducting a physical examination, the physician concluded the patient again had pemphigus foliaceus and prescribed medications to treat it. The physician also considered the fact the patient had essential hypertension under treatment. The pemphigus foliaceus was listed as the first-listed diagnosis code as the reason for the visit with a secondary code of hypertension.

Chapter 13: Diseases of the Musculoskeletal System and Connective Tissue

1. **Principal Diagnosis: M51.26** Displacement, intervertebral disc, lumbar
Secondary Diagnoses: M47.20 Osteoarthritis, spine, see Spondylosis, Spondylosis, with radiculopathy
Principal Procedure: Excision of lumbar vertebral disc 0SB20ZZ

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	S	Lower Joints
Root Operation	B	Excision
Body Part	2	Lumbar Vertebral Disc
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Resection, disc, lumbar vertebral		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: In the Alphabetic Index the main term herniation, nucleus pulposus (vertebrae) led the coder to the main term displacement, lumbar region. The reason for the admission and the surgery is the displacement of the intervertebral disc, so it is listed as the principal diagnosis. The patient also has osteoarthritis, which is an additional code. An intervertebral discectomy involves removing the nucleus pulpous but leaving the annulus fibrosus intact. Therefore, this procedure is considered an excision. The laminotomy is the approach for this procedure and is not coded separately.

3. **First-Listed Diagnosis: M15.9** Arthritis, degenerative, see Osteoarthritis, osteoarthritis, generalized
Secondary Diagnoses: M47.817 Spondylosis, without myelopathy, lumbosacral spine;
I10 Hypertension;
I25.719 Disease, artery, coronary, with angina pectoris, see Arteriosclerosis, coronary, artery, bypass graft, autologous vein, with angina pectoris
Rationale: The main reason for the visit is to evaluate the patient's arthritis which is listed as the first diagnosis. Other medical conditions were also evaluated and treated; therefore, the secondary codes are included. There is an Excludes2 note under section M15–M19 for osteoarthritis of spine M47 so an additional code can be used to describe the osteoarthritis of spine for this patient.

5. **First-Listed Diagnosis: M84.361A** Fracture, traumatic, stress, tibia, right
Secondary Diagnoses: M84.362A Fracture, traumatic, stress, tibia, left;
M84.374A Fracture, traumatic, stress, metatarsus, right foot;
S39.012A Strain, low back;
Y93.02 Index to external cause, activity, running;
Y99.8 Index to external cause, recreation or sport not for income or while a student
Rationale: Given the fact that the patient has multiple traumatic stress fractures, any of the three codes from M84.36- could be listed as the first code. The other sites of the stress fractures as well as the strain

of the low back are listed as secondary diagnosis codes. The use of the external cause codes for running for recreation are optional codes as there is no national requirement for external cause reporting.

7. **First-Listed Diagnosis: M24.411** Dislocation, recurrent, shoulder
Secondary Diagnoses: M12.511 Arthritis, traumatic, see Arthropathy, traumatic, shoulder
Rationale: The reason the patient came to the ER is the recurrent dislocation of his shoulder. The secondary diagnosis of traumatic arthritis is a co-existing condition that should be listed as a secondary diagnosis.

9. **Principal Diagnosis: M23.221** Tear, meniscus, old—see Derangement, knee, meniscus, due to old tear, medial posterior horn
Secondary Diagnoses: I11.9 Hypertension, heart (disease)
Principal Procedure: Meniscectomy or excision knee joint **0SBC4ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	S	Lower Joints
Root Operation	B	Excision
Body Part	C	Knee Joint, Right
Approach	4	Percutaneous Endoscopic
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Meniscectomy, see excision, lower joints		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted to the hospital for surgical treatment of the old tear of the meniscus in the right knee. The patient's secondary condition of hypertensive heart disease is coded as a secondary diagnosis as it is also a reason the patient was admitted. The partial meniscectomy is coded as an excision in ICD-10-PCS as the total meniscus was not excised. The code includes the arthroscopic approach as character 5.

11. **Principal Diagnosis: M54.5** Pain, low back
Secondary Diagnoses: C50.911 Neoplasm breast, malignant, primary;
D75.81 Myelofibrosis, secondary;
D46.9 Myelodysplastic syndrome;
T45.1 X5S Table of drugs, antineoplastic, adverse effect;
Z90.11 Absence, breast, right
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was the pain in the low back. Had the pain not been present, there was no reason to admit the patient to the hospital. The patient's underlying conditions were also coded. The code for the drug involved in this patient's care would require the use the 7th character of

"S" since this patient was known to have the myelodysplastic syndrome previously as a result of the drug therapy and not discovered during this current episode of care.

13. **Principal Diagnosis: M16.4** Osteoarthritis post-traumatic hip bilateral
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Left hip replacement **0SRB039**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	S	Lower Joints
Root Operation	R	Replacement
Body Part	B	Hip Joint Left
Approach	0	Open
Device	3	Synthetic Substitute, Ceramic
Qualifier	9	Cemented
INDEX: Replacement, joint, hip, left		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: There is a single reason for the admission and the surgery, that is, the traumatic arthritis of both the hips. The procedure is a hip replacement using a ceramic cemented device. The removal of the diseased hip joint is integral to the replacement procedure.

15. **First-Listed Diagnosis: M62.561** Atrophy, muscle, lower leg, right
Secondary Diagnoses: M62.562 Atrophy, muscle, lower leg, left;
G14, Syndrome, postpolio
Rationale: Either of the muscle atrophy codes (right or left) could be listed first as the bilateral condition was the reason for the clinic visit. Code G14, a more specific neurological condition, has an Excludes1 note for code B91 for sequela of polio so the B91 code is not used.

17. Diagnosis Codes: **M22.42** Chondromalacia, patella, left knee;
M70.42 Bursitis, knee, prepatellar
Principal Procedure: Debridement, left knee joint **0SBD4ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	S	Lower Joints
Root Operation	B	Excision
Body Part	D	Knee Joint Left

Approach	4	Percutaneous Endoscopic
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Debridement, excisional, see Excision, joint, knee, left		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The procedure of arthroscopic debridement of the knee joint was done to treat the chondromalacia of the left patella. A secondary diagnosis of prepatellar bursitis was also established during the procedure. The procedure performed was a debridement of the patella. In ICD-10-PCS, the Alphabetic Index the main term of debridement states “excisional see Excision.” Under the main term of excision there is a subterm of patella but more than the patella was debrided so the subterm of joint was used instead.

Chapter 14: Diseases of the Genitourinary System

1. **Principal Diagnosis: N39.0** Infection, urinary (tract)
Secondary Diagnoses: B96.4 Infection, bacteria, as cause of disease classified elsewhere, proteus;
I10 Hypertension;
I25.10 Arteriosclerosis, coronary (artery);
Z98.61 Status (post) angioplasty, coronary artery;
J44.9 Disease, lung obstructive;
Z87.440 History, personal, urinary infection(s)
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study, the principal diagnosis, is the urinary tract infection with proteus as the cause of the infection. The patient's underlying medical conditions, including the fact the patient has had previous urinary tract infections, were coded as secondary diagnoses.

3. **Principal Diagnosis: N81.12** Cystocele, female, paravaginal
Secondary Diagnoses: N39.3 Incontinence, stress;
E11.9 Diabetes, type 2
Principal Procedure: Colporrhaphy **0UQG0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	U	Female Reproductive System
Root Operation	Q	Repair
Body Part	G	Vagina
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Colporrhaphy, see Repair, vagina		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient was admitted to the hospital for surgical treatment of a paravaginal cystocele so this is the principal diagnosis. The cystocele caused urinary incontinence, and the patient was also treated for the diabetes. The surgery coded with the root operation of repair in ICD-10-PCS per the direction in the Index and table 0UQ. If documentation in the record identified the type of medication used to treat the type 2 diabetes, an additional code would be assigned for insulin therapy (Z79.4) or oral hypoglycemic medication (Z79.84).

5. **Principal Diagnosis: N10** Pyelonephritis, acute
Secondary Diagnoses: N17.9 Failure, renal, acute;
I10 Hypertension;
Z87.442 History, personal, calculi, renal
Principal Procedure: Urinary catheterization **0T9B70Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	T	Urinary System
Root Operation	9	Drainage
Body Part	B	Bladder
Approach	7	Via Natural or Artificial Opening
Device	0	Drainage Device
Qualifier	Z	No Qualifier
INDEX: Catheterization, see drainage, bladder		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was the acute pyelonephritis complicated by acute renal failure. The acute pyelonephritis was the principal diagnosis, and the acute renal failure was the secondary diagnosis. The patient was also was known to have hypertension and a history of renal calculi that were coded as secondary diagnoses. The placement of the urinary catheter for drainage was coded in ICD-10-PCS under the root operation of drainage as it was the objective of the procedure.

7. **Principal Diagnosis: N80.0** Endometriosis, uterus
Secondary Diagnoses: N80.1 Endometriosis, ovary;
N80.2 Endometriosis, fallopian tube;
N80.3 Endometriosis, peritoneal;
D06.9 Neoplasm, cervix, carcinoma in situ
Principal Procedure: Vaginal Hysterectomy **0UT97ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	U	Female Reproductive System
Root Operation	T	Resection
Body Part	9	Uterus
Approach	7	Via Natural or Artificial Opening
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Hysterectomy, see Resection, uterus		

Secondary Procedure: Removal of the uterine cervix **0UTC7ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	U	Female Reproductive System
Root Operation	T	Resection
Body Part	C	Cervix
Approach	7	Via Natural or Artificial Opening
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Laparoscopy, see Inspection		

Secondary Procedure: Bilateral salpingectomy **0UT77ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	U	Female Reproductive system
Root Operation	T	Resection
Body Part	7	Fallopian Tubes, Bilateral
Approach	7	Via Natural or Artificial Opening
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Salpingectomy, see Resection, female reproductive system		

Secondary Procedure: Bilateral oophorectomy **0UT27ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	U	Female Reproductive system
Root Operation	T	Resection
Body Part	2	Ovaries, bilateral

Approach	7	Via natural or artificial opening
Device	Z	No device
Qualifier	Z	No qualifier
INDEX: Oophorectomy, see Resection, female reproductive system		

Rationale: The patient was admitted for a scheduled hysterectomy and bilateral salpingo-oophorectomy. Even though the endometriosis was present in several anatomic locations, the principal diagnosis of endometriosis of the uterus was selected over the other sites. The principal procedure was selected to be the hysterectomy. All of the other sites affected, as well as the pathological diagnosis of the carcinoma in-situ of the cervix, were coded as secondary procedures. The removal of the entire uterus, fallopian tubes, ovaries, and cervix were coded to the root operation of resection in ICD-10-PCS.

9. **First-Listed Diagnosis: N20.0** Calculus, kidney
Secondary Diagnoses: None indicated by the documentation provided
Rationale: As an outpatient visit for a diagnostic test that has a report written by a physician, the coder is able to use the diagnosis provided by the radiologist in the IVP report. The bilateral nephrolithiasis is coded as the first-listed and only diagnosis code. The renal colic is not coded as it is a symptom of the calculus in the kidney.

11. **Principal Diagnosis: N39.0** Infection, urinary (tract)
Secondary Diagnoses: E86.0 Dehydration;
C67.5 Neoplasm, bladder, neck, malignant, primary;
I25.10 Disease, artery, coronary, see Arteriosclerosis, coronary
Z95.1 Status, aortocoronary bypass;
Z93.6 Status, nephrostomy;
E11.9 Diabetes, type 2;
E78.00 Hypercholesterolemia
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: It is stated the reason for admission was the urinary tract infection so the code for it is listed as a principal diagnosis. The fact the patient also has dehydration and cancer of the bladder are significant conditions to code. In addition, the patient's medical conditions are also coded as secondary diagnoses. If documentation in the health record identified the type of medication used to treat the type 2 diabetes, an additional code from Z79.4 (insulin) or Z79.84 (oral hypoglycemic medication) could be assigned.

13. **Principal Diagnosis: N17.9** Failure, renal, acute
Secondary Diagnoses: E86.0 Dehydration
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: This could be a scenario where there is a coder debate as to whether the acute renal failure or the dehydration was the principal diagnosis. The question is, what brought the patient into the hospital? If she just had dehydration, could that have been treated as an outpatient? The physician's conclusion that the patient had "acute renal failure due to dehydration" appears to say the reason for admission was the acute renal failure, which is then the principal diagnosis.

15. **First-Listed Diagnosis: N93.8** Bleeding, uterus, dysfunctional
Secondary Diagnoses: Z30.2 Encounter (for), sterilization

Rationale: This is an outpatient visit and two procedures performed that would be coded with CPT/HCPCS codes. Each condition had a procedure performed for it. For that reason, either condition could be listed as the first diagnosis.

17. **Principal Diagnosis: N39.0** Infection, urinary tract
Secondary Diagnoses: N41.0 Prostatitis, acute;
N41.1 Prostatitis, chronic;
N40.0 Hypertrophy, prostate, see Enlarged prostate, without lower urinary tract symptoms (LUTS);
I48.91 Fibrillation, atrial;
Z79.01 Long term drug therapy (current) anticoagulants
Z87.440 History, personal, urinary (tract) infections
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: Based on the answer to the physician query, that the diagnosis was urinary tract infection and not sepsis, the code for urinary tract infection was listed as the principal diagnosis code. The related conditions, the prostatitis and enlarged prostate, were included as additional diagnoses. The diagnosis code for enlarged prostate without lower urinary tract symptoms was selected because no incomplete bladder emptying, nocturia or any of the other conditions listed under code N40.1 were documented. The patient's atrial fibrillation and treatment on anticoagulants were addressed during the hospital stay and were therefore coded as secondary diagnoses. Any diagnosis qualified as "possible" for an inpatient is coded as if it was confirmed.

Chapter 15: Pregnancy, Childbirth, and the Puerperium

1. **First-Listed Diagnosis: O99.810** Pregnancy, complicated by, abnormal glucose tolerance
Secondary Diagnoses: Z3A.22 Pregnancy, weeks of gestation, 22 weeks
Rationale: Rule out conditions cannot be coded for outpatient visits. What appeared to be known about the patient was that she had abnormal glucose tolerance screening, and that is the reason for this laboratory test. At the beginning of ICD-10-CM Chapter 15, Pregnancy, Childbirth and the Puerperium, there is an instruction note "Use additional code from category Z3A, weeks of gestation, to identify the specific week of gestation."

3. **Principal Diagnosis: O33.9** Delivery, cesarean, cephalopelvic disproportion
Secondary Diagnoses: O34.211 Delivery, cesarean, previous cesarean delivery, low;
Z3A.39 Pregnancy, weeks of gestation, 39 weeks;
Z37.0 Outcome of delivery, single, liveborn
Principal Procedure: Repeat low Cesarean delivery **10D00Z1**

Character	Code	Explanation
Section	1	Obstetrics
Body System	0	Pregnancy
Root Operation	D	Extraction
Body Part	0	Products of Conception
Approach	0	Open
Device	Z	No Device
Qualifier	1	Low Cervical
INDEX: Cesarean section, see Extraction, products of conception		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient had a previous cesarean delivery for cephalopelvic disproportion. The cesarean delivery was performed again for this second pregnancy because the patient had the same cephalopelvic disproportion. At the beginning of ICD-10-CM Chapter 15, Pregnancy, Childbirth and the Puerperium, there is an instruction note "Use additional code from category Z3A, weeks of gestation, to identify the specific week of gestation." The outcome of delivery code is assigned for every patient who has a delivery. The Index entry for cesarean section refers the coder in ICD-10-PCS to locate the main term of extraction, products of conception for the cesarean delivery code.

5. **Principal Diagnosis: O80** Delivery, normal
Secondary Diagnoses: Z3A.40 Pregnancy, weeks of gestation, 40 weeks;
Z37.0 Outcome of delivery, single liveborn
Principal Procedure: Manually assisted delivery **10E0XZZ**

Character	Code	Explanation
Section	1	Obstetrics

Body System	0	Pregnancy
Root Operation	E	Delivery
Body Part	0	Products of Conception
Approach	X	External
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Delivery, manually assisted		

Secondary Procedure: Artificial rupture of membranes **10907ZC**

Character	Code	Explanation
Section	1	Obstetrics
Body System	0	Pregnancy
Root Operation	9	Drainage
Body Part	0	Products of Conception
Approach	7	Via Natural or Artificial Opening
Device	Z	No Device
Qualifier	C	Amniotic Fluid, Therapeutic
INDEX: Induction of labor, artificial rupture of membranes, see Drainage, products of conception, amniotic fluid, therapeutic		

Rationale: This patient had a normal full-term pregnancy with a completely normal delivery. The artificial rupture of membranes can be coded with a diagnosis code of normal delivery O80. The vaginal delivery (manually assisted) is assigned as the principal procedure code. The artificial rupture of membranes is a drainage procedure by the definition of drainage in ICD-10-PCS and the body part being drained is the amniotic fluid from the uterus, which is part of the products of conception. At the beginning of ICD-10-CM Chapter 15, Pregnancy, Childbirth and the Puerperium, there is an instruction note "Use additional code from category Z3A, weeks of gestation, to identify the specific week of gestation."

7. **First-Listed Diagnosis: O91.12** Abscess, breast, puerperal, see Mastitis, obstetric, purulent, associated with puerperium
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The reason for the office visit is found to be the postpartum purulent breast abscess, and that is the only diagnosis code required as the first-listed diagnosis.

9. **Principal Diagnosis: O07.1** Abortion, attempted, complicated by, hemorrhage

Secondary Diagnoses: O99.019 Pregnancy, complicated by anemia;
D62 Anemia, blood loss, acute
Principal Procedure: Dilatation and curettage following abortion **10D17ZZ**

Character	Code	Explanation
Section	1	Obstetrics
Body System	0	Pregnancy
Root Operation	D	Extraction
Body Part	1	Products of Conception Retained
Approach	7	Via Natural or Artificial Opening
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Extraction, products of conception, retained		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was found to be retained products of conception following an elective abortion during a previous healthcare encounter. The vaginal bleeding is occurring because the elective abortion was not completed. The complication of the abortion code is listed as principal diagnosis. The patient was also diagnosed and treated for anemia associated with the pregnancy, and this is coded as a secondary diagnosis. The weeks of pregnancy code is not assigned here because the codes are not applicable for pregnancies with abortive outcomes according to ICD-10-CM Chapter 15 coding guidelines. The ICD-10-PCS root operation of extraction is used to describe the dilatation and curettage following the abortion to remove the retained products of conception from the uterus. Refer to ICD-10-PCS coding guideline C.2 for procedures following delivery or abortion.

11. **Principal Diagnosis: O44.13** Pregnancy, complicated by, placenta previa, third trimester
Secondary Diagnoses: O30.043 Pregnancy, twin, dichorionic/diamniotic, third trimester;
O60.14X1 Pregnancy, complicated by, preterm labor, third trimester;
O60.14X2 Pregnancy, complicated by, preterm labor, third trimester;
O99.013 Pregnancy, complicated by, anemia, third trimester;
D62 Anemia, blood loss, acute;
Z3A.35 Pregnancy, weeks of gestation, 35 weeks;
Z37.2 Outcome of delivery, twins, both liveborn
Principal Procedure: Cesarean delivery **10D00Z1**

Character	Code	Explanation
Section	1	Obstetrics
Body System	0	Pregnancy
Root Operation	D	Extraction

Body Part	0	Products of Conception
Approach	0	Open
Device	Z	No Device
Qualifier	1	Low Cervical
INDEX: Cesarean section, see Extraction, products of conception		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for the admission and the cesarean delivery was the patient's pregnancy complicated by placenta previa. The vaginal bleeding is a symptom of the placenta previa and not coded separately. The patient is also diagnosed with acute blood loss anemia that is coded as complicating the pregnancy. Some of these pregnancy chapter codes require the use of the character to identify the trimester of pregnancy; in this scenario, it is the third trimester of pregnancy. At the beginning of ICD-10-CM Chapter 15, Pregnancy, Childbirth and the Puerperium there is an instruction note to "Use additional code from category Z3A, weeks of gestation, to identify the specific week of gestation." The patient was one day short of 36 weeks gestation so 35 weeks was used with category Z3A. The Index entry for cesarean section refers the coder in ICD-10-PCS to locate the main term of extraction, products of conception for the cesarean delivery code. The outcome of delivery code is assigned for every patient who has a delivery.

13. **Principal Diagnosis: O76** Pregnancy, complicated by, fetal, heart rate irregularity
Secondary Diagnoses: O99.013 Pregnancy, complicated by, anemia;
D50.9 Anemia, iron deficiency;
Z3A.38 Pregnancy, weeks of gestation, 38 weeks;
Z37.0 Outcome of delivery, single, liveborn
Principal Procedure: Cesarean delivery **10D00Z1**

Character	Code	Explanation
Section	1	Obstetrics
Body System	0	Pregnancy
Root Operation	D	Extraction
Body Part	0	Products of Conception
Approach	0	Open
Device	Z	No Device
Qualifier	1	Low Cervical
INDEX: Cesarean section, extraction, products of conception		

Secondary Procedure: Artificial rupture of membranes **10907ZC**

Character	Code	Explanation
Section	1	Obstetrics
Body System	0	Pregnancy
Root Operation	9	Drainage
Body Part	0	Products of Conception
Approach	7	Via Natural or Artificial Opening
Device	Z	No Device
Qualifier	C	Amniotic Fluid, Therapeutic
INDEX: Induction of labor, artificial rupture of membranes, see Drainage, pregnancy, 109; AROM (artificial rupture of membranes) 10907ZC		

Secondary Procedure: Fetal monitoring **4A1HXCZ**

Character	Code	Explanation
Section	4	Measurement and Monitoring
Physiologic system	A	Physiological System
Root Operation	1	Monitoring
Body Part	H	Products of Conception
Approach	X	External
Function/device	C	Rate
Qualifier	Z	No Qualifier
Index: Monitoring, products of conception, cardiac rate		

Rationale: The patient was in labor on admission but was found to have fetal distress with fetal heart rate decelerations, and the management of the patient was changed to performing a cesarean delivery for her. The patient also had microcytic anemia related to her pregnancy, which was treated. The principal procedure was the cesarean delivery. The Index entry for cesarean section refers the coder in ICD-10-PCS to locate the main term of extraction, products of conception for the cesarean delivery code. Two other procedures were performed, including the rupture of membranes (drainage as the root operation in ICD-10-PCS) and the fetal heart rate monitoring. At the beginning of ICD-10-CM Chapter 15, Pregnancy, Childbirth and the Puerperium there is an instruction note "Use additional code from category Z3A, weeks of gestation, to identify the specific week of gestation." The outcome of delivery code is assigned for every patient who has a delivery.

15. **Principal Diagnosis: O44.13** Delivery, cesarean for, placenta previa, third trimester
Secondary Diagnoses: O32.8XX0 Delivery, cesarean for, breech presentation, incomplete;
O13.3 Hypertension, gestational;
O34.21 Delivery, cesarean, previous cesarean delivery;
O41.1230 Pregnancy, complicated by, chorioamnionitis;
Z3A.32 Pregnancy, weeks of gestation, 32 weeks;
Z37.0 Outcome of delivery, single, liveborn
Principal Procedure: Cesarean delivery **10D00Z1**

Character	Code	Explanation
Section	1	Obstetrics
Body System	0	Pregnancy
Root Operation	D	Extraction
Body Part	0	Products of Conception
Approach	0	Open
Device	Z	No Device
Qualifier	1	Low Cervical
INDEX: Cesarean section, extraction, products of conception		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The patient has multiple conditions treated during this pregnancy. The patient needed to be admitted and have the cesarean delivery because of the vaginal bleeding that was occurring due to the total placenta previa that was known to be present. The other conditions treated and evaluated were the breech presentation of the infant, the fact the patient had a previous cesarean delivery, gestational hypertension, and the presence of amnionitis found on pathological exam of the placenta. A code for preterm labor is not assigned as the patient did not go into labor. At the beginning of ICD-10-CM Chapter 15, Pregnancy, Childbirth and the Puerperium there is an instruction note "Use additional code from category Z3A, weeks of gestation, to identify the specific week of gestation." The Index entry for cesarean section refers the coder in ICD-10-PCS to locate the main term of extraction, products of conception for the cesarean delivery code. The outcome of delivery code is assigned for every patient who has a delivery.

17. **Principal Diagnosis: ~~O00.1~~ O00.10** Pregnancy, ectopic, tubal, without intrauterine pregnancy
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Resection, fallopian tube, left **0T60ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	U	Female Reproductive System
Root Operation	T	Resection

Body Part	6	Fallopian Tube, Left
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Resection, fallopian tube, left		

Secondary Procedure: Diagnostic D&C **0UDB7ZX**

Character	Code	Explanation
Section	0	Medical and Surgical
Body system	U	Female Reproductive System
Root Operation	D	Extraction
Body Part	B	Endometrium
Approach	7	Via Natural or Artificial Opening
Device	Z	No Device
Qualifier	X	Diagnostic
INDEX: Curettage, see Extraction, endometrium		

Secondary Procedure: Removal of contents of fallopian tube **10T20ZZ**

Character	Code	Explanation
Section	1	Obstetrics
Body system	0	Pregnancy
Root Operation	T	Resection
Body Part	2	Products of Conception, Ectopic
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Resection, products of conception, ectopic		

Rationale: After study it was determined the patient had an ectopic pregnancy in the left fallopian tube,

so it was chosen as the principal diagnosis. There was no documentation of a pregnancy also present in the uterus. The estimated eight weeks of pregnancy would not be assigned as a secondary diagnosis code as the coding guidelines for Chapter 21 stated category Z3A codes should not be used for pregnancies with abortive outcomes, categories O00–O08. The patient had three procedures. The definitive procedure related to the principal diagnosis is the removal of the entire left fallopian tube that would be coded with the root operation of resection in ICD-10-PCS. It was an open procedure for the approach. Prior to deciding the fallopian tube had to be removed, the surgeon removed the contents of the fallopian, the ectopic pregnancy products of conception. Therefore, the body part is the products of conception that were removed in their entirety, so the root operation of resection is used again. The first procedure performed was a diagnostic procedure, a dilatation and curettage, to determine if there was an intrauterine pregnancy or possibly an incomplete abortion or a missed abortion. There were no villi in the uterus; therefore, there was no pregnancy in the uterus. The D&C is identified as an "extraction" in ICD-10-PCS and is coded as a diagnostic with the 7th character of X as it was not treating the ectopic pregnancy.

Chapter 16: Certain Conditions Originating in the Perinatal Period

1. **Principal Diagnosis: P07.03** Low, birth weight, extreme, with weight of 750–999 grams
Secondary Diagnoses: P07.32 Premature, newborn, less than 37 completed weeks, see Preterm infant, newborn, gestational age, 29 completed weeks;
P22.0 Syndrome, respiratory, distress, newborn
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for the transfer to the university hospital is the infant's prematurity. See the note located under Category P07 Disorders of newborn related to short gestation and low birth weight, not elsewhere classified: When both birth weight and gestational age of the newborn are available, both should be coded with birth weight sequenced before gestational age. In addition, a code for the neonatal respiratory distress syndrome is coded.

3. **First-Listed Diagnosis: Z00.111** Newborn, examination, 8 to 28 days old
Secondary Diagnoses: P38.9 Omphalitis without hemorrhage
Rationale: The purpose of the visit was for the well baby exam. The use additional code for any identified abnormal findings appears under code Z00.11 so the omphalitis is also coded and reported.

5. **Principal Diagnosis: P29.3** Hypertension, pulmonary, of newborn
Secondary Diagnoses: P84 Hypoxemia, newborn
Principal Procedure: ECMO **5A15223**

Character	Code	Explanation
Section	5	Extracorporeal Assistance and Performance
Physiological System	A	Physiological Systems
Root Operation	1	Performance
Body System	5	Circulatory
Duration	2	Continuous
Function	2	Oxygenation
Qualifier	3	Membrane
INDEX: ECMO, see Performance circulatory 5A15		

Secondary Procedure: Ultrasound, heart **B24DYZZ**

Character	Code	Explanation
Section	B	Imaging
Body System	2	Heart
Root Type	4	Ultrasonography

Body Part	D	Pediatric Heart
Contrast	Y	Other Contrast
Qualifier	Z	None
Qualifier	Z	None
INDEX: Echocardiogram, see Ultrasonography, heart pediatric		

Rationale: The infant was transferred to the hospital and found to have pulmonary hypertension in a newborn as the reason after study for the hospital admission. The hypoxemia was also treated and not integral to the pulmonary hypertension. The ECMO procedure was the principal therapeutic procedure performed. The ultrasound of the heart may or may not be required to be coded based on the coding guidelines of the hospital as it is a diagnostic imaging procedure.

7. **Principal Diagnosis: P96.1** Withdrawal state, newborn infant of dependent mother
Secondary Diagnoses: P05.18 Small-for-dates with weight of 2400 grams
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The infant was transferred to the university hospital as an infant of an addicted mother and found to be suffering withdrawal, and this was the principal diagnosis. The physician also described the infant as "small for dates." There is no code assigned for the weeks of gestation for this full-term infant. The procedure of weaning the infant from the narcotics does not have a code.

9. **First-Listed Diagnosis: P04.41** Crack baby
Secondary Diagnoses: P22.1 Tachypnea, transitory, of newborn
Rationale: The infant was brought to the pediatric clinic for evaluation of her status as a "crack baby," so this should be the first-listed diagnosis code. The physician also diagnosed the infant as having transitory tachypnea.

11. **Principal Diagnosis: Z38.01** Newborn, born in hospital, by cesarean
Secondary Diagnoses: P05.07 Light-for-dates with weight of 1920 grams;
P07.35 Preterm infant, newborn gestational age, 32 completed weeks;
Z05.1 Observation, newborn (for) suspected condition, ruled out, infectious

Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The principal diagnosis for an infant born in the hospital during a current admission should be the Z38 category code describing the infant's status and type of delivery. This infant was premature and also described as "light for dates." Both of these conditions were added as secondary diagnoses. The gestational age of the infant and the fact the infant was suspected of acquiring an infectious disease from the mother but found not to have an infection was also coded as secondary diagnoses.

13. **First-Listed Diagnosis: Z00.110** Newborn, examination, under 8 days old
Secondary Diagnoses: P39.1 Conjunctivitis, chlamydial, neonatal
Rationale: The 7-day old infant was brought to the physician's office for her first post-discharge examination and, therefore, this is the first-listed diagnosis. The findings of the exam are coded and reported as a secondary diagnosis.

15. **Principal Diagnosis: P07.16** Low, birth weight, with weight of 1600 grams
Secondary Diagnoses: P07.36 Preterm infant, newborn, gestational age 33 completed weeks;
Q76.0 Spina Bifida occulta
Principal Procedures: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason the infant was transferred to the university hospital because of his prematurity and respiratory difficulties. No diagnosis was made to explain the suspected respiratory condition. Additional diagnosis codes were assigned to reflect the infant's gestational age and the spina bifida occulta. No procedures were performed.

17. **Principal Diagnosis: Z38.01** Newborn, born in hospital, by cesarean
Secondary Diagnoses: P22.1 Tachypnea, newborn
Principal Procedure: Oxygen therapy (introduction) **3E0F7GC**

Character	Code	Explanation
Section	3	Administration
Physiological System	E	Physiological Systems and Anatomical Regions
Root Operation	0	Introduction
Body System/Region	F	Respiratory Tract
Approach	7	Via Natural or Artificial Opening
Substance	G	Other Therapeutic Substance
Qualifier	C	Other Substance
INDEX: Introduction of substance in or on, respiratory tract		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The infant was born during the current hospital stay by cesarean delivery and weighed 3150 grams after a 38-week gestation. The principal diagnosis is the Z38.01 code to indicate the birth. The pediatrician also described the infant as having transient tachypnea that is coded with a secondary diagnosis of P22.1. The ICD-10-PCS code for the supplemental oxygen is coded as an introduction of a therapeutic substance into the respiratory tract. The approach is via the natural opening (nose). The coding of oxygen therapy may or may not be coded based on hospital coding policies as it not a surgical procedure that is required to be coded.

Chapter 17: Congenital Malformations, Deformations, and Chromosomal Abnormalities

1. **Principal Diagnosis: H90.6** Loss, hearing, see also Deafness, mixed, bilateral
Secondary Diagnoses: Q16.5 anomaly, ear, inner
Principal Procedure: Insertion of cochlear prosthesis, right **09HD05Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	9	Ear, Nose, Sinus
Root Operation	H	Insertion
Body Part	D	Inner Ear, Right
Approach	0	Open
Device	5	Hearing Device, Single Channel Cochlear Prosthesis
Qualifier	Z	No Qualifier
INDEX: Cochlear implant, single channel, use hearing device, single channel cochlear prosthesis, right		

Secondary Procedure: Insertion of cochlear prosthesis, left **09HE05Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	9	Ear, Nose, Sinus
Root Operation	H	Insertion
Body Part	E	Inner Ear, Left
Approach	0	Open
Device	5	Hearing Device, Single Channel Cochlear Prosthesis
Qualifier	Z	No Qualifier
INDEX: Cochlear implant, single channel, use hearing device, single channel cochlear prosthesis, left		

Rationale: The principal diagnosis, reason for admission after study, was bilateral hearing loss. The underlying congenital anomaly of the inner ear was also assigned as a secondary diagnosis. A bilateral cochlear implant procedure was performed. Two procedure codes are assigned, one for the right ear and one for the left ear.

3. **Principal Diagnosis: Q25.1** Coarctation, aorta

Secondary Diagnoses: None indicated by the documentation provided
Principal Diagnosis: Excision of the thoracic aorta **02BW0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	B	Excision
Body Part	W	Thoracic, Aorta
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Excision, aorta, thoracic		

Secondary Procedure: Cardiopulmonary bypass **5A1221Z**

Character	Code	Explanation
Section	5	Extracorporeal Assistance and Performance
Physiological System	A	Physiological Systems
Root Operation	1	Performance
Body System	2	Cardiac
Duration	2	Continuous
Function	1	Output
Qualifier	Z	No Qualifier
INDEX: Bypass, cardiopulmonary		

Rationale: The reason for admission (transfer) for this infant was the congenital condition, coarctation of the aorta, that was surgically repaired. An excision of the thoracic aorta was performed with an end-to-end anastomosis. Procedure steps necessary to reach the operative site and close the operative site, including any anastomosis of a tubular body part, are not coded separately. The use of the pump oxygenator or cardiopulmonary bypass is coded as an additional procedure.

5. **Principal Diagnosis: Q22.1** Stenosis, pulmonary valve, congenital
Secondary Diagnoses: Q25.6 Stenosis, pulmonary artery;
Z98.890 History, personal, surgery, NEC;
Z87.74 History, personal, congenital malformation, circulatory system

Principal Procedure: Replacement of the pulmonary valve **02RH0KZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	R	Replacement
Body Part	H	Pulmonary Valve
Approach	0	Open
Device	K	Nonautologous Tissue Substitute
Qualifier	Z	No Qualifier
INDEX: Replacement, valve, pulmonary		

Secondary Procedure: Repair of the pulmonary artery, left **02QR0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	Q	Repair
Body Part	R	Pulmonary Artery, Left
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Arterioplasty, see Repair, heart and great vessels		

Secondary Procedure: Repair of the pulmonary artery, right **02QQ0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	Q	Repair
Body Part	Q	Pulmonary Artery, Right

Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Arterioplasty, see Repair, heart and great vessels		

Secondary Procedure: Cardiopulmonary bypass **5A1221Z**

Character	Code	Explanation
Section	5	Extracorporeal Assistance and Performance
Physiological System	A	Physiological Systems
Root Operation	1	Performance
Body System	2	Cardiac
Duration	2	Continuous
Function	1	Output
Qualifier	Z	No Qualifier
INDEX: Bypass, cardiopulmonary		

Secondary Procedure: Ultrasound of the heart, intraoperative, pediatric **B24DZZ4**

Character	Code	Explanation
Section	B	Imaging
Body System	2	Heart
Root Type	4	Ultrasonography
Body Part	D	Pediatric Heart
Contrast	Z	None
Qualifier	Z	None
Qualifier	4	Transesophageal
INDEX: Echocardiogram, see Ultrasonography, heart, pediatric		

Rationale: The reason for admission after study was to repair the child's congenital heart defects that had previously been repaired, but this was a planned next procedure. The principal diagnosis was identified by the physician as the pulmonary valve stenosis and secondary conditions of stenosis of the pulmonary

artery. The other conditions produced by the congenital defect of right ventricular outflow obstruction and pulmonary insufficiency are symptoms of the underlying congenital condition and not coded separately. The personal history of cardiac surgery and personal history of congenital malformation of the circulatory system are relevant to the patient's current admission and are therefore coded as secondary diagnoses. The principal procedure is to replace the pulmonary value with a homograft, a nonautologous tissue graft. The bilateral repair of the pulmonary arteries is reported with two codes because each is a separate body part in ICD-10-PCS. The ICD-10-PCS root operation of "repair" is used as the type of reconstruction of the artery and is not included in other ICD-10-PCS root operations definitions. The cardiopulmonary bypass and intraoperative echocardiogram are also coded as secondary procedures relevant to the overall surgery.

7. **First-Listed Diagnosis: Q37.8** Cleft, lip, bilateral, with cleft palate
Secondary Diagnoses: R63.3 Difficult, feeding;
Z98.890 Status, postsurgical (postprocedural)
Rationale: The reason for the clinic visit was to evaluate the child's complete bilateral cleft lip and palate deformity that was coded as the first-listed diagnosis. The child's feeding difficulties as a result of the congenital deformity as well as the fact that the child had previous surgery for the condition were relevant to the current clinic visit and coded as secondary diagnoses.

9. **First-Listed Diagnosis: Q13.4** Embryotoxon
Secondary Diagnoses: Q91.7 Trisomy 13
Rationale: The infant was seen in the ophthalmologist's office for an eye examination and the physician made the diagnosis of an embryotoxon or a congenital corneal malformation. There was no evidence of a retinoblastoma. The child was previous diagnoses with Trisomy 13 which is relevant to the current examination so it was coded as a secondary diagnosis.

11. **First-Listed Diagnosis: Q30.0** Atresia, choanal
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The reason for the visit to the physician's office was to evaluate the symptoms the infant was demonstrating after feeding. Examination by the physician and the CT scan concluded with the diagnosis of choanal atresia left side being made, so it was listed as the first diagnosis for this outpatient visit.

13. **First-Listed Diagnosis: Q51.3** Bicornate uterus
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The reason for the visit to the physician's office was to review the findings of a recent ultrasound examination. Based on the imaging study, the physician concluded the patient had a congenital condition of a partial bicornuate uterus. The physician order another radiology study for a possible kidney abnormality but this was not proven and suspected conditions are not coded on the outpatient records.

15. **First-Listed Diagnosis: Q54.0** Hypospadias, balanic
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The reason for the physician office visit was to re-evaluate the established hypospadias; that is the only option for the first-listed diagnosis code for this visit. There were no other diagnoses established.

17. **First-Listed Diagnosis: Q75.0** Craniosynostosis
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The coding of this congenital condition is straightforward using the main term of craniosynostosis. The child's misshaped head and deviated nose were symptoms of the congenital condition and are not coded separately.

Chapter 18: Symptoms, Signs, and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified

1. **Principal Diagnosis (for colonoscopy services): R19.4** Change, bowel habits
Secondary Diagnoses: Z80.0 History, family, malignant neoplasm, gastrointestinal tract
Principal Procedure (for colonoscopy services): Colonoscopy **0DJD8ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	D	Gastrointestinal System
Root Operation	J	Inspection
Body Part	D	Lower Intestinal Tract
Approach	8	Via Natural or Artificial Opening Endoscopic
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Colonoscopy		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: Coding the diagnoses and procedure performed for the colonoscopy services provided to an inpatient was the purpose of this exercise. The reason for the colonoscopy was change in bowel habits in a patient with a family history of colon cancer. No abnormal findings were identified nor was any procedure such as a biopsy performed during the exam so the main reason for the colonoscopy was the change in bowel habits. The possible colonic polyps were not found and therefore not coded. The family history of colon cancer is another reason for the colonoscopy, so this fact is also coded.

3. **Principal Diagnosis: R91.8** Mass, lung
Secondary Diagnoses: R05 Cough;
R07.89 Pressure, chest
R00.1 Bradycardia;
Z53.09 Procedure not done because of contraindication
Principal Procedure: Bronchoscopy **0BJ08ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	B	Respiratory System
Root Operation	J	Inspection
Body Part	0	Tracheobronchial Tree

Approach	8	Via Natural or Artificial Opening Endoscopic
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Bronchoscopy		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission, even though the diagnostic study could not be completed, to evaluate it would be the lung mass. The patient's other symptoms of cough and chest pressure would be secondary diagnosis codes. During the bronchoscopy when a biopsy was planned the patient developed bradycardia so it would also be listed as a secondary diagnosis as the reason the biopsy procedure was canceled. The Z53.09 code is added to indicate that a planned procedure was canceled. The only procedure performed was the bronchoscopy, considered to be an inspection procedure in ICD-10-PCS when no other procedure is performed through the bronchoscope.

5. **First-Listed Diagnosis: R20.0** Numbness
Secondary Diagnoses: R26.2 Difficulty in walking;
R27.9 Lack of coordination;
R25.1 Tremor
Rationale: While the neurologist considered the patient's condition to be "consistent with multiple sclerosis" the patient's physician was not 100% certain and was sending the patient for further evaluation and study. Because this is an outpatient visit and that qualified diagnoses such as possible or probable are not coded for outpatients, the patient's symptoms were coded as the diagnoses for the office visit. Any of the diagnoses could be listed first. The author chose to list the diagnoses in the sequence listed by the physician in the documentation.

7. **First-Listed Diagnosis: R87.810** Human papillomavirus (HPV), DNA test positive, high risk, cervix
Secondary Diagnoses: None listed by the documentation provided
Rationale: The main reason for the follow-up visit was to review the results of a recent abnormal Pap smear that produced the diagnosis of DNA positive for cervical high-risk human papillomavirus (HPV). A secondary diagnosis for genital warts (A63.0) was not included as a secondary diagnosis because of the Excludes1 note that includes code A63.0 with code R87.810.

9. **First-Listed Diagnosis: R51** Headache
Secondary Diagnoses: R50.9 Fever;
R11.2 Nausea with vomiting;
R29.1 Meningismus
Rationale: This is an outpatient visit any diagnosis stated as a "rule out" condition is not coded as if it were confirmed. Instead the reasons for the visit are the conditions known to be present. Any of the symptoms could have been listed as the first-listed diagnosis but the author chose the diagnosis of headache as it was the first symptom identified in the documentation. The physician added the diagnosis of meningismus at the conclusion of the visit, so it was coded as well.

11. **Principal Diagnosis: R13.10** Dysphagia
Secondary Diagnoses: F41.9 Anxiety disorder;
E86.0 Dehydration
Principal Procedure: EGD **0DJ08ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	D	Gastrointestinal System
Root Operation	J	Inspection
Body Part	0	Upper Intestinal Tract
Approach	8	Via Natural or Artificial Opening Endoscopic
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: EGD (Esophagogastroduodenoscopy)		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was the dysphagia even though no cause for the dysphagia was found during the examinations. This symptom was coded as the principal diagnosis. The other diagnoses documented by the physician for anxiety and dehydration were coded as second diagnoses.

13. **First-Listed Diagnosis: R94.39** Findings, abnormal, stress test
Secondary Diagnoses: R03.0 Elevation, blood pressure reading
Rationale: The reason the patient was seen in the cardiologist's office was to "diagnose and treat possible cardiac disease" because the patient had a previous abnormal stress test. Based on the repeated blood pressure readings taken in the office the physician included in his impression at the conclusion of the visit that the patient had elevated blood pressure readings and rule out hypertension. Because this was an outpatient visit, the rule out diagnosis of hypertension is not coded.

15. **First-Listed Diagnosis: R10.83** Colic
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The clearly stated reason for the office visit for this baby is colic. It appears much of the visit included advising and counseling the parents on how to soothe the infant but these are not diagnoses to be coded and instead reflect the work of the physician in the professional fee evaluation and management procedure code for the office visit.

17. **First-Listed Diagnosis: N40.1** Enlarged, prostate, with lower urinary tract symptoms
Secondary Diagnoses: R35.1 Nocturia;
R39.16 Straining, on urination;
R35.0 Frequency, micturition;
I10 Hypertension (essential);
E78.5 Hyperlipidemia
Rationale: The patient presents to the physicians with symptoms of an enlarged prostate and the diagnosis was confirmed after the physical examination. In ICD-10-CM under the code N40.1 there is a note to use additional codes for associated symptoms. For that reason, symptom codes for nocturia, straining, and frequency were added. Usually the integral symptoms of a disease are not coded when the cause of the symptoms are known. However, the direction in the ICD-10-CM code book to use additional

code for associated symptoms over-rules the practice of not assigning the symptom codes. Additional codes were assigned for the hypertension and hyperlipidemia because the conditions were evaluated and prescription management continued.

Chapter 19A: Injuries, Effects of Foreign Body, Burns and Corrosions, and Frostbite

*Note: List all applicable codes **excluding** the External Cause codes*

1. **First-Listed Diagnosis: T21.31XA** Burn, chest wall, third degree, chest, initial encounter
Secondary Diagnoses: T22.232A Burn, above elbow, left, second degree, initial encounter;
T22.231A Burn, above elbow, right, second degree initial encounter;
T31.20 Burn, extent, 20–29% with 0–9% third degree burns
Rationale: The most severe burn, the third degree burn of the chest, is listed first. The second degree burn and the extent of burn codes are listed as additional diagnoses.

3. **Principal Diagnosis: S72.402A** Fracture, traumatic, femur, lower end, initial encounter
Secondary Diagnoses: S92.112A Fracture, traumatic, talus, neck, initial encounter
Principal Procedure: Open reduction, internal fixation fracture left femur **0QSC04Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Q	Lower Bones
Root Operation	S	Reposition
Body Part	C	Lower Femur, Left
Approach	0	Open
Device	4	Internal Fixation Device
Qualifier	Z	No Qualifier
INDEX: Reduction, fracture, see Reposition, femur		

Secondary Procedure: Open reduction, internal fixation fracture talus **0QSM04Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Q	Lower Bones
Root Operation	S	Reposition
Body Part	M	Tarsal, Left
Approach	0	Open
Device	4	Internal Fixation Device
Qualifier	Z	No Qualifier

INDEX: Reduction, fracture, see Reposition, talus

Rationale: The most severe injury is coded first so the principal diagnosis is the fracture of the lower femur. The second fracture is listed as the secondary code. The principal procedure most closely related to the principal diagnosis is the open reduction of the femur fracture. A second procedure code is added for the open reduction of the talus.

5. **Principal Diagnosis: S06.9 X2A** Injury, head, with loss of consciousness initial encounter
Secondary Diagnoses: S01.419A Laceration, cheek, initial encounter;
S01.81 XA Laceration, forehead and jaw, initial encounter;
S01.511A Laceration, lip, initial encounter;
S60.511A Abrasion, hand, right, initial encounter;
S60.512A Abrasion, hand, left, initial encounter;
S30.1XXA Contusion, abdominal wall, initial encounter;
S80.01XA Contusion, knee, right, initial encounter,
S80.02XA Contusion, knee, left, initial encounter;
S80.11XA Contusion, lower leg, right, initial encounter;
S80.12XA Contusion, lower leg, left, initial encounter
Principal Procedure: Repair of skin, face, **0HQ1XZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	H	Skin and Breast
Root Operation	Q	Repair
Body Part	1	Skin, Face
Approach	X	External
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Suture, laceration repair, see Repair, skin, face		

Secondary Procedure: Repair laceration of upper lip **0CQ0XZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	C	Mouth and Throat
Root Operation	Q	Repair
Body Part	0	Upper Lip

Approach	X	External
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Suture, laceration repair, see Repair, lip		

Rationale: The most severe injury is coded as the principal diagnosis, which appears to be the head injury with loss of consciousness for this patient. The patient also had multiple lacerations that are coded individually per site. The patient had other injuries, including abrasions and contusions on different body sites that are coded individually per site. Lesser injuries that occur at the same site as a more severe injury are not coded separately, but in this scenario there are multiple sites on the body with different injuries. For the procedures, each body part that is repaired is coded separately. There were multiple lacerations on the face, the forehead and the cheek, that were individual repaired, but all of these sites are on the "face" which is the body part character 4 so reported once per ICD-10-PCS guideline B3.2a.

7. **Principal Diagnosis: S97.82XA** Crush, foot, initial encounter
Secondary Diagnoses: S92.312B Fracture, traumatic, metatarsal, first, initial encounter
Principal Procedure: Fasciotomy, left foot **0J8R0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	J	Skin and Breast
Root Operation	8	Division
Body Part	R	Subcutaneous Tissue and Fascia, Left Foot
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Fasciotomy, see Division, subcutaneous tissue and fascia		

Secondary Procedure: Open reduction, internal fixation fracture first metatarsal **0QSP04Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Q	Lower Bones
Root Operation	S	Reposition

Body Part	P	Metatarsal, Left
Approach	0	Open
Device	4	Internal Fixation Device
Qualifier	Z	No Qualifier
INDEX: Reduction, fracture, see Reposition, metatarsal		

Rationale: The most severe injury for the principal diagnosis appears to be the crushing injury to the foot but there could probably be a coder debate on that so the physician should designate the most severe injury. There is an instructional note at category S97 to code all associated injuries, so a secondary code was added, S92.312B, for the fracture of the first metatarsal. The surgical repair included the fasciotomy and the open reduction and internal fixation. Depending on which of the diagnoses was selected by the physician as principal, the matching surgical repair (fasciotomy versus reduction) should be selected as the principal procedure.

9. **Principal Diagnosis: S32.022A** Fracture, traumatic, vertebra, lumbar, second, burst, unstable, initial encounter
Secondary Diagnoses: S32.032A Fracture, traumatic, vertebra, lumbar, third, burst, unstable, initial encounter
Principal Procedure: Open reduction vertebral fracture, lumbar **0QS00ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Q	Lower Bones
Root Operation	S	Reposition
Body Part	0	Lumbar Vertebra
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Reduction, fracture, see Reposition, vertebra, lumbar		

Secondary Procedure: Fusion of Lumbar vertebrae with device **0SG00A1**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	S	Lower Joints

Root Operation	G	Fusion
Body Part	0	Lumbar Vertebral Joint
Approach	0	Open
Device	A	Interbody Fusion Device
Qualifier	1	Posterior Approach, Posterior Column
INDEX: Fusion, lumbar vertebral 1 joint		

Secondary Procedure: Excision of bone for the bone graft **0QB20ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Q	Lower Bones
Root Operation	B	Excision
Body Part	2	Pelvic Bones, Right
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Excision, bone, pelvic, right		

Rationale: Either of the diagnosis codes for the second or third vertebra fracture could be listed as principal with the second site listed as the secondary diagnosis code. The surgical repairs include the open reduction of the lumbar fractures. The fusion procedure involves the interbody fusion device, bone graft, and interspinous process wiring. ICD-10-PCS coding guideline B3.10c states when an interbody fusion device is used to render the joint immobile (alone or containing other material like bone graft), the procedure is coded with the device value interbody fusion device. Excision of the bone to use for the fusion is coded separately.

11. **Principal Diagnosis: S36.116A** Laceration, liver, major, initial encounter
Secondary Diagnoses: S36.438A Laceration, jejunum, initial encounter;
S37.011A Hematoma, kidney, see contusion, initial encounter;
S31.129A Laceration, abdominal wall with foreign body, initial encounter;
S41.011A Laceration, shoulder, right, initial encounter;
S81.811A Laceration, leg (lower), right, initial encounter;
T51.0X1A (Table of Drugs and Chemicals) Poisoning, accidental, alcohol, beverage, initial encounter
Principal Procedure: Repair of liver laceration **0FQ00ZZ**

Character	Code	Explanation

Section	0	Medical and Surgical
Body System	F	Hepatobiliary System and Pancreas
Root Operation	Q	Repair
Body Part	0	Liver
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Repair, liver		

Secondary Procedure: Repair of jejunum laceration **0DQA0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	D	Gastrointestinal System
Root Operation	Q	Repair
Body Part	A	Jejunum
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Repair, jejunum		

Secondary Procedure: Internal examination of the kidney **0TJ50ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	T	Urinary System
Root Operation	J	Inspection
Body Part	5	Kidney
Approach	0	Open
Device	Z	No Device

Qualifier	Z	No Qualifier
INDEX: Examination, see Inspection, kidney		

Secondary Procedure: Examination of colon for injuries **0DJD0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	D	Gastrointestinal
Root Operation	J	Inspection
Body Part	D	Lower Intestinal Tract
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Examination, see Inspection, colon, intestinal tract, lower		

Secondary Procedure: Removal of glass from abdominal wall/fascia **0JC80ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	J	Subcutaneous Tissue and Fascia
Root Operation	C	Extirpation
Body Part	8	Subcutaneous Tissue and Fascia, Abdomen
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Extirpation, subcutaneous tissue and fascia, abdomen (glass)		

Rationale: The patient had several serious injuries, and the physician should designate the most serious injury if there is any debate. In this scenario it appears the major laceration of the liver would qualify as the principal diagnosis. There is an instructional note at S36 that directs users to code also any associated open wound. Each of the lacerations is coded: abdominal wall with foreign body, shoulder skin and leg skin. The hematoma of the kidney was diagnosed during the procedure and coded as a secondary diagnosis code. The patient was also treated for the acute alcoholic poisoning. If the blood alcohol level was documented there could have been an additional code. The surgical procedures include repair of the liver and jejunum as well as an inspection of the kidney and colon for additional injuries. Glass was

removed from the abdominal wall and fascia. All of the procedures were done through a laparotomy or via an open approach.

13. **Principal Diagnosis: S02.651A** Fracture, traumatic, mandible, angle, right, initial encounter
Secondary Diagnoses: S02.652A Fracture, traumatic, mandible, angle, left, initial encounter
S02.5XXA Fracture, traumatic tooth, initial encounter;
S01.81XA Laceration, jaw—See Laceration, head, specified site NEC, initial encounter;
N39.0 Infection, urinary tract;
S60.511A Abrasion, hand, right hand, initial encounter
Principal Procedure: Open reduction/internal fixation mandible, left **0NSV04Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	N	Head and Facial Bones
Root Operation	S	Reposition
Body Part	V	Mandible, Left
Approach	0	Open
Device	4	Internal Fixation Device
Qualifier	Z	No Qualifier
INDEX: Reposition mandible left		

Secondary Procedure: Open reduction, internal fixation mandible right **0NST04Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	N	Head and Facial Bones
Root Operation	S	Reposition
Body Part	T	Mandible, Right
Approach	0	Open
Device	4	Internal Fixation Device
Qualifier	Z	No Qualifier
INDEX: Reposition mandible right		

Secondary Procedure: Repair of skin laceration on face **0HQ1XZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	H	Skin and Breast
Root Operation	Q	Repair
Body Part	1	Skin Face
Approach	X	External
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Repair skin face		

Secondary Procedure: Extraction lower tooth **0CDXXZ0**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	C	Mouth and Throat
Root Operation	D	Extraction
Body Part	X	Lower Tooth
Approach	X	External
Device	Z	No Device
Qualifier	0	Single
INDEX: Extraction tooth lower		

Rationale: The most serious injury appears to be the bilateral fracture of the mandible and either right or left side could be coded as the principal diagnosis with the 7th character of A for the initial encounter. The other injuries were also coded with the 7th character of A for the initial encounter as well. The urinary tract infection was diagnosed as well and not attributed to the surgery as it was present preoperatively in the urinalysis. The procedures performed include two codes for the open reduction of the mandible because the left and right mandible are separate body parts in ICD-10-PCS. The other procedures for repair of the laceration and extraction of the tooth was coded.

15. **Principal Diagnosis: S82.852A** Fracture, traumatic, ankle, trimalleolar, initial encounter for closed fracture
Secondary Diagnoses: I69.354 Sequela, infarction, cerebral, hemiplegia;
E11.9 Diabetes, type 2;

I25.9 Ischemia, heart;
N39.0 Infection, urinary
Principal Procedure: Closed reduction left tibia **0QSHXZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Q	Lower Bones
Root Operation	S	Reposition
Body Part	H	Tibia Left
Approach	X	External
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Reposition, tibia, left		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was the fracture of the left ankle that required surgical treatment of the tibia. The patient also had medical conditions that were treated including hemiplegia from a previous cerebral infarction, type 2 diabetes, ischemic heart disease, and a urinary tract infection. If the documentation in the health record identifies what type of medication (insulin or oral hypoglycemic medications) were used to treat the diabetes, an additional code would be used from Z79.4 or Z79.84. The procedure of "reposition" in ICD-10-PCS describes the closed reduction performed to treat the fracture. The application of the cast is included in the fracture care procedure code and not coded separately.

17. **Principal Diagnosis: S72.011A** Fracture, traumatic, femur, subcapital, right, initial encounter for closed fracture
Secondary Diagnoses: I10 Hypertension, (essential);
Principal Procedure: Insertion of internal fixation device without fracture reduction **0QH604Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Q	Lower Bones
Root Operation	H	Insertion
Body Part	6	Upper Femur Right
Approach	0	Open
Device	4	Internal Fixation Device
Qualifier	Z	No Qualifier

INDEX: Fixation, bone, internal, without fracture reduction, see Insertion. Insertion, femur ,upper, right

Secondary Procedure(s): None indicated by the documentation provided
Rationale: A fracture not indicated as open or closed should be coded to closed. The operative report includes "This showed the fracture to be well reduced on its own" so a reposition procedure was not performed.

19. **Principal Diagnosis: S42.211P** Malunion, fracture—See Fracture, by site, Fracture traumatic, humerus, upper end, surgical neck, with 7th character of P for subsequent encounter for fracture with malunion
Secondary Diagnoses: I25.10 Disease, arteriosclerotic, heart—See Disease, heart, ischemic, atherosclerotic;
N18.9 Insufficiency, renal, chronic;
E11.9 Diabetes, type 2
Principal Procedure: Open reduction with internal fixation humerus **0PSC04Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	P	Upper Bones
Root Operation	S	Reposition
Body Part	C	Humeral Head Right
Approach	0	Open
Device	4	Internal Fixation Device
Qualifier	Z	No Qualifier
INDEX: Reposition humeral head, right (Body Part Key: neck of humerus = humeral head)		

Secondary Procedure: Bone grafting right humerus **0PRC07Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	P	Upper Bones
Root Operation	R	Replacement
Body Part	C	Humeral Head Right
Approach	0	Open
Device	7	Autologous Tissue Substitute

Qualifier	Z	No Qualifier
INDEX: Graft, see Replacement humeral head, right		

Secondary Procedure: Harvesting of bone for bone graft **0QB30ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	Q	Lower Bones
Root Operation	B	Excision
Body Part	3	Pelvic Bone Left
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: (Harvest) Excision, bone, pelvic bone, left (Body Part Key: iliac crest = pelvic bone)		

Rationale: The principal diagnosis, the reason for admission after study, was the malunion of the upper end of the humerus from a previous traumatic fracture. The 7th character of P was chosen from the options to describe a subsequent encounter for fracture care for a fracture with nonunion. If the documentation in the health record identifies what type of medication (insulin or oral hypoglycemic medications) were used to treat the diabetes, an additional code would be used from Z79.4 or Z79.84. Three procedures are necessary to code: the reposition and internal fixation of the fracture site. The patient's other medical conditions are coded as well.

Chapter 19B: Poisoning by, Adverse Effects, Underdosing, Toxic Effects of Substances, Other Effects of External Causes, Certain Early Complications of Trauma and Complications of Surgical and Medical Care

1. **First-Listed Diagnosis: T43.202A** Table of Drugs and Chemicals: Antidepressants, poisoning, intentional, antidepressants, initial encounter
Secondary Diagnoses: T42.4X2A Table of Drugs and Chemicals: Lorazepam, poisoning, intentional initial encounter;
T51.0X2A Table of Drugs and Chemicals, alcohol, beverage, poisoning, intentional, initial encounter;
F32.9 Depression
Rationale: Any of the poisoning codes may be listed first. Coding Guideline I.C.19.e states "Codes in categories T36–T65 are combination codes that include the substance that was taken as well as the intent. No additional external cause code is required for poisonings." The 7th character of A should be used on the poisoning codes to identify it as the initial encounter for care.

3. **Principal Diagnosis: T81.4XXA** Infection, due to surgery
Secondary Diagnoses: L03.311 Cellulitis, abdominal wall;
B95.62 Infection, methicillin resistant staphylococcus aureus;
E11.9 Diabetes, type 2
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: Coding Guideline I.C.1.b. states, when there is documentation of a current infection (such as wound infection, stitch abscess, urinary tract infection) due to MRSA, and that infection does not have a combination code that includes the causal organism, assign the appropriate code to identify the condition along with code B95.62, Methicillin resistant *Staphylococcus aureus* infection as the cause of diseases classified elsewhere for the MRSA infection. Do not assign a code from subcategory Z16.11, Resistance to penicillins, due to the Excludes1 note found under Z16. The 7th character of A is listed on the infection due to surgery to identify it as the initial encounter. If the documentation indicated whether insulin or oral medications were used to treat the type 2 diabetes, another diagnosis code for Z79.4 or Z79.84 would be added.

5. **First-Listed Diagnosis: L29.9** Pruritus
Secondary Diagnoses: T36.3 X5A Table of Drugs and Chemicals, azithromycin, adverse effect, initial encounter;
H66.90 Otitis media, acute
Rationale: This scenario is an example of an adverse effect of the drug azithromycin. The principal diagnosis, the reason for admission after study, was the pruritus caused by the proper use of the azithromycin. The diagnosis of "drug allergy" is found in the Alphabetic Index under allergy, drug, correct substance properly administered – see Table of Drugs and Chemicals, by drug, adverse effect. The drug is identified from the Table of Drugs and Chemicals using the drug name azithromycin with the T code and with the 7th character of A for the initial encounter identifying it as the source of the adverse effect. The patient's other medical conditions that were evaluated and treated during the hospital stay should be coded as secondary diagnoses as well.

7. **First-Listed Diagnosis: T82.7XXA** Infection, due to device, implant or graft, electronic, cardiac—or—Complication, cardiovascular device, electronic, pulse generator, infection
Secondary Diagnoses: L03.313 Cellulitis, chest wall;
Z86.14 History, personal, infection, methicillin resistant Staphylococcus aureus
Rationale: The reason for this outpatient visit is found to be an infection of the chest wall, that is, cellulitis due to the presence of the cardiac pulse generator. There is an instructional note under code

T82.7 to use an additional code to identify the infection, which is the cellulitis in this scenario. The 7th character of A is used to identify this as the initial encounter to treat the infection due to the device.

9. **First-Listed Diagnosis: T36.8X1A** Table of Drugs and Chemicals, ciprofloxacin, poisoning, accidental, initial encounter;
Secondary Diagnoses: R19.7 Diarrhea;
N39.0 Urinary tract infection;
B96.20 Infection, Escherichia (E. coli), as cause of disease classified elsewhere
Rationale: The scenario describes an admission due to an overdose of ciprofloxacin that was identified as an accidental. The code is found on the Table of Drugs and Chemicals with a 7th character of A for the initial encounter for care. The manifestation of the overdose, the diarrhea, is coded separately. The patient's coexisting conditions of urinary tract infection caused by *E. coli* were also evaluated and treated and coded as secondary diagnoses.

11. **Principal Diagnosis: T84.032A** Complication, joint prosthesis, Internal, mechanical, loosening, knee;
Secondary Diagnoses: G20 Parkinsonism;
H40.9 Glaucoma
H54.11 Blindness, one eye, right, low vision on left;
I25.2 Infarction, myocardial, healed or old;
R94.39 Findings, abnormal, stress test;
M15.0 Osteoarthrosis, generalized, primary
Principal Procedure: Replacement tibial component knee **0SRV0J9**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	S	Lower Joints
Root Operation	R	Replacement
Body Part	V	Knee Joint, Tibial Surface, Right
Approach	0	Open
Device	J	Synthetic Substitute
Qualifier	9	Cemented
INDEX: Replacement, joint, knee, right, tibial component		

Secondary Procedure: Removal tibial component knee **0SPC0JZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	S	Lower Joints
Root Operation	P	Removal
Body Part	C	Knee Joint, Right

Approach	0	Open
Device	J	Synthetic Substitute
Qualifier	Z	No qualified
INDEX: Removal of device from, knee joint		

Rationale: The reason for admission after study, the principal diagnosis, was the mechanical loosening of the tibial component of the knee joint prosthesis. The patient had several medical conditions that were also treated or evaluated during this admission that are coded as secondary diagnoses. The procedure, called a revision by the physician, is actually two procedures in ICD-10-PCS. One is the replacement of the tibial component prosthesis in the knee with a new device. The second code is the removal of the original device in order to replace it with another device. The root operation in ICD-10-PCS for revision is correcting a portion of a malfunctioning device or the position of a displaced device, which is not what was done during this surgery.

13. **Principal Diagnosis: T86.49** Complication, transplant, liver, specified type NEC
Secondary Diagnoses: D89.810 Disease, graft-versus-host, acute;
R21 Rash;
R19.7 Diarrhea;
R18.8 Ascites
Principal Procedure: Skin biopsy, chest **0HB5XZX**

Character	Code	Explanation
Section	O	Medical and Surgical
Body System	H	Skin and Breast
Root Operation	B	Excision
Body Part	5	Skin, Chest
Approach	X	External
Device	Z	No Device
Qualifier	X	Diagnostic
INDEX: Biopsy, see Excision with qualifier diagnostic, skin, chest		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The doctor describes the cause of this patient's symptoms as due to acute graft-versus-host disease and that this is a complication of his transplanted liver. In ICD-10-CM, codes under category T86 are for use for both complications and rejection of transplanted organs. Two codes are required to fully describe a transplant complication: the appropriate code from category T86 and a secondary code to identify the complication. In this scenario the complication of code D89.810, acute graft-versus-host disease is used. The symptoms vary with this disease, so for this patient each symptom is coded as an additional diagnosis for the rash, diarrhea, and ascites. The biopsy of the skin is a diagnostic procedure of an excision using the qualifier of X to indicate it is a biopsy.

15. **Principal Diagnosis: T40.5X1A** Table of Drugs and Chemicals, cocaine, poisoning, accidental (unintentional), initial encounter
Secondary Diagnosis: **J96.00** Failure, respiratory, acute;
N17.9 Failure, kidney, acute;
F14.221 Dependence, drug, cocaine, with intoxication delirium
Principal Procedure: Mechanical ventilation 72 hours **5A1945Z**

Character	Code	Explanation
Section	5	Extracorporeal Assistance and Performance
Physiological System	A	Physiological Systems
Root Operation	1	Performance
Body System	9	Respiratory
Duration	4	24–96 Consecutive Hours
Function	5	Ventilation
Qualifier	Z	No Qualifier
INDEX: Mechanical Ventilation see Performance, respiratory		

Secondary Procedure(s): Endotracheal intubation **0BH17EZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Physiological System	B	Respiratory System
Root Operation	H	Insertion
Body Part	1	Trachea
Duration	7	Via Natural or Artificial Opening
Function	E	Intraluminal Device, Endotracheal Airway
Qualifier	Z	No Qualifier
INDEX: Intubation, airway – see Insertion of device in, Trachea 0BH1-		

Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was identified by the physician as the accidental cocaine overdose which should be the principal diagnosis. According to coding guidelines I.C.19.5.b, when coding a poisoning, first assign the appropriate code from category T36–50. The code for the cocaine overdose can be located on the Table of Drugs and Chemicals with the intent of accidental included as well as the 7th character of A for the initial encounter for treatment. Use additional codes for all manifestations of the poisoning. The acute respiratory failure is the manifestation of the poisoning. It is

the reason the patient had respiratory failure. In addition, the patient was identified as having a cocaine dependency with intoxication delirium and acute renal failure that would qualify as additional diagnoses. The procedure performed was mechanical ventilation, which would be the principal procedure code.

17. **Principal Diagnosis: T82.868A** Complication, graft, vascular, thrombosis, initial encounter
Secondary Diagnoses: I12.0 Hypertensive kidney disease with stage 5 chronic kidney disease or end-stage renal disease;
N18.6 Disease, End stage renal;
N03.9 Glomerulonephritis, chronic;
Z99.2 Dependence on renal dialysis
Principal Procedure: Thrombectomy, vein cephalic, right **05CF0ZZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	5	Upper Vein
Root Operation	C	Extirpation
Body Part	F	Cephalic Vein Left
Approach	0	Open
Device	Z	No Device
Qualifier	Z	No Qualifier
INDEX: Thrombectomy, see Extirpation, Vein, Cephalic, Right		

Secondary Procedure: Insertion of catheter, internal jugular vein, left **05HN33Z**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	5	Upper Vein
Root Operation	H	Insertion
Body Part	N	Internal Jugular Vein Left
Approach	3	Percutaneous
Device	3	Infusion Device
Qualifier	Z	No Qualifier
INDEX: Insertion of Device in vein, internal jugular , left		

Secondary Procedure: Hemodialysis **5A1D00Z**

Character	Code	Explanation
Section	5	Extracorporeal Assistance and Performance
Physiological Systems	A	Physiological Systems
Root Operation	1	Performance
Body System	D	Urinary
Duration	0	Single
Function	0	Filtration
Qualifier	Z	No Qualifier
INDEX: Dialysis, hemodialysis		

Rationale: The reason for the admission was to treat the thrombosis in the renal dialysis site. Using the Index entry of thrombosis, due to device, catheter, dialysis, code T82.868 is located. This code is used for the principal diagnosis with the 7th character of A to identify the initial encounter for care for the thrombosis. The patient's underlying disease, hypertensive kidney disease, ESRD, glomerulonephritis, and dependence on renal dialysis are added as secondary diagnoses. The principal procedure is to remove the thrombus from the cephalic vein by an open approach, which meets the definition of extirpation in ICD-10-PCS. The need for immediate access for dialysis requires the placement of a catheter for infusion in the left internal jugular vein. In ICD-10-PCS this is the root operation of insertion of device into vein as a secondary code. The hemodialysis performed during the hospital stay is coded as another secondary procedure.

Chapter 20: External Causes of Morbidity

1. **External cause code(s):**

Y04.0XXA Fight, see Assault, fight, unarmed brawl or fight, initial encounter;
Y92.39 Place of occurrence, stadium;
Y93.82 Activity, spectator at an event;
Y99.8 External cause status, student

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: Fight between spectators that is referred to as an assault by fighting

This was the initial encounter.

The place where the event or accident occurred: Sports stadium

The activity of the patient at the time the event or accident occurred: Patient was a spectator at a sports event

The status of the patient at the time the event or accident occurred: Patient was a student

3. **External cause code(s):**

V43.52XA Accident, transport, car, driver, collision, car, initial encounter
Y92.411 Place of occurrence, highway
Y99.0 External cause status, civilian activity done for income or pay

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: Transport accident, collision, car with car

This would be the initial encounter.

The place where the event or accident occurred: Highway

The activity of the patient at the time the event or accident occurred: No type of activity stated so no code applied

The status of the patient at the time the event or accident occurred: Patient was employed so code as civilian activity done for income or pay

5. **External cause code(s):**

W11.XXXA Fall from ladder, initial encounter
Y92.017 Place of occurrence, residence, house, single family, yard
Y93.H9 Activity, maintenance, exterior building
Y99.8 External cause status, specified NED (unemployed)

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: Fall from ladder

This would be the initial encounter.

The place where the event or accident occurred: Yard at a single family house

The activity of the patient at the time the event or accident occurred: Washing windows is maintenance on the exterior of a building

The status of the patient at the time the event or accident occurred: Patient was unemployed so code Y99.8 for other specified

7. **External cause code(s):**

V95.32XA Accident, transport, aircraft, occupant, powered craft accident, fixed wing, commercial, forced landing, initial encounter
Y92.520 Place of occurrence, airport
Y99.8 External cause status, leisure

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: Transport accident, airplane occupant, forced landing

This would be the initial encounter.

The place where the event or accident occurred: Airport

The activity of the patient at the time the event or accident occurred: No activity stated other than occupant of plane that is included in the event code

The status of the patient at the time the event or accident occurred: Leisure activity, flying to vacation

9. **External cause code(s):**

W16.032A Accident, diving, see Fall, into water, in swimming pool, striking wall, initial encounter
Y92.016 Place of occurrence, swimming pool, private, single-family residence
Y93.12 Activity, diving
Y99.8 External cause status, student

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: Diving accident

This would be the initial encounter.

The place where the event or accident occurred: Swimming pool at single family residence

The activity of the patient at the time the event or accident occurred: Diving

The status of the patient at the time the event or accident occurred: Patient is a student

11. **External cause code(s):**

W06.XXXA Fall from bed, initial encounter
Y92.230 Place of occurrence, hospital, patient room
Y99.8 External cause status, specified NEC (patient)

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: patient fell out of bed

This would be the initial encounter.

The place where the event or accident occurred: Patient room in a hospital

The activity of the patient at the time the event or accident occurred: There is no stated activity, so not coded

The status of the patient at the time the event or accident occurred: Person was a patient, so other "specified" status

13. **External cause code(s):**

X37.1XXA Tornado, initial encounter
W20.8XXA Tree, falling on or hitting initial encounter
Y92.017 Place of occurrence, residence, house, single family, yard
Y99.8 External cause status, leisure

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: two events for this accident: there was a tornado and the patient was struck by a falling tree. There is a note under category W20, Struck by thrown, projected or falling object – Code first any associated cataclysm (X34–X39) or lightning strike (T75.00). For this reason the X37.1XXA code is listed first.

This would be the initial encounter.

The place where the event or accident occurred: Single family residence in the yard

The activity of the patient at the time the event or accident occurred: There is no stated activity, so not coded

The status of the patient at the time the event or accident occurred: Person was off work on vacation at home, so status would be leisure

15. **External cause code(s):**

W92.XXXA Exposure, excessive heat, man-made, initial encounter
Y92.63 Place of occurrence, factory
Y99.0 External cause status, civilian activity for income or pay

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: patient was exposed to excessive heat in a steel mill factory (man-made origin)

This would be the initial encounter.

The place where the event or accident occurred: Factory

The activity of the patient at the time the event or accident occurred: There is no stated activity nor is there a code for "working"; the fact the patient was at work is captured in the status code and possibly from the place of occurrence of a factory

The status of the patient at the time the event or accident occurred: Patient was at work in a civilian job

17. **External cause code(s):**

V00.131A Accident, skateboard, see Accident, transport, pedestrian, conveyance, skateboard, fall, initial encounter
Y92.481 Place of occurrence, parking lot
Y93.51 Activity, skateboarding
Y99.8 External cause status, student

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: Skateboard accident fall

This is the initial encounter.

The place where the event or accident occurred: Parking lot

The activity of the patient at the time the event or accident occurred: Skateboarding

The status of the patient at the time the event or accident occurred: Patient was a student

19. **External cause code(s):**

V00.321A Fall, skis, see Accident, transport, pedestrian, conveyance, skis, fall, initial encounter
Y92.828 Place of occurrence, mountain
Y93.23 Activity, skiing, downhill
Y99.8 External cause status, leisure

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: Fall involving skis, this becomes a transport accident because skis transport a person from place to place

This would be the initial encounter.

The place where the event or accident occurred: Mountain

The activity of the patient at the time the event or accident occurred: Downhill skiing

The status of the patient at the time the event or accident occurred: Patient was spending leisure time as a skier

21. **External cause code(s):**

W54.0XXA Bitten by dog
Y92.018 Place of occurrence, residence, single family, specified (porch)
Y99.0 External cause status, civilian activity done for income or pay

Rationale for selecting the external cause of morbidity codes:

The event or accident that was the cause of the injury: Bitten by dog was the event

This would be the initial encounter.

The place where the event or accident occurred: Porch on single family house

The activity of the patient at the time the event or accident occurred: There is no activity code available for “delivery of package” or “working.”

The status of the patient at the time the event or accident occurred: Patient was an employee, so status is civilian activity done for income or pay

Chapter 21: Factors Influencing Health Status and Contact with Health Services

1. **Principal Diagnosis: Z38.01** Newborn, born in hospital, by cesarean
Secondary Diagnoses: P07.03 Low birthweight, extreme, 945 grams;
P07.26 Immaturity, extreme, with gestation of 27 weeks;
P22.0 Syndrome, respiratory, distress, newborn
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: An infant born during a current admission requires the newborn category code Z38 to be listed first with any other conditions listed as secondary diagnoses. A note with category P07 states when both birth weight and gestational age of the newborn are available, both should be coded with birth weight sequenced before gestational age.

3. **Principal Diagnosis: I10** Hypertension
Secondary Diagnoses: Z30.2 Encounter, sterilization, or Multiparity requiring contraceptive management, see Contraception, sterilization (same code)
Principal Procedure: Fallopian tubal ligation bilateral **0UL74CZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	U	Female Reproductive System
Root Operation	L	Occlusion
Body Part	7	Fallopian Tubes, Bilateral
Approach	4	Percutaneous Endoscopic
Device	C	Extraluminal Device (Falope Rings)
Qualifier	Z	No Qualifier
INDEX: Ligation, see Occlusion, fallopian, tubes, bilateral		

Secondary Procedure: None indicated by the documentation provided
Rationale: The reason for admission and principal diagnosis is the hypertension. The secondary diagnoses reflect the request for sterilization due to multiparity. In ICD-10-CM the multiparity is not coded separately from the code for the encounter for sterilization. The procedure performed is a tubal ligation using Falope rings. Falope rings are placed on the exterior surface of the fallopian tube to accomplish the occlusion.

5. **First-Listed Diagnosis: R26.2** Gait abnormality, difficulty walking
Secondary Diagnoses: Z47.1 Aftercare, following surgery, joint replacement;
Z96.641 Presence, hip joint implant, right;
Z79.01 Therapy, drug, long term, anticoagulant;
Z51.81 Encounter, therapeutic drug level monitoring
Rationale: To explain the home health services provided by the nurse and physical therapists there could be a variety of codes and in varying sequences for the home health services. The three-day-per-week physical therapy would best be explained by the abnormality of gait code to focus on the reason for the

therapy. The nurses serve to draw blood would be explained by the long term (current) use of anticoagulant. All of the above may also be described as surgical aftercare.

7. **Principal Diagnosis: Z04.1** Observation (following) accident, transport
Secondary Diagnoses: V43.62XA External Cause: Accident, transport, car occupant, passenger, collision with car, initial encounter;
Y92.411 External Cause: Place of occurrence, street and highway, interstate highway;
Y99.8 External Cause: Status of External Cause, specified (infant)
Principal Procedure: None indicated by the documentation provided
Secondary Procedure(s): None indicated by the documentation provided
Rationale: The reason for admission after study was the fact the infant was in a car involved in a serious motor vehicle accident but found to be unhurt. The observation following accident code as principal describes this fact. The external cause codes are optional depending on the hospital's coding guidelines or state-mandated reporting from trauma hospitals.

9. **First-Listed Diagnosis: Z00.111** Newborn, examination, 8 to 28 days old
Secondary Diagnoses: None indicated by the documentation provided
Rationale: This is a first visit of a 2-week-old infant to the physician's office for a newborn examination with no abnormal findings.

11. **First-Listed Diagnosis: Z48.00** Change, dressing (nonsurgical)
Secondary Diagnoses: S60.511D Abrasion, right hand, subsequent care;
S60.512D Abrasion, left hand, subsequent care;
W24.0XXD External Cause: Contact with lifting device, subsequent encounter
Rationale: The scenario represents a follow-up visit for a dressing change for the patient's deep abrasions suffered in a work accident that was previously treated. In ICD-10-CM, the original injuries are coded with the 7th character of D for subsequent care. The type of accident is also coded again with an external cause code with the 7th character of D. The 7th characters for the injury and the external cause should match as they are describing the same injury and event.

13. **Principal Diagnosis: Z45.09** Admission, adjustment, device, implanted, cardiac
Secondary Diagnoses: None indicated by the documentation provided
Principal Procedure: Mitral Valve Replacement **02RG0JZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	R	Replacement
Body Part	G	Mitral Valve
Approach	0	Open
Device	J	Synthetic Substitute
Qualifier	Z	No Qualifier
INDEX: Replacement, valve, mitral		

Secondary Procedure: Mitral valve removed **02PA0JZ**

Character	Code	Explanation
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Root Operation	P	Removal
Body Part	A	Heart
Approach	0	Open
Device	J	Synthetic Substitute
Qualifier	Z	No Qualifier
INDEX: Removal of device from, heart		

Rationale: The reason for admission after study was not to treat a specific disease but to admit the patient to the hospital to replace the worn out heart valve prosthesis. This is an encounter for specific care for an implanted heart device. In this scenario, there is not cardiac or other disease mentioned specifically, but in another patient it is highly likely there would have been other secondary diagnoses. In ICD-10-PCS, the replacement of a previously placed device requires two codes: one to remove the previously placed device and another to replace the body part again with the device, in this case, the heart valve. There is no code (Z95.2) added for the presence of the heart valve because of the Excludes1 note under category Z45.

15. **First-Listed Diagnosis: Z23** Admission, prophylactic vaccination
Secondary Diagnoses: P07.33 Preterm infant, with gestation of, 30 weeks
Rationale: The reason for this office visit was to receive the prophylactic injection of Synagis. There was no disease. A reason for the injection was the fact the infant had been born prematurely. ICD-10-CM coding guideline I.C.16.e: Codes from category P07, Disorders of newborn related to short gestation and low birth weight, not elsewhere classified, are for use for a child or adult who was premature or had a low birth weight as a newborn that is affecting the patient's current health status.

17. **First-Listed Diagnosis: Z94.0** Transplant (status), kidney
Secondary Diagnoses: N18.4 Disease, kidney, chronic, stage 4
Rationale: Given the fact that the patient is being seen in the transplant clinic to monitor her status as a kidney transplant patient, the first-listed code describes the kidney transplant status. The patient's chronic kidney disease present in the other kidney is coded as an additional diagnosis as relevant to her overall medical status.

19. **First-Listed Diagnosis: Z12.5** Screening, neoplasm (malignant), prostate
Secondary Diagnoses: None indicated by the documentation provided
Rationale: The stated reason for the visit to the primary care physician's office was for a screening examination to rule out prostate cancer. This is a screening visit because the patient has no symptoms of prostate or urinary disease. The main term in the Alphabetic Index is the word "screening" as it is the intent of the patient's visit to the physician.