



## PSI #10 Postoperative Physiologic and Metabolic Derangement

### Provider-Level Indicator

#### Numerator

Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM codes for physiologic and metabolic derangements in any secondary diagnosis field.

Discharges with acute kidney failure (subgroup of physiologic and metabolic derangements) must be accompanied by a procedure code for dialysis.

*ICD-9-CM Physiologic and Metabolic Derangements diagnosis codes:*

<u>Secondary Diabetes with ketoacidosis</u>		25013	TYPE 1 UNCONTROLLED
24910	SECONDARY DIABETES MELLITUS WITH KETOACIDOSIS, UNSPECIFIED	<u>Diabetes with hyperosmolarity</u>	
24911	SECONDARY DIABETES MELLITUS WITH KETOACIDOSIS, UNCONTROLLED	25020	TYPE 2, OR UNSPECIFIED TYPE, NOT STATED AS UNCONTROLLED
24920	SECONDARY DIABETES MELLITUS WITH HYPEROSMOLARITY, UNSPECIFIED	25021	TYPE 1 NOT STATED AS UNCONTROLLED
24921	SECONDARY DIABETES MELLITUS WITH HYPEROSMOLARITY, UNCONTROLLED	25022	TYPE 2, OR UNSPECIFIED TYPE, UNCONTROLLED
24930	SECONDARY DIABETES MELLITUS WITH OTHER COMA, UNSPECIFIED	25023	TYPE 1 UNCONTROLLED
24931	SECONDARY DIABETES MELLITUS WITH OTHER COMA, UNCONTROLLED	<u>Diabetes with other coma</u>	
<u>Diabetes with ketoacidosis</u>		25030	TYPE 2, OR UNSPECIFIED TYPE, NOT STATED AS UNCONTROLLED
25010	TYPE 2, OR UNSPECIFIED TYPE, NOT STATED AS UNCONTROLLED	25031	TYPE 1 NOT STATED AS UNCONTROLLED
25011	TYPE 1 NOT STATED AS UNCONTROLLED	25032	TYPE 2, OR UNSPECIFIED TYPE, UNCONTROLLED
25012	TYPE 2, OR UNSPECIFIED TYPE, UNCONTROLLED	25033	TYPE 1 UNCONTROLLED

*ICD-9-CM Acute Kidney Failure diagnosis codes:*

5845	W/ LESION OF TUBULAR NECROSIS	5849	ACUTE KIDNEY FAILURE, NOS
5846	W/ LESION OF CORTICAL NECROSIS	586	CHRONIC KIDNEY DISEASE, UNSPECIFIED-OCT05
5847	W/ LESION OF MEDULLARY [PAPILLARY] NECROSIS	9975	URINARY COMPLICATIONS-OCT05
5848	ACUTE KIDNEY FAILURE NEC		

*ICD-9-CM Dialysis procedure codes:*

3995	HEMODIALYSIS	5498	PERITONEAL DIALYSIS
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## Denominator

All elective\* surgical discharges 18 years and older defined by specific DRGs or MS-DRGs and an ICD-9-CM code for an operating room procedure.

\*Elective - SID Admission type # is recorded as elective (Admission Type = 3)

See *Patient Safety Indicators Appendices*:

- Appendix A – Operating Room Procedure Codes
- Appendix D – Surgical Discharge DRGs
- Appendix E – Surgical Discharge MS-DRGs

Exclude cases:

- with preexisting condition (principal diagnosis or secondary diagnosis present on admission) of physiologic and metabolic derangements
- with acute renal failure (see Numerator) where a procedure for dialysis occurs **before or on the same day** as the first operating room procedure.  
*Note: If day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available.*
- with both a diagnosis code of ketoacidosis, hyperosmolarity, or other coma (subgroups of physiologic and metabolic derangements coding) **and** a principal diagnosis of diabetes.
- with both a secondary diagnosis code for acute renal failure (subgroup of physiologic and metabolic derangements coding) **and** a principal diagnosis of acute myocardial infarction, cardiac arrhythmia, cardiac arrest, shock, hemorrhage, or gastrointestinal hemorrhage.
- MDC 14 (pregnancy, childbirth and the puerperium)

*ICD-9-CM Chronic Renal Failure diagnosis code:*

40300	HYPERTENSIVE CHRONIC KIDNEY DISEASE, MALIGNANT, WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED	40410	HYPERTENSIVE HEART AND CHRONIC KIDNEY DISEASE, BENIGN, WITHOUT HEART FAILURE AND WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED
40301	MAL HYP KIDNEY W CHR KID	40411	HYPERTENSIVE HEART AND CHRONIC KIDNEY DISEASE, BENIGN, WITH HEART FAILURE AND WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED
40310	HYPERTENSIVE CHRONIC KIDNEY DISEASE, BENIGN, WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED	40412	BEN HYP HT/KID W CHR KID
40311	BEN HYP KIDNEY W CHR KID	40413	BEN HYP HT/KID W HF/KID
40390	HYPERTENSIVE CHRONIC KIDNEY DISEASE, UNSPECIFIED, WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED	40490	HYPERTENSIVE HEART AND CHRONIC KIDNEY DISEASE, UNSPECIFIED, WITHOUT HEART FAILURE AND WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED
40391	HYP KIDNEY NOS W CHR KID	40491	HYPERTENSIVE HEART AND CHRONIC KIDNEY DISEASE, UNSPECIFIED, WITH HEART FAILURE AND WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED
40400	HYPERTENSIVE HEART AND CHRONIC KIDNEY DISEASE, MALIGNANT, WITHOUT HEART FAILURE AND WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED	40492	HYP HT/KID NOS W CHR KID
40401	HYPERTENSIVE HEART AND CHRONIC KIDNEY DISEASE, MALIGNANT, WITH HEART FAILURE AND WITH CHRONIC KIDNEY DISEASE STAGE I THROUGH STAGE IV, OR UNSPECIFIED	40493	HYP HRT/KID NOS W HF/KID
40402	MAL HY HRT/KID W CHR KID	585	CHRONIC RENAL FAILURE
40403	MAL HYP HRT/KID W HF/KID	5855	CHRON KIDNEY DIS STAGE V
		5856	END STAGE RENAL DISEASE

*ICD-9-CM Diabetes diagnosis codes:*

24900	SECONDARY DIABETES MELLITUS WITHOUT MENTION OF COMPLICATION, NOT STATED AS CONTROLLED OR UNSPECIFIED OCT08-	24981	SECONDARY DIABETES MELLITUS WITH OTHER SPECIFIED MANIFESTATIONS, UNCONTROLLED OCT08-
24901	SECONDARY DIABETES MELLITUS WITHOUT MENTION OF COMPLICATION, UNCONTROLLED OCT08-	24990	SECONDARY DIABETES MELLITUS WITH UNSPECIFIED MANIFESTATIONS, UNSPECIFIED OCT08-
24910	SECONDARY DIABETES MELLITUS WITH KETOACIDOSIS, UNSPECIFIED OCT08-	24991	SECONDARY DIABETES MELLITUS WITH UNSPECIFIED MANIFESTATIONS, UNCONTROLLED OCT08-
24911	SECONDARY DIABETES MELLITUS WITH KETOACIDOSIS, UNCONTROLLED OCT08-	25000	DMII WO CMP NT ST UNCNR
24920	SECONDARY DIABETES MELLITUS WITH HYPEROSMOLARITY, UNSPECIFIED OCT08-	25001	DMII WO CMP NT ST UNCNR
24921	SECONDARY DIABETES MELLITUS WITH HYPEROSMOLARITY, UNCONTROLLED OCT08-	25002	DMII WO CMP UNCNR
24930	SECONDARY DIABETES MELLITUS WITH OTHER COMA, UNSPECIFIED OCT08-	25003	DMI WO CMP UNCNR
24931	SECONDARY DIABETES MELLITUS WITH OTHER COMA, UNCONTROLLED OCT08-	25010	DMII KETO NT ST UNCNR
24940	SECONDARY DIABETES MELLITUS WITH RENAL MANIFESTATIONS, UNSPECIFIED OCT08-	25011	DMI KETO NT ST UNCNR
24941	SECONDARY DIABETES MELLITUS WITH RENAL MANIFESTATIONS, UNCONTROLLED OCT08-	25012	DMII KETOACD UNCONTROL
24950	SECONDARY DIABETES MELLITUS WITH OPHTHALMIC MANIFESTATIONS, UNSPECIFIED OCT08-	25013	DMI KETOACD UNCONTROL
24951	SECONDARY DIABETES MELLITUS WITH OPHTHALMIC MANIFESTATIONS, UNCONTROLLED OCT08-	25020	DMII HPRSM NT ST UNCNR
24960	SECONDARY DIABETES MELLITUS WITH NEUROLOGICAL MANIFESTATIONS, UNSPECIFIED OCT08-	25021	DMI HPRSM NT ST UNCNR
24961	SECONDARY DIABETES MELLITUS WITH NEUROLOGICAL MANIFESTATIONS, UNCONTROLLED OCT08-	25022	DMII HPROMLR UNCONTROL
24970	SECONDARY DIABETES MELLITUS WITH PERIPHERAL CIRCULATORY MANIFESTATIONS, UNSPECIFIED OCT08-	25023	DMI HPROMLR UNCONTROL
24971	SECONDARY DIABETES MELLITUS WITH PERIPHERAL CIRCULATORY MANIFESTATIONS, UNCONTROLLED OCT08-	25030	DMII O CM NT ST UNCNR
24980	SECONDARY DIABETES MELLITUS WITH OTHER SPECIFIED MANIFESTATIONS, UNSPECIFIED OCT08-	25031	DMI O CM NT ST UNCNR
		25032	DMII OTH COMA UNCONTROL
		25033	DMI OTH COMA UNCONTROL
		25040	DMII RENL NT ST UNCNR
		25041	DMI RENL NT ST UNCNR
		25042	DMII RENAL UNCNR
		25043	DMI RENAL UNCNR
		25050	DMII OPHTH NT ST UNCNR
		25051	DMI OPHTH NT ST UNCNR
		25052	DMII OPHTH UNCNR
		25053	DMI OPHTH UNCNR
		25060	DMII NEURO NT ST UNCNR
		25061	DMI NEURO NT ST UNCNR
		25062	DMII NEURO UNCNR
		25063	DMI NEURO UNCNR
		25070	DMII CIRC NT ST UNCNR
		25071	DMI CIRC NT ST UNCNR
		25072	DMII CIRC UNCNR
		25073	DMI CIRC UNCNR
		25080	DMII OTH NT ST UNCNR
		25081	DMI OTH NT ST UNCNR
		25082	DMII OTH UNCNR
		25083	DMI OTH UNCNR
		25090	DMII UNSPF NT ST UNCNR
		25091	DMI UNSPF NT ST UNCNR
		25092	DMII UNSPF UNCNR
		25093	DMI UNSPF UNCNR

*ICD-9-CM Acute Myocardial Infarction diagnosis codes:*

41000	AMI OF ANTEROLATERAL WALL – EPISODE OF CARE UNSPECIFIED	41011	AMI OF OTHER ANTERIOR WALL – INITIAL EPISODE OF CARE
41001	AMI OF ANTEROLATERAL WALL – INITIAL EPISODE OF CARE	41020	AMI OF INFEROLATERAL WALL – EPISODE OF CARE UNSPECIFIED
41010	AMI OF OTHER ANTERIOR WALL – EPISODE OF CARE UNSPECIFIED	41021	AMI OF INFEROLATERAL WALL – INITIAL EPISODE OF CARE

41030	AMI OF INFEROPOSTERIOR WALL – EPISODE OF CARE UNSPECIFIED	41061	AMI TRUE POSTERIOR WALL INFARCTION – INITIAL EPISODE OF CARE
41031	AMI OF INFEROPOSTERIOR WALL – INITIAL EPISODE OF CARE	41070	AMI SUBENDOCARDIAL INFARCTION – EPISODE OF CARE UNSPECIFIED
41040	AMI OF INFERIOR WALL – EPISODE OF CARE UNSPECIFIED	41071	AMI SUBENDOCARDIAL INFARCTION – INITIAL EPISODE OF CARE
41041	AMI OF INFERIOR WALL – INITIAL EPISODE OF CARE	41080	AMI OF OTHER SPECIFIED SITES – EPISODE OF CARE UNSPECIFIED
41050	AMI OF OTHER LATERAL WALL – EPISODE OF CARE UNSPECIFIED	41081	AMI OF OTHER SPECIFIED SITES – INITIAL EPISODE OF CARE
41051	AMI OF OTHER LATERAL WALL – INITIAL EPISODE OF CARE	41090	AMI UNSPECIFIED SITE – EPISODE OF CARE UNSPECIFIED
41060	AMI TRUE POSTERIOR WALL INFARCTION – EPISODE OF CARE UNSPECIFIED	41091	AMI UNSPECIFIED SITE – INITIAL EPISODE OF CARE

*ICD-9-CM Cardiac Arrhythmia diagnosis codes:*

4260	ATRIOVENTRICULAR BLOCK, COMPLETE	4272	PAROXYSMAL TACHYCARDIA, UNSPECIFIED
4270	PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA	42731	ATRIAL FIBRILLATION
4271	PAROXYSMAL VENTRICULAR TACHYCARDIA	42732	ATRIAL FLUTTER
		42741	VENTRICULAR FIBRILLATION
		42742	VENTRICULAR FLUTTER
		4279	CARDIAC DYSRHYTHMIA

*ICD-9-CM Cardiac Arrest diagnosis code:*

4275 CARDIAC ARREST

*ICD-9-CM Shock diagnosis codes:*

63450	SPONTANEOUS ABORTION W/ SHOCK - UNSPECIFIED	66910	SHOCK DURING OR FOLLOWING LABOR AND DELIVERY, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
63451	SPONTANEOUS ABORTION W/ SHOCK - INCOMPLETE	66911	SHOCK DURING OR FOLLOWING LABOR AND DELIVERY, DELIVERED W/ OR W/O MENTION OF ANTEPARTUM CONDITION
63452	SPONTANEOUS ABORTION W/ SHOCK - COMPLETE	66912	SHOCK DURING OR FOLLOWING LABOR AND DELIVERY, DELIVERED W/ MENTION OF POSTPARTUM COMPLICATION
63550	LEGAL ABORTION W/ SHOCK - UNSPECIFIED	66913	SHOCK DURING OR FOLLOWING LABOR AND DELIVERY, ANTEPARTUM CONDITION OR COMPLICATION
63551	LEGAL ABORTION W/ SHOCK - INCOMPLETE	66914	SHOCK DURING OR FOLLOWING LABOR AND DELIVERY, POSTPARTUM CONDITION OR COMPLICATION
63552	LEGAL ABORTION W/ SHOCK - COMPLETE	7855	SHOCK W/O MENTION OF TRAUMA
63650	ILLEGAL ABORTION W/ SHOCK - UNSPECIFIED	78550	SHOCK, UNSPECIFIED
63651	ILLEGAL ABORTION W/ SHOCK - INCOMPLETE	78551	CARDIOGENIC SHOCK
63652	ILLEGAL ABORTION W/ SHOCK – COMPLETE	78552	SEPTIC SHOCK OCT03-
63750	ABORTION NOS W/ SHOCK - UNSPECIFIED	78559	SHOCK W/O MENTION OF TRAUMA, OTHER
63751	ABORTION NOS W/ SHOCK - INCOMPLETE	9950	OTHER ANAPHYLACTIC SHOCK
63752	ABORTION NOS W/ SHOCK - COMPLETE	9954	SHOCK DUE TO ANESTHESIA
6385	ATTEMPTED ABORTION W/ SHOCK	9980	POSTOPERATIVE SHOCK
6395	COMPLICATIONS FOLLOWING ABORTION AND ECTOPIC AND MOLAR PREGNANCIES, SHOCK	9994	ANAPHYLACTIC SHOCK, DUE TO SERUM

*ICD-9-CM Hemorrhage diagnosis codes:*

2851	ACUTE POSTHEMORRHAGIC ANEMIA	9582	CERTAIN EARLY COMPLICATIONS OF TRAUMA, SECONDARY AND RECURRENT HEMORRHAGE
4590	OTHER DISORDERS OF CIRCULATORY SYSTEM, HEMORRHAGE, UNSPECIFIED	99811	HEMORRHAGE COMPLICATING A PROCEDURE
56881	HEMOPERITONEUM (NONTRAUMATIC)		

*ICD-9-CM Gastrointestinal (GI) Hemorrhage diagnosis codes:*

4560	ESOPHAGEAL VARICES W/ BLEEDING	53261	DUODENAL ULCER CHRONIC OR UNSPECIFIED W/ HEMORRHAGE AND PERFORATION – W/ OBSTRUCTION
45620	ESOPHAGEAL VARICES IN DISEASES CLASSIFIED ELSEWHERE W/ BLEEDING	53300	PEPTIC ULCER, SITE UNSPECIFIED, ACUTE W/ HEMORRHAGE – W/O MENTION OF OBSTRUCTION
5307	GASTROESOPHAGEAL LACERATION – HEMORRHAGE SYNDROME	53301	PEPTIC ULCER, SITE UNSPECIFIED, ACUTE W/ HEMORRHAGE – W/ OBSTRUCTION
53082	ESOPHAGEAL HEMORRHAGE	53320	PEPTIC ULCER, SITE UNSPECIFIED, ACUTE W/ HEMORRHAGE AND PERFORATION – W/O MENTION OF OBSTRUCTION
53100	GASTRIC ULCER ACUTE W/ HEMORRHAGE – W/O MENTION OF OBSTRUCTION	53321	PEPTIC ULCER, SITE UNSPECIFIED, ACUTE W/ HEMORRHAGE AND PERFORATION – W/ OBSTRUCTION
53101	GASTRIC ULCER ACUTE W/ HEMORRHAGE – W/ OBSTRUCTION	53340	PEPTIC ULCER, SITE UNSPECIFIED, CHRONIC OR UNSPECIFIED W/ HEMORRHAGE – W/O MENTION OF OBSTRUCTION
53120	GASTRIC ULCER ACUTE W/ HEMORRHAGE AND PERFORATION – W/O MENTION OF OBSTRUCTION	53341	PEPTIC ULCER, SITE UNSPECIFIED, CHRONIC OR UNSPECIFIED W/ HEMORRHAGE – W/ OBSTRUCTION
53121	GASTRIC ULCER ACUTE W/ HEMORRHAGE AND PERFORATION – W/ OBSTRUCTION	53360	PEPTIC ULCER, SITE UNSPECIFIED, CHRONIC OR UNSPECIFIED W/ HEMORRHAGE AND PERFORATION – W/O MENTION OF OBSTRUCTION
53140	GASTRIC ULCER CHRONIC OR UNSPECIFIED W/ HEMORRHAGE – W/O MENTION OF OBSTRUCTION	53361	PEPTIC ULCER, SITE UNSPECIFIED, CHRONIC OR UNSPECIFIED W/ HEMORRHAGE AND PERFORATION – W/ OBSTRUCTION
53141	GASTRIC ULCER CHRONIC OR UNSPECIFIED W/ HEMORRHAGE – W/ OBSTRUCTION	53400	GASTROJEJUNAL ULCER, ACUTE W/ HEMORRHAGE – W/O MENTION OF OBSTRUCTION
53160	GASTRIC ULCER CHRONIC OR UNSPECIFIED W/ HEMORRHAGE AND PERFORATION – W/O MENTION OF OBSTRUCTION	53401	GASTROJEJUNAL ULCER, ACUTE W/ HEMORRHAGE – W/ OBSTRUCTION
53161	GASTRIC ULCER CHRONIC OR UNSPECIFIED W/ HEMORRHAGE AND PERFORATION – W/ OBSTRUCTION	53420	GASTROJEJUNAL ULCER, ACUTE W/ HEMORRHAGE AND PERFORATION – W/O MENTION OF OBSTRUCTION
53200	DUODENAL ULCER ACUTE W/ HEMORRHAGE – W/O MENTION OF OBSTRUCTION	53421	GASTROJEJUNAL ULCER, ACUTE W/ HEMORRHAGE AND PERFORATION – W/ OBSTRUCTION
53201	DUODENAL ULCER ACUTE W/ HEMORRHAGE – W/ OBSTRUCTION	53440	GASTROJEJUNAL ULCER, CHRONIC OR UNSPECIFIED W/ HEMORRHAGE – W/O MENTION OF OBSTRUCTION
53220	DUODENAL ULCER ACUTE W/ HEMORRHAGE AND PERFORATION – W/O MENTION OF OBSTRUCTION	53441	GASTROJEJUNAL ULCER, CHRONIC OR UNSPECIFIED W/ HEMORRHAGE – W/ OBSTRUCTION
53221	DUODENAL ULCER ACUTE W/ HEMORRHAGE AND PERFORATION – W/ OBSTRUCTION	53460	GASTROJEJUNAL ULCER, CHRONIC OR UNSPECIFIED W/ HEMORRHAGE AND PERFORATION – W/O MENTION OF OBSTRUCTION
53240	DUODENAL ULCER CHRONIC OR UNSPECIFIED W/ HEMORRHAGE – W/O MENTION OF OBSTRUCTION		
53241	DUODENAL ULCER CHRONIC OR UNSPECIFIED W/ HEMORRHAGE – W/ OBSTRUCTION		
53260	DUODENAL ULCER CHRONIC OR UNSPECIFIED W/ HEMORRHAGE AND PERFORATION – W/O MENTION OF OBSTRUCTION		

53461	GASTROJEJUNAL ULCER, CHRONIC OR UNSPECIFIED W/ HEMORRHAGE AND PERFORATION – W/ OBSTRUCTION	53784	DIEULAFOY LESION (HEMORRHAGIC) OF STOMACH AND DUODENUM
53501	GASTRITIS AND DUODENITIS, ACUTE GASTRITIS W/ HEMORRHAGE	56202	DIVERTICULOSIS OF SMALL INTESTINE – W/ HEMORRHAGE
53511	GASTRITIS AND DUODENITIS, ATROPHIC GASTRITIS W/ HEMORRHAGE	56203	DIVERTICULITIS OF SMALL INTESTINE – W/ HEMORRHAGE
53521	GASTRITIS AND DUODENITIS, GASTRIC MUCOSAL HYPERTROPHY, W/ HEMORRHAGE	56212	DIVERTICULOSIS OF COLON – W/ HEMORRHAGE
53531	GASTRITIS AND DUODENITIS, ALCOHOLIC GASTRITIS, W/ HEMORRHAGE	56213	DIVERTICULITIS OF COLON – W/ HEMORRHAGE
53541	GASTRITIS AND DUODENITIS, OTHER SPECIFIED GASTRITIS – W/ HEMORRHAGE	5693	HEMORRHAGE OF RECTUM AND ANUS
53551	GASTRITIS AND DUODENITIS, UNSPECIFIED GASTRITIS AND GASTRODUODENITIS – W/ HEMORRHAGE	56985	ANGIODYSPLASIA OF INTESTINE - W/ HEMORRHAGE
53561	GASTRITIS AND DUODENITIS, DUODENITIS – W/ HEMORRHAGE	56986	DIEULAFOY LESION (HEMORRHAGIC) OF INTESTINE
53783	OTHER SPECIFIED DISORDERS OF STOMACH AND DUODENUM, ANGIODYSPLASIA OF STOMACH AND DUODENUM – W/ HEMORRHAGE	5780	GASTROINTESTINAL HEMORRHAGE, HEMATEMESIS
		5781	GASTROINTESTINAL HEMORRHAGE, BLOOD IN STOOL
		5789	GASTROINTESTINAL HEMORRHAGE, HEMORRHAGE OF GASTROINTESTINAL TRACT, UNSPECIFIED