



# **Patient Safety Indicator 04 (PSI 04) Death Rate among Surgical Inpatients with Serious Treatable Complications**

**August 2023**

**Hospital-Level Indicator**

**Type of Score: Rate**

## **Prepared by:**

Agency for Healthcare Research and Quality

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[qualityindicators.ahrq.gov](https://qualityindicators.ahrq.gov)

## **DESCRIPTION**

In-hospital deaths per 1,000 surgical discharges among patients ages 18 through 89 years or obstetric patients of any age with serious treatable complications (shock/cardiac arrest, sepsis, pneumonia, gastrointestinal hemorrhage/acute ulcer, or deep vein thrombosis/pulmonary embolism). Measure can be stratified to report deaths by hospitalizations with each type of complication. Excludes transfers to an acute care facility and discharges admitted from a hospice facility.

[NOTE: The software provides the rate per hospital discharge. However, common practice reports the measure as per 1,000 discharges. The user must multiply the rate obtained from the software by 1,000 to report in-hospital deaths per 1,000 hospital discharges.]

## **NUMERATOR OVERALL**

Number of deaths (DISP=20) among discharges meeting the inclusion and exclusion rules for the denominator.

## **STRATUM\_SHOCK: SHOCK/CARDIAC ARREST**

Number of deaths (DISP=20) among discharges meeting the inclusion and exclusion rules for the denominator.

## **STRATUM\_SEPSIS: SEPSIS**

Number of deaths (DISP=20) among discharges meeting the inclusion and exclusion rules for the denominator.

**STRATUM\_PNEUMONIA: PNEUMONIA**

Number of deaths (DISP=20) among discharges meeting the inclusion and exclusion rules for the denominator.

**STRATUM\_GI\_HEMORRHAGE: GASTROINTESTINAL (GI)**

Number of deaths (DISP=20) among discharges meeting the inclusion and exclusion rules for the denominator.

**STRATUM\_DVT\_PE: DEEP VEIN THROMBOSIS/PULMONARY EMBOLISM (DVT/PE)**

Number of deaths (DISP=20) among discharges meeting the inclusion and exclusion rules for the denominator.

**DENOMINATOR**

Surgical discharges (*Appendix E: SURGI2R*) for patients ages 18 through 89 years or patients of any age with a principal ICD-10-CM diagnosis code assigned to MDC 14 Pregnancy, Childbirth & the Puerperium (*Appendix O: MDC14PRINDX*), with any listed ICD-10-PCS procedure code for an operating room procedure (*Appendix A: ORPROC*) and all of the following:

- Admission type of elective (ATYPE = 3) or any admission type in which the earliest ICD-10-PCS code for an operating room procedure (*Appendix A: ORPROC*) occurs within two days of admission.
- Meet the inclusion and exclusion criteria for STRATUM\_SHOCK (shock or cardiac arrest), STRATUM\_SEPSIS (sepsis), STRATUM\_PNEUMONIA (pneumonia), STRATUM\_GI\_HEMORRHAGE (gastrointestinal hemorrhage or acute ulcer), or STRATUM\_DVT\_PE (deep vein thrombosis or pulmonary embolism).

In the event that a discharge record meets the denominator criteria for several strata, the software assigns the record to the one (and only one) candidate stratum that has the highest risk of the outcome (i.e., observed mortality rate in the AHRQ QI POA reference population). For example, if a discharge meets criteria to be in the denominator for both STRATUM\_SEPSIS and STRATUM\_SHOCK, the discharge will be assigned to the single stratum with the higher observed mortality rate in the reference population, STRATUM\_SHOCK. It will not be assigned to STRATUM\_SEPSIS.

For PSI 04, prioritization to ensure mutual exclusivity for the strata is as follows:

STRATUM\_SHOCK

STRATUM\_SEPSIS

STRATUM\_PNEUMONIA

STRATUM\_GI\_HEMORRHAGE

STRATUM\_DVT\_PE

[Appendix A – Operating Room Procedure Codes](#)

[Appendix E - Surgical Discharge MS-DRGs](#)

[Appendix O - MDC 14 and MDC 15 Principal Diagnosis Codes](#)

### **DENOMINATOR STRATUM\_SHOCK**

Surgical discharges (*Appendix E: SURGI2R*) for patients ages 18 through 89 years or patients of any age with a principal ICD-10-CM diagnosis code assigned to MDC 14 Pregnancy, Childbirth and the Puerperium (*Appendix O: MDC14PRINDX*) with any listed ICD-10-PCS procedure code for an operating room procedure (*Appendix A: ORPROC*) and all of the following:

- Admission type of elective (ATYPE = 3) or any admission type in which the earliest ICD-10-PCS code for an operating room procedure (*Appendix A: ORPROC*) occurs within two days of admission.
- Any secondary ICD-10-CM diagnosis code for shock or cardiac arrest (*FTR5DX\**) or any listed ICD-10-PCS procedure code for shock or cardiac arrest (resuscitation) (*FTR5PR\**) that occurs on the same day as or after the first operating room procedure (*Appendix A: ORPROC*).

### **DENOMINATOR STRATUM\_SEPSIS**

Surgical discharges (*Appendix E: SURGI2R*) for patients ages 18 through 89 years or patients of any age with a principal ICD-10-CM diagnosis code assigned to MDC 14 Pregnancy, Childbirth and the Puerperium (*Appendix O: MDC14PRINDX*) with any listed ICD-10-PCS procedure code for an operating room procedure (*Appendix A: ORPROC*) and all of the following:

- Admission type of elective (ATYPE = 3) or any admission type in which the earliest ICD-10-PCS code for an operating room procedure (*Appendix A: ORPROC*) occurs within two days of admission.
- Any secondary ICD-10-CM diagnosis code for sepsis (*FTR4DX\**).

### **DENOMINATOR STRATUM\_PNEUMONIA**

Surgical discharges (*Appendix E: SURGI2R*) for patients ages 18 through 89 years or patients of any age with a principal ICD-10-CM diagnosis code assigned to MDC 14 Pregnancy, Childbirth and the Puerperium (*Appendix O: MDC14PRINDX*), with any listed ICD-10-PCS procedure code for an operating room procedure (*Appendix A: ORPROC*) and all of the following:

- Admission type of elective (ATYPE = 3) or any admission type in which the earliest ICD-10-PCS code for an operating room procedure (*Appendix A: ORPROC*) occurs within two days of admission.
- Any secondary ICD-10-CM diagnosis code for pneumonia (*FTR3DX\**).

### **DENOMINATOR STRATUM\_GI\_HEMORRHAGE**

Surgical discharges (*Appendix E: SURGI2R*) for patients ages 18 through 89 years or patients of any age with a principal ICD-10-CM diagnosis code assigned to MDC 14 Pregnancy, Childbirth and the Puerperium (*Appendix O: MDC14PRINDX*) with any listed ICD-10-PCS procedure code for an operating room procedure (*Appendix A: ORPROC*) and all of the following:

- Admission type of elective (ATYPE = 3) or any admission type in which the earliest ICD-10-PCS code for an operating room procedure (*Appendix A: ORPROC*) occurs within two days of admission.
- Any secondary ICD-10-CM diagnosis code for gastrointestinal hemorrhage or acute ulcer (*FTR6DX\**).

### **DENOMINATOR STRATUM\_DVT\_PE**

Surgical discharges (*Appendix E: SURGI2R*) for patients ages 18 through 89 years or patients of any age with a principal ICD-10-CM diagnosis code assigned to MDC 14 Pregnancy, Childbirth and the Puerperium (*Appendix O: MDC14PRINDX*) with any listed ICD-10-PCS procedure code for an operating room procedure (*Appendix A: ORPROC*) and all of the following:

- Admission type of elective (ATYPE = 3) or any admission type in which the earliest ICD-10-PCS code for an operating room procedure (*Appendix A: ORPROC*) occurs within two days of admission.
- Any secondary ICD-10-CM diagnosis code for deep vein thrombosis or pulmonary embolism (*FTR2DXB\**).

### **DENOMINATOR OVERALL EXCLUSIONS (FOR ALL STRATA)**

Exclude discharges:

- transferred to an acute care facility (DISP = 2)
- admitted from a hospice facility (POINTOFORIGINUB04 = F)
- with a principal ICD-10-CM diagnosis code assigned to MDC 15 Newborns & Other Neonates with Conditions Originating in Perinatal Period (*Appendix O: MDC15PRINDX*)
- with an ungroupable DRG (DRG=999)
- with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- with missing MDC (MDC=missing) when the user indicates that MDC is provided

### **DENOMINATOR EXCLUSIONS STRATUM\_SHOCK**

Exclude discharges:

- with a principal ICD-10-CM diagnosis code for shock or cardiac arrest (*FTR5DX\**)
- with a principal ICD-10-CM diagnosis code for trauma (*Appendix G: TRAUMID*)
- with a principal ICD-10-CM diagnosis code for hemorrhage (*HEMORID\**)
- with a principal ICD-10-CM diagnosis code for gastrointestinal hemorrhage (*GASTRID\**)
- with a principal ICD-10-CM diagnosis code for abortion-related shock (*FTR5EX\**)
- with a secondary ICD-10-CM diagnosis code for esophageal varices with bleeding (*FTR6GV\**) and with a principal ICD-10-CM diagnosis code for qualifying diagnoses associated with a diagnosis of esophageal varices with bleeding (*FTR6QD\**)
- MDC 4 (diseases/disorders of respiratory system)
- MDC 5 (diseases/disorders of circulatory system)
- transferred to an acute care facility (DISP = 2)
- admitted from a hospice facility (POINTOFORIGINUB04 = F)
- with a principal ICD-10-CM diagnosis code assigned to MDC 15 Newborns & Other Neonates with Conditions Originating in Perinatal Period (*Appendix O: MDC15PRINDX*)
- with an ungroupable DRG (DRG=999)
- with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- with missing MDC (MDC=missing) when the user indicates that MDC is provided

#### [Appendix G – Trauma Diagnosis Codes](#)

## **DENOMINATOR EXCLUSIONS STRATUM\_SEPSIS**

Exclude discharges:

- with a principal ICD-10-CM diagnosis code for sepsis (***FTR4DX\****)
- with a principal ICD-10-CM diagnosis code for infection (***Appendix F: INFECID***)
- transferred to an acute care facility (DISP = 2)
- admitted from a hospice facility (POINTOFORIGINUB04 = F)
- with a principal ICD-10-CM diagnosis code assigned to MDC 15 Newborns & Other Neonates with Conditions Originating in Perinatal Period (***Appendix O: MDC15PRINDX***)
- with an ungroupable DRG (DRG=999)
- with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- with missing MDC (MDC=missing) when the user indicates that MDC is provided

### **[Appendix F – Infection Diagnosis Codes](#)**

## **DENOMINATOR EXCLUSIONS STRATUM\_PNEUMONIA**

Exclude discharges:

- with a principal ICD-10-CM diagnosis code for pneumonia (***FTR3DX\****)
- with a principal ICD-10-CM diagnosis code for respiratory complications (***FTR3EXA\****)
- with any listed ICD-10-CM diagnosis code for viral pneumonia or influenza (***FTR3EXB\****)
- with any listed ICD-10-PCS procedure code for lung cancer (***LUNGCIP\****)
- MDC 4 (diseases/disorders of respiratory system)
- transferred to an acute care facility (DISP = 2)
- admitted from a hospice facility (POINTOFORIGINUB04 = F)
- with a principal ICD-10-CM diagnosis code assigned to MDC 15 Newborns & Other Neonates with Conditions Originating in Perinatal Period (***Appendix O: MDC15PRINDX***)
- with an ungroupable DRG (DRG=999)
- with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- with missing MDC (MDC=missing) when the user indicates that MDC is provided

## DENOMINATOR EXCLUSIONS STRATUM\_GI\_HEMORRHAGE

Exclude discharges:

- with a principal ICD-10-CM diagnosis code for gastrointestinal hemorrhage or acute ulcer (**FTR6DX\***)
- with a secondary ICD-10-CM diagnosis code for esophageal varices with bleeding (**FTR6GV\***), and with a principal ICD-10-CM diagnosis code for qualifying diagnoses associated with a diagnosis of esophageal varices with bleeding (**FTR6QD\***)
- with a principal ICD-10-CM diagnosis code for trauma (**Appendix G: TRAUMID**)
- with a principal ICD-10-CM diagnosis code for alcoholism (**ALCHLSM\***)
- with a principal ICD-10-CM diagnosis code for anemia (**FTR6EX\***)
- MDC 6 (diseases and disorders of the digestive system)
- MDC 7 (diseases and disorders of the hepatobiliary system and pancreas)
- transferred to an acute care facility (DISP = 2)
- admitted from a hospice facility (POINTOFORIGINUB04 = F)
- with a principal ICD-10-CM diagnosis code assigned to MDC 15 Newborns & Other Neonates with Conditions Originating in Perinatal Period (**Appendix O: MDC15PRINDX**)
- with an ungroupable DRG (DRG=999)
- with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- with missing MDC (MDC=missing) when the user indicates that MDC is provided

### [Appendix G – Trauma Diagnosis Codes](#)

## DENOMINATOR EXCLUSIONS STRATUM\_DVT\_PE

Exclude discharges:

- with a principal ICD-10-CM diagnosis code for deep vein thrombosis or pulmonary embolism (**FTR2DXB\***)
- with a principal ICD-10-CM diagnosis code for abortion-related or postpartum obstetric pulmonary embolism (**OBEMBOL\***)
- transferred to an acute care facility (DISP = 2)
- admitted from a hospice facility (POINTOFORIGINUB04 = F)
- with a principal ICD-10-CM diagnosis code assigned to MDC 15 Newborns & Other Neonates with Conditions Originating in Perinatal Period (**Appendix O: MDC15PRINDX**)
- with an ungroupable DRG (DRG=999)
- with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- with missing MDC (MDC=missing) when the user indicates that MDC is provided

\* See below for code list

***Shock or cardiac arrest diagnosis codes: (FTR5DX)***

I462	Cardiac arrest due to underlying cardiac condition	R578	Other shock
I468	Cardiac arrest due to other underlying condition	R579	Shock, unspecified
I469	Cardiac arrest, cause unspecified	T782XXA	Anaphylactic shock, unspecified, initial encounter
O0331	Shock following incomplete spontaneous abortion	T8051XA	Anaphylactic reaction due to administration of blood and blood products, initial encounter
O0381	Shock following complete or unspecified spontaneous abortion	T8052XA	Anaphylactic reaction due to vaccination, initial encounter
O0481	Shock following (induced) termination of pregnancy	T8059XA	Anaphylactic reaction due to other serum, initial encounter
O0731	Shock following failed attempted termination of pregnancy	T8110XA	Postprocedural shock unspecified, initial encounter
O083	Shock following ectopic and molar pregnancy	T8111XA	Postprocedural cardiogenic shock, initial encounter
O751	Shock during or following labor and delivery	T8119XA	Other postprocedural shock, initial encounter
R092	Respiratory arrest	T882XXA	Shock due to anesthesia, initial encounter
R570	Cardiogenic shock	T886XXA	Anaphylactic reaction due to adverse effect of correct drug or medicament properly administered, initial encounter
R571	Hypovolemic shock		



***Shock or cardiac arrest (resuscitation) procedure codes: (FTR5PR)***

5A12012	Performance of cardiac output, single, manual	5A19054	Respiratory ventilation, single, nonmechanical
5A1221J	Performance of cardiac output, continuous, automated		

***Sepsis diagnosis codes for PSI 04: (FTR4DX)***

A021	Salmonella sepsis	A4150	Gram-Negative sepsis, unspecified
A227	Anthrax sepsis	A4151	Sepsis due to escherichia coli [E. coli]
A267	Erysipelothrix sepsis	A4152	Sepsis due to pseudomonas
A327	Listerial sepsis	A4153	Sepsis due to serratia
A400	Sepsis due to streptococcus, group A	A4159	Other gram-negative Sepsis
A401	Sepsis due to streptococcus, group B	A4181	Sepsis due to enterococcus
A403	Sepsis due to streptococcus pneumoniae	A4189	Other specified Sepsis
A408	Other streptococcal sepsis	A419	Sepsis, unspecified organism
A409	Streptococcal sepsis, unspecified	A427	Actinomycotic Sepsis
A4101	Sepsis due to methicillin susceptible staphylococcus aureus	A5486	Gonococcal Sepsis
A4102	Sepsis due to methicillin resistant staphylococcus aureus	B377	Candidal Sepsis
A411	Sepsis due to other specified staphylococcus	R6520	Severe Sepsis without septic shock
A412	Sepsis due to unspecified staphylococcus	R6521	Severe Sepsis with septic shock
A413	Sepsis due to hemophilus influenzae	T8112XA	Postprocedural septic shock, initial encounter
A414	Sepsis due to anaerobes	T8144XA	Sepsis following a procedure, initial encounter

***Bacterial and aspiration pneumonia diagnosis codes: (FTR3DX)***

A481	Legionnaires' disease	J154	Pneumonia due to other streptococci
J13	Pneumonia due to streptococcus pneumoniae	J155	Pneumonia due to escherichia coli
J14	Pneumonia due to hemophilus influenzae	J156	Pneumonia due to other gram-negative bacteria
J150	Pneumonia due to klebsiella pneumoniae	J158	Pneumonia due to other specified bacteria
J151	Pneumonia due to pseudomonas	J159	Unspecified bacterial pneumonia
J1520	Pneumonia due to staphylococcus, unspecified	J180	Bronchopneumonia, unspecified organism
J15211	Pneumonia due to methicillin susceptible staphylococcus aureus	J181	Lobar pneumonia, unspecified organism
J15212	Pneumonia due to methicillin resistant staphylococcus aureus	J188	Other pneumonia, unspecified organism
J1529	Pneumonia due to other staphylococcus	J189	Pneumonia, unspecified organism
J153	Pneumonia due to streptococcus, group B	J690	Pneumonitis due to inhalation of food and vomit

***Gastrointestinal hemorrhage or acute ulcer diagnosis codes: (FTR6DX)***

I8501	Esophageal varices with bleeding	K286	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation
I8511	Secondary esophageal varices with bleeding	K2901	Acute gastritis with bleeding
K2081	Other esophagitis with bleeding	K2921	Alcoholic gastritis with bleeding
K2091	Esophagitis, unspecified with bleeding	K2931	Chronic superficial gastritis with bleeding
K2101	Gastro-Esophageal reflux disease with esophagitis, with bleeding	K2941	Chronic atrophic gastritis with bleeding
K2211	Ulcer of esophagus with bleeding	K2951	Unspecified chronic gastritis with bleeding
K226	Gastro-Esophageal laceration-hemorrhage syndrome	K2961	Other gastritis with bleeding
K250	Acute gastric ulcer with hemorrhage	K2971	Gastritis, unspecified, with bleeding
K251	Acute gastric ulcer with perforation	K2981	Duodenitis with bleeding
K252	Acute gastric ulcer with both hemorrhage and perforation	K2991	Gastroduodenitis, unspecified, with bleeding
K253	Acute gastric ulcer without hemorrhage or perforation	K31811	Angiodysplasia of stomach and duodenum with bleeding
K254	Chronic or unspecified gastric ulcer with hemorrhage	K3182	Dieulafoy lesion (hemorrhagic) of stomach and duodenum
K256	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	K5521	Angiodysplasia of colon with hemorrhage
K260	Acute duodenal ulcer with hemorrhage	K5701	Diverticulitis of small intestine with perforation and abscess with bleeding
K261	Acute duodenal ulcer with perforation	K5711	Diverticulosis of small intestine without perforation or abscess with bleeding
K262	Acute duodenal ulcer with both hemorrhage and perforation	K5713	Diverticulitis of small intestine without perforation or abscess with bleeding
K263	Acute duodenal ulcer without hemorrhage or perforation	K5721	Diverticulitis of large intestine with perforation and abscess with bleeding
K264	Chronic or unspecified duodenal ulcer with hemorrhage	K5731	Diverticulosis of large intestine without perforation or abscess with bleeding
K266	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	K5733	Diverticulitis of large intestine without perforation or abscess with bleeding
K270	Acute peptic ulcer, site unspecified, with hemorrhage	K5741	Diverticulitis of both small and large intestine with perforation and abscess with bleeding
K271	Acute peptic ulcer, site unspecified, with perforation	K5751	Diverticulosis of both small and large intestine without perforation or abscess with bleeding
K272	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	K5753	Diverticulitis of both small and large intestine without perforation or abscess with bleeding

***Gastrointestinal hemorrhage or acute ulcer diagnosis codes: (FTR6DX)***

K273	Acute peptic ulcer, site unspecified, without hemorrhage or perforation	K5781	Diverticulitis of intestine, part unspecified, with perforation and abscess with bleeding
K274	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	K5791	Diverticulosis of intestine, part unspecified, without perforation or abscess with bleeding
K276	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	K5793	Diverticulitis of intestine, part unspecified, without perforation or abscess with bleeding
K280	Acute gastrojejunal ulcer with hemorrhage	K625	Hemorrhage of anus and rectum
K281	Acute gastrojejunal ulcer with perforation	K6381	Dieulafoy lesion of intestine
K282	Acute gastrojejunal ulcer with both hemorrhage and perforation	K920	Hematemesis
K283	Acute gastrojejunal ulcer without hemorrhage or perforation	K921	Melena
K284	Chronic or unspecified gastrojejunal ulcer with hemorrhage	K922	Gastrointestinal hemorrhage, unspecified

***Pulmonary embolism or deep vein thrombosis diagnosis codes: (FTR2DXB)***

I2602	Saddle embolus of pulmonary artery with acute cor pulmonale	I80293	Phlebitis and thrombophlebitis of other deep vessels of lower extremity, bilateral
I2609	Other pulmonary embolism with acute cor pulmonale	I80299	Phlebitis and thrombophlebitis of other deep vessels of unspecified lower extremity
I2692	Saddle embolus of pulmonary artery without acute cor pulmonale	I82401	Acute embolism and thrombosis of unspecified deep veins of right lower extremity
I2694	Multiple subsegmental pulmonary emboli without acute cor pulmonale	I82402	Acute embolism and thrombosis of unspecified deep veins of left lower extremity
I2699	Other pulmonary embolism without acute cor pulmonale	I82403	Acute embolism and thrombosis of unspecified deep veins of lower extremity, bilateral
I8010	Phlebitis and thrombophlebitis of unspecified femoral vein	I82409	Acute embolism and thrombosis of unspecified deep veins of unspecified lower extremity
I8011	Phlebitis and thrombophlebitis of right femoral vein	I82411	Acute embolism and thrombosis of right femoral vein
I8012	Phlebitis and thrombophlebitis of left femoral vein	I82412	Acute embolism and thrombosis of left femoral vein
I8013	Phlebitis and thrombophlebitis of femoral vein, bilateral	I82413	Acute embolism and thrombosis of femoral vein, bilateral
I80201	Phlebitis and thrombophlebitis of unspecified deep vessels of right lower extremity	I82419	Acute embolism and thrombosis of unspecified femoral vein
I80202	Phlebitis and thrombophlebitis of unspecified deep vessels of left lower extremity	I82421	Acute embolism and thrombosis of right iliac vein
I80203	Phlebitis and thrombophlebitis of unspecified deep vessels of lower extremities, bilateral	I82422	Acute embolism and thrombosis of left iliac vein
I80209	Phlebitis and thrombophlebitis of unspecified deep vessels of unspecified lower extremity	I82423	Acute embolism and thrombosis of iliac vein, bilateral
I80211	Phlebitis and thrombophlebitis of right iliac vein	I82429	Acute embolism and thrombosis of unspecified iliac vein
I80212	Phlebitis and thrombophlebitis of left iliac vein	I82431	Acute embolism and thrombosis of right popliteal vein
I80213	Phlebitis and thrombophlebitis of iliac vein, bilateral	I82432	Acute embolism and thrombosis of left popliteal vein
I80219	Phlebitis and thrombophlebitis of unspecified iliac vein	I82433	Acute embolism and thrombosis of popliteal vein, bilateral

***Pulmonary embolism or deep vein thrombosis diagnosis codes: (FTR2DXB)***

I80221	Phlebitis and thrombophlebitis of right popliteal vein	I82439	Acute embolism and thrombosis of unspecified popliteal vein
I80222	Phlebitis and thrombophlebitis of left popliteal vein	I824Y1	Acute embolism and thrombosis of unspecified deep veins of right proximal lower extremity
I80223	Phlebitis and thrombophlebitis of popliteal vein, bilateral	I824Y2	Acute embolism and thrombosis of unspecified deep veins of left proximal lower extremity
I80229	Phlebitis and thrombophlebitis of unspecified popliteal vein	I824Y3	Acute embolism and thrombosis of unspecified deep veins of proximal lower extremity, bilateral
I80291	Phlebitis and thrombophlebitis of other deep vessels of right lower extremity	I824Y9	Acute embolism and thrombosis of unspecified deep veins of unspecified proximal lower extremity
I80292	Phlebitis and thrombophlebitis of other deep vessels of left lower extremity		

***Hemorrhage diagnosis codes: (HEMORID)***

D62	Acute posthemorrhagic anemia	I97411	Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating a cardiac bypass
D7801	Intraoperative hemorrhage and hematoma of the spleen complicating a procedure on the spleen	I97418	Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating other circulatory system procedure
D7802	Intraoperative hemorrhage and hematoma of the spleen complicating other procedure	I9742	Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating other procedure
D7821	Postprocedural hemorrhage of the spleen following a procedure on the spleen	I97610	Postprocedural hemorrhage of a circulatory system organ or structure following a cardiac catheterization
D7822	Postprocedural hemorrhage of the spleen following other procedure	I97611	Postprocedural hemorrhage of a circulatory system organ or structure following cardiac bypass
D7831	Postprocedural hematoma of the spleen following a procedure on the spleen	I97618	Postprocedural hemorrhage of a circulatory system organ or structure following other circulatory system procedure
D7832	Postprocedural hematoma of the spleen following other procedure	I9762	Postprocedural hemorrhage and hematoma of a circulatory system organ or structure following other procedure
E3601	Intraoperative hemorrhage and hematoma of an endocrine system organ or structure complicating an endocrine system procedure	I97620	Postprocedural hemorrhage of a circulatory system organ or structure following other procedure
E3602	Intraoperative hemorrhage and hematoma of an endocrine system organ or structure complicating other procedure	I97621	Postprocedural hematoma of a circulatory system organ or structure following other procedure
G9731	Intraoperative hemorrhage and hematoma of a nervous system organ or structure complicating a nervous system procedure	I97630	Postprocedural hematoma of a circulatory system organ or structure following a cardiac catheterization
G9732	Intraoperative hemorrhage and hematoma of a nervous system organ or structure complicating other procedure	I97631	Postprocedural hematoma of a circulatory system organ or structure following cardiac bypass
G9751	Postprocedural hemorrhage of a nervous system organ or structure following a nervous system procedure	I97638	Postprocedural hematoma of a circulatory system organ or structure following other circulatory system procedure



***Hemorrhage diagnosis codes: (HEMORID)***

G9752	Postprocedural hemorrhage of a nervous system organ or structure following other procedure	J9561	Intraoperative hemorrhage and hematoma of a respiratory system organ or structure complicating a respiratory system procedure
G9761	Postprocedural hematoma of a nervous system organ or structure following a nervous system procedure	J9562	Intraoperative hemorrhage and hematoma of a respiratory system organ or structure complicating other procedure
G9762	Postprocedural hematoma of a nervous system organ or structure following other procedure	J95830	Postprocedural hemorrhage of a respiratory system organ or structure following a respiratory system procedure
H59111	Intraoperative hemorrhage and hematoma of right eye and adnexa complicating an ophthalmic procedure	J95831	Postprocedural hemorrhage of a respiratory system organ or structure following other procedure
H59112	Intraoperative hemorrhage and hematoma of left eye and adnexa complicating an ophthalmic procedure	J95860	Postprocedural hematoma of a respiratory system organ or structure following a respiratory system procedure
H59113	Intraoperative hemorrhage and hematoma of eye and adnexa complicating an ophthalmic procedure, bilateral	J95861	Postprocedural hematoma of a respiratory system organ or structure following other procedure
H59119	Intraoperative hemorrhage and hematoma of unspecified eye and adnexa complicating an ophthalmic procedure	K661	Hemoperitoneum
H59121	Intraoperative hemorrhage and hematoma of right eye and adnexa complicating other procedure	K9161	Intraoperative hemorrhage and hematoma of a digestive system organ or structure complicating a digestive system procedure
H59122	Intraoperative hemorrhage and hematoma of left eye and adnexa complicating other procedure	K9162	Intraoperative hemorrhage and hematoma of a digestive system organ or structure complicating other procedure
H59123	Intraoperative hemorrhage and hematoma of eye and adnexa complicating other procedure, bilateral	K91840	Postprocedural hemorrhage of a digestive system organ or structure following a digestive system procedure
H59129	Intraoperative hemorrhage and hematoma of unspecified eye and adnexa complicating other procedure	K91841	Postprocedural hemorrhage of a digestive system organ or structure following other procedure
H59311	Postprocedural hemorrhage of right eye and adnexa following an ophthalmic procedure	K91870	Postprocedural hematoma of a digestive system organ or structure following a digestive system procedure

***Hemorrhage diagnosis codes: (HEMORID)***

H59312	Postprocedural hemorrhage of left eye and adnexa following an ophthalmic procedure	K91871	Postprocedural hematoma of a digestive system organ or structure following other procedure
H59313	Postprocedural hemorrhage of eye and adnexa following an ophthalmic procedure, bilateral	L7601	Intraoperative hemorrhage and hematoma of skin and subcutaneous tissue complicating a dermatologic procedure
H59319	Postprocedural hemorrhage of unspecified eye and adnexa following an ophthalmic procedure	L7602	Intraoperative hemorrhage and hematoma of skin and subcutaneous tissue complicating other procedure
H59321	Postprocedural hemorrhage of right eye and adnexa following other procedure	L7621	Postprocedural hemorrhage of skin and subcutaneous tissue following a dermatologic procedure
H59322	Postprocedural hemorrhage of left eye and adnexa following other procedure	L7622	Postprocedural hemorrhage of skin and subcutaneous tissue following other procedure
H59323	Postprocedural hemorrhage of eye and adnexa following other procedure, bilateral	L7631	Postprocedural hematoma of skin and subcutaneous tissue following a dermatologic procedure
H59329	Postprocedural hemorrhage of unspecified eye and adnexa following other procedure	L7632	Postprocedural hematoma of skin and subcutaneous tissue following other procedure
H59331	Postprocedural hematoma of right eye and adnexa following an ophthalmic procedure	M96810	Intraoperative hemorrhage and hematoma of a musculoskeletal structure complicating a musculoskeletal system procedure
H59332	Postprocedural hematoma of left eye and adnexa following an ophthalmic procedure	M96811	Intraoperative hemorrhage and hematoma of a musculoskeletal structure complicating other procedure
H59333	Postprocedural hematoma of eye and adnexa following an ophthalmic procedure, bilateral	M96830	Postprocedural hemorrhage of a musculoskeletal structure following a musculoskeletal system procedure
H59339	Postprocedural hematoma of unspecified eye and adnexa following an ophthalmic procedure	M96831	Postprocedural hemorrhage of a musculoskeletal structure following other procedure
H59341	Postprocedural hematoma of right eye and adnexa following other procedure	M96840	Postprocedural hematoma of a musculoskeletal structure following a musculoskeletal system procedure
H59342	Postprocedural hematoma of left eye and adnexa following other procedure	M96841	Postprocedural hematoma of a musculoskeletal structure following other procedure
H59343	Postprocedural hematoma of eye and adnexa following other procedure, bilateral	N9961	Intraoperative hemorrhage and hematoma of a genitourinary system organ or structure complicating a genitourinary system procedure

***Hemorrhage diagnosis codes: (HEMORID)***

H59349	Postprocedural hematoma of unspecified eye and adnexa following other procedure	N9962	Intraoperative hemorrhage and hematoma of a genitourinary system organ or structure complicating other procedure
H9521	Intraoperative hemorrhage and hematoma of ear and mastoid process complicating a procedure on the ear and mastoid process	N99820	Postprocedural hemorrhage of a genitourinary system organ or structure following a genitourinary system procedure
H9522	Intraoperative hemorrhage and hematoma of ear and mastoid process complicating other procedure	N99821	Postprocedural hemorrhage of a genitourinary system organ or structure following other procedure
H9541	Postprocedural hemorrhage of ear and mastoid process following a procedure on the ear and mastoid process	N99840	Postprocedural hematoma of a genitourinary system organ or structure following a genitourinary system procedure
H9542	Postprocedural hemorrhage of ear and mastoid process following other procedure	N99841	Postprocedural hematoma of a genitourinary system organ or structure following other procedure
H9551	Postprocedural hematoma of ear and mastoid process following a procedure on the ear and mastoid process	R58	Hemorrhage, not elsewhere classified
H9552	Postprocedural hematoma of ear and mastoid process following other procedure	T792XXA	Traumatic secondary and recurrent hemorrhage and seroma, initial encounter
I97410	Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating a cardiac catheterization		

***Gastrointestinal hemorrhage diagnosis codes for PSI 04: (GASTRID)***

I8501	Esophageal varices with bleeding	K31811	Angiodysplasia of stomach and duodenum with bleeding
I8511	Secondary esophageal varices with bleeding	K3182	Dieulafoy lesion (hemorrhagic) of stomach and duodenum
K2081	Other esophagitis with bleeding	K50011	Crohn's disease of small intestine with rectal bleeding
K2091	Esophagitis, unspecified with bleeding	K50111	Crohn's disease of large intestine with rectal bleeding
K2101	Gastro-Esophageal reflux disease with esophagitis, with bleeding	K50811	Crohn's disease of both small and large intestine with rectal bleeding
K2211	Ulcer of esophagus with bleeding	K50911	Crohn's disease, unspecified, with rectal bleeding
K226	Gastro-Esophageal laceration-hemorrhage syndrome	K51011	Ulcerative (chronic) pancolitis with rectal bleeding
K250	Acute gastric ulcer with hemorrhage	K51211	Ulcerative (chronic) proctitis with rectal bleeding
K252	Acute gastric ulcer with both hemorrhage and perforation	K51311	Ulcerative (chronic) rectosigmoiditis with rectal bleeding
K254	Chronic or unspecified gastric ulcer with hemorrhage	K51411	Inflammatory polyps of colon with rectal bleeding
K256	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	K51511	Left sided colitis with rectal bleeding
K260	Acute duodenal ulcer with hemorrhage	K51811	Other ulcerative colitis with rectal bleeding
K262	Acute duodenal ulcer with both hemorrhage and perforation	K51911	Ulcerative colitis, unspecified with rectal bleeding
K264	Chronic or unspecified duodenal ulcer with hemorrhage	K5521	Angiodysplasia of colon with hemorrhage
K266	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	K5701	Diverticulitis of small intestine with perforation and abscess with bleeding
K270	Acute peptic ulcer, site unspecified, with hemorrhage	K5711	Diverticulosis of small intestine without perforation or abscess with bleeding
K272	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	K5713	Diverticulitis of small intestine without perforation or abscess with bleeding
K274	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	K5721	Diverticulitis of large intestine with perforation and abscess with bleeding
K276	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	K5731	Diverticulosis of large intestine without perforation or abscess with bleeding
K280	Acute gastrojejunal ulcer with hemorrhage	K5733	Diverticulitis of large intestine without perforation or abscess with bleeding
K282	Acute gastrojejunal ulcer with both hemorrhage and perforation	K5741	Diverticulitis of both small and large intestine with perforation and abscess with bleeding

***Gastrointestinal hemorrhage diagnosis codes for PSI 04: (GASTRID)***

K284	Chronic or unspecified gastrojejunal ulcer with hemorrhage	K5751	Diverticulosis of both small and large intestine without perforation or abscess with bleeding
K286	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation	K5753	Diverticulitis of both small and large intestine without perforation or abscess with bleeding
K2901	Acute gastritis with bleeding	K5781	Diverticulitis of intestine, part unspecified, with perforation and abscess with bleeding
K2921	Alcoholic gastritis with bleeding	K5791	Diverticulosis of intestine, part unspecified, without perforation or abscess with bleeding
K2931	Chronic superficial gastritis with bleeding	K5793	Diverticulitis of intestine, part unspecified, without perforation or abscess with bleeding
K2941	Chronic atrophic gastritis with bleeding	K625	Hemorrhage of anus and rectum
K2951	Unspecified chronic gastritis with bleeding	K6381	Dieulafoy lesion of intestine
K2961	Other gastritis with bleeding	K920	Hematemesis
K2971	Gastritis, unspecified, with bleeding	K921	Melena
K2981	Duodenitis with bleeding	K922	Gastrointestinal hemorrhage, unspecified
K2991	Gastroduodenitis, unspecified, with bleeding		

***Abortion-related shock diagnosis codes: (FTR5EX)***

O0331	Shock following incomplete spontaneous abortion	O0481	Shock following (induced) termination of pregnancy
O0381	Shock following complete or unspecified spontaneous abortion	O0731	Shock following failed attempted termination of pregnancy

***Esophageal varices with bleeding diagnosis codes: (FTR6GV)***

I8511      Secondary esophageal varices with  
              bleeding

***Qualifying diagnoses associated with a diagnosis of esophageal varices with bleeding: (FTR6QD)***

B180	Chronic viral hepatitis B with delta-agent	K719	Toxic liver disease, unspecified
B181	Chronic viral hepatitis B without delta-agent	K7200	Acute and subacute hepatic failure without coma
B182	Chronic viral hepatitis C	K7201	Acute and subacute hepatic failure with coma
B188	Other chronic viral hepatitis	K7210	Chronic hepatic failure without coma
B189	Chronic viral hepatitis, unspecified	K7211	Chronic hepatic failure with coma
B190	Unspecified viral hepatitis with hepatic coma	K7290	Hepatic failure, unspecified without coma
B1910	Unspecified viral hepatitis B without hepatic coma	K7291	Hepatic failure, unspecified with coma
B1911	Unspecified viral hepatitis B with hepatic coma	K730	Chronic persistent hepatitis, not elsewhere classified
B1920	Unspecified viral hepatitis C without hepatic coma	K731	Chronic lobular hepatitis, not elsewhere classified
B1921	Unspecified viral hepatitis C with hepatic coma	K732	Chronic active hepatitis, not elsewhere classified
B199	Unspecified viral hepatitis without hepatic coma	K738	Other chronic hepatitis, not elsewhere classified
B651	Schistosomiasis due to schistosoma mansoni [intestinal schistosomiasis]	K739	Chronic hepatitis, unspecified
B652	Schistosomiasis due to schistosoma japonicum	K740	Hepatic fibrosis
B658	Other schistosomiasis	K7400	Hepatic fibrosis, unspecified
B659	Schistosomiasis, unspecified	K7402	Hepatic fibrosis, advanced fibrosis
C220	Liver cell carcinoma	K741	Hepatic sclerosis
C221	Intrahepatic bile duct carcinoma	K742	Hepatic fibrosis with hepatic sclerosis
C222	Hepatoblastoma	K743	Primary biliary cirrhosis
C223	Angiosarcoma of liver	K744	Secondary biliary cirrhosis
C224	Other sarcomas of liver	K745	Biliary cirrhosis, unspecified
C227	Other specified carcinomas of liver	K7460	Unspecified cirrhosis of liver
C228	Malignant neoplasm of liver, primary, unspecified as to type	K7469	Other cirrhosis of liver
C229	Malignant neoplasm of liver, not specified as primary or secondary	K751	Phlebitis of portal vein
C787	Secondary malignant neoplasm of liver and intrahepatic bile duct	K752	Nonspecific reactive hepatitis
C7B02	Secondary carcinoid tumors of liver	K753	Granulomatous hepatitis, not elsewhere classified
C861	Hepatosplenic T-cell lymphoma	K754	Autoimmune hepatitis
D015	Carcinoma in situ of liver, gallbladder and bile ducts	K7581	Nonalcoholic steatohepatitis (NASH)
D376	Neoplasm of uncertain behavior of liver, gallbladder and bile ducts	K7589	Other specified inflammatory liver diseases



***Qualifying diagnoses associated with a diagnosis of esophageal varices with bleeding: (FTR6QD)***

I81	Portal vein thrombosis	K759	Inflammatory liver disease, unspecified
I820	Budd-Chiari syndrome	K760	Fatty (change of) liver, not elsewhere classified
K7011	Alcoholic hepatitis with ascites	K761	Chronic passive congestion of liver
K702	Alcoholic fibrosis and sclerosis of liver	K762	Central hemorrhagic necrosis of liver
K7030	Alcoholic cirrhosis of liver without ascites	K763	Infarction of liver
K7031	Alcoholic cirrhosis of liver with ascites	K765	Hepatic veno-occlusive disease
K7040	Alcoholic hepatic failure without coma	K766	Portal hypertension
K7041	Alcoholic hepatic failure with coma	K767	Hepatorenal syndrome
K709	Alcoholic liver disease, unspecified	K7681	Hepatopulmonary syndrome
K710	Toxic liver disease with cholestasis	K7689	Other specified diseases of liver
K7110	Toxic liver disease with hepatic necrosis, without coma	K769	Liver disease, unspecified
K7111	Toxic liver disease with hepatic necrosis, with coma	K77	Liver disorders in diseases classified elsewhere
K712	Toxic liver disease with acute hepatitis	K830	Cholangitis
K713	Toxic liver disease with chronic persistent hepatitis	K8301	Primary sclerosing cholangitis
K714	Toxic liver disease with chronic lobular hepatitis	K9182	Postprocedural hepatic failure
K7150	Toxic liver disease with chronic active hepatitis without ascites	Q265	Anomalous portal venous connection
K7151	Toxic liver disease with chronic active hepatitis with ascites	Q266	Portal vein-hepatic artery fistula
K716	Toxic liver disease with hepatitis, not elsewhere classified	T8642	Liver transplant failure
K717	Toxic liver disease with fibrosis and cirrhosis of liver	T8643	Liver transplant infection
K718	Toxic liver disease with other disorders of liver	T8649	Other complications of liver transplant

***Respiratory complications diagnosis codes: (FTR3EXA)***

J954	Chemical pneumonitis due to anesthesia	J9587	Transfusion-Associated dyspnea (tad)
J95851	Ventilator associated pneumonia	J9588	Other intraoperative complications of respiratory system, not elsewhere classified
J95859	Other complication of respirator [ventilator]	J9589	Other postprocedural complications and disorders of respiratory system, not elsewhere classified

***Viral pneumonia or influenza diagnosis codes: (FTR3EXB)***

A221	Pulmonary anthrax	J1100	Influenza due to unidentified influenza virus with unspecified type of pneumonia
A3701	Whooping cough due to bordetella pertussis with pneumonia	J1108	Influenza due to unidentified influenza virus with specified pneumonia
A3711	Whooping cough due to bordetella parapertussis with pneumonia	J111	Influenza due to unidentified influenza virus with other respiratory manifestations
A3781	Whooping cough due to other bordetella species with pneumonia	J112	Influenza due to unidentified influenza virus with gastrointestinal manifestations
A3791	Whooping cough, unspecified species with pneumonia	J1181	Influenza due to unidentified influenza virus with encephalopathy
B250	Cytomegaloviral pneumonitis	J1182	Influenza due to unidentified influenza virus with myocarditis
B440	Invasive pulmonary aspergillosis	J1183	Influenza due to unidentified influenza virus with otitis media
J09X1	Influenza due to identified novel influenza A virus with pneumonia	J1189	Influenza due to unidentified influenza virus with other manifestations
J09X2	Influenza due to identified novel influenza A virus with other respiratory manifestations	J120	Adenoviral pneumonia
J09X3	Influenza due to identified novel influenza A virus with gastrointestinal manifestations	J121	Respiratory syncytial virus pneumonia
J09X9	Influenza due to identified novel influenza A virus with other manifestations	J122	Parainfluenza virus pneumonia
J1000	Influenza due to other identified influenza virus with unspecified type of pneumonia	J123	Human metapneumovirus pneumonia
J1001	Influenza due to other identified influenza virus with the same other identified influenza virus pneumonia	J1281	Pneumonia due to SARS-associated coronavirus
J1008	Influenza due to other identified influenza virus with other specified pneumonia	J1282	Pneumonia due to coronavirus disease 2019
J101	Influenza due to other identified influenza virus with other respiratory manifestations	J1289	Other viral pneumonia
J102	Influenza due to other identified influenza virus with gastrointestinal manifestations	J129	Viral pneumonia, unspecified
J1081	Influenza due to other identified influenza virus with encephalopathy	J157	Pneumonia due to mycoplasma pneumoniae

***Viral pneumonia or influenza diagnosis codes: (FTR3EXB)***

J1082	Influenza due to other identified influenza virus with myocarditis	J160	Chlamydial pneumonia
J1083	Influenza due to other identified influenza virus with otitis media	J168	Pneumonia due to other specified infectious organisms
J1089	Influenza due to other identified influenza virus with other manifestations	J17	Pneumonia in diseases classified elsewhere

***Lung cancer procedure codes: (LUNGCIP)***

0BB20ZZ	Excision of carina, open approach	0BT74ZZ	Resection of left main bronchus, percutaneous endoscopic approach
0BB30ZZ	Excision of right main bronchus, open approach	0BT80ZZ	Resection of left upper lobe bronchus, open approach
0BB40ZZ	Excision of right upper lobe bronchus, open approach	0BT84ZZ	Resection of left upper lobe bronchus, percutaneous endoscopic approach
0BB50ZZ	Excision of right middle lobe bronchus, open approach	0BT90ZZ	Resection of lingula bronchus, open approach
0BB60ZZ	Excision of right lower lobe bronchus, open approach	0BT94ZZ	Resection of lingula bronchus, percutaneous endoscopic approach
0BB70ZZ	Excision of left main bronchus, open approach	0BTB0ZZ	Resection of left lower lobe bronchus, open approach
0BB80ZZ	Excision of left upper lobe bronchus, open approach	0BTB4ZZ	Resection of left lower lobe bronchus, percutaneous endoscopic approach
0BB90ZZ	Excision of lingula bronchus, open approach	0BTC0ZZ	Resection of right upper lung lobe, open approach
0BBB0ZZ	Excision of left lower lobe bronchus, open approach	0BTC4ZZ	Resection of right upper lung lobe, percutaneous endoscopic approach
0BBC0ZZ	Excision of right upper lung lobe, open approach	0BTD0ZZ	Resection of right middle lung lobe, open approach
0BBC4ZZ	Excision of right upper lung lobe, percutaneous endoscopic approach	0BTD4ZZ	Resection of right middle lung lobe, percutaneous endoscopic approach
0BBD0ZZ	Excision of right middle lung lobe, open approach	0BTF0ZZ	Resection of right lower lung lobe, open approach
0BBD4ZZ	Excision of right middle lung lobe, percutaneous endoscopic approach	0BTF4ZZ	Resection of right lower lung lobe, percutaneous endoscopic approach
0BBF0ZZ	Excision of right lower lung lobe, open approach	0BTG0ZZ	Resection of left upper lung lobe, open approach
0BBF4ZZ	Excision of right lower lung lobe, percutaneous endoscopic approach	0BTG4ZZ	Resection of left upper lung lobe, percutaneous endoscopic approach
0BBG0ZZ	Excision of left upper lung lobe, open approach	0BTH0ZZ	Resection of lung lingula, open approach
0BBG4ZZ	Excision of left upper lung lobe, percutaneous endoscopic approach	0BTH4ZZ	Resection of lung lingula, percutaneous endoscopic approach
0BBH0ZZ	Excision of lung lingula, open approach	0BTJ0ZZ	Resection of left lower lung lobe, open approach
0BBH4ZZ	Excision of lung lingula, percutaneous endoscopic approach	0BTJ4ZZ	Resection of left lower lung lobe, percutaneous endoscopic approach
0BBJ0ZZ	Excision of left lower lung lobe, open approach	0BTK0ZZ	Resection of right lung, open approach
0BBJ4ZZ	Excision of left lower lung lobe, percutaneous endoscopic approach	0BTK4ZZ	Resection of right lung, percutaneous endoscopic approach
0BBK0ZZ	Excision of right lung, open approach	0BTL0ZZ	Resection of left lung, open approach
0BBK4ZZ	Excision of right lung, percutaneous endoscopic approach	0BTL4ZZ	Resection of left lung, percutaneous endoscopic approach

***Lung cancer procedure codes: (LUNGCIP)***

0BBL0ZZ	Excision of left lung, open approach	0BTM0ZZ	Resection of bilateral lungs, open approach
0BBL4ZZ	Excision of left lung, percutaneous endoscopic approach	0BTM4ZZ	Resection of bilateral lungs, percutaneous endoscopic approach
0BBM0ZZ	Excision of bilateral lungs, open approach	0BTT0ZZ	Resection of diaphragm, open approach
0BBM4ZZ	Excision of bilateral lungs, percutaneous endoscopic approach	0BTT4ZZ	Resection of diaphragm, percutaneous endoscopic approach
0BBT0ZZ	Excision of diaphragm, open approach	0PB20ZZ	Excision of 3 or more ribs, open approach
0BBT4ZZ	Excision of diaphragm, percutaneous endoscopic approach	0PB24ZZ	Excision of 3 or more ribs, percutaneous endoscopic approach
0BT20ZZ	Resection of carina, open approach	0PT20ZZ	Resection of 3 or more ribs, open approach
0BT24ZZ	Resection of carina, percutaneous endoscopic approach	0WB80ZZ	Excision of chest wall, open approach
0BT30ZZ	Resection of right main bronchus, open approach	0WB84ZZ	Excision of chest wall, percutaneous endoscopic approach
0BT34ZZ	Resection of right main bronchus, percutaneous endoscopic approach	0WBC0ZZ	Excision of mediastinum, open approach
0BT40ZZ	Resection of right upper lobe bronchus, open approach	0WBC4ZZ	Excision of mediastinum, percutaneous endoscopic approach
0BT44ZZ	Resection of right upper lobe bronchus, percutaneous endoscopic approach	0WU807Z	Supplement chest wall with autologous tissue substitute, open approach
0BT50ZZ	Resection of right middle lobe bronchus, open approach	0WU80JZ	Supplement chest wall with synthetic substitute, open approach
0BT54ZZ	Resection of right middle lobe bronchus, percutaneous endoscopic approach	0WU80KZ	Supplement chest wall with nonautologous tissue substitute, open approach
0BT60ZZ	Resection of right lower lobe bronchus, open approach	0WU847Z	Supplement chest wall with autologous tissue substitute, percutaneous endoscopic approach
0BT64ZZ	Resection of right lower lobe bronchus, percutaneous endoscopic approach	0WU84JZ	Supplement chest wall with synthetic substitute, percutaneous endoscopic approach
0BT70ZZ	Resection of left main bronchus, open approach	0WU84KZ	Supplement chest wall with nonautologous tissue substitute, percutaneous endoscopic approach

*Alcoholism diagnosis codes: (ALCHLSM)*

F1010	Alcohol abuse, uncomplicated	F10920	Alcohol use, unspecified with intoxication, uncomplicated
F1011	Alcohol abuse, in remission	F10921	Alcohol use, unspecified with intoxication delirium
F10120	Alcohol abuse with intoxication, uncomplicated	F10929	Alcohol use, unspecified with intoxication, unspecified
F10121	Alcohol abuse with intoxication delirium	F10930	Alcohol use, unspecified with withdrawal, uncomplicated
F10129	Alcohol abuse with intoxication, unspecified	F10931	Alcohol use, unspecified with withdrawal delirium
F10130	Alcohol abuse with withdrawal, uncomplicated	F10932	Alcohol use, unspecified with withdrawal with perceptual disturbance
F10131	Alcohol abuse with withdrawal delirium	F10939	Alcohol use, unspecified with withdrawal, unspecified
F10132	Alcohol abuse with withdrawal with perceptual disturbance	F1094	Alcohol use, unspecified with alcohol-induced mood disorder
F10139	Alcohol abuse with withdrawal, unspecified	F10950	Alcohol use, unspecified with alcohol-induced psychotic disorder with delusions
F1014	Alcohol abuse with alcohol-induced mood disorder	F10951	Alcohol use, unspecified with alcohol-induced psychotic disorder with hallucinations
F10150	Alcohol abuse with alcohol-induced psychotic disorder with delusions	F10959	Alcohol use, unspecified with alcohol-induced psychotic disorder, unspecified
F10151	Alcohol abuse with alcohol-induced psychotic disorder with hallucinations	F1096	Alcohol use, unspecified with alcohol-induced persisting amnesic disorder
F10159	Alcohol abuse with alcohol-induced psychotic disorder, unspecified	F1097	Alcohol use, unspecified with alcohol-induced persisting dementia
F10180	Alcohol abuse with alcohol-induced anxiety disorder	F10980	Alcohol use, unspecified with alcohol-induced anxiety disorder
F10181	Alcohol abuse with alcohol-induced sexual dysfunction	F10981	Alcohol use, unspecified with alcohol-induced sexual dysfunction
F10182	Alcohol abuse with alcohol-induced sleep disorder	F10982	Alcohol use, unspecified with alcohol-induced sleep disorder
F10188	Alcohol abuse with other alcohol-induced disorder	F10988	Alcohol use, unspecified with other alcohol-induced disorder
F1019	Alcohol abuse with unspecified alcohol-induced disorder	F1099	Alcohol use, unspecified with unspecified alcohol-induced disorder
F1020	Alcohol dependence, uncomplicated	I426	Alcoholic cardiomyopathy
F1021	Alcohol dependence, in remission	K2920	Alcoholic gastritis without bleeding
F10220	Alcohol dependence with intoxication, uncomplicated	K2921	Alcoholic gastritis with bleeding
F10221	Alcohol dependence with intoxication delirium	K700	Alcoholic fatty liver

***Alcoholism diagnosis codes: (ALCHLSM)***

F10229	Alcohol dependence with intoxication, unspecified	K7010	Alcoholic hepatitis without ascites
F10230	Alcohol dependence with withdrawal, uncomplicated	K7011	Alcoholic hepatitis with ascites
F10231	Alcohol dependence with withdrawal delirium	K702	Alcoholic fibrosis and sclerosis of liver
F10232	Alcohol dependence with withdrawal with perceptual disturbance	K7030	Alcoholic cirrhosis of liver without ascites
F10239	Alcohol dependence with withdrawal, unspecified	K7031	Alcoholic cirrhosis of liver with ascites
F1024	Alcohol dependence with alcohol-induced mood disorder	K7040	Alcoholic hepatic failure without coma
F10250	Alcohol dependence with alcohol-induced psychotic disorder with delusions	K7041	Alcoholic hepatic failure with coma
F10251	Alcohol dependence with alcohol-induced psychotic disorder with hallucinations	K709	Alcoholic liver disease, unspecified
F10259	Alcohol dependence with alcohol-induced psychotic disorder, unspecified	T510X1A	Toxic effect of ethanol, accidental (unintentional), initial encounter
F1026	Alcohol dependence with alcohol-induced persisting amnestic disorder	T510X2A	Toxic effect of ethanol, intentional self-harm, initial encounter
F1027	Alcohol dependence with alcohol-induced persisting dementia	T510X3A	Toxic effect of ethanol, assault, initial encounter
F10280	Alcohol dependence with alcohol-induced anxiety disorder	T510X4A	Toxic effect of ethanol, undetermined, initial encounter
F10281	Alcohol dependence with alcohol-induced sexual dysfunction	T5191XA	Toxic effect of unspecified alcohol, accidental (unintentional), initial encounter
F10282	Alcohol dependence with alcohol-induced sleep disorder	T5192XA	Toxic effect of unspecified alcohol, intentional self-harm, initial encounter
F10288	Alcohol dependence with other alcohol-induced disorder	T5193XA	Toxic effect of unspecified alcohol, assault, initial encounter
F1029	Alcohol dependence with unspecified alcohol-induced disorder	T5194XA	Toxic effect of unspecified alcohol, undetermined, initial encounter



*Anemia diagnosis codes: (FTR6EX)*

D500	Iron deficiency anemia secondary to blood loss (chronic)	D62	Acute posthemorrhagic anemia
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***Abortion-related or postpartum obstetric pulmonary embolism diagnosis codes: (OBEMBOL)***

O032	Embolism following incomplete spontaneous abortion	O88212	Thromboembolism in pregnancy, second trimester
O037	Embolism following complete or unspecified spontaneous abortion	O88213	Thromboembolism in pregnancy, third trimester
O047	Embolism following (induced) termination of pregnancy	O88219	Thromboembolism in pregnancy, unspecified trimester
O072	Embolism following failed attempted termination of pregnancy	O8822	Thromboembolism in childbirth
O082	Embolism following ectopic and molar pregnancy	O8823	Thromboembolism in the puerperium
O88211	Thromboembolism in pregnancy, first trimester		