

# PATIENT SAFETY INDICATORS (PSI) PARAMETER ESTIMATES Version 2020

**Prepared for:**

Agency for Healthcare Research and Quality  
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## Executive Summary

This document provides statistical parameters associated with Version 2020 of Agency for Healthcare Research and Quality (AHRQ) Quality Indicators™ (QI) Patient Safety Indicators (PSI). The parameter estimates derived for the AHRQ QI are based on analysis of the 2017 Agency for Healthcare Research and Quality's Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID).<sup>1</sup>

HCUP is a family of healthcare databases and related software tools and products developed through a Federal-State-Industry partnership.<sup>2</sup> HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988. The SID contain all-payer, encounter-level information on inpatient discharges, including clinical and resource information typically found on a billing record, such as patient demographics, up to 30 *International Classification of Diseases, Tenth Revision, Clinical Modification/Procedural Classification System (ICD-10-CM/PCS)* diagnoses and procedures, length of stay (LOS), expected payer, admission and discharge dates and discharge disposition. In 2017, the HCUP databases represent more than 97 percent of all annual discharges in the U.S.<sup>3</sup>

The analytic dataset used to generate the risk adjustment regression models in this document consists of the same hospital discharge records that comprise the reference population for Version 2020 of the AHRQ QI software. This reference population file was limited to community hospitals and excludes

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<sup>1</sup> Healthcare Cost and Utilization Project (HCUP) 2017 State Inpatient Databases (SID). Agency for Healthcare Research and Quality, Rockville, MD

<sup>2</sup> The AHRQ QI program would like to acknowledge the HCUP Partner organizations that participated in the HCUP SID: Alaska Department of Health and Social Services, Alaska State Hospital and Nursing Home Association, Arizona Department of Health Services, Arkansas Department of Health, California Office of Statewide Health Planning and Development, Colorado Hospital Association, Connecticut Hospital Association, Delaware Division of Public Health, District of Columbia Hospital Association, Florida Agency for Health Care Administration, Georgia Hospital Association, Hawaii Laulima Data Alliance, a non-profit subsidiary of the Healthcare Association of Hawaii, University of Hawaii, Hilo Center for Rural Health Science, Illinois Department of Public Health, Indiana Hospital Association, Iowa Hospital Association, Kansas Hospital Association, Kentucky Cabinet for Health and Family Services, Louisiana Department of Health, Maine Health Data Organization, Maryland Health Services Cost Review Commission, Massachusetts Center for Health Information and Analysis, Michigan Health & Hospital Association, Minnesota Hospital Association (provides data for Minnesota and North Dakota), Mississippi State Department of Health, Missouri Hospital Industry Data Institute, Montana Hospital Association, Nebraska Hospital Association, Nevada Department of Health and Human Services, New Hampshire Department of Health & Human Services, New Jersey Department of Health, New Mexico Department of Health, New York State Department of Health, North Carolina Department of Health and Human Services, North Dakota (data provided by the Minnesota Hospital Association), Ohio Hospital Association, Oklahoma State Department of Health, Oregon Association of Hospitals and Health Systems, Oregon Health Authority, Pennsylvania Health Care Cost Containment Council, Rhode Island Department of Health, South Carolina Revenue and Fiscal Affairs Office, South Dakota Association of Healthcare Organizations, Tennessee Hospital Association, Texas Department of State Health Services, Utah Department of Health, Vermont Association of Hospitals and Health Systems, Virginia Health Information, Washington State Department of Health, West Virginia Health Care Authority, Wisconsin Department of Health Services, Wyoming Hospital Association.

<sup>3</sup> The states included in the analysis are Alaska, Arkansas, Arizona, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Iowa, Illinois, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Maryland, Maine, Michigan, Minnesota, Mississippi, Missouri, Montana, North Carolina, Nebraska, New Jersey, New Mexico, Nevada, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Vermont, Washington, Wisconsin, West Virginia, and Wyoming.

rehabilitation and long-term acute care (LTAC) hospitals. Information on the type of hospital was obtained by the American Hospital Association (AHA) Annual Survey of Hospitals. AHA defines community hospitals as “all non-Federal, short-term, general, and other specialty hospitals, excluding hospital units of institutions.” Included among community hospitals are specialty hospitals such as obstetrics-gynecology, ear-nose-throat, orthopedic, and pediatric institutions. Also included are public hospitals and academic medical centers.

In 2017, 46 of the SID include indicators of the diagnoses being present on admission (POA) and included the PRDAY data element. Discharges from these 46 participating States are used to develop hospital-level indicators.<sup>4</sup> Edit checks on POA were developed during an HCUP evaluation of POA coding in the 2011 SID at hospitals that were required to report POA to CMS (<http://www.hcup-us.ahrq.gov/reports/methods/2015-06.pdf>). The edits identify general patterns of suspect reporting of POA. The edits do not evaluate whether a valid POA value (e.g., Y or N) is appropriate for the specific diagnosis. There are three hospital-level edit checks:

1. Indication that a hospital has POA reported as Y on all diagnoses on all discharges
2. Indication that a hospital has POA reported as missing on all non-Medicare discharges
3. Indication that a hospital reported POA as missing on all nonexempt diagnoses for 15 percent or more of discharges. The cut-point of 15 percent was determined by 2 times the standard deviation plus the mean of the percentage for hospitals that are required to report POA to CMS.

This document is devoted to listing covariates and coefficients for risk adjustment regression models. The regression coefficients are used to calculate risk-adjusted rates that account for differences in patient populations across hospitals. Certain AHRQ QIs (such as PSI 18 Obstetric Trauma Rate – Vaginal Delivery With Instrument and PSI 19 Obstetric Trauma Rate – Vaginal Delivery Without Instrument) are not risk-adjusted because materially important risk factors (e.g., whether the mother is nulliparous or multiparous or the size of the infant) are not available in the HCUP SID.

The majority of the document is devoted to listing covariates and coefficients for risk adjustment regression models. The regression coefficients are used by the prediction module to calculate risk-adjusted rates that account for differences in patient populations across hospitals. Covariates that are considered as potential risk adjusters include sex and age, Major Diagnostic Categories (MDC), Modified Medicare Severity-Diagnosis-Related Group (MS-DRG) categories, comorbidities that were apparently present on admission, patient point-of-origin and whether they were transferred from another facility, and other indicator-specific risk stratifiers. Descriptions of some variable categories are provided in the Appendix tables at the end of the document. Every covariate in every model is a binary indicator variable, coded using 0 or 1. The AHRQ QI software user does not need to manipulate or adjust these coefficients; rather this document is intended to make it transparent to the user how the risk adjusted QI rates are calculated.

In addition to the presentation of the covariates for the risk models, the document also lists weights used to calculate the composite indicator, PSI 90 Patient Safety and Adverse Events Composite.

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<sup>4</sup> Colorado and Hawaii were not included in the reference population used to develop PSI 17. Wisconsin was not used to develop PSI 03, PSI 09, PSI 10, PSI 11, PSI 12, PSI 14, and PSI 15.

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Additional information on the risk adjustment process and composite indicators may be found in *Quality Indicator Empirical Methods*, available on the AHRQ QI™ website.  
(<http://www.qualityindicators.ahrq.gov/modules/Default.aspx>)

**Table 1. Risk Adjustment Coefficients for PSI 02 – Death Rate in Low-Mortality Diagnosis Related Groups (DRGs)**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-7.634657761	0.1983181633	-38.4970172937	<.0001
Age_LT30	Age < 30	1	-2.843347888	0.4846723329	-5.8665364099	<.0001
Age_30_34	30 <= Age <= 34	1	-1.412949302	0.3683936505	-3.8354333734	0.0001
Age_35_39	35 <= Age <= 39	1	-2.168824896	0.4625886129	-4.6884528415	<.0001
Age_40_44	40 <= Age <= 44	1	-1.418150837	0.3496823025	-4.0555407788	<.0001
Age_45_49	45 <= Age <= 49	1	-0.8865468199	0.2793166601	-3.1739847506	0.0015
Age_50_54	50 <= Age <= 54	1	-0.8718491896	0.2770361275	-3.1470595464	0.0016
Age_55_59	55 <= Age <= 59	1	-0.3579555708	0.2518433361	-1.4213422373	0.1552
Age_60_64	60 <= Age <= 64	1	0.0275583944	0.2289581917	0.1203643083	0.9042
Age_70_74	70 <= Age <= 74	1	0.5090746691	0.2181427167	2.3336771298	0.0196
Age_75_79	75 <= Age <= 79	1	0.8830661022	0.2129189929	4.1474275739	<.0001
Age_80_84	80 <= Age <= 84	1	1.0665053948	0.2153930341	4.9514386535	<.0001
Age_85_89	85 <= Age <= 89	1	1.4455227266	0.2098150256	6.8895100471	<.0001
Age_90Plus	Age >= 90	1	2.1116262083	0.2035748457	10.3727265564	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.4324854057	0.2263265373	1.9108912764	0.0560
Age_LT30_MALE	Age < 30 MALE	1	0.9703260308	0.5564379414	1.7438171600	0.0812
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.4284816588	0.4531070481	0.9456521600	0.3443
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.8122092176	0.5600768010	1.4501747191	0.1470
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.2161560366	0.5110372648	-0.4229750969	0.6723
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.2194800040	0.3983943389	-0.5509114528	0.5817
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0653446176	0.3613996817	0.1808098373	0.8565
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.1082347116	0.3295490461	-0.3284327867	0.7426
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.1929395074	0.3076838223	-0.6270706920	0.5306
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.3464698650	0.2991185889	-1.1583026861	0.2467
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.4711231069	0.2860728219	-1.6468642628	0.0996
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.2939191509	0.2926903351	-1.0041983478	0.3153
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0244386244	0.2753219096	-0.0887638198	0.9293
Age_90Plus_MALE	Age >= 90 MALE	1	-0.3891896260	0.2810995978	-1.3845257304	0.1662
ALCOHOL	Alcohol abuse	1	0.0016759375	0.1508134108	0.0111126557	0.9911
ANEMDEF	Deficiency anemias	1	0.1696175332	0.0867999570	1.9541200153	0.0507
BLDLOSS	Chronic blood loss anemia	1	0.8396765601	0.2556257945	3.2847880701	0.0010
CHF	Congestive heart failure	1	0.8608940093	0.1002367679	8.5886050375	<.0001
CHRNLUNG	Chronic pulmonary disease	1	0.0692814593	0.0795969052	0.8704039320	0.3841

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Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
COAG	Coagulopathy	1	0.6937589111	0.1281923843	5.4118574595	<.0001
DEPRESS	Depression	1	-0.1904657063	0.1021333607	-1.8648726040	0.0622
DMCX	Diabetes w/ chronic complications	1	0.3138372894	0.0856115431	3.6658291383	0.0002
DRUG	Drug abuse	1	-0.4347802832	0.1755764834	-2.4763013516	0.0133
HTN_C	Hypertension	1	-0.4257626512	0.0706515911	-6.0262287726	<.0001
HYPOTHY	Hypothyroidism	1	-0.1938576328	0.0856540472	-2.2632629644	0.0236
LIVER	Liver disease	1	0.5724954060	0.1560567727	3.6685072750	0.0002
LYTES	Fluid and electrolyte disorders	1	0.5868685615	0.0733129501	8.0049781222	<.0001
NEURO	Neurological disease	1	0.3933431765	0.0879324975	4.4732401312	<.0001
OBESE	Obesity	1	0.0479570913	0.0920424464	0.5210323408	0.6023
PARA	Paralysis	1	0.4664436105	0.1482267454	3.1468248803	0.0017
PERIVASC	Peripheral vascular disease	1	0.3163538052	0.1169410897	2.7052407848	0.0068
PSYCH	Psychoses	1	0.4554237374	0.1585778775	2.8719247884	0.0041
PULMCIRC	Pulmonary circulation disease	1	0.5372108848	0.2181651915	2.4624042046	0.0138
RENLF FAIL	Renal failure	1	0.1365972058	0.0855791013	1.5961514393	0.1105
ULCER	Chronic peptic ulcer disease	1	0.1874161744	0.3544009972	0.5288251891	0.5969
VALVE	Valvular disease	1	0.1532767270	0.1382386855	1.1087831637	0.2675
WGHTLOSS	Weight loss	1	0.5502937825	0.1434580031	3.8359225029	0.0001
MDC_4	Respiratory System	1	-0.3973356328	0.1363825259	-2.9133910677	0.0036
MDC_10	Endocrine Nutritional And Metabolic	1	1.4590957845	0.2698996723	5.4060672693	<.0001
MDC_12	Male Reproductive System	1	0.7112206099	0.1696217069	4.1929810936	<.0001
MDC_18	Infectious and Parasitic	1	0.4195375881	0.2045875889	2.0506502389	0.0403
MDC_19	Mental Diseases and Disorders	1	-0.1895227506	0.5085316777	-0.3726862238	0.7094
MDC_20	Alcohol/Drug Disorders	1	0.0000000000	0.0000000000	.	.
MDC_21	Injuries Poison And Toxic	1	1.5553711419	0.3131212497	4.9673126421	<.0001
MDRG_116	Transient ischemia	1	-0.1418672599	0.1376707072	-1.0304825390	0.3028
MDRG_119	Viral meningitis	1	0.9056149643	0.4168233206	2.1726590609	0.0298
MDRG_205	Neurological eye disorders	1	-1.053319302	0.6860706476	-1.5352927661	0.1247
MDRG_307	Dysequilibrium	1	-1.721532257	0.3729375537	-4.6161407986	<.0001
MDRG_532	Angina pectoris	1	1.6556064519	0.1497380479	11.0566851618	<.0001
MDRG_533	Syncope & collapse	1	-0.0844896898	0.1169744096	-0.7222920814	0.4701
MDRG_812	Major joint/limb reattachment procedure of upper extremities	1	-1.203453477	0.2382394881	-5.0514441849	<.0001
MDRG_815	Back & neck proc exc spinal fusion or disc device/neurostim	1	0.4637977887	0.1579077188	2.9371445054	0.0033
MDRG_829	Sprains, strains, & dislocations of hip, pelvis & thigh	1	0.3937435571	0.5049312899	0.7797963108	0.4355
MDRG_1001	Adrenal & pituitary procedures	1	0.3616557505	0.3234942331	1.1179666081	0.2636

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_1206	Other male reproductive system O.R. proc exc malignancy	1	0.4261033516	0.3505533190	1.2155165233	0.2242
MDRG_1308	Other female reproductive system O.R. procedures	1	1.8633810322	0.4528178883	4.1150782258	<.0001
MDRG_1311	Menstrual & other female reproductive system disorders	1	-0.3939391288	0.4994930853	-0.7886778425	0.4303
MDRG_1909	O.R. procedure w principal diagnoses of mental illness	1	1.6979394869	0.6489084891	2.6166085287	0.0089
MDRG_1910	Acute adjustment reaction & psychosocial dysfunction	1	0.3259990348	0.5411653285	0.6024019233	0.5469
MDRG_1911	Depressive neuroses	1	-0.4889014583	0.5702597520	-0.8573311663	0.3913
MDRG_1912	Neuroses except depressive	1	-0.7832093319	0.7649641909	-1.0238509740	0.3059
MDRG_1915	Psychoses	1	-0.2801632262	0.5106419167	-0.5486490965	0.5832
TRNSFER	Transferred-in from another acute care facility	1	0.3649703950	0.1178432157	3.0970844847	0.0020

c-statistic=0.868

**Table 2. Risk Adjustment Coefficients for PSI 03 – Pressure Ulcer Rate**

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
Intercept	Intercept	1	-7.167984550	0.0735548737	9496.6670789567	<.0001
Age_LT30	Age < 30	1	-0.9641642433	0.1174046083	67.4422039978	<.0001
Age_30_34	30 <= Age <= 34	1	-0.9985048190	0.1518600084	43.2328126865	<.0001
Age_35_39	35 <= Age <= 39	1	-0.8612024636	0.1325582836	42.2081952435	<.0001
Age_40_44	40 <= Age <= 44	1	-0.5819821159	0.1111019277	27.4394934180	<.0001
Age_45_49	45 <= Age <= 49	1	-0.4165421362	0.0928917421	20.1077586925	<.0001
Age_50_54	50 <= Age <= 54	1	-0.3236009799	0.0813574949	15.8206571990	<.0001
Age_55_59	55 <= Age <= 59	1	-0.1435106016	0.0706832413	4.1222569354	0.0423
Age_60_64	60 <= Age <= 64	1	-0.0698338314	0.0662977959	1.1095159751	0.2922
Age_70_74	70 <= Age <= 74	1	0.0619299297	0.0627138276	0.9751570364	0.3234
Age_75_79	75 <= Age <= 79	1	0.1524337972	0.0624921791	5.9499209980	0.0147
Age_80_84	80 <= Age <= 84	1	0.1280055067	0.0647564330	3.9074323695	0.0481
Age_85_89	85 <= Age <= 89	1	0.0775012958	0.0688038608	1.2687974922	0.2600
Age_90Plus	Age >= 90	1	0.0649847513	0.0739318007	0.7726100513	0.3794
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1983041202	0.0578803202	11.7382032484	0.0006
Age_LT30_MALE	Age < 30 MALE	1	0.6337870417	0.1378310894	21.1442523381	<.0001
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.6180296332	0.1795524840	11.8477467614	0.0006
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.4363425863	0.1614767266	7.3018907188	0.0069
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.3115272832	0.1382402661	5.0783549577	0.0242
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.1866175719	0.1166289084	2.5603105594	0.1096
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.1935609693	0.1014338913	3.6414085118	0.0564
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0569996430	0.0893765621	0.4067213601	0.5236
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.1205448777	0.0837174475	2.0733163112	0.1499
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0935140061	0.0818404907	1.3056202452	0.2532
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0851981020	0.0820993084	1.0769135520	0.2994
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0897876728	0.0862969067	1.0825375586	0.2981
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0554896391	0.0936278987	0.3512475046	0.5534
Age_90Plus_MALE	Age >= 90 MALE	1	-0.1064375089	0.1084126911	0.9638937261	0.3262
AIDS	Acquired immune deficiency syndrome	1	0.1341319609	0.1702739373	0.6205377267	0.4308
ALCOHOL	Alcohol abuse	1	-0.1749983353	0.0514157012	11.5844737209	0.0007
ANEMDEF	Deficiency anemias	1	0.0102400376	0.0234480685	0.1907168018	0.6623
ARTH	Rheumatoid arthritis/collagen vas	1	-0.0036942146	0.0565515981	0.0042673127	0.9479
CHF	Congestive heart failure	1	0.5858468153	0.0264696025	489.8615010806	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
CHRNLUNG	Chronic pulmonary disease	1	-0.3708571182	0.0262556341	199.5116294871	<.0001
COAG	Coagulopathy	1	0.1129709725	0.0332393015	11.5512759093	0.0007
DEPRESS	Depression	1	-0.2798314906	0.0333829961	70.2655658260	<.0001
DM	Diabetes w/o chronic complications	1	-0.3438298155	0.0405360289	71.9456708566	<.0001
DMCX	Diabetes w/ chronic complications	1	0.1262144962	0.0258547006	23.8308455180	<.0001
HTN_C	Hypertension	1	-0.4838647673	0.0229978961	442.6615356419	<.0001
HYPOTHY	Hypothyroidism	1	-0.4110346210	0.0343433397	143.2424550554	<.0001
LIVER	Liver disease	1	-0.0146173965	0.0442567387	0.1090890699	0.7412
LYMPH	Lymphoma	1	-0.0106668214	0.0870197828	0.0150256772	0.9024
LYTES	Fluid and electrolyte disorders	1	0.1438985483	0.0221130566	42.3462805954	<.0001
METS	Metastatic cancer	1	0.0694106917	0.0487552450	2.0267960915	0.1545
NEURO	Neurological disease	1	0.1684992549	0.0303559829	30.8111118415	<.0001
PARA	Paralysis	1	1.1113296734	0.0293977078	1429.0877051505	<.0001
PSYCH	Psychoses	1	-0.0547099202	0.0545544368	1.0057082421	0.3159
PULMCIRC	Pulmonary circulation disease	1	0.2867023117	0.0447675235	41.0143893192	<.0001
RENLFAIL	Renal failure	1	0.2462355417	0.0260793128	89.1475049156	<.0001
VALVE	Valvular disease	1	-0.1103447587	0.0426548121	6.6921759672	0.0097
WGHTLOSS	Weight loss	1	1.0676171789	0.0239127622	1993.2951870490	<.0001
MDC_1	Nervous system	1	1.0834086081	0.0710443177	232.5551003038	<.0001
MDC_3	Ear nose mouth and throat	1	-0.3720028948	0.1405886014	7.0015213555	0.0081
MDC_4	Respiratory system	1	0.8556891381	0.0711600351	144.5971494356	<.0001
MDC_5	Circulatory system	1	0.6133774458	0.0712989258	74.0098684758	<.0001
MDC_6	Digestive system	1	-0.4296066667	0.0692702859	38.4634348493	<.0001
MDC_7	Hepatobiliary system and pancreas	1	-0.5040426045	0.0981786838	26.3572492082	<.0001
MDC_8	Musculoskeletal and connective	1	-0.0408773522	0.0673336074	0.3685545264	0.5438
MDC_9	Skin subcutaneous and breast	1	-0.2092010062	0.1156570768	3.2717726327	0.0705
MDC_11	Kidney and urinary tract	1	-0.1573185709	0.1048447844	2.2514708219	0.1335
MDC_12	Male reproductive system	1	-0.4028777130	0.2005946308	4.0337397764	0.0446
MDC_13	Female reproductive system	1	-0.9781358454	0.2210337615	19.5830855144	<.0001
MDC_16	Blood and Immunological	1	-0.5975618839	0.1549963825	14.8635535164	0.0001
MDC_17	Myeloproliferative dds	1	0.0154247204	0.1389146781	0.0123292974	0.9116
MDC_18	Infectious and Parasitic	1	1.3552967758	0.0655333907	427.7042167464	<.0001
MDC_19	Mental Diseases and Disorders	1	-1.194713188	0.1783019999	44.8967482007	<.0001
MDC_23	Factors influencing health	1	-0.2220292068	0.1163434694	3.6419685730	0.0563
MDRG_102	Cranio w major dev impl/acute complex CNS pdx	1	-1.280332392	0.1506253081	72.2519494284	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
MDRG_103	Craniotomy & endovascular intracranial procedures	1	-2.247264513	0.2011167898	124.8566651599	<.0001
MDRG_108	Periph/cranial nerve & other nerv syst proc	1	-0.0368373788	0.1154361972	0.1018341442	0.7496
MDRG_110	Nervous system neoplasms	1	-2.501143121	0.3364062246	55.2775825205	<.0001
MDRG_111	Degenerative nervous system disorders	1	-1.539312305	0.1126338650	186.7736080049	<.0001
MDRG_113	Acute ischemic stroke w use of thrombolytic agent	1	-3.735691166	0.5794360160	41.5653037359	<.0001
MDRG_114	Intracranial hemorrhage or cerebral infarction	1	-1.972324924	0.1129415011	304.9648701215	<.0001
MDRG_116	Transient ischemia	1	-2.975945555	0.5792666244	26.3932547819	<.0001
MDRG_117	Nonspecific cerebrovascular disorders	1	-1.385295408	0.1777830694	60.7161170612	<.0001
MDRG_118	Cranial & peripheral nerve disorders	1	-1.856469642	0.2541761053	53.3465406415	<.0001
MDRG_122	Traumatic stupor & coma, coma >1 hr	1	-2.207801981	0.3807760826	33.6186998871	<.0001
MDRG_123	Traumatic stupor & coma, coma <1 hr	1	-2.502984611	0.3195563651	61.3509671944	<.0001
MDRG_125	Other disorders of nervous system	1	-1.117829669	0.1246285622	80.4481562918	<.0001
MDRG_128	Seizures	1	-2.345936499	0.1941772352	145.9606800458	<.0001
MDRG_401	Major chest procedures	1	-0.8904191719	0.1434731431	38.5165854431	<.0001
MDRG_402	Other resp system O.R. procedures	1	-0.5331396422	0.1033275528	26.6225508465	<.0001
MDRG_403	Pulmonary embolism	1	-2.774487972	0.3048165036	82.8492799901	<.0001
MDRG_404	Respiratory infections & inflammations	1	-1.489945706	0.1105422612	181.6704106542	<.0001
MDRG_405	Respiratory neoplasms	1	-1.700032066	0.2134144736	63.4550933114	<.0001
MDRG_407	Pleural effusion	1	-2.196711076	0.3806935785	33.2962080905	<.0001
MDRG_408	Pulmonary edema & respiratory failure	1	-1.962433371	0.1337112067	215.4042285500	<.0001
MDRG_409	Chronic obstructive pulmonary disease	1	-3.035437495	0.1559899946	378.6597140022	<.0001
MDRG_410	Simple pneumonia & pleurisy	1	-2.200003415	0.1210263590	330.4355567905	<.0001
MDRG_411	Interstitial lung disease	1	-2.936851649	0.7086012850	17.1775075292	<.0001
MDRG_412	Pneumothorax	1	-3.064926731	0.5791808421	28.0034679540	<.0001
MDRG_413	Bronchitis & asthma	1	-4.052495743	0.7086303100	32.7043623588	<.0001
MDRG_415	Other respiratory system diagnoses	1	-2.458751260	0.5020212240	23.9875025923	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	-0.0523791036	0.0930330784	0.3169869193	0.5734
MDRG_507	Coronary bypass w/o ptca	1	-0.8957864513	0.1176119588	58.0104203669	<.0001
MDRG_509	Amputation for circ sys disorders exc upper limb & toe	1	0.7021473619	0.0975101129	51.8510097872	<.0001
MDRG_510	Permanent cardiac pacemaker implant and procedures	1	-1.878406185	0.2399986274	61.2578151914	<.0001
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-2.436175902	0.2227344210	119.6306909886	<.0001
MDRG_514	Other vascular procedures	1	-0.5131082274	0.1110279756	21.3576327524	<.0001
MDRG_520	Acute myocardial infarction, discharged alive	1	-1.736379889	0.1328406274	170.8549864751	<.0001
MDRG_522	Circulatory disorders except ami, w card cath	1	-2.132785456	0.1941626037	120.6599571579	<.0001
MDRG_524	Heart failure & shock	1	-1.747936984	0.0820675959	453.6366352689	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
MDRG_527	Peripheral vascular disorders	1	-1.293958928	0.1685574774	58.9311527709	<.0001
MDRG_529	Hypertension	1	-3.605696272	0.5791585553	38.7599608396	<.0001
MDRG_531	Cardiac arrhythmia & conduction disorders	1	-2.398030889	0.1910669378	157.5209997047	<.0001
MDRG_533	Syncope & collapse	1	-3.447403785	0.5791479297	35.4327852257	<.0001
MDRG_535	Other circulatory system diagnoses	1	-1.354036967	0.1474799112	84.2937369989	<.0001
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	-0.2050274866	0.2341178555	0.7669288950	0.3812
MDRG_542	Other major cardiovascular procedures	1	-0.1659836172	0.1129260080	2.1604414323	0.1416
MDRG_615	G.I. hemorrhage	1	-1.084131517	0.1402009954	59.7945697578	<.0001
MDRG_620	Esophagitis, gastroent & misc digest disorders	1	-1.697170493	0.1968666136	74.3201886669	<.0001
MDRG_701	Pancreas, liver & shunt procedures	1	-0.0020205912	0.2709521646	0.0000556124	0.9940
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	-1.416560674	0.3000648171	22.2864147313	<.0001
MDRG_709	Malignancy of hepatobiliary system or pancreas	1	-0.6951822546	0.2709127778	6.5847361390	0.0103
MDRG_710	Disorders of pancreas except malignancy	1	-1.089408663	0.2327905529	21.9003444406	<.0001
MDRG_803	Spinal fusion except cervical	1	-1.468344936	0.2531280549	33.6492676033	<.0001
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-1.072854463	0.1159062851	85.6776708731	<.0001
MDRG_826	Other musculoskelet sys & conn tiss O.R proc	1	-0.4730821688	0.2269767771	4.3442049694	0.0371
MDRG_834	Medical back problems	1	-1.084421887	0.2077710790	27.2412077640	<.0001
MDRG_838	Aftercare, musculoskeletal system & connective tissue	1	0.4848840795	0.0923338076	27.5774661330	<.0001
MDRG_910	Cellulitis	1	-0.8490483639	0.1619221032	27.4949279740	<.0001
MDRG_1002	Amputat of lower limb for endocrine,nutrit,& metabol dis	1	-0.2396831119	0.1916245746	1.5644888126	0.2110
MDRG_1006	Other endocrine, nutrit & metab O.R proc	1	0.0708324843	0.2365389007	0.0896726077	0.7646
MDRG_1007	Diabetes	1	-0.9942199606	0.1474979281	45.4352703160	<.0001
MDRG_1010	Endocrine disorders	1	-1.174846894	0.2941923978	15.9477586386	<.0001
MDRG_1109	Other kidney & urinary tract procedures	1	0.4905427657	0.1624083489	9.1229868401	0.0025
MDRG_1110	Renal failure	1	-0.8867517251	0.1195397693	55.0274334937	<.0001
MDRG_1113	Kidney & urinary tract infections	1	-1.111758796	0.1450670997	58.7331496967	<.0001
MDRG_1118	Other kidney & urinary tract diagnoses	1	-0.1752013580	0.1255634059	1.9469229367	0.1629
MDRG_1604	Red blood cell disorders	1	-0.7978825119	0.2503493608	10.1574552728	0.0014
MDRG_1708	Lymphoma & non-acute leukemia w other O.R. proc	1	0.4522598792	0.2446705500	3.4167462657	0.0645
MDRG_1710	Myeloprolif disord or poorly diff neopl w other O.R. proc	1	1.0283041396	0.3160826816	10.5838034491	0.0011
MDRG_1713	Lymphoma & non-acute leukemia	1	-0.4158009765	0.2203316737	3.5613703852	0.0591
MDRG_1715	Chemotherapy w/o acute leukemia as secondary diagnosis	1	-1.894524131	0.3988970089	22.5568641059	<.0001
MDRG_1801	Infectious & parasitic diseases w O.R. procedure	1	-0.2205029407	0.0488461206	20.3783312205	<.0001
MDRG_1805	Viral illness	1	-3.870086697	0.9997203716	14.9859508661	0.0001
MDRG_1808	Septicemia or severe sepsis w/o mv >96 hours	1	-1.780176748	0.0484973453	1347.3806765363	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
MDRG_1915	Psychoses	1	-1.924839206	0.2763322234	48.5205649820	<.0001
MDRG_2018	Alcohol/drug abuse or dependence, left ama	1	-2.444442783	0.2646220325	85.3311798912	<.0001
MDRG_2101	Wound debridements for injuries	1	1.1029604419	0.2161686410	26.0336156397	<.0001
MDRG_2107	Poisoning & toxic effects of drugs	1	-1.123169942	0.2120696068	28.0500785989	<.0001
MDRG_2304	Aftercare	1	0.4487837668	0.1552383289	8.3574995255	0.0038
MDRG_2407	Limb reattachment, hip & femur proc for multiple significant trauma	1	0.5855505711	0.2119818840	7.6301191998	0.0057
MDRG_2408	Other O.R. procedures for multiple significant trauma	1	0.8640761267	0.1438480181	36.0824690097	<.0001
MDRG_2502	HIV w major related condition	1	0.0455960350	0.1790109238	0.0648776468	0.7989
MDRG_7701	Heart transplant or implant of heart assist system	1	1.5478968937	0.1213380548	162.7383846094	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.5993556368	0.0273800940	479.1807017616	<.0001

c-statistic=0.826

**Table 3A. PSI 04 – Death Rate among Surgical Inpatients with Serious Treatable Complications-Stratum\_DVT\_PE: Deep Vein Thrombosis/Pulmonary Embolism (DVT/PE), per 1,000 Admissions**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-4.238632730	0.1884706611	-22.4896156529	<.0001
Age_LT30	Age < 30	1	-1.112038272	0.3554460725	-3.1285709923	0.0018
Age_30_34	30 <= Age <= 34	1	-1.038788576	0.3886539516	-2.6727853196	0.0075
Age_35_39	35 <= Age <= 39	1	-0.9587898487	0.3520313918	-2.7235919045	0.0065
Age_40_44	40 <= Age <= 44	1	-0.7850844931	0.3082751444	-2.5467005931	0.0109
Age_45_49	45 <= Age <= 49	1	-0.8364376389	0.2753317246	-3.0379268499	0.0024
Age_50_54	50 <= Age <= 54	1	-0.4788104628	0.2183451523	-2.1929063128	0.0283
Age_55_59	55 <= Age <= 59	1	-0.2611657853	0.1867727652	-1.3983076443	0.1620
Age_60_64	60 <= Age <= 64	1	-0.1644889810	0.1709378282	-0.9622737267	0.3359
Age_70_74	70 <= Age <= 74	1	0.0260743644	0.1583631654	0.1646491739	0.8692
Age_75_79	75 <= Age <= 79	1	0.1639956458	0.1642279368	0.9985855570	0.3180
Age_80_84	80 <= Age <= 84	1	0.0364162485	0.1777132999	0.2049157183	0.8376
Age_85_89	85 <= Age <= 89	1	0.5648399101	0.1875694585	3.0113639742	0.0026
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.2315289056	0.1587011292	-1.4588989177	0.1446
Age_LT30_MALE	Age < 30 MALE	1	-0.4278314909	0.5023608975	-0.8516417043	0.3944
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.1781236774	0.5463778115	0.3260082559	0.7444
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.4766579248	0.4537693937	1.0504408878	0.2935
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.7312987971	0.3812148468	1.9183376599	0.0551
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.6246706288	0.3543495527	1.7628655774	0.0779
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.6538470969	0.2819875917	2.3187087527	0.0204
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.16666737291	0.2579999950	0.6460222182	0.5183
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.1371721751	0.2501967717	0.5482571746	0.5835
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.2931346550	0.2163958265	1.3546224976	0.1755
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.2365613290	0.2213369080	1.0687839238	0.2852
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.6602376640	0.2480540962	2.6616680564	0.0078
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1831263522	0.2721364290	0.6729211261	0.5010
ALCOHOL	Alcohol abuse	1	-0.2627914634	0.1604471951	-1.6378688537	0.1014
ANEMDEF	Deficiency Anemias	1	-0.1784446359	0.0761222353	-2.3441854431	0.0191
ARTH	Rheumatoid arthritis/collagen vas	1	0.1643370345	0.1640379092	1.0018235129	0.3164
BLDLOSS	Chronic blood loss anemia	1	-0.15666321819	0.2494919923	-0.6278044456	0.5301
CHF	Congestive heart failure	1	0.5252805925	0.0930761069	5.6435599862	<.0001
CHRNLUNG	Chronic pulmonary disease	1	0.0440966944	0.0742979000	0.5935119896	0.5528

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
COAG	Coagulopathy	1	0.7691747540	0.0857532034	8.9696328897	<.0001
DEPRESS	Depression	1	-0.3579421742	0.1087902990	-3.2902030546	0.0010
DM	Diabetes w/o chronic complications	1	0.0699589940	0.1023503259	0.6835248775	0.4943
DMCX	Diabetes w/ chronic complications	1	0.0208940115	0.0871218178	0.2398252473	0.8105
HTN_C	Hypertension	1	-0.1960692638	0.0662094766	-2.9613474359	0.0031
HYPOTHY	Hypothyroidism	1	-0.2747649355	0.1009766196	-2.7210748044	0.0065
LIVER	Liver disease	1	0.2094746192	0.1412444583	1.4830643387	0.1381
LYTES	Fluid and electrolyte disorders	1	0.5590483298	0.0691665984	8.0826344379	<.0001
METS	Metastatic cancer	1	0.6710270408	0.0912617812	7.3527716891	<.0001
NEURO	Neurological disease	1	-0.0427142510	0.1214416902	-0.3517264201	0.7250
OBESE	Obesity	1	-0.1366255612	0.0773917849	-1.7653755017	0.0775
PARA	Paralysis	1	0.0357104593	0.1260730232	0.2832521848	0.7770
PERIVASC	Peripheral vascular disease	1	0.3018816145	0.0839052275	3.5978880413	0.0003
PSYCH	Psychoses	1	0.3290301683	0.1785831452	1.8424480532	0.0654
PULMCIRC	Pulmonary circulation disease	1	-0.0956416681	0.1018208789	-0.9393129299	0.3476
RENLFAIL	Renal failure	1	0.3133259623	0.0825131658	3.7972844591	0.0001
ULCER	Peptic ulcer disease x bleeding	1	-0.1600040874	0.2415159869	-0.6624989488	0.5077
VALVE	Valvular disease	1	0.0871024497	0.1375040870	0.6334535328	0.5264
WGHTLOSS	Weight loss	1	0.2882623637	0.0845051334	3.4111816884	0.0006
MDC_1	Nervous system	1	0.8905052265	0.2357043569	3.7780601018	0.0002
MDC_4	Respiratory system	1	1.6477762358	0.1625768695	10.1353669835	<.0001
MDC_5	Circulatory system	1	1.6615332118	0.1672366629	9.9352210369	<.0001
MDC_8	Musculoskeletal and connective	1	-0.3061684089	0.2123387139	-1.4418868956	0.1493
MDC_10	Endocrine nutritional and metabolic	1	-0.6536820293	0.5052974884	-1.2936577845	0.1958
MDC_11	Kidney and urinary tract	1	-0.1519982547	0.2513071985	-0.6048304850	0.5453
MDC_13	Female reproductive system	1	-0.6666102103	0.3461625936	-1.9257141664	0.0541
MDC_16	Blood and Immunological	1	0.8456961993	0.3927822513	2.1530916852	0.0313
MDC_18	Infectious and Parasitic	1	1.3569705364	0.2052233956	6.6121629675	<.0001
MDC_23	Factors influencing health	1	1.1172804040	0.4692643141	2.3809191760	0.0173
MDC_24	Multiple significant trauma	1	1.7022773754	0.2079751550	8.1850035198	<.0001
MDRG_101	Intracranial vascular procedures w pdx hemorrhage	1	0.8017739934	0.4140729515	1.9363109582	0.0528
MDRG_102	Crano w major dev impl/acute complex CNS pdx	1	1.1919173595	0.2520413327	4.7290551389	<.0001
MDRG_103	Craniotomy & endovascular intracranial procedures	1	0.3278478920	0.2574384737	1.2734999834	0.2028
MDRG_104	Spinal procedures	1	-0.3786806730	0.4357727198	-0.8689866432	0.3849
MDRG_402	Other resp system O.R procedures	1	-0.6732620276	0.2031267111	-3.3144928308	0.0009

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_501	Other heart assist system implant	1	0.8988785696	0.3886182472	2.3130117441	0.0207
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	-0.4523630153	0.2079202002	-2.1756568857	0.0296
MDRG_504	Cardiac defibrillator implant	1	-1.130105650	0.6077085863	-1.8596177106	0.0629
MDRG_507	Coronary bypass w/o ptca	1	-0.5063322419	0.2212333401	-2.2886796435	0.0221
MDRG_510	Permanent cardiac pacemaker implant and procedures	1	-2.361315711	0.9784530692	-2.4133152479	0.0158
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-1.259488329	0.2334035319	-5.3961836784	<.0001
MDRG_514	Other vascular procedures	1	-1.095742030	0.2066498010	-5.3024102853	<.0001
MDRG_519	Other circulatory system O.R procedures	1	-1.124968070	0.5392474539	-2.0861815144	0.0370
MDRG_540	Endovascular cardiac valve replacement	1	-2.158387559	0.7096847179	-3.0413330104	0.0024
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	0.1589969781	0.2815874999	0.5646450150	0.5723
MDRG_542	Other major cardiovascular procedures	1	-0.7601720610	0.1643762886	-4.6245846495	<.0001
MDRG_543	Percutaneous intracardiac procedures	1	-1.614973808	0.7033971031	-2.2959631209	0.0217
MDRG_601	Stomach, esophageal & duodenal proc	1	0.4584970027	0.2765511679	1.6579102023	0.0973
MDRG_602	Major small & large bowel procedures	1	-0.0462976502	0.1982968001	-0.2334765372	0.8154
MDRG_610	Hernia procedures except inguinal & femoral	1	-1.424029828	0.9980419198	-1.4268236635	0.1536
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	-1.563104252	1.0074341774	-1.5515696081	0.1208
MDRG_803	Spinal fusion except cervical	1	-1.490225654	0.6951220993	-2.1438329406	0.0320
MDRG_805	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis	1	-1.562826980	0.9416174642	-1.6597259923	0.0970
MDRG_806	Revision of hip or knee replacement	1	-0.9680460251	0.7136354055	-1.3564994361	0.1749
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-0.2706909203	0.2350693290	-1.1515365336	0.2495
MDRG_810	Biopsies of musculoskeletal system & connective tissue	1	0.4421946747	0.4161513910	1.0625812726	0.2880
MDRG_811	Hip & femur procedures except major joint	1	1.0987359579	0.2074724379	5.2958164902	<.0001
MDRG_816	Lower extrem & humer proc except hip,foot,femur	1	0.3990232009	0.3777788522	1.0562348807	0.2909
MDRG_1708	Lymphoma & non-acute leukemia w other O.R proc	1	0.4941938235	0.3793712218	1.3026655558	0.1927
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	0.1701788563	0.1919301803	0.8866706425	0.3753
MDRG_2406	Craniotomy for multiple significant trauma	1	1.8188455055	0.3717343479	4.8928637231	<.0001
MDRG_2407	Limb reattachment, hip & femur proc for multiple significant trauma	1	-1.042635774	0.3662334334	-2.8469158711	0.0044
MDRG_7701	Heart transplant or implant of heart assist system	1	0.4665640840	0.4197972739	1.1114033200	0.2664
TRNSFER	Transferred-in from another acute care facility	1	0.2683870199	0.0786451790	3.4126315590	0.0006
XPPS04_DVT_PE_ANY	PSI04_DVT_PE   Any Triggering Complication POA	1	-0.4863472206	0.0836122337	-5.8166992938	<.0001
XPPS04_DVT_PE_SEVERE	PSI04_DVT_PE   Triggering Complication Severe	1	0.8770879185	0.0729518969	12.0228253905	<.0001

c-statistic=0.82

**Table 3B. PSI 04 – Death Rate among Surgical Inpatients with Serious Treatable Complications-  
Stratum\_Pneumonia: Pneumonia, per 1,000 Admissions**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-3.120746438	0.0676788047	-46.1111340515	<.0001
Age_LT30	Age < 30	1	-0.9658895216	0.1564118067	-6.1752980291	<.0001
Age_30_34	30 <= Age <= 34	1	-0.9134589826	0.1806899007	-5.0553958960	<.0001
Age_35_39	35 <= Age <= 39	1	-0.7854935031	0.1551774204	-5.0619059197	<.0001
Age_40_44	40 <= Age <= 44	1	-0.4046784341	0.1310380882	-3.0882504449	0.0020
Age_45_49	45 <= Age <= 49	1	-0.6672043416	0.1244373903	-5.3617673934	<.0001
Age_50_54	50 <= Age <= 54	1	-0.4403678529	0.1006994356	-4.3730915709	<.0001
Age_55_59	55 <= Age <= 59	1	-0.2455477226	0.0816949365	-3.0056663634	0.0026
Age_60_64	60 <= Age <= 64	1	-0.1603563403	0.0773515991	-2.0730837127	0.0382
Age_70_74	70 <= Age <= 74	1	0.0267122620	0.0696516215	0.3835124208	0.7013
Age_75_79	75 <= Age <= 79	1	0.2151240480	0.0696489074	3.0886923571	0.0020
Age_80_84	80 <= Age <= 84	1	0.4364133344	0.0694403123	6.2847259795	<.0001
Age_85_89	85 <= Age <= 89	1	0.4888665121	0.0752220324	6.4989803737	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0184767769	0.0644038229	0.2868894430	0.7742
Age_LT30_MALE	Age < 30 MALE	1	-0.1510535556	0.1960730160	-0.7703944102	0.4411
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.2677113043	0.2174840614	1.2309467765	0.2183
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.1621779940	0.1900478781	0.8533533528	0.3935
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.1082396971	0.1614964252	-0.6702296781	0.5027
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.2235423253	0.1472415377	1.5182015131	0.1290
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0960169506	0.1188709287	0.8077412339	0.4192
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0207257558	0.1012501067	0.2046986064	0.8378
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0331024385	0.0997302920	0.3319195983	0.7399
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0190020794	0.0883088124	-0.2151776124	0.8296
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0055727118	0.0866742549	-0.0642948913	0.9487
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.1589767714	0.0918234342	-1.7313311444	0.0834
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0142589509	0.0959858513	0.1485526328	0.8819
ALCOHOL	Alcohol abuse	1	-0.1206799241	0.0506461912	-2.3828035500	0.0172
ANEMDEF	Deficiency anemias	1	-0.2792461511	0.0292908209	-9.5335720502	<.0001
ARTH	Rheumatoid arthritis/collagen vas	1	0.1568882243	0.0640412769	2.4497985021	0.0143
BLDLOSS	Chronic blood loss anemia	1	-0.3660788148	0.1139352282	-3.2130432416	0.0013
CHF	Congestive heart failure	1	0.3459675666	0.0323539298	10.6932162222	<.0001
CHRNLUNG	Chronic pulmonary disease	1	-0.1141755861	0.0261692311	-4.3629706141	<.0001

**AHRQ Quality Indicators™**  
**Patient Safety Indicators (PSI) Parameter Estimates**

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Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
COAG	Coagulopathy	1	0.5227055145	0.0354998476	14.7241622069	<.0001
DEPRESS	Depression	1	-0.3470929476	0.0410156973	-8.4624417195	<.0001
DM	Diabetes w/o chronic complications	1	-0.0339376605	0.0401999585	-0.8442212829	0.3985
DMCX	Diabetes w/ chronic complications	1	-0.0727738330	0.0324253951	-2.2443468372	0.0248
DRUG	Drug abuse	1	-0.1919035085	0.0661475948	-2.9011411381	0.0037
HTN_C	Hypertension	1	-0.2422192107	0.0258955507	-9.3536999225	<.0001
HYPOTHY	Hypothyroidism	1	-0.1838289417	0.0389315991	-4.7218441080	<.0001
LIVER	Liver disease	1	0.3391270767	0.0472571210	7.1762111022	<.0001
LYMPH	Lymphoma	1	0.2510556017	0.1076835790	2.3314195539	0.0197
LYTES	Fluid and electrolyte disorders	1	0.4826145258	0.0250025516	19.3026109386	<.0001
METS	Metastatic cancer	1	0.5866668358	0.0504987778	11.6174462240	<.0001
NEURO	Neurological disease	1	0.1733157930	0.0375949373	4.6100833073	<.0001
OBESE	Obesity	1	-0.1275216994	0.0336535464	-3.7892499599	0.0002
PARA	Paralysis	1	-0.2564507327	0.0457977503	-5.5996360258	<.0001
PERIVASC	Peripheral vascular disease	1	0.1786939114	0.0351525518	5.0833837671	<.0001
PSYCH	Psychoses	1	-0.2758170366	0.0718595682	-3.8382785148	0.0001
PULMCIRC	Pulmonary circulation disease	1	0.1863405362	0.0593027695	3.1421894399	0.0017
RENLF FAIL	Renal failure	1	0.3074299027	0.0300817810	10.2198039004	<.0001
TUMOR	Solid tumor w/out metastasis	1	0.1921271261	0.0600107185	3.2015468392	0.0014
VALVE	Valvular disease	1	-0.1268427315	0.0503214969	-2.5206470242	0.0117
WGHTLOSS	Weight loss	1	0.2603687061	0.0326296647	7.9795090982	<.0001
MDRG_101	Intracranial vascular procedures w pdx hemorrhage	1	1.3771888403	0.0841605641	16.3638261664	<.0001
MDRG_102	Cranio w major dev impl/acute complex CNS pdx	1	1.8365943730	0.0586628404	31.3076278192	<.0001
MDRG_103	Craniotomy & endovascular intracranial procedures	1	1.3407239261	0.0612050983	21.9054288371	<.0001
MDRG_104	Spinal procedures	1	0.8287729848	0.1609846300	5.1481497645	<.0001
MDRG_501	Other heart assist system implant	1	2.0369223217	0.0880727836	23.12771159448	<.0001
MDRG_502	Perc cardiovasc proc w non-drug-eluting stent	1	0.8200847219	0.1148378139	7.1412428867	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	0.2491456336	0.0775301124	3.2135337600	0.0013
MDRG_504	Cardiac defibrillator implant	1	-1.184643395	0.2740912468	-4.3220767131	<.0001
MDRG_507	Coronary bypass w/o ptca	1	-0.2576003842	0.1002294993	-2.5701054686	0.0102
MDRG_509	Amputation for circ sys disorders exc upper limb & toe	1	0.4545115642	0.1346679202	3.3750544578	0.0007
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	0.3963549541	0.0601991091	6.5840667801	<.0001
MDRG_513	Perc cardiovasc proc w/o coronary artery stent	1	0.9256395309	0.1438337337	6.4354828813	<.0001
MDRG_514	Other vascular procedures	1	0.4296509621	0.0931000653	4.6149372821	<.0001
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	0.5331758656	0.1263408713	4.2201376314	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_542	Other major cardiovascular procedures	1	0.9976522752	0.0614841800	16.2261621716	<.0001
MDRG_601	Stomach, esophageal & duodenal proc	1	-0.5754419864	0.1071286149	-5.3715058924	<.0001
MDRG_602	Major small & large bowel procedures	1	-0.3401076796	0.0698467840	-4.8693391489	<.0001
MDRG_604	Peritoneal adhesiolysis	1	-0.9533972088	0.1795167514	-5.3109094355	<.0001
MDRG_610	Hernia procedures except inguinal & femoral	1	-1.051698444	0.2438074772	-4.3136431096	<.0001
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	-1.014267863	0.1675666432	-6.0529222499	<.0001
MDRG_803	Spinal fusion except cervical	1	-1.060040409	0.2128818685	-4.9794771916	<.0001
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-0.7625610641	0.0845999290	-9.0137317291	<.0001
MDRG_811	Hip & femur procedures except major joint	1	-0.1891385278	0.0649247112	-2.9131978292	0.0036
MDRG_816	Lower extrem & humer proc except hip,foot,femur	1	-0.7900279498	0.1951816188	-4.0476554851	<.0001
MDRG_826	Other musculoskelet sys & conn tiss O.R proc	1	-1.155826226	0.2973791221	-3.8867093898	0.0001
MDRG_1103	Kidney & ureter procedures for neoplasm	1	-1.178695974	0.3164316695	-3.7249620930	0.0002
MDRG_1401	Cesarean section	1	-1.507787499	0.4894190240	-3.0807701070	0.0021
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	0.7849400662	0.0371308722	21.1398230278	<.0001
MDRG_2406	Craniotomy for multiple significant trauma	1	2.4905392295	0.1102545231	22.5889982496	<.0001
MDRG_2408	Other O.R procedures for multiple significant trauma	1	0.3343506683	0.1146616504	2.9159764139	0.0035
MDRG_7701	Heart transplant or implant of heart assist system	1	1.0633479268	0.1469606620	7.2355956487	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.2676491339	0.0308981630	8.6622992310	<.0001
XPPS04_PNEUMONIA_ANY	PSI04_PNEUMONIA   Any Triggering Complication POA	1	-0.1045421921	0.0266948701	-3.9161903253	<.0001
XPPS04_PNEUMONIA_SEVERE	PSI04_PNEUMONIA   Triggering Complication Severe	1	0.5681682447	0.0265210996	21.4232537152	<.0001

c-statistic=0.771

**Table 3C. PSI 04 – Death Rate among Surgical Inpatients with Serious Treatable Complications-Stratum\_Sepsis: Sepsis, per 1,000 Admissions**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-2.409701682	0.0681685301	-35.3491805897	<.0001
Age_LT30	Age < 30	1	-1.139296383	0.1531196833	-7.4405612538	<.0001
Age_30_34	30 <= Age <= 34	1	-0.8657369545	0.1790934361	-4.8339960043	<.0001
Age_35_39	35 <= Age <= 39	1	-0.6836584741	0.1461342763	-4.6782896631	<.0001
Age_40_44	40 <= Age <= 44	1	-0.7621878627	0.1336834141	-5.7014392394	<.0001
Age_45_49	45 <= Age <= 49	1	-0.4776501052	0.1036921493	-4.6064249644	<.0001
Age_50_54	50 <= Age <= 54	1	-0.4747569279	0.0901466628	-5.2664947677	<.0001
Age_55_59	55 <= Age <= 59	1	-0.2248644284	0.0759985980	-2.9587970620	0.0031
Age_60_64	60 <= Age <= 64	1	-0.1207518083	0.0725140723	-1.6652189619	0.0959
Age_70_74	70 <= Age <= 74	1	0.1696999247	0.0675046891	2.5138983236	0.0119
Age_75_79	75 <= Age <= 79	1	0.2942268932	0.0689050884	4.2700314304	<.0001
Age_80_84	80 <= Age <= 84	1	0.4841869055	0.0722168333	6.7046266504	<.0001
Age_85_89	85 <= Age <= 89	1	0.5544419765	0.0784934889	7.0635409963	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0605792848	0.0600059815	-1.0095541040	0.3127
Age_LT30_MALE	Age < 30 MALE	1	0.1437163660	0.1888053035	0.7611881837	0.4465
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.0654656470	0.2135909653	-0.3065000755	0.7592
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0090348053	0.1835928998	0.0492110821	0.9608
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.1418600665	0.1693870353	0.8374906984	0.4023
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.0627106256	0.1348225272	-0.4651346245	0.6418
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.1360076837	0.1164774077	1.1676743706	0.2429
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0255933588	0.0962520819	-0.2658992747	0.7903
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0195708963	0.0906467817	0.2159028257	0.8291
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0154052098	0.0869718299	0.1771287298	0.8594
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0370713160	0.0887407113	-0.4177486912	0.6761
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.1371398352	0.0944403723	-1.4521314536	0.1465
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0174459421	0.1044572211	-0.1670151845	0.8674
ANEMDEF	Deficiency anemias	1	-0.2060188576	0.0320604586	-6.4259485530	<.0001
CHF	Congestive heart failure	1	0.2281604281	0.0354980338	6.4274103097	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
CHRNLUNG	Chronic pulmonary disease	1	0.0417656910	0.0282388500	1.4790152957	0.1391
COAG	Coagulopathy	1	0.4407099772	0.0376793553	11.6963247973	<.0001
DEPRESS	Depression	1	-0.2526068622	0.0431702323	-5.8514130882	<.0001
DM	Diabetes w/o chronic complications	1	-0.1060543780	0.0452867179	-2.3418428818	0.0192
DMCX	Diabetes w/ chronic complications	1	-0.0801312375	0.0309773512	-2.5867685399	0.0097
DRUG	Drug abuse	1	-0.1817561867	0.0776751739	-2.3399521054	0.0193
HTN_C	Hypertension	1	-0.1698833374	0.0267505208	-6.3506553293	<.0001
HYPOTHY	Hypothyroidism	1	-0.1653959684	0.0401681022	-4.1175947947	<.0001
LIVER	Liver disease	1	0.4066405265	0.0498970319	8.1495934877	<.0001
LYTES	Fluid and electrolyte disorders	1	0.2970273991	0.0256573651	11.5766914490	<.0001
METS	Metastatic cancer	1	0.5104356620	0.0465899700	10.9559130782	<.0001
NEURO	Neurological disease	1	-0.0284803679	0.0474746504	-0.5999068473	0.5486
OBESE	Obesity	1	-0.1143612956	0.0331291126	-3.4519878973	0.0006
PARA	Paralysis	1	-0.2377596522	0.0543852919	-4.3717638319	<.0001
PERIVASC	Peripheral vascular disease	1	0.1616645719	0.0348657726	4.6367701033	<.0001
PSYCH	Psychoses	1	-0.3498307135	0.0812863284	-4.3036845228	<.0001
PULMCIRC	Pulmonary circulation disease	1	0.2115592592	0.0653367663	3.2379817869	0.0012
RENLFAIL	Renal failure	1	0.2108940923	0.0298846801	7.0569298829	<.0001
MDC_1	Nervous system	1	0.1235976721	0.0753012949	1.6413751205	0.1007
MDC_4	Respiratory system	1	0.8491293253	0.0622085136	13.6497285684	<.0001
MDC_5	Circulatory system	1	0.8348782615	0.0501627532	16.6433899144	<.0001
MDC_7	Hepatobiliary system and pancreas	1	0.2453261639	0.0703615985	3.4866485289	0.0005
MDC_8	Musculoskeletal and connective	1	-0.2529176703	0.0574365168	-4.4034298113	<.0001
MDC_10	Endocrine nutritional and metabolic	1	-0.5851210595	0.1302127711	-4.4935765877	<.0001
MDC_11	Kidney and urinary tract	1	-0.6385091246	0.0827336552	-7.7176467410	<.0001
MDC_14	Pregnancy childbirth and puerperium	1	-1.668726299	0.2920398924	-5.7140354518	<.0001
MDC_17	Myeloproliferative dds	1	0.7488351086	0.0992903710	7.5418703875	<.0001
MDC_21	Injuries poison and toxic	1	-0.1086654319	0.0759129522	-1.4314478469	0.1523
MDC_22	Burns	1	1.1731323230	0.1396761756	8.3989436123	<.0001
MDC_24	Multiple significant trauma	1	0.7916254652	0.0896575738	8.8294321571	<.0001
MDRG_101	Intracranial vascular procedures w pdx hemorrhage	1	1.0860640691	0.1391622426	7.8043012855	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_102	Cranio w major dev impl/acute complex CNS pdx	1	1.5145975115	0.0990715306	15.2879187582	<.0001
MDRG_103	Craniotomy & endovascular intracranial procedures	1	0.8840853512	0.1083322513	8.1608693716	<.0001
MDRG_501	Other heart assist system implant	1	1.2057263357	0.0952564993	12.6576805171	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	0.2329637383	0.0739216301	3.1514962282	0.0016
MDRG_507	Coronary bypass w/o ptca	1	-0.3691176896	0.0880760469	-4.1908975548	<.0001
MDRG_509	Amputation for circ sys disorders exc upper limb & toe	1	-0.4783053066	0.1251063912	-3.8231884240	0.0001
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-0.1959523337	0.0756286588	-2.5909798875	0.0096
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	0.3511927548	0.1034959061	3.3933009332	0.0007
MDRG_542	Other major cardiovascular procedures	1	0.2508595542	0.0658968319	3.8068530269	0.0001
MDRG_602	Major small & large bowel procedures	1	-0.0313978351	0.0487268927	-0.6443635825	0.5193
MDRG_611	Other digestive system O.R procedures	1	0.8220957115	0.1080202449	7.6105707045	<.0001
MDRG_811	Hip & femur procedures except major joint	1	0.6154673814	0.0766061135	8.0341809984	<.0001
MDRG_2406	Craniotomy for multiple significant trauma	1	1.7514037594	0.2155147593	8.1266070348	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.1563635704	0.0346849629	4.5081083323	<.0001
XPPS04_SEPSIS_ANY	PSI04_SEPSIS   Any Triggering Complication POA	1	-0.5077859818	0.0299151087	-16.9742315642	<.0001
XPPS04_SEPSIS_SEVERE	PSI04_SEPSIS   Triggering Complication Severe	1	1.3235037302	0.0257116136	51.4749385456	<.0001

c-statistic=0.783

**Table 3D. PSI 4 Death Rate among Surgical Inpatients with Serious Treatable Complications-Stratum\_Shock: Shock/Cardiac Arrest, per 1,000 Admissions**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-2.212671075	0.0738641296	-29.9559622018	<.0001
Age_LT30	Age < 30	1	-0.5918315529	0.1215596184	-4.8686526061	<.0001
Age_30_34	30 <= Age <= 34	1	-0.2823551315	0.1322453306	-2.1350858298	0.0328
Age_35_39	35 <= Age <= 39	1	-0.5080821970	0.1359586122	-3.7370357702	0.0002
Age_40_44	40 <= Age <= 44	1	-0.3210052306	0.1282960076	-2.5020671848	0.0123
Age_45_49	45 <= Age <= 49	1	-0.3325801998	0.1033664447	-3.2174870758	0.0013
Age_50_54	50 <= Age <= 54	1	-0.3848277862	0.1001732930	-3.8416206032	0.0001
Age_55_59	55 <= Age <= 59	1	-0.1227001765	0.0862814724	-1.4220918232	0.1550
Age_60_64	60 <= Age <= 64	1	-0.0753424428	0.0798023243	-0.9441133881	0.3451
Age_70_74	70 <= Age <= 74	1	0.1162055447	0.0813511250	1.4284442251	0.1532
Age_75_79	75 <= Age <= 79	1	0.2196843043	0.0793496209	2.7685614847	0.0056
Age_80_84	80 <= Age <= 84	1	0.3999565314	0.0883481691	4.5270494639	<.0001
Age_85_89	85 <= Age <= 89	1	0.6959968026	0.1013065067	6.8702082978	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0311033801	0.0728582357	-0.4269027347	0.6695
Age_LT30_MALE	Age < 30 MALE	1	0.4175949456	0.1922027045	2.1726798628	0.0298
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.2977579353	0.2057424141	1.4472365191	0.1478
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.3343673711	0.1939398307	1.7240778748	0.0847
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.0977157681	0.1727215088	0.5657417469	0.5716
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.2579011454	0.1360572622	1.8955338450	0.0580
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.2423127405	0.1289437529	1.8792127197	0.0602
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.1884541614	0.1153543332	-1.6336981560	0.1023
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0747870118	0.1066250858	0.7014016564	0.4831
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0541750428	0.1046270166	-0.5177921014	0.6046
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0998824613	0.1070926830	0.9326730695	0.3510
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0795348407	0.1194866112	-0.6656380989	0.5056
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0700556242	0.1437120187	-0.4874722719	0.6259
ANEMDEF	Deficiency Anemias	1	-0.1445501963	0.0365464585	-3.9552449743	<.0001
CHF	Congestive heart failure	1	0.0680636299	0.0365014507	1.8646828709	0.0622
COAG	Coagulopathy	1	0.4163724926	0.0411641323	10.1149342665	<.0001
DEPRESS	Depression	1	-0.2503308216	0.0471374028	-5.3106621629	<.0001
DM	Diabetes w/o chronic complications	1	0.1093380161	0.0460273948	2.3754986897	0.0175

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
HTN_C	Hypertension	1	-0.0498131177	0.0313448035	-1.5891985973	0.1120
HYPOTHY	Hypothyroidism	1	-0.1731434299	0.0428213467	-4.0433905807	<.0001
LIVER	Liver disease	1	0.5209427065	0.0545100429	9.5568207099	<.0001
LYTES	Fluid and electrolyte disorders	1	0.3930555985	0.0301151006	13.0517777055	<.0001
METS	Metastatic cancer	1	0.4814398065	0.0565065639	8.5200687075	<.0001
NEURO	Neurological disease	1	-0.0528560910	0.0521631819	-1.0132834898	0.3109
OBESE	Obesity	1	-0.1856223199	0.0352019581	-5.2730680402	<.0001
PARA	Paralysis	1	-0.1670152837	0.0625170621	-2.6715152317	0.0076
PERIVASC	Peripheral vascular disease	1	0.2981473003	0.0417120454	7.1477506607	<.0001
RENLFAIL	Renal failure	1	0.1808642463	0.0361793186	4.9991059328	<.0001
WGHTLOSS	Weight loss	1	-0.2073764538	0.0393468622	-5.2704699279	<.0001
MDC_1	Nervous system	1	-0.1353420154	0.0828875753	-1.6328383949	0.1025
MDC_6	Digestive system	1	0.4258305980	0.0545903668	7.8004714595	<.0001
MDC_7	Hepatobiliary system and pancreas	1	0.5193687197	0.0633140493	8.2030564415	<.0001
MDC_8	Musculoskeletal and connective	1	-0.1402067458	0.0510792436	-2.744868836	0.0061
MDC_13	Female reproductive system	1	-0.4335842398	0.1138777933	-3.8074520699	0.0001
MDC_14	Pregnancy childbirth and puerperium	1	-0.7076084759	0.1224732050	-5.7776594976	<.0001
MDC_17	Myeloproliferative dds	1	0.7196291751	0.1142922595	6.2963946857	<.0001
MDRG_101	Intracranial vascular procedures w pdx hemorrhage	1	1.6860150836	0.1403068012	12.0166311869	<.0001
MDRG_102	Cranio w major dev impl/acute complex CNS pdx	1	2.4190288999	0.1151804684	21.0020755528	<.0001
MDRG_103	Craniotomy & endovascular intracranial procedures	1	1.0257064256	0.1424454595	7.2006958268	<.0001
MDRG_602	Major small & large bowel procedures	1	0.1569044732	0.0562669204	2.7885740360	0.0053
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	0.9506401738	0.0463169543	20.5246693714	<.0001
MDRG_7702	Liver transplant	1	-1.359887628	0.1541473909	-8.8219957509	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.3884827708	0.0481799529	8.0631621175	<.0001
XPPS04_SHOCK_ANY	PSI04_SHOCK   Any Triggering Complication POA	1	-0.2453201841	0.0361502500	-6.7861269055	<.0001
XPPS04_SHOCK_SEVERE	PSI04_SHOCK   Triggering Complication Severe	1	2.0911408181	0.0325760074	64.1926677040	<.0001

c-statistic=0.833

**Table 3E. PSI 04 – Death Rate among Surgical Inpatients with Serious Treatable Complications-  
Stratum\_GI\_Hemorrhage: Gastrointestinal (GI), per 1,000 Admissions**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-3.938138301	0.2131670825	-18.4744204193	<.0001
Age_LT30	Age < 30	1	-1.209896945	0.4246291582	-2.8493025532	0.0044
Age_30_34	30 <= Age <= 34	1	-1.043992957	0.4885685247	-2.1368403908	0.0326
Age_35_39	35 <= Age <= 39	1	-1.022171203	0.3530729059	-2.8950712060	0.0038
Age_40_44	40 <= Age <= 44	1	-0.6910916370	0.3023945589	-2.2853970637	0.0223
Age_45_49	45 <= Age <= 49	1	-0.7362078190	0.2601946310	-2.8294504622	0.0047
Age_50_54	50 <= Age <= 54	1	-0.2610127355	0.2096458690	-1.2450173084	0.2131
Age_55_59	55 <= Age <= 59	1	-0.4197505813	0.1789936310	-2.3450587538	0.0190
Age_60_64	60 <= Age <= 64	1	-0.2645424198	0.1607525970	-1.6456494313	0.0998
Age_70_74	70 <= Age <= 74	1	-0.2875348286	0.1564804208	-1.8375131354	0.0661
Age_75_79	75 <= Age <= 79	1	-0.0623741174	0.1505158775	-0.4144022443	0.6786
Age_80_84	80 <= Age <= 84	1	0.1698370028	0.1591604211	1.0670806324	0.2859
Age_85_89	85 <= Age <= 89	1	0.2076612916	0.1787395366	1.1618094999	0.2453
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.1811222495	0.1382157079	-1.3104317324	0.1900
Age_LT30_MALE	Age < 30 MALE	1	0.2757745706	0.5408069966	0.5099315881	0.6101
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.5071182832	0.5653223122	0.8970427530	0.3697
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.6981307734	0.4521823952	1.5439140949	0.1226
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.5204547325	0.3764511580	1.3825292378	0.1668
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.3169032105	0.3402881926	0.9312788908	0.3517
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0185754592	0.2568527016	0.0723195011	0.9423
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.3172987382	0.2249173648	1.4107347312	0.1583
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0363906193	0.2033873052	0.1789227665	0.8580
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.3516704505	0.2027700100	1.7343316723	0.0829
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0843840908	0.1936153684	-0.4358336400	0.6630
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0184583763	0.2195699266	-0.0840660493	0.9330
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1801042962	0.2420066652	0.7442121318	0.4567
ANEMDEF	Deficiency anemias	1	-0.4173443565	0.0705690739	-5.9139837569	<.0001
BLDLOSS	Chronic blood loss anemia	1	-0.7085344774	0.1710938433	-4.1412038198	<.0001
CHF	Congestive heart failure	1	0.3517356495	0.0945213278	3.7212305179	0.0002
CHRNLUNG	Chronic pulmonary disease	1	0.1523443683	0.0634922177	2.3994179733	0.0164
COAG	Coagulopathy	1	0.6969740766	0.0724916815	9.6145386860	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
DEPRESS	Depression	1	-0.3008479861	0.0990686737	-3.0367620241	0.0024
DM	Diabetes w/o chronic complications	1	-0.1618174827	0.0953208160	-1.6976090802	0.0896
DMCX	Diabetes w/ chronic complications	1	-0.2517264021	0.0707596439	-3.5574854297	0.0004
HTN_C	Hypertension	1	-0.2544351325	0.0594936175	-4.2766794693	<.0001
HYPOTHY	Hypothyroidism	1	-0.2162361486	0.0949237579	-2.2779981884	0.0227
LIVER	Liver disease	1	0.2262528922	0.0868741027	2.6043767369	0.0092
LYTES	Fluid and electrolyte disorders	1	0.8554502825	0.0570535046	14.9938253187	<.0001
METS	Metastatic cancer	1	0.5424841997	0.1334053498	4.0664351220	<.0001
NEURO	Neurological disease	1	0.1884521304	0.1078321699	1.7476429401	0.0805
OBESE	Obesity	1	0.0573276163	0.0699512351	0.8195368706	0.4125
PARA	Paralysis	1	-0.3002042177	0.1397344750	-2.1483904930	0.0317
PERIVASC	Peripheral vascular disease	1	0.2181807016	0.0709112223	3.0768148467	0.0021
PULMCIRC	Pulmonary circulation disease	1	0.1821020230	0.1753089411	1.0387492038	0.2989
RENLFAIL	Renal failure	1	0.1522241857	0.0687227363	2.2150483791	0.0268
ULCER	Peptic ulcer Disease x bleeding	1	-0.1287446718	0.0887414758	-1.4507835322	0.1468
VALVE	Valvular disease	1	-0.1854734885	0.1497302054	-1.2387179196	0.2154
MDC_1	Nervous system	1	1.2022603792	0.2493504234	4.8215694305	<.0001
MDC_3	Ear nose mouth and throat	1	-1.393235701	1.0032532614	-1.3887178393	0.1649
MDC_4	Respiratory system	1	1.9728083525	0.2109545793	9.3518157257	<.0001
MDC_5	Circulatory system	1	2.1488383504	0.1942934628	11.0597563083	<.0001
MDC_8	Musculoskeletal and connective	1	0.0752753101	0.2768070995	0.2719413998	0.7857
MDC_17	Myeloproliferative dds	1	1.1196293970	0.3447466066	3.2476879407	0.0012
MDC_18	Infectious and Parasitic	1	1.8864001442	0.2530449929	7.4548013091	<.0001
MDC_21	Injuries poison and toxic	1	0.8878711801	0.2695985114	3.2933089117	0.0010
MDRG_102	Cranio w major dev impl/acute complex CNS pdx	1	1.8958012135	0.2495821153	7.5959016981	<.0001
MDRG_501	Other heart assist system implant	1	1.8839782112	0.1590157905	11.8477429539	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	-0.3685018801	0.1476391186	-2.4959636963	0.0126
MDRG_504	Cardiac defibrillator implant	1	-1.989266650	0.7384747948	-2.6937502328	0.0071
MDRG_507	Coronary bypass w/o ptca	1	-0.6602344788	0.1968623890	-3.3537867854	0.0008
MDRG_510	Permanent cardiac pacemaker implant and procedures	1	-1.228701809	0.4573245712	-2.6867172396	0.0072
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-0.5632978886	0.1144471807	-4.9219027089	<.0001
MDRG_513	Perc cardiovasc proc w/o coronary artery stent	1	0.1231502144	0.2171337844	0.5671628428	0.5706
MDRG_514	Other vascular procedures	1	-0.6734225120	0.1625457756	-4.1429714763	<.0001
MDRG_519	Other circulatory system O.R procedures	1	-0.9975327896	0.3624971647	-2.7518361152	0.0059
MDRG_540	Endovascular cardiac valve replacement	1	-1.979768203	0.4533766716	-4.3667182871	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_542	Other major cardiovascular procedures	1	-0.1055696270	0.1178049859	-0.8961388711	0.3702
MDRG_543	Percutaneous intracardiac procedures	1	-1.326385514	0.4464328024	-2.9710753938	0.0030
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-0.6326326333	0.4371212170	-1.4472704792	0.1478
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	0.2942169339	0.1921974422	1.5308056679	0.1258
TRNSFER	Transferred-in from another acute care facility	1	0.4302896416	0.0711847527	6.0446882992	<.0001
XPPS04_GIHEMO_RRHAGE_ANY	PSI04_GIHEMORRHAGE   Any Triggering Complication POA	1	-0.5080877025	0.0596356598	-8.5198638570	<.0001
XPPS04_GIHEMO_RRHAGE_SEVER	PSI04_GIHEMORRHAGE   Triggering Complication Severe	1	0.3260361307	0.1059675333	3.0767549320	0.0021

c-statistic=0.805

**Table 4. Risk Adjustment Coefficients for PSI 06 – Iatrogenic Pneumothorax Rate**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-8.663353946	0.0738392152	-117.3272754853	<.0001
Age_LT30	Age < 30	1	-0.2959269265	0.1325366552	-2.2327930797	0.0256
Age_30_34	30 <= Age <= 34	1	-0.6253935530	0.1831687410	-3.4143028427	0.0006
Age_35_39	35 <= Age <= 39	1	-0.4738467447	0.1612928681	-2.9378034514	0.0033
Age_40_44	40 <= Age <= 44	1	-0.5061877628	0.1495295373	-3.3852024950	0.0007
Age_45_49	45 <= Age <= 49	1	-0.4415086401	0.1300580710	-3.3947038949	0.0007
Age_50_54	50 <= Age <= 54	1	-0.2391829390	0.1060960277	-2.2544005104	0.0242
Age_55_59	55 <= Age <= 59	1	-0.1489215668	0.0973011209	-1.5305226235	0.1259
Age_60_64	60 <= Age <= 64	1	-0.0662707803	0.0910159460	-0.7281227440	0.4665
Age_70_74	70 <= Age <= 74	1	0.0902061767	0.0818158873	1.1025508572	0.2702
Age_75_79	75 <= Age <= 79	1	0.1858395948	0.0806943267	2.3030069448	0.0213
Age_80_84	80 <= Age <= 84	1	0.1778212184	0.0815994132	2.1791972679	0.0293
Age_85_89	85 <= Age <= 89	1	0.1254414944	0.0851156921	1.4737763541	0.1405
Age_90Plus	Age >= 90	1	-0.0007613255	0.0971942207	-0.0078330325	0.9938
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.3835711617	0.0913047362	-4.2009996144	<.0001
Age_LT30_MALE	Age < 30 MALE	1	0.2282564983	0.1820372189	1.2539001622	0.2099
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.3187200067	0.2602289284	1.2247677793	0.2207
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.1564552956	0.2348625456	0.6661568588	0.5053
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.1781449859	0.2162406278	0.8238275468	0.4100
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.1468058796	0.2036258239	-0.7209590453	0.4709
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.2132405231	0.1676094314	-1.2722465636	0.2033
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0165398120	0.1423860921	-0.1161617103	0.9075
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0134479964	0.1338866178	-0.1004431705	0.9200
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.1699540881	0.1263189315	-1.3454363971	0.1785
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0350622618	0.1228291846	0.2854554630	0.7753
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.0079191929	0.1205483604	0.0656930787	0.9476
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0017290194	0.1408357469	0.0122768502	0.9902
Age_90Plus_MALE	Age >= 90 MALE	1	0.2709426669	0.1507968586	1.7967394641	0.0724
ANEMDEF	Deficiency anemias	1	-0.0524311438	0.0412809264	-1.2701057927	0.2040
ARTH	Rheumatoid arthritis/collagen vas	1	-0.1637787844	0.0860497513	-1.9033034023	0.0570
CHF	Congestive heart failure	1	0.0967093135	0.0558083490	1.7328825380	0.0831
CHRNLUNG	Chronic pulmonary disease	1	0.1320270577	0.0370209439	3.5662801568	0.0004

**AHRQ Quality Indicators™**  
**Patient Safety Indicators (PSI) Parameter Estimates**

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Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
DEPRESS	Depression	1	-0.1419188514	0.0492859148	-2.8795012125	0.0040
DM	Diabetes w/o chronic complications	1	-0.4552322401	0.0546870840	-8.3243099927	<.0001
DMCX	Diabetes w/ chronic complications	1	-0.3636507019	0.0502233527	-7.2406695684	<.0001
DRUG	Drug abuse	1	0.0400171215	0.0892493205	0.4483745229	0.6539
HTN_C	Hypertension	1	-0.1245149388	0.0313933932	-3.9662784486	<.0001
HYPOTHY	Hypothyroidism	1	0.0398915451	0.0421601609	0.9461905337	0.3441
LIVER	Liver disease	1	0.1585623783	0.0720465397	2.2008326682	0.0277
LYMPH	Lymphoma	1	-0.0360091288	0.1595692134	-0.2256646381	0.8215
LYTES	Fluid and electrolyte disorders	1	0.0997591537	0.0357585580	2.7897980026	0.0053
METS	Metastatic cancer	1	0.4366022532	0.0841752068	5.1868272142	<.0001
NEURO	Neurological disease	1	0.1026314173	0.0504703848	2.0334978163	0.0420
OBESE	Obesity	1	-0.5658177633	0.0526494473	-10.7468889517	<.0001
PARA	Paralysis	1	0.1769753667	0.0710017181	2.4925504808	0.0127
PERIVASC	Peripheral vascular disease	1	-0.0362397625	0.0582760164	-0.6218640996	0.5340
PSYCH	Psychoses	1	-0.0226221162	0.0860710319	-0.2628307772	0.7927
PULMCIRC	Pulmonary circulation disease	1	0.1784947098	0.0969927401	1.8402893840	0.0657
RENLF FAIL	Renal failure	1	-0.1599054344	0.0443484835	-3.6056573278	0.0003
TUMOR	Solid tumor w/out metastasis	1	0.1629078521	0.0924117889	1.7628470788	0.0779
ULCER	Peptic ulcer Disease x bleeding	1	0.3515340328	0.1281503705	2.7431370770	0.0061
VALVE	Valvular disease	1	-0.0922514681	0.0844101312	-1.0928956843	0.2744
WGHTLOSS	Weight loss	1	0.7604549620	0.0465708494	16.3289905825	<.0001
MDRG_101	Intracranial vascular procedures w pdx hemorrhage	1	3.0278723575	0.2170928806	13.9473590692	<.0001
MDRG_102	Cranio w major dev impl/acute complex CNS pdx	1	2.1267014721	0.1665344826	12.7703370442	<.0001
MDRG_103	Craniotomy & endovascular intracranial procedures	1	1.1419522529	0.1596418967	7.1532115094	<.0001
MDRG_108	Periph/cranial nerve & other nerv syst proc	1	2.2594858604	0.1718496641	13.1480376857	<.0001
MDRG_111	Degenerative nervous system disorders	1	-1.250140809	0.3881831284	-3.2204923854	0.0013
MDRG_114	Intracranial hemorrhage or cerebral infarction	1	-0.2117647532	0.1521772048	-1.3915668482	0.1641
MDRG_128	Seizures	1	-0.5117045270	0.2833307110	-1.8060326926	0.0709
MDRG_301	Cranial/facial procedures	1	0.1644334236	0.6506824940	0.2527091556	0.8005
MDRG_402	Other resp system O.R procedures	1	2.3985650034	0.1750770097	13.7000569471	<.0001
MDRG_405	Respiratory neoplasms	1	2.2304750386	0.1507832022	14.7925962988	<.0001
MDRG_408	Pulmonary edema & respiratory failure	1	-0.7703349462	0.2335174207	-3.2988328831	0.0010
MDRG_410	Simple pneumonia & pleurisy	1	-1.223366819	0.2247927893	-5.4421977789	<.0001
MDRG_416	Respiratory system diagnosis w ventilator support	1	2.1568114544	0.0854406371	25.2433915339	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	1.5530393797	0.4644727672	3.3436607899	0.0008

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_504	Cardiac defibrillator implant	1	4.1637646705	0.0813064870	51.2107314145	<.0001
MDRG_510	Permanent cardiac pacemaker implant and procedures	1	4.3704436181	0.0495885558	88.1341177814	<.0001
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-0.7248064795	0.2461082514	-2.9450718341	0.0032
MDRG_514	Other vascular procedures	1	0.5117930326	0.1992096190	2.5691180734	0.0102
MDRG_520	Acute myocardial infarction, discharged alive	1	-0.2980506723	0.2008405812	-1.4840161807	0.1378
MDRG_522	Circulatory disorders except ami, w card cath	1	-0.1174789401	0.2085232575	-0.5633853103	0.5732
MDRG_528	Atherosclerosis	1	-0.1749664839	0.5049484676	-0.3465036437	0.7290
MDRG_531	Cardiac arrhythmia & conduction disorders	1	-0.9734060276	0.2169435072	-4.4869101652	<.0001
MDRG_533	Syncope & collapse	1	-2.235269172	0.7030723907	-3.1792873707	0.0015
MDRG_534	Chest pain	1	-2.050426925	0.6963284278	-2.9446261898	0.0032
MDRG_535	Other circulatory system diagnoses	1	0.1526787449	0.2268602186	0.6730080129	0.5009
MDRG_540	Endovascular cardiac valve replacement	1	1.8301691237	0.1575877561	11.6136505112	<.0001
MDRG_601	Stomach, esophageal & duodenal proc	1	1.5620316720	0.2076587978	7.5221068804	<.0001
MDRG_606	Appendectomy w/o complicated principal diag	1	-0.6368158160	0.5756523222	-1.1062507550	0.2686
MDRG_611	Other digestive system O.R procedures	1	1.2157217228	0.2281951270	5.3275533909	<.0001
MDRG_618	Inflammatory bowel disease	1	-2.265342843	1.0414218452	-2.1752403726	0.0296
MDRG_619	G.I. obstruction	1	-1.285639201	0.3692618887	-3.4816460629	0.0005
MDRG_620	Esophagitis, gastroent & misc digest disorders	1	-1.211109542	0.2144988992	-5.6462273059	<.0001
MDRG_621	Other digestive system diagnoses	1	-0.2732319901	0.2268930641	-1.2042324481	0.2285
MDRG_701	Pancreas, liver & shunt procedures	1	2.4924747191	0.1572538785	15.8500047316	<.0001
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	0.0230470424	0.2025492468	0.1137848831	0.9094
MDRG_708	Cirrhosis & alcoholic hepatitis	1	0.0185800226	0.2851759666	0.0651528346	0.9481
MDRG_711	Disorders of liver except malig,cirr,alc hepa	1	-0.1530737543	0.3000419237	-0.5101745531	0.6099
MDRG_712	Disorders of the biliary tract	1	-0.0463927883	0.2815418449	-0.1647811477	0.8691
MDRG_801	Combined anterior/posterior spinal fusion	1	1.9277714755	0.1925169841	10.0135137916	<.0001
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-2.053753510	0.2385263375	-8.6101750076	<.0001
MDRG_808	Cervical spinal fusion	1	-0.1096649468	0.3021562851	-0.3629411406	0.7166
MDRG_815	Back & neck proc exc spinal fusion or disc device/neurostim	1	0.1576674109	0.3647824059	0.4322231784	0.6656
MDRG_816	Lower extrem & humer proc except hip,foot,femur	1	-1.336604492	0.5299571312	-2.5220992660	0.0117
MDRG_834	Medical back problems	1	-1.839546008	0.5863268226	-3.1374072232	0.0017
MDRG_838	Aftercare, musculoskeletal system & connective tissue	1	-2.681938613	1.0103584547	-2.6544426890	0.0079
MDRG_903	Other skin, subcut tiss & breast proc	1	1.3557684723	0.1587630754	8.5395704818	<.0001
MDRG_905	Breast biopsy, local excision & other breast procedures	1	2.4181240865	0.2738522320	8.8300324182	<.0001
MDRG_908	Malignant breast disorders	1	1.5156247347	0.5003540103	3.0291048009	0.0025
MDRG_910	Cellulitis	1	-1.769824556	0.3834564318	-4.6154514817	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_1003	O.R. procedures for obesity	1	-1.546799718	0.6067202017	-2.5494448908	0.0108
MDRG_1008	Misc disorders of nutrition,metabolism,fluids/electrolytes	1	-1.076466500	0.2745937790	-3.9202144480	<.0001
MDRG_1103	Kidney & ureter procedures for neoplasm	1	3.2867670258	0.1003428064	32.7553826956	<.0001
MDRG_1104	Kidney & ureter procedures for non-neoplasm	1	2.4043178413	0.1461261310	16.4537158701	<.0001
MDRG_1107	Transurethral procedures	1	0.0328550983	0.4095954974	0.0802135241	0.9361
MDRG_1109	Other kidney & urinary tract procedures	1	0.8892905499	0.3352390433	2.6527057862	0.0080
MDRG_1113	Kidney & urinary tract infections	1	-3.025336464	0.5702710315	-5.3050852971	<.0001
MDRG_1118	Other kidney & urinary tract diagnoses	1	-0.4578854767	0.2624929257	-1.7443726361	0.0811
MDRG_1304	Uterine & adnexa proc for non-malignancy	1	-1.460540756	0.5116424546	-2.8546121286	0.0043
MDRG_1604	Red blood cell disorders	1	-2.348923741	0.6125158365	-3.8348783836	0.0001
MDRG_1713	Lymphoma & non-acute leukemia	1	0.5982398612	0.2939215135	2.0353728250	0.0418
MDRG_1714	Other myeloprolif dis or poorly diff neopl diag	1	1.0160645810	0.5084710034	1.9982743838	0.0457
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	1.5081753169	0.0983773448	15.3305145527	<.0001
MDRG_1807	Septicemia or severe sepsis w mv >96 hours	1	2.7120822143	0.0960733055	28.2293005356	<.0001
MDRG_1808	Septicemia or severe sepsis w/o mv >96 hours	1	0.3717123264	0.0655788814	5.6681711949	<.0001
MDRG_1915	Psychoses	1	-4.742290352	1.1291222748	-4.1999794511	<.0001
MDRG_2018	Alcohol/drug abuse or dependence, left ama	1	-2.003372234	0.4288254364	-4.6717663269	<.0001
MDRG_2104	Other O.R procedures for injuries	1	1.0085296242	0.2505979011	4.0244935011	<.0001
MDRG_2107	Poisoning & toxic effects of drugs	1	0.4853740217	0.1548139314	3.1352089389	0.0017
MDRG_2302	Rehabilitation	1	-0.4640307842	0.7029052167	-0.6601612467	0.5092
MDRG_2303	Signs & symptoms	1	-2.248281740	0.7366743265	-3.0519344291	0.0023
MDRG_2304	Aftercare	1	-1.942564063	1.0404090785	-1.8671156407	0.0619
MDRG_2408	Other O.R procedures for multiple significant trauma	1	1.7773784968	0.3844666252	4.6229721398	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.0521797046	0.0531389028	0.9819492276	0.3261

c-statistic=0.851

**Table 5. Risk Adjustment Coefficients for PSI 07 – Central Venous Catheter-Related Blood Stream Infection Rate**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-9.500723936	0.1294260433	-73.4065856879	<.0001
Age_LT30	Age < 30	1	0.4501519326	0.1513929032	2.9734018111	0.0029
Age_30_34	30 <= Age <= 34	1	0.6086942690	0.1712524881	3.5543674474	0.0004
Age_35_39	35 <= Age <= 39	1	0.4945391990	0.1717549150	2.8793306960	0.0040
Age_40_44	40 <= Age <= 44	1	0.3247821295	0.1767484501	1.8375387698	0.0661
Age_45_49	45 <= Age <= 49	1	0.2004998832	0.1714484464	1.1694470697	0.2422
Age_50_54	50 <= Age <= 54	1	0.2722818748	0.1646702211	1.6534979605	0.0982
Age_55_59	55 <= Age <= 59	1	0.0143881055	0.1640206968	0.0877212802	0.9301
Age_60_64	60 <= Age <= 64	1	0.1046487751	0.1568194216	0.6673202467	0.5046
Age_70_74	70 <= Age <= 74	1	-0.4358168078	0.1744460812	-2.4982894709	0.0125
Age_75_79	75 <= Age <= 79	1	-0.3363270807	0.1789961972	-1.8789621561	0.0602
Age_80_84	80 <= Age <= 84	1	-0.8140194980	0.2039186628	-3.9918832680	<.0001
Age_85_89	85 <= Age <= 89	1	-1.236579961	0.2443286291	-5.0611341189	<.0001
Age_90Plus	Age >= 90	1	-1.676180458	0.3302088932	-5.0761214867	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0271841341	0.1499874624	-0.1812427100	0.8562
Age_LT30_MALE	Age < 30 MALE	1	0.1688856546	0.2054735805	0.8219336723	0.4111
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.1525527125	0.2332639377	0.6539918430	0.5131
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.1301632486	0.2444405450	0.5324945115	0.5944
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.2994120318	0.2387042735	1.2543220422	0.2097
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.0874516287	0.2399568740	-0.3644472745	0.7155
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0208785898	0.2330434038	0.0895909924	0.9286
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.2809194190	0.2154906156	1.3036271591	0.1924
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.1297337385	0.2182924050	0.5943117375	0.5523
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.4863879375	0.2289317872	2.1245976518	0.0336
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.1931593346	0.2384437205	0.8100835461	0.4179
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.4399055632	0.2743530469	1.6034287504	0.1088
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.3196285995	0.3578865763	0.8931002743	0.3718
Age_90Plus_MALE	Age >= 90 MALE	1	0.8070679131	0.4403261125	1.8328867861	0.0668
ALCOHOL	Alcohol abuse	1	-0.3360746110	0.1079624364	-3.1128846511	0.0019
ANEMDEF	Deficiency anemias	1	0.4499941948	0.0585160434	7.6900994803	<.0001
ARTH	Rheumatoid arthritis/collagen vas	1	0.1395358831	0.1255314499	1.1115611523	0.2663
BLDLOSS	Chronic blood loss anemia	1	-0.1984190432	0.2183852527	-0.9085734530	0.3636

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
CHF	Congestive heart failure	1	0.5398344292	0.0803677376	6.7170539491	<.0001
CHRNLUNG	Chronic pulmonary disease	1	-0.1130462545	0.0607754342	-1.8600649431	0.0629
COAG	Coagulopathy	1	0.5011669247	0.0819264258	6.1172804727	<.0001
DEPRESS	Depression	1	0.2168175829	0.0638556604	3.3954324754	0.0007
DM	Diabetes w/o chronic complications	1	-0.3461367358	0.1073419843	-3.2246165203	0.0013
DMCX	Diabetes w/ chronic complications	1	0.0642331466	0.0755236869	0.8505033223	0.3950
DRUG	Drug abuse	1	0.6914900360	0.0765709917	9.0307049756	<.0001
HTN_C	Hypertension	1	-0.2566728910	0.0626793578	-4.0950146927	<.0001
HYPOTHY	Hypothyroidism	1	-0.1748697979	0.0868186781	-2.0141955836	0.0440
LIVER	Liver disease	1	0.3148644438	0.0884176357	3.5611045391	0.0004
LYTES	Fluid and electrolyte disorders	1	0.3855593422	0.0577113067	6.6808284973	<.0001
NEURO	Neurological disease	1	0.3803453116	0.0751459965	5.0614181648	<.0001
OBESE	Obesity	1	0.1879717922	0.0610174193	3.0806250801	0.0021
PARA	Paralysis	1	0.6632327669	0.0836219005	7.9313285467	<.0001
PERIVASC	Peripheral vascular disease	1	-0.0748683305	0.0997799495	-0.7503344195	0.4531
PSYCH	Psychoses	1	0.1059508503	0.0941277869	1.1256065165	0.2603
PULMCIRC	Pulmonary circulation disease	1	0.6096286284	0.1094517306	5.5698400091	<.0001
RENLFAIL	Renal failure	1	0.2156795081	0.0794583772	2.7143709165	0.0066
ULCER	Peptic ulcer Disease x bleeding	1	0.7108392272	0.1507666138	4.7148318128	<.0001
VALVE	Valvular disease	1	0.1179788878	0.1121755795	1.0517341506	0.2929
WGHTLOSS	Weight loss	1	1.1358230063	0.0742257161	15.3022842401	<.0001
MDRG_101	Intracranial vascular procedures w pdx hemorrhage	1	2.3418188643	0.2800616175	8.3617986817	<.0001
MDRG_102	Crano w major dev impl/acute complex CNS pdx	1	0.8377240366	0.2784921337	3.0080707320	0.0026
MDRG_103	Craniotomy & endovascular intracranial procedures	1	-0.3090929331	0.4319595443	-0.7155599111	0.4743
MDRG_108	Periph/cranial nerve & other nerv syst proc	1	0.4093163098	0.4280428280	0.9562508304	0.3389
MDRG_114	Intracranial hemorrhage or cerebral infarction	1	-0.7662901727	0.2639069081	-2.9036381742	0.0037
MDRG_117	Nonspecific cerebrovascular disorders	1	-0.6134007836	0.5846808757	-1.0491206554	0.2941
MDRG_118	Cranial & peripheral nerve disorders	1	-0.6707849893	0.5050508138	-1.3281534669	0.1841
MDRG_122	Traumatic stupor & coma, coma >1 hr	1	-0.5793990448	0.7732022828	-0.7493498891	0.4536
MDRG_125	Other disorders of nervous system	1	-1.371671555	0.5961434203	-2.3009086544	0.0214
MDRG_127	Non-bacterial infect of nervous sys exc viral meningitis	1	1.5257593828	0.3191358193	4.7809092251	<.0001
MDRG_402	Other resp system O.R procedures	1	0.1196584830	0.3562799834	0.3358551941	0.7370
MDRG_403	Pulmonary embolism	1	-1.503929127	0.5886033211	-2.5550809408	0.0106
MDRG_404	Respiratory infections & inflammations	1	-0.6026964924	0.3061064988	-1.9689111296	0.0490
MDRG_408	Pulmonary edema & respiratory failure	1	-1.675211308	0.4031689973	-4.1551094433	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_409	Chronic obstructive pulmonary disease	1	-2.565619942	0.4906463798	-5.2290611890	<.0001
MDRG_410	Simple pneumonia & pleurisy	1	-2.927251330	0.6919877539	-4.2302068404	<.0001
MDRG_413	Bronchitis & asthma	1	-1.367954567	0.5718855477	-2.3920075839	0.0168
MDRG_416	Respiratory system diagnosis w ventilator support	1	0.7047588196	0.1652017670	4.2660489194	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	0.6616937383	0.2484360534	2.6634368450	0.0077
MDRG_507	Coronary bypass w/o ptca	1	0.4812014910	0.2370600356	2.0298718411	0.0424
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-1.412390009	0.4218117423	-3.3483894999	0.0008
MDRG_514	Other vascular procedures	1	-0.2357603775	0.4318439824	-0.5459387816	0.5851
MDRG_520	Acute myocardial infarction, discharged alive	1	-0.4289423137	0.2790210174	-1.5373118402	0.1242
MDRG_522	Circulatory disorders except ami, w card cath	1	0.6508060616	0.1731884116	3.7577921961	0.0002
MDRG_523	Acute & subacute endocarditis	1	1.6695824871	0.3075258961	5.4290793339	<.0001
MDRG_524	Heart failure & shock	1	-0.5537033277	0.1785356509	-3.1013600071	0.0019
MDRG_527	Peripheral vascular disorders	1	-0.7190542150	0.4148729482	-1.7331913737	0.0831
MDRG_529	Hypertension	1	-1.025421955	0.5085164671	-2.0164970490	0.0437
MDRG_531	Cardiac arrhythmia & conduction disorders	1	-1.561636940	0.4550282189	-3.4319562499	0.0006
MDRG_533	Syncope & collapse	1	-2.045796401	0.9975562645	-2.0508080335	0.0403
MDRG_535	Other circulatory system diagnoses	1	-0.0762691284	0.3033210550	-0.2514468653	0.8015
MDRG_542	Other major cardiovascular procedures	1	1.3147492934	0.2019862769	6.5091020732	<.0001
MDRG_601	Stomach, esophageal & duodenal proc	1	1.9088153056	0.1663893821	11.4719778478	<.0001
MDRG_602	Major small & large bowel procedures	1	1.3841683396	0.1211932458	11.4211673320	<.0001
MDRG_604	Peritoneal adhesiolysis	1	1.6023631239	0.2164041225	7.4044944500	<.0001
MDRG_607	Minor small & large bowel procedures	1	1.4987752377	0.3810936470	3.9328266149	<.0001
MDRG_611	Other digestive system O.R procedures	1	0.8428252851	0.4024550403	2.0942097895	0.0362
MDRG_612	Major esophageal disorders	1	-1.195514780	1.0186084013	-1.1736745725	0.2405
MDRG_613	Major gastrointestinal disorders & peritoneal infections	1	-0.4825827421	0.3605236769	-1.3385604694	0.1807
MDRG_615	G.I. hemorrhage	1	-0.6728879937	0.2597333902	-2.5906872932	0.0096
MDRG_616	Complicated peptic ulcer	1	0.5423231881	0.4708138531	1.1518845177	0.2494
MDRG_618	Inflammatory bowel disease	1	-0.3433943584	0.4445370950	-0.7724762732	0.4398
MDRG_619	G.I. obstruction	1	-0.6754666783	0.3542182607	-1.9069222374	0.0565
MDRG_620	Esophagitis, gastroent & misc digest disorders	1	-0.9778728041	0.2350958640	-4.1594640908	<.0001
MDRG_621	Other digestive system diagnoses	1	0.2860229721	0.2261468030	1.2647668164	0.2060
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	-1.437000786	0.4447436130	-3.2310768364	0.0012
MDRG_710	Disorders of pancreas except malignancy	1	-0.2939131619	0.2260253555	-1.3003548267	0.1935
MDRG_711	Disorders of liver except malig,cirr,alc hepa	1	-1.637847999	0.6168403872	-2.6552217285	0.0079
MDRG_712	Disorders of the biliary tract	1	-0.9969616638	0.5941286351	-1.6780232511	0.0933

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_803	Spinal fusion except cervical	1	-1.289022598	0.5194828578	-2.4813573311	0.0131
MDRG_806	Revision of hip or knee replacement	1	-0.6471731408	0.6059300099	-1.0680658330	0.2855
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-3.250220744	0.7135012033	-4.5553122109	<.0001
MDRG_811	Hip & femur procedures except major joint	1	-0.4534442408	0.3293345458	-1.3768499133	0.1686
MDRG_816	Lower extrem & humer proc except hip,foot,femur	1	-0.7469292772	0.4297150508	-1.7381966860	0.0822
MDRG_830	Osteomyelitis	1	0.9759789928	0.3353192974	2.9105959617	0.0036
MDRG_832	Connective tissue disorders	1	0.0451064694	0.5144146973	0.0876850324	0.9301
MDRG_834	Medical back problems	1	-0.9950165900	0.5111460512	-1.9466385148	0.0516
MDRG_903	Other skin, subcut tiss & breast proc	1	-0.4369316380	0.4148464878	-1.0532369223	0.2922
MDRG_906	Skin ulcers	1	0.0743426177	0.5855233155	0.1269678180	0.8990
MDRG_910	Cellulitis	1	-1.913920216	0.4704581367	-4.0682051544	<.0001
MDRG_912	Minor skin disorders	1	0.6183639937	0.5108421756	1.2104795243	0.2261
MDRG_1003	O.R. procedures for obesity	1	-1.100994122	0.6120610627	-1.7988305238	0.0720
MDRG_1007	Diabetes	1	-0.7800165078	0.2214565283	-3.5222104931	0.0004
MDRG_1008	Misc disorders of nutrition,metabolism,fluids/electrolytes	1	-0.0689080144	0.2818957035	-0.2444450680	0.8069
MDRG_1010	Endocrine disorders	1	-0.6468327840	0.5861112892	-1.1036006232	0.2698
MDRG_1110	Renal failure	1	-0.5252233703	0.1821853372	-2.8829069257	0.0039
MDRG_1113	Kidney & urinary tract infections	1	-2.419536023	0.5747006802	-4.2100803194	<.0001
MDRG_1118	Other kidney & urinary tract diagnoses	1	-0.1357311958	0.2543795860	-0.5335773907	0.5936
MDRG_1401	Cesarean section	1	-2.962989104	0.3683906322	-8.0430631094	<.0001
MDRG_1405	Vaginal delivery (w/o or proc)	1	-5.619949378	1.1015727071	-5.1017507434	<.0001
MDRG_1411	Other antepartum diagnoses w medical complications	1	-1.804660920	0.5434770577	-3.3205834440	0.0009
MDRG_1604	Red blood cell disorders	1	1.0449525051	0.1394293022	7.4944971274	<.0001
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	0.9834522241	0.1048163020	9.3826266039	<.0001
MDRG_1807	Septicemia or severe sepsis w mv >96 hours	1	1.48666892954	0.1386648283	10.7214591697	<.0001
MDRG_1915	Psychoses	1	-3.501625972	0.5054777978	-6.9273586042	<.0001
MDRG_2018	Alcohol/drug abuse or dependence, left ama	1	-2.731105091	0.5189259046	-5.2629962526	<.0001
MDRG_2107	Poisoning & toxic effects of drugs	1	-1.099271723	0.2830714531	-3.8833718869	0.0001
MDRG_2303	Signs & symptoms	1	-1.026253757	0.5895310322	-1.7407968390	0.0817
MDRG_2304	Aftercare	1	-2.008187681	1.0575652677	-1.8988782463	0.0576
MDRG_2408	Other O.R procedures for multiple significant trauma	1	0.7440894251	0.3139960462	2.3697413837	0.0178
MDRG_7701	Heart transplant or implant of heart assist system	1	3.6227904935	0.2090184962	17.3323919186	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.7123187102	0.0756315522	9.4182743812	<.0001

c-statistic=0.871

**Table 6. Risk Adjustment Coefficients for PSI 08 – In-Hospital Fall with Hip Fracture Rate**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-9.215323856	0.1216039342	-75.7814614816	<.0001
Age_LT30	Age < 30	1	-2.723286665	0.5693025738	-4.7835488372	<.0001
Age_30_34	30 <= Age <= 34	1	-2.261135145	0.4958957969	-4.5596981446	<.0001
Age_35_39	35 <= Age <= 39	1	-1.458019013	0.3919853392	-3.7195753696	0.0002
Age_40_44	40 <= Age <= 44	1	-1.445386860	0.3644130516	-3.9663421867	<.0001
Age_45_49	45 <= Age <= 49	1	-2.166114746	0.4479044504	-4.8361090063	<.0001
Age_50_54	50 <= Age <= 54	1	-0.8872106447	0.2323058928	-3.8191482533	0.0001
Age_55_59	55 <= Age <= 59	1	-0.2176134826	0.1704570941	-1.2766466759	0.2017
Age_60_64	60 <= Age <= 64	1	-0.1662197774	0.1587611763	-1.0469800066	0.2951
Age_70_74	70 <= Age <= 74	1	0.3080968174	0.1394775301	2.2089351395	0.0272
Age_75_79	75 <= Age <= 79	1	0.6824385725	0.1324852032	5.1510550310	<.0001
Age_80_84	80 <= Age <= 84	1	0.7787270287	0.1371741840	5.6769211654	<.0001
Age_85_89	85 <= Age <= 89	1	1.1156636747	0.1384408626	8.0587743675	<.0001
Age_90Plus	Age >= 90	1	1.2737011078	0.1424723965	8.9399851403	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.5118251399	0.1615229553	-3.1687455140	0.0015
Age_LT30_MALE	Age < 30 MALE	1	0.8994786346	0.7496573235	1.1998530614	0.2302
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.1020291667	0.6331442040	0.1611468068	0.8720
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.2879754165	0.6775008971	-0.4250554024	0.6708
Age_45_49_MALE	45 <= Age <= 49 MALE	1	1.6618714017	0.5327351581	3.1195076511	0.0018
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.2914900763	0.3929328979	-0.7418316915	0.4582
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0498943761	0.2593051792	0.1924156556	0.8474
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.1307542273	0.2435395463	0.5368911510	0.5913
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0067888399	0.2238515098	0.0303274253	0.9758
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.1710827325	0.2125953778	0.8047340179	0.4210
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.2466559102	0.2120789630	1.1630380813	0.2448
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.2836764999	0.2169779206	1.3073980019	0.1911
Age_90Plus_MALE	Age >= 90 MALE	1	0.0302745452	0.2444914277	0.1238266124	0.9015
AIDS	Acquired immune deficiency syndrome	1	0.4971713187	0.5715292741	0.8698965060	0.3844
ALCOHOL	Alcohol abuse	1	0.5632866719	0.1378215744	4.0870718133	<.0001
ANEMDEF	Deficiency anemias	1	0.2169411230	0.0711707262	3.0481791417	0.0023
ARTH	Rheumatoid arthritis/collagen vas	1	-0.0215435538	0.1227780763	-0.1754674323	0.8607
BLDLOSS	Chronic blood loss anemia	1	0.2574013065	0.2294962163	1.1215928115	0.2620
CHF	Congestive heart failure	1	0.6341707567	0.0727165298	8.7211361538	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
CHRNLUNG	Chronic pulmonary disease	1	0.2301745375	0.0617695427	3.7263435577	0.0002
COAG	Coagulopathy	1	0.2419764304	0.1090970040	2.2179933597	0.0266
DEPRESS	Depression	1	0.2181346301	0.0709154905	3.0759799958	0.0021
DM	Diabetes w/o chronic complications	1	-0.1909064800	0.0905949269	-2.1072535341	0.0351
DMCX	Diabetes w/ chronic complications	1	0.0323285359	0.0733595741	0.4406859821	0.6594
DRUG	Drug abuse	1	0.3712123440	0.1732929565	2.1421086671	0.0322
HTN_C	Hypertension	1	-0.1328405876	0.0662908563	-2.0039051403	0.0451
HYPOTHY	Hypothyroidism	1	-0.0549988642	0.0695935816	-0.7902864455	0.4294
LIVER	Liver disease	1	0.2438088549	0.1246894097	1.9553292894	0.0505
LYTES	Fluid and electrolyte disorders	1	0.2375357010	0.0673337624	3.5277354553	0.0004
NEURO	Neurological disease	1	0.3583058765	0.0788099970	4.5464521019	<.0001
OBESE	Obesity	1	-0.5146821937	0.0864969117	-5.9502956097	<.0001
PARA	Paralysis	1	-0.0122825843	0.1354759499	-0.0906624708	0.9278
PERIVASC	Peripheral vascular disease	1	-0.0958812954	0.0946843193	-1.0126417561	0.3112
PSYCH	Psychoses	1	0.2882362975	0.1395497818	2.0654729356	0.0389
PULMCIRC	Pulmonary circulation disease	1	0.5086162615	0.1217366586	4.1780041220	<.0001
VALVE	Valvular disease	1	0.1706987804	0.0944618722	1.8070653947	0.0708
WGHTLOSS	Weight loss	1	0.7074663959	0.0826310768	8.5617472647	<.0001
MDRG_107	Extracranial procedures	1	-2.106707548	0.9735541283	-2.1639346868	0.0305
MDRG_111	Degenerative nervous system disorders	1	0.4962300847	0.1388617235	3.5735555637	0.0004
MDRG_116	Transient ischemia	1	-2.765531037	0.9783308528	-2.8267850581	0.0047
MDRG_117	Nonspecific cerebrovascular disorders	1	-0.6344979143	0.3370120219	-1.8827159657	0.0597
MDRG_118	Cranial & peripheral nerve disorders	1	-1.274052624	0.6951215196	-1.8328487727	0.0668
MDRG_125	Other disorders of nervous system	1	-1.576043616	0.4966081788	-3.1736159064	0.0015
MDRG_403	Pulmonary embolism	1	-2.372499021	0.6926053735	-3.4254701327	0.0006
MDRG_408	Pulmonary edema & respiratory failure	1	-3.055238011	0.4997801741	-6.1131636850	<.0001
MDRG_409	Chronic obstructive pulmonary disease	1	-1.885374607	0.2388007729	-7.8951779927	<.0001
MDRG_410	Simple pneumonia & pleurisy	1	-2.329656056	0.2863584185	-8.1354550982	<.0001
MDRG_413	Bronchitis & asthma	1	-2.109430523	0.6908853464	-3.0532280557	0.0023
MDRG_416	Respiratory system diagnosis w ventilator support	1	-2.960488790	0.6997104167	-4.2310200322	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	-1.260364438	0.5577883525	-2.2595746798	0.0238
MDRG_507	Coronary bypass w/o ptca	1	-1.770913217	0.6928380776	-2.5560275540	0.0106
MDRG_509	Amputation for circ sys disorders exc upper limb & toe	1	-0.4525480927	0.4963394178	-0.9117714138	0.3619
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-1.075937065	0.2989857513	-3.5986232146	0.0003
MDRG_514	Other vascular procedures	1	-0.2744279991	0.2847440261	-0.9637708748	0.3352

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_519	Other circulatory system O.R procedures	1	0.0833521600	0.4492843175	0.1855220776	0.8528
MDRG_520	Acute myocardial infarction, discharged alive	1	-1.855526214	0.3335262280	-5.5633592155	<.0001
MDRG_522	Circulatory disorders except ami, w card cath	1	-2.154987599	0.5598115790	-3.8494873619	0.0001
MDRG_524	Heart failure & shock	1	-2.011723223	0.2101396877	-9.5732664536	<.0001
MDRG_527	Peripheral vascular disorders	1	-2.492926735	0.6904406770	-3.6106313230	0.0003
MDRG_529	Hypertension	1	-2.964879741	0.9778580934	-3.0320143187	0.0024
MDRG_531	Cardiac arrhythmia & conduction disorders	1	-2.657399293	0.4402215387	-6.0365044846	<.0001
MDRG_533	Syncope & collapse	1	-2.379659771	0.9771526456	-2.4352999315	0.0149
MDRG_535	Other circulatory system diagnoses	1	-2.159035802	0.5694754053	-3.7912713728	0.0001
MDRG_540	Endovascular cardiac valve replacement	1	-2.247824084	0.9499555775	-2.3662412610	0.0180
MDRG_542	Other major cardiovascular procedures	1	-1.515970417	0.6924392958	-2.1893188705	0.0286
MDRG_601	Stomach, esophageal & duodenal proc	1	-0.7266419332	0.4415982621	-1.6454818680	0.0999
MDRG_602	Major small & large bowel procedures	1	-1.652650334	0.3697034936	-4.4702048053	<.0001
MDRG_611	Other digestive system O.R procedures	1	-0.0551333096	0.4948698487	-0.1114097166	0.9113
MDRG_613	Major gastrointestinal disorders & peritoneal infections	1	-2.536666541	0.6944964532	-3.6525262726	0.0003
MDRG_614	Digestive malignancy	1	-1.821736175	0.9876536881	-1.8445090586	0.0651
MDRG_615	G.I. hemorrhage	1	-2.969972114	0.4375782375	-6.7872939282	<.0001
MDRG_619	G.I. obstruction	1	-2.456980441	0.5657630048	-4.3427732469	<.0001
MDRG_620	Esophagitis, gastroent & misc digest disorders	1	-3.623560243	0.6782522127	-5.3424967517	<.0001
MDRG_621	Other digestive system diagnoses	1	-3.376303230	0.9505336771	-3.5520080053	0.0004
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	-1.782973857	0.5682439100	-3.1376910963	0.0017
MDRG_708	Cirrhosis & alcoholic hepatitis	1	-2.745993237	0.9672561982	-2.8389512954	0.0045
MDRG_710	Disorders of pancreas except malignancy	1	-2.036769674	0.5655350477	-3.6014915117	0.0003
MDRG_711	Disorders of liver except malig,cirr,alc hepa	1	-2.727888085	0.9625987608	-2.8338786583	0.0046
MDRG_804	Bilateral or multiple major joint procs of lower extremity	1	1.1781975470	0.4128439748	2.8538567084	0.0043
MDRG_805	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis	1	1.4754858075	0.2089719806	7.0606872917	<.0001
MDRG_806	Revision of hip or knee replacement	1	1.6425684528	0.1505048710	10.9137228677	<.0001
MDRG_807	Major joint replacement or reattachment of lower extremity	1	0.7691217287	0.0843990051	9.1129241171	<.0001
MDRG_811	Hip & femur procedures except major joint	1	3.1472581563	0.1718838648	18.3103757857	<.0001
MDRG_812	Major joint/limb reattachment procedure of upper extremities	1	-2.405151357	0.9515834799	-2.5275253378	0.0115
MDRG_831	Pathological fractures & musculoskeletal & conn tiss malig	1	-0.2389306434	0.4081231498	-0.5854376149	0.5583
MDRG_834	Medical back problems	1	-2.549485248	0.9693208680	-2.6301767887	0.0085
MDRG_838	Aftercare, musculoskeletal system & connective tissue	1	0.4858727439	0.1852342392	2.6230180014	0.0087
MDRG_910	Cellulitis	1	-2.754289975	0.5635997683	-4.8869608013	<.0001
MDRG_1007	Diabetes	1	-3.499377231	0.9622662398	-3.6365998162	0.0003

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_1008	Misc disorders of nutrition,metabolism,fluids/electrolytes	1	-2.438427009	0.4403103332	-5.5379736174	<.0001
MDRG_1010	Endocrine disorders	1	-1.816271567	0.6961193124	-2.6091383112	0.0091
MDRG_1110	Renal failure	1	-2.686700060	0.3170948321	-8.4728598148	<.0001
MDRG_1113	Kidney & urinary tract infections	1	-2.750768183	0.3752413083	-7.3306646209	<.0001
MDRG_1118	Other kidney & urinary tract diagnoses	1	-1.758887363	0.4069117538	-4.3225277889	<.0001
MDRG_1204	Transurethral prostatectomy	1	-0.6331074674	0.9794044395	-0.6464208675	0.5180
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	0.9540619337	0.1156553980	8.2491777339	<.0001
MDRG_1807	Septicemia or severe sepsis w mv >96 hours	1	-1.544046699	0.4958004693	-3.1142501754	0.0018
MDRG_1808	Septicemia or severe sepsis w/o mv >96 hours	1	-2.638705145	0.2079550367	-12.6888253682	<.0001
MDRG_1911	Depressive neuroses	1	0.2698694168	0.4194300454	0.6434193730	0.5200
MDRG_2104	Other O.R procedures for injuries	1	0.5207820135	0.3508037581	1.4845394369	0.1377
MDRG_2303	Signs & symptoms	1	-1.012492443	0.3545253970	-2.8559094821	0.0043
MDRG_2304	Aftercare	1	-0.2315678348	0.3722823032	-0.6220221396	0.5339
TRNSFER	Transferred-in from another acute care facility	1	-0.0213818445	0.1095472297	-0.1951837998	0.8452

c-statistic=0.875

**Table 7. Risk Adjustment Coefficients for PSI 09 – Perioperative Hemorrhage or Hematoma Rate**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-5.973637503	0.0429574326	-139.0594628615	<.0001
Age_LT30	Age < 30	1	-0.4044066618	0.0811733889	-4.9820103246	<.0001
Age_30_34	30 <= Age <= 34	1	-0.2250935801	0.0811428454	-2.7740410005	0.0055
Age_35_39	35 <= Age <= 39	1	-0.1539424600	0.0732382799	-2.1019398636	0.0356
Age_40_44	40 <= Age <= 44	1	-0.1639232992	0.0689017287	-2.3790883390	0.0174
Age_45_49	45 <= Age <= 49	1	-0.0504045045	0.0570401167	-0.8836676261	0.3769
Age_50_54	50 <= Age <= 54	1	-0.0530641994	0.0559127192	-0.9490541708	0.3426
Age_55_59	55 <= Age <= 59	1	-0.0207973652	0.0553682579	-0.3756189200	0.7072
Age_60_64	60 <= Age <= 64	1	-0.0475622756	0.0532559239	-0.8930889214	0.3718
Age_70_74	70 <= Age <= 74	1	-0.1018576176	0.0535593566	-1.9017707448	0.0572
Age_75_79	75 <= Age <= 79	1	0.0177642451	0.0545736547	0.3255095376	0.7448
Age_80_84	80 <= Age <= 84	1	0.0100192914	0.0617408329	0.1622798221	0.8711
Age_85_89	85 <= Age <= 89	1	-0.0998661319	0.0745252367	-1.3400310593	0.1802
Age_90Plus	Age >= 90	1	-0.4634251076	0.1164289757	-3.9803245267	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0517130963	0.0491820850	1.0514620579	0.2930
Age_LT30_MALE	Age < 30 MALE	1	0.2152349259	0.1045512062	2.0586555988	0.0395
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.1308989465	0.1115522307	1.1734319049	0.2406
Age_35_39_MALE	35 <= Age <= 39 MALE	1	-0.1460795597	0.1092289810	-1.3373699750	0.1811
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.1014389670	0.0954062209	1.0632322093	0.2877
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.0365756779	0.0819260219	0.4464476250	0.6553
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0100568986	0.0787616019	0.1276878367	0.8984
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0336418863	0.0734377577	0.4581006744	0.6469
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0509865318	0.0689177245	0.7398174007	0.4594
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0937330669	0.0687695461	1.3630025531	0.1729
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0491516321	0.0715630951	0.6868293220	0.4922
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0236472191	0.0826104025	-0.2862498954	0.7747
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0195769046	0.1051762747	-0.1861342267	0.8523
Age_90Plus_MALE	Age >= 90 MALE	1	0.1015776213	0.1677183134	0.6056441852	0.5448
ALCOHOL	Alcohol abuse	1	0.0010125443	0.0527330740	0.0192013132	0.9847
ANEMDEF	Deficiency Anemias	1	-0.2144929586	0.0280651468	-7.6426807914	<.0001
ARTH	Rheumatoid arthritis/collagen vas	1	0.1322880254	0.0520721782	2.5404742036	0.0111
CHF	Congestive heart failure	1	0.2874551362	0.0369852896	7.7721477834	<.0001
DEPRESS	Depression	1	0.0177352023	0.0300547975	0.5900955530	0.5551

**AHRQ Quality Indicators™**  
**Patient Safety Indicators (PSI) Parameter Estimates**

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Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
DM	Diabetes w/o chronic complications	1	-0.1806306160	0.0300661837	-6.0077666525	<.0001
DMCX	Diabetes w/ chronic complications	1	-0.1596776706	0.0280955453	-5.6833803709	<.0001
DRUG	Drug abuse	1	-0.0038144827	0.0645668965	-0.0590779942	0.9529
HYPOTHY	Hypothyroidism	1	-0.0167452906	0.0294285665	-0.5690148250	0.5693
LIVER	Liver disease	1	0.1488807677	0.0458508983	3.2470632715	0.0012
LYTES	Fluid and electrolyte disorders	1	-0.0010389464	0.0274179621	-0.0378929095	0.9698
METS	Metastatic cancer	1	-0.0321182261	0.0555666359	-0.5780127867	0.5633
NEURO	Neurological disease	1	-0.0359356600	0.0435678146	-0.8248212650	0.4095
OBESE	Obesity	1	-0.0847435153	0.0249899152	-3.3911085571	0.0007
PARA	Paralysis	1	0.2537366779	0.0452520568	5.6071855309	<.0001
PERIVASC	Peripheral vascular disease	1	0.2224185619	0.0266909711	8.3331011370	<.0001
PSYCH	Psychoses	1	0.0295987826	0.0579071151	0.5111424142	0.6093
PULMCIRC	Pulmonary circulation disease	1	0.2160584346	0.0689823930	3.1320808867	0.0017
RENLF FAIL	Renal failure	1	0.1963998926	0.0302802148	6.4860798935	<.0001
TUMOR	Solid tumor w/out metastasis	1	0.1498694639	0.0530357805	2.8258180125	0.0047
ULCER	Peptic ulcer disease x bleeding	1	0.3885588181	0.0866820721	4.4825741788	<.0001
VALVE	Valvular disease	1	0.3407751805	0.0478082610	7.1279559980	<.0001
WGHTLOSS	Weight loss	1	0.3544987214	0.0373284962	9.4967319187	<.0001
MDC_3	Ear nose mouth and throat	1	1.4462117730	0.0718392340	20.1312248544	<.0001
MDC_4	Respiratory system	1	0.0866449976	0.1068783013	0.8106883857	0.4175
MDC_7	Hepatobiliary system and pancreas	1	0.0286345432	0.1136132925	0.2520351499	0.8010
MDC_10	Endocrine nutritional and metabolic	1	-0.3255383394	0.0751065325	-4.3343545290	<.0001
MDC_18	Infectious and Parasitic	1	0.1889701601	0.0837620990	2.2560342014	0.0241
MDC_21	Injuries poison and toxic	1	0.0495746584	0.0858710588	0.5773150941	0.5637
MDC_23	Factors influencing health	1	0.9332957059	1.0947566008	0.8525143445	0.3939
MDRG_102	Cranio w major dev impl/acute complex CNS pdx	1	-0.6266066120	0.1431678315	-4.3767276871	<.0001
MDRG_103	Craniotomy & endovascular intracranial procedures	1	0.5124041797	0.0707509849	7.2423610853	<.0001
MDRG_107	Extracranial procedures	1	1.0167469254	0.0518181757	19.6214342230	<.0001
MDRG_301	Cranial/facial procedures	1	-0.8637799807	0.1146440202	-7.5344529883	<.0001
MDRG_401	Major chest procedures	1	0.1562976833	0.1217435015	1.2838277304	0.1992
MDRG_402	Other resp system O.R procedures	1	-1.588044168	0.2214460101	-7.1712475999	<.0001
MDRG_501	Other heart assist system implant	1	1.3781104539	0.1267966082	10.8686697042	<.0001
MDRG_502	Perc cardiovasc proc w non-drug-eluting stent	1	-1.040667565	0.2130062299	-4.8856203217	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	1.5016102041	0.0519479034	28.9060790621	<.0001
MDRG_504	Cardiac defibrillator implant	1	-0.2491641653	0.1236560560	-2.0149774572	0.0439

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_505	Other cardiothoracic procedures	1	1.0833264704	0.0936784369	11.5643098525	<.0001
MDRG_507	Coronary bypass w/o ptca	1	0.9348482240	0.0490086894	19.0751524983	<.0001
MDRG_509	Amputation for circ sys disorders exc upper limb & toe	1	-0.1769360035	0.1115001150	-1.5868683492	0.1125
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-1.301450278	0.0712928865	-18.2549808395	<.0001
MDRG_514	Other vascular procedures	1	0.8218305210	0.0438180467	18.7555261691	<.0001
MDRG_540	Endovascular cardiac valve replacement	1	0.2988545770	0.0904562075	3.3038592394	0.0010
MDRG_542	Other major cardiovascular procedures	1	0.6801330338	0.0567524864	11.9841980062	<.0001
MDRG_543	Percutaneous intracardiac procedures	1	-0.7981645316	0.1620853974	-4.9243457123	<.0001
MDRG_601	Stomach, esophageal & duodenal proc	1	0.1216631588	0.0692536486	1.7567761598	0.0790
MDRG_602	Major small & large bowel procedures	1	-0.0189464590	0.0438698256	-0.4318790596	0.6658
MDRG_605	Appendectomy w complicated principal diag	1	-1.294854451	0.1945982969	-6.6539865542	<.0001
MDRG_606	Appendectomy w/o complicated principal diag	1	-0.8611060892	0.1461623079	-5.8914374147	<.0001
MDRG_701	Pancreas, liver & shunt procedures	1	0.4550608893	0.1408163425	3.2315914558	0.0012
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	-0.8937954924	0.1292324494	-6.9161847264	<.0001
MDRG_801	Combined anterior/posterior spinal fusion	1	-0.7081894512	0.1304750568	-5.4277765299	<.0001
MDRG_803	Spinal fusion except cervical	1	-0.9383890685	0.0813653645	-11.5330285084	<.0001
MDRG_804	Bilateral or multiple major joint procs of lower extremity	1	-4.144892890	1.0443252706	-3.9689673387	<.0001
MDRG_805	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis	1	0.0154179555	0.1021595199	0.1509203989	0.8800
MDRG_806	Revision of hip or knee replacement	1	-1.575244039	0.1624619783	-9.6960781518	<.0001
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-3.443233840	0.1179452061	-29.1935039358	<.0001
MDRG_808	Cervical spinal fusion	1	-0.2465884300	0.0719168024	-3.4288013605	0.0006
MDRG_810	Biopsies of musculoskeletal system & connective tissue	1	-1.875314353	0.3263981944	-5.7454801688	<.0001
MDRG_811	Hip & femur procedures except major joint	1	-2.529630137	0.1582743061	-15.9825697492	<.0001
MDRG_812	Major joint/limb reattachment procedure of upper extremities	1	-3.263874177	0.3201305891	-10.1954461345	<.0001
MDRG_814	Knee procedures w/o pdx of infection	1	-1.963901033	0.4273933048	-4.5950673795	<.0001
MDRG_816	Lower extrem & humer proc except hip,foot,femur	1	-2.583221813	0.2122335833	-12.1715977892	<.0001
MDRG_819	Soft tissue procedures	1	-0.6013184158	0.1578750918	-3.8088238559	0.0001
MDRG_824	Shoulder,elbow or forearm proc,exc major joint proc	1	-2.615468826	0.5198212451	-5.0314773608	<.0001
MDRG_825	Hand or wrist proc, except major thumb or joint proc	1	-2.325400440	0.6034333853	-3.8536158198	0.0001
MDRG_826	Other musculoskelet sys & conn tiss O.R proc	1	-0.6345750682	0.1094841262	-5.7960463356	<.0001
MDRG_902	Skin graft exc for skin ulcer or cellulitis	1	1.1403142971	0.1224822482	9.3100372787	<.0001
MDRG_903	Other skin, subcut tiss & breast proc	1	1.5227796095	0.0489222801	31.1265052604	<.0001
MDRG_904	Mastectomy for malignancy	1	1.6790762017	0.1085230582	15.4720686021	<.0001
MDRG_905	Breast biopsy, local excision & other breast procedures	1	1.5216255651	0.1048008605	14.5192086967	<.0001
MDRG_1003	O.R. procedures for obesity	1	-0.2259327713	0.1074955612	-2.1017869830	0.0356

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_1005	Thyroid, parathyroid & thyroglossal procedures	1	2.0291773099	0.1072238329	18.9246854477	<.0001
MDRG_1101	Kidney transplant	1	1.4455838610	0.1021204817	14.1556702085	<.0001
MDRG_1107	Transurethral procedures	1	-2.677170975	0.3452501635	-7.7542931425	<.0001
MDRG_1201	Major male pelvic procedures	1	-0.9147081411	0.1326656356	-6.8948385691	<.0001
MDRG_1709	Myeloprolif disord or poorly diff neopl w maj O.R proc	1	0.9254570243	0.1415950993	6.5359396562	<.0001
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	-0.4851022170	0.0949858848	-5.1070979446	<.0001
MDRG_2101	Wound debridements for injuries	1	0.4862819642	0.1671169151	2.9098309039	0.0036
MDRG_2301	O.R. proc w diagnoses of other contact w health services	1	-0.6510901963	1.1087209235	-0.5872444386	0.5570
MDRG_7701	Heart transplant or implant of heart assist system	1	2.7756524636	0.1188671836	23.3508726269	<.0001
MDRG_7702	Liver transplant	1	2.2910609409	0.2008994835	11.4040160829	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.1034228389	0.0357917726	2.8895701837	0.0039

c-statistic=0.785

**Table 8. Risk Adjustment Coefficients for PSI 10 – Postoperative Acute Kidney Injury Requiring Dialysis Rate**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-6.733977774	0.1020085228	-66.0138740590	<.0001
Age_LT30	Age < 30	1	-1.540335961	0.3533500043	-4.3592357224	<.0001
Age_30_34	30 <= Age <= 34	1	-2.209535795	0.5767732689	-3.8308567932	0.0001
Age_35_39	35 <= Age <= 39	1	-0.8320990064	0.2523892085	-3.2968882124	0.0010
Age_40_44	40 <= Age <= 44	1	-1.006035598	0.2394516477	-4.2014143891	<.0001
Age_45_49	45 <= Age <= 49	1	-1.034476880	0.2157727387	-4.7942890591	<.0001
Age_50_54	50 <= Age <= 54	1	-0.5669052384	0.1566819835	-3.6181903351	0.0003
Age_55_59	55 <= Age <= 59	1	-0.3522434658	0.1278703706	-2.7546918342	0.0059
Age_60_64	60 <= Age <= 64	1	-0.0586902899	0.1061045360	-0.5531364838	0.5802
Age_70_74	70 <= Age <= 74	1	0.0785928785	0.1018297269	0.7718068278	0.4402
Age_75_79	75 <= Age <= 79	1	0.1819394172	0.1015702822	1.7912662368	0.0733
Age_80_84	80 <= Age <= 84	1	0.1013068436	0.1129433125	0.8969707129	0.3697
Age_85_89	85 <= Age <= 89	1	-0.1094938955	0.1552837120	-0.7051215744	0.4807
Age_90Plus	Age >= 90	1	-1.218536090	0.3842543981	-3.1711701820	0.0015
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.2377496648	0.0915276752	2.5975713266	0.0094
Age_LT30_MALE	Age < 30 MALE	1	0.9523136699	0.4163573062	2.2872510120	0.0222
Age_30_34_MALE	30 <= Age <= 34 MALE	1	1.3639489618	0.6587981952	2.0703592870	0.0384
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.5001739949	0.3129726264	1.5981397500	0.1100
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.4649615946	0.2999914890	1.5499159532	0.1212
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.7652265623	0.2654529523	2.8827201035	0.0039
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.1936966258	0.1939032125	0.9989345886	0.3178
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0276186268	0.1674701264	-0.1649167369	0.8690
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.1262088572	0.1388056470	-0.9092487220	0.3632
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0879259666	0.1252675226	-0.7019055280	0.4827
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.1223351549	0.1310608258	-0.9334227384	0.3506
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.1629059637	0.1475504368	-1.1040696807	0.2696
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.2887861749	0.2018342249	-1.4308087495	0.1525
Age_90Plus_MALE	Age >= 90 MALE	1	0.1894368215	0.5009121170	0.3781837473	0.7053
ANEMDEF	Deficiency Anemias	1	0.2414569649	0.0618679051	3.9027823016	<.0001
CHF	Congestive heart failure	1	1.4179013652	0.0820419827	17.2826316396	<.0001
CHRNLUNG	Chronic pulmonary disease	1	-0.0538433055	0.0456996389	-1.1781998008	0.2387
COAG	Coagulopathy	1	0.5505308674	0.0694084853	7.9317516447	<.0001

**AHRQ Quality Indicators™**  
**Patient Safety Indicators (PSI) Parameter Estimates**

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Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
DEPRESS	Depression	1	-0.3286327907	0.0716809643	-4.5846591750	<.0001
DM	Diabetes w/o chronic complications	1	-0.5433931914	0.0814551293	-6.6710739513	<.0001
DMCX	Diabetes w/ chronic complications	1	0.2971572606	0.0514564486	5.7749275078	<.0001
HTN_C	Hypertension	1	-0.4140428253	0.0435022077	-9.5177428338	<.0001
LIVER	Liver disease	1	0.3712712958	0.0835027836	4.4462146024	<.0001
LYMPH	Lymphoma	1	0.2278542141	0.2179520776	1.0454326321	0.2958
LYTES	Fluid and electrolyte disorders	1	0.7713131782	0.0563071000	13.6983289446	<.0001
METS	Metastatic cancer	1	0.0804881086	0.1095615531	0.7346382582	0.4626
NEURO	Neurological disease	1	-0.3377567982	0.1060634684	-3.1844781548	0.0015
OBESE	Obesity	1	0.4343435890	0.0464209774	9.3566230887	<.0001
PERIVASC	Peripheral vascular disease	1	0.2600682709	0.0562335519	4.6247882656	<.0001
PSYCH	Psychoses	1	-0.7240583967	0.1994137746	-3.6309347140	0.0003
PULMCIRC	Pulmonary circulation disease	1	0.7231024204	0.1166211849	6.2004379457	<.0001
RENLFAIL	Renal failure	1	1.3706242158	0.0550198596	24.9114451901	<.0001
ULCER	Peptic ulcer Disease x bleeding	1	0.6995927564	0.1673198474	4.1811701788	<.0001
VALVE	Valvular disease	1	0.4017150472	0.0968982960	4.1457390264	<.0001
WGHTLOSS	Weight loss	1	0.9840283259	0.0719924377	13.6684957100	<.0001
MDRG_103	Craniotomy & endovascular intracranial procedures	1	-2.548633369	0.4348329949	-5.8611775063	<.0001
MDRG_106	Carotid artery stent procedure	1	-2.310093150	0.7202753211	-3.2072362920	0.0013
MDRG_107	Extracranial procedures	1	-2.568264567	0.3201746200	-8.0214495662	<.0001
MDRG_301	Cranial/facial procedures	1	-3.006748973	1.0248360754	-2.9338828374	0.0033
MDRG_401	Major chest procedures	1	-0.7415420963	0.1542564521	-4.8072031096	<.0001
MDRG_501	Other heart assist system implant	1	2.5764884803	0.1852931368	13.9049320684	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	1.2504332376	0.0753368301	16.5979008685	<.0001
MDRG_505	Other cardiothoracic procedures	1	0.7085444354	0.1550731504	4.5690980916	<.0001
MDRG_506	Coronary bypass w ptca	1	1.8105858824	0.3512005859	5.1554181714	<.0001
MDRG_507	Coronary bypass w/o ptca	1	0.5948650857	0.0867260688	6.8591266001	<.0001
MDRG_509	Amputation for circ sys disorders exc upper limb & toe	1	-1.127082524	0.2737883194	-4.1166201915	<.0001
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-0.8102367111	0.2197547178	-3.6870048535	0.0002
MDRG_540	Endovascular cardiac valve replacement	1	-0.3457240902	0.1206449973	-2.8656313804	0.0042
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	0.7224087747	0.1087312171	6.6439868303	<.0001
MDRG_542	Other major cardiovascular procedures	1	0.6881094270	0.1165132455	5.9058472177	<.0001
MDRG_601	Stomach, esophageal & duodenal proc	1	-0.1559285053	0.1236981049	-1.2605569455	0.2075
MDRG_602	Major small & large bowel procedures	1	-0.4823527105	0.0846397999	-5.6988876515	<.0001
MDRG_610	Hernia procedures except inguinal & femoral	1	-1.072329327	0.2577925662	-4.1596596162	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_701	Pancreas, liver & shunt procedures	1	0.4870572433	0.1352526168	3.6010929394	0.0003
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	-1.990448502	0.4926544268	-4.0402529527	<.0001
MDRG_801	Combined anterior/posterior spinal fusion	1	-1.296036289	0.2550918916	-5.0806643868	<.0001
MDRG_803	Spinal fusion except cervical	1	-1.575482861	0.1589726532	-9.9104017492	<.0001
MDRG_804	Bilateral or multiple major joint procs of lower extremity	1	-2.553765723	0.6124810970	-4.1695421066	<.0001
MDRG_805	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis	1	-0.9839535607	0.2297621727	-4.2824871868	<.0001
MDRG_806	Revision of hip or knee replacement	1	-1.980673288	0.2637727104	-7.5090151889	<.0001
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-3.170746067	0.1460957742	-21.7032017766	<.0001
MDRG_808	Cervical spinal fusion	1	-2.396143705	0.3015627902	-7.9457538642	<.0001
MDRG_811	Hip & femur procedures except major joint	1	-2.032439513	0.6045086450	-3.3621347349	0.0008
MDRG_812	Major joint/limb reattachment procedure of upper extremities	1	-4.838091570	0.8072259435	-5.9934787881	<.0001
MDRG_815	Back & neck proc exc spinal fusion or disc device/neurostim	1	-2.207810880	0.3880849671	-5.6889884094	<.0001
MDRG_816	Lower extrem & humer proc except hip,foot,femur	1	-2.191514767	0.4419557811	-4.9586742848	<.0001
MDRG_819	Soft tissue procedures	1	-2.257009276	0.6782646734	-3.3276232191	0.0009
MDRG_826	Other musculoskelet sys & conn tiss O.R proc	1	-2.615458108	0.4767964539	-5.4854814597	<.0001
MDRG_903	Other skin, subcut tiss & breast proc	1	-1.519964904	0.3687969291	-4.1214142085	<.0001
MDRG_1002	Amputat of lower limb for endocrine,nutrit,& metabol dis	1	-2.331311380	0.5769931642	-4.0404488736	<.0001
MDRG_1003	O.R. procedures for obesity	1	-1.703968958	0.2360016569	-7.2201567601	<.0001
MDRG_1102	Major bladder procedures	1	0.3013691167	0.1804289096	1.6702928445	0.0949
MDRG_1201	Major male pelvic procedures	1	-1.539010674	0.2657806703	-5.7905289803	<.0001
MDRG_1304	Uterine & adnexa proc for non-malignancy	1	-2.381917067	0.3652890092	-6.5206371036	<.0001
MDRG_2104	Other O.R procedures for injuries	1	-0.2123994727	0.2099730844	-1.0115557109	0.3118
MDRG_7701	Heart transplant or implant of heart assist system	1	2.4433090194	0.2082833410	11.7306982287	<.0001
MDRG_7702	Liver transplant	1	1.7029152582	0.3185550073	5.3457494590	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.2611180735	0.1201407528	2.1734346378	0.0297

c-statistic=0.921

**Table 9. Risk Adjustment Coefficients for PSI 11 – Postoperative Respiratory Failure Rate**

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
Intercept	Intercept	1	-5.915798644	0.0411024147	20715.3413557699	<.0001
Age_LT30	Age < 30	1	-0.6353563599	0.0996824468	40.6253750968	<.0001
Age_30_34	30 <= Age <= 34	1	-0.8549147275	0.1170232945	53.3704613139	<.0001
Age_35_39	35 <= Age <= 39	1	-0.7895874287	0.0944218573	69.9286867984	<.0001
Age_40_44	40 <= Age <= 44	1	-0.5088257283	0.0745360589	46.6020771845	<.0001
Age_45_49	45 <= Age <= 49	1	-0.4308840014	0.0628799637	46.9565491486	<.0001
Age_50_54	50 <= Age <= 54	1	-0.3665606436	0.0555011950	43.6201345948	<.0001
Age_55_59	55 <= Age <= 59	1	-0.1969391718	0.0487679762	16.3077764145	<.0001
Age_60_64	60 <= Age <= 64	1	-0.1056175682	0.0457743538	5.3238754149	0.0210
Age_70_74	70 <= Age <= 74	1	0.0626420964	0.0442949950	1.9999689463	0.1573
Age_75_79	75 <= Age <= 79	1	0.1980824705	0.0474678986	17.4137407957	<.0001
Age_80_84	80 <= Age <= 84	1	0.1712412972	0.0581876231	8.6607556008	0.0033
Age_85_89	85 <= Age <= 89	1	0.2927968707	0.0747004906	15.3633510231	<.0001
Age_90Plus	Age >= 90	1	0.0175043635	0.1369912643	0.0163270190	0.8983
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0627857790	0.0446634955	1.9761374798	0.1598
Age_LT30_MALE	Age < 30 MALE	1	0.5991261262	0.1306746426	21.0210243289	<.0001
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.3812191498	0.1679661720	5.1511686308	0.0232
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.2537820243	0.1414265778	3.2200280090	0.0727
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.2581584272	0.1103542050	5.4726142846	0.0193
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.1565789765	0.0927407970	2.8505276113	0.0913
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0757699395	0.0802056738	0.8924495965	0.3448
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0675271589	0.0696228635	0.9407044372	0.3321
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0063748563	0.0658228199	0.0093796758	0.9228
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0792013292	0.0633131226	1.5648671506	0.2110
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0973429304	0.0673139898	2.0912125042	0.1481
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1202740005	0.0818046111	2.1616627777	0.1415
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.2506406285	0.1029870975	5.9229396161	0.0149
Age_90Plus_MALE	Age >= 90 MALE	1	0.4760046384	0.1902139846	6.2623521109	0.0123
ALCOHOL	Alcohol abuse	1	0.4377658960	0.0563135052	60.4308536575	<.0001
ANEMDEF	Deficiency anemias	1	0.1029847998	0.0260880304	15.5834522056	<.0001
BLDLOSS	Chronic blood loss anemia	1	0.0937006605	0.0843801508	1.2331182074	0.2668
CHF	Congestive heart failure	1	0.9360893641	0.0274637030	1161.7600375202	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
CHRNLUNG	Chronic pulmonary disease	1	0.4494656390	0.0207890211	467.4389674109	<.0001
COAG	Coagulopathy	1	0.6904424283	0.0402880612	293.6988234477	<.0001
DEPRESS	Depression	1	0.1341781235	0.0252949135	28.1382465796	<.0001
DM	Diabetes w/o chronic complications	1	-0.0680151363	0.0282568595	5.7937981613	0.0161
DMCX	Diabetes w/ chronic complications	1	0.1871165864	0.0273387190	46.8455400735	<.0001
DRUG	Drug abuse	1	0.4413360539	0.0661714623	44.4833362022	<.0001
HTN_C	Hypertension	1	0.1338844181	0.0210582407	40.4218231899	<.0001
HYPOTHY	Hypothyroidism	1	0.0159152485	0.0256907720	0.3837713406	0.5356
LIVER	Liver disease	1	0.2510476858	0.0403677614	38.6761390823	<.0001
LYTES	Fluid and electrolyte disorders	1	0.8718828095	0.0261447501	1112.1087053064	<.0001
METS	Metastatic cancer	1	0.3255501399	0.0409225491	63.2864033485	<.0001
NEURO	Neurological disease	1	0.3755415165	0.0367280807	104.5488944184	<.0001
OBESE	Obesity	1	0.4868304723	0.0206458759	556.0180408618	<.0001
PARA	Paralysis	1	0.7845338368	0.0453451019	299.3385117753	<.0001
PERIVASC	Peripheral vascular disease	1	0.1599330263	0.0354688028	20.3321474704	<.0001
PSYCH	Psychoses	1	0.3564226564	0.0520554072	46.8812204476	<.0001
PULMCIRC	Pulmonary circulation disease	1	0.7215016589	0.0509102022	200.8468494257	<.0001
RENLFAIL	Renal failure	1	0.3545452419	0.0276065495	164.9373700952	<.0001
TUMOR	Solid tumor w/out metastasis	1	0.1797601269	0.0508467788	12.4985560185	0.0004
ULCER	Peptic ulcer disease x bleeding	1	0.6056598571	0.0775894608	60.9329370316	<.0001
VALVE	Valvular disease	1	0.1252331569	0.0390739532	10.2722115040	0.0014
WGHTLOSS	Weight loss	1	0.9385823165	0.0317924583	871.5584418723	<.0001
MDRG_102	Crano w major dev impl/acute complex CNS pdx	1	1.5217791360	0.1261652944	145.4867492782	<.0001
MDRG_103	Craniotomy & endovascular intracranial procedures	1	0.8217270985	0.0470151702	305.4774751221	<.0001
MDRG_107	Extracranial procedures	1	-0.1954974781	0.0627372118	9.7102830923	0.0018
MDRG_601	Stomach, esophageal & duodenal proc	1	1.0216386612	0.0456536926	500.7752066611	<.0001
MDRG_602	Major small & large bowel procedures	1	0.7291651677	0.0306043277	567.6571875524	<.0001
MDRG_604	Peritoneal adhesiolysis	1	0.9708457582	0.0717294116	183.1917611285	<.0001
MDRG_610	Hernia procedures except inguinal & femoral	1	0.7388421255	0.0600645075	151.3099393966	<.0001
MDRG_701	Pancreas, liver & shunt procedures	1	1.1639224268	0.0513127806	514.5137359998	<.0001
MDRG_704	Cholecystectomy except by laparoscope w/o C.D.E.	1	0.7813582990	0.1130482550	47.7719240039	<.0001
MDRG_801	Combined anterior/posterior spinal fusion	1	0.6506660785	0.0557493325	136.2187805019	<.0001
MDRG_802	Spinal fus exc cerv w spinal curv/malig/infec or ext fus	1	1.1108795487	0.0728325088	232.6394719100	<.0001
MDRG_803	Spinal fusion except cervical	1	-0.3276422540	0.0469030231	48.7975636159	<.0001
MDRG_804	Bilateral or multiple major joint procs of lower extremity	1	-1.174144767	0.1785339259	43.2515607221	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
MDRG_805	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis	1	-0.5686866633	0.1066067361	28.4561926722	<.0001
MDRG_806	Revision of hip or knee replacement	1	-0.9956640680	0.0848870424	137.5760588321	<.0001
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-1.497475915	0.0377867454	1570.5100417366	<.0001
MDRG_808	Cervical spinal fusion	1	0.0142441181	0.0531745007	0.0717570026	0.7888
MDRG_812	Major joint/limb reattachment procedure of upper extremities	1	-1.113546163	0.0783793965	201.8425024096	<.0001
MDRG_815	Back & neck proc exc spinal fusion or disc device/neurostim	1	-0.7088932523	0.1031818597	47.2014111979	<.0001
MDRG_816	Lower extrem & humer proc except hip,foot,femur	1	-0.7686892464	0.1202752914	40.8459287520	<.0001
MDRG_826	Other musculoskelet sys & conn tiss O.R proc	1	-0.5839041144	0.0969982760	36.2372339493	<.0001
MDRG_903	Other skin, subcut tiss & breast proc	1	-0.8093787240	0.1397810428	33.5279511976	<.0001
MDRG_1003	O.R. procedures for obesity	1	-0.5906129805	0.0701637356	70.8566422907	<.0001
MDRG_1102	Major bladder procedures	1	0.9618889814	0.0702775069	187.3342588426	<.0001
MDRG_1103	Kidney & ureter procedures for neoplasm	1	0.7330026008	0.0524280689	195.4714384567	<.0001
MDRG_1201	Major male pelvic procedures	1	-0.8006793953	0.1003292488	63.6886706191	<.0001
MDRG_1302	Uterine & adnexa proc for ovarian or adnexal malignancy	1	0.5642391907	0.1133386856	24.7839287629	<.0001
MDRG_1304	Uterine & adnexa proc for non-malignancy	1	-0.5491825724	0.0780083057	49.5623400335	<.0001
MDRG_1709	Myeloprolif disord or poorly diff neopl w maj O.R proc	1	1.2855142267	0.1077685816	142.2883818782	<.0001
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	1.2285940750	0.0614761665	399.3956003354	<.0001
MDRG_2104	Other O.R procedures for injuries	1	0.5966632494	0.0792922439	56.6235588545	<.0001
MDRG_7702	Liver transplant	1	1.6449140050	0.1285249242	163.7991651688	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.3695070669	0.0576934767	41.0196617593	<.0001

c-statistic=0.833

**Table 10. Risk Adjustment Coefficients for PSI 12 – Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-5.945685973	0.0454188783	-130.9078118806	<.0001
Age_LT30	Age < 30	1	-0.5697946508	0.0733459050	-7.7685952693	<.0001
Age_30_34	30 <= Age <= 34	1	-0.5923224917	0.0884763796	-6.6946963059	<.0001
Age_35_39	35 <= Age <= 39	1	-0.4809366292	0.0739068555	-6.5073344770	<.0001
Age_40_44	40 <= Age <= 44	1	-0.3531303739	0.0631613010	-5.5909293843	<.0001
Age_45_49	45 <= Age <= 49	1	-0.3421106108	0.0585034249	-5.8477022762	<.0001
Age_50_54	50 <= Age <= 54	1	-0.2432643926	0.0511810878	-4.7530133270	<.0001
Age_55_59	55 <= Age <= 59	1	-0.1319845804	0.0420741160	-3.1369543320	0.0017
Age_60_64	60 <= Age <= 64	1	-0.0379186187	0.0393860649	-0.9627419950	0.3357
Age_70_74	70 <= Age <= 74	1	0.1242026016	0.0369817558	3.3584830887	0.0008
Age_75_79	75 <= Age <= 79	1	0.2081509267	0.0384311613	5.4162018391	<.0001
Age_80_84	80 <= Age <= 84	1	0.1983630138	0.0414329855	4.7875626453	<.0001
Age_85_89	85 <= Age <= 89	1	0.1161210196	0.0488624213	2.3764892647	0.0175
Age_90Plus	Age >= 90	1	0.0393118888	0.0580288449	0.6774542710	0.4981
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0887672023	0.0376712006	2.3563677549	0.0185
Age_LT30_MALE	Age < 30 MALE	1	0.0537066695	0.0951745182	0.5642967309	0.5726
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.2795668980	0.1176495177	2.3762689684	0.0175
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.1806051156	0.1013620842	1.7817817878	0.0748
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.1864845463	0.0856272665	2.1778640614	0.0294
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.1777973078	0.0758842687	2.3430061430	0.0191
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.1143066799	0.0648925777	1.7614754094	0.0782
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0568481289	0.0596158277	0.9535744305	0.3403
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0197439681	0.0531063708	0.3717815359	0.7101
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0567423836	0.0526080561	-1.0785873450	0.2808
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.1101780921	0.0547730151	-2.0115396593	0.0443
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0999243681	0.0593095882	-1.6847928160	0.0920
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.1157490517	0.0733294163	-1.5784804724	0.1145
Age_90Plus_MALE	Age >= 90 MALE	1	-0.1542373581	0.1044032017	-1.4773240248	0.1396
ALCOHOL	Alcohol abuse	1	-0.0506890926	0.0405588711	-1.2497658630	0.2114
ANEMDEF	Deficiency Anemias	1	-0.0021286747	0.0218703798	-0.0973313992	0.9225
BLDLOSS	Chronic blood loss anemia	1	0.2092183963	0.0598767811	3.4941490227	0.0005

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
CHF	Congestive heart failure	1	0.3047091017	0.0258163370	11.8029564635	<.0001
CHRNLUNG	Chronic pulmonary disease	1	-0.0415006638	0.0191327645	-2.1690887245	0.0301
COAG	Coagulopathy	1	0.3103800778	0.0267794275	11.5902432015	<.0001
DEPRESS	Depression	1	-0.0623000201	0.0208384771	-2.9896628210	0.0028
DM	Diabetes w/o chronic complications	1	-0.2125054480	0.0242724687	-8.7549993467	<.0001
DMCX	Diabetes w/ chronic complications	1	-0.1927147186	0.0235620494	-8.1790304106	<.0001
DRUG	Drug abuse	1	0.0965743685	0.0422369667	2.2864892077	0.0222
HTN_C	Hypertension	1	-0.0948519511	0.0174896051	-5.4233329047	<.0001
HYPOTHY	Hypothyroidism	1	-0.1493193701	0.0225961684	-6.6081721152	<.0001
LYMPH	Lymphoma	1	0.3662074251	0.0667407081	5.4870173759	<.0001
LYTES	Fluid and electrolyte disorders	1	0.3839530468	0.0209796948	18.3011741046	<.0001
METS	Metastatic cancer	1	0.7214448198	0.0295086998	24.4485464788	<.0001
NEURO	Neurological disease	1	0.0749123116	0.0278302714	2.6917564153	0.0071
OBESE	Obesity	1	0.4225594102	0.0175994705	24.0097797135	<.0001
PARA	Paralysis	1	0.4833775719	0.0325714637	14.8405234630	<.0001
PERIVASC	Peripheral vascular disease	1	0.0674811232	0.0279005323	2.4186321100	0.0156
PSYCH	Psychoses	1	0.1218881113	0.0433606679	2.8110293819	0.0049
PULMCIRC	Pulmonary circulation disease	1	0.7186572103	0.0394951595	18.1960832719	<.0001
RENLFAIL	Renal failure	1	-0.0598426473	0.0239401345	-2.4996788290	0.0124
TUMOR	Solid tumor w/out metastasis	1	0.2599557057	0.0375078251	6.9307059354	<.0001
ULCER	Peptic ulcer disease x bleeding	1	0.3598073338	0.0561019392	6.4134562747	<.0001
VALVE	Valvular disease	1	-0.0185878914	0.0345694221	-0.5376974869	0.5908
WGHTLOSS	Weight loss	1	0.6317273974	0.0268294093	23.5460792173	<.0001
MDC_1	Nervous System	1	0.8696696431	0.0620830070	14.0081752709	<.0001
MDC_3	Ear nose mouth And throat	1	-0.2318279578	0.1011735461	-2.2913890716	0.0219
MDC_4	Respiratory system	1	0.8124654683	0.0672695713	12.0777560059	<.0001
MDC_5	Circulatory system	1	0.1551535674	0.0471535397	3.2903906779	0.0010
MDC_6	Digestive system	1	0.4172552440	0.0584889088	7.1339208179	<.0001
MDC_7	Hepatobiliary system and pancreas	1	0.5988007649	0.0727923901	8.2261451197	<.0001
MDC_9	Skin subcutaneous and breast	1	-0.6855920550	0.0954430099	-7.1832610466	<.0001
MDC_10	Endocrine nutritional and metabolic	1	-0.5602961936	0.0789767615	-7.0944437676	<.0001
MDC_12	Male reproductive system	1	-0.3803654535	0.1361341611	-2.7940485366	0.0052
MDC_13	Female reproductive system	1	0.5877424723	0.0674595589	8.7125157964	<.0001
MDC_17	Myeloproliferative dds	1	0.7061268542	0.0643277175	10.9770233094	<.0001
MDC_18	Infectious and Parasitic	1	0.9172832248	0.0528219976	17.3655534802	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDC_21	Injuries poison and toxic	1	0.3721592651	0.0597585380	6.2277170378	<.0001
MDC_24	Multiple significant trauma	1	1.8417828066	0.0577347253	31.9007806413	<.0001
MDRG_102	Cranio w major dev impl/acute complex CNS pdx	1	-0.2321835770	0.0943040120	-2.4620752821	0.0138
MDRG_103	Craniotomy & endovascular intracranial procedures	1	-0.5907991367	0.0838522718	-7.0457141318	<.0001
MDRG_105	Ventricular shunt procedures	1	-0.8631576509	0.1819344875	-4.7443322210	<.0001
MDRG_106	Carotid artery stent procedure	1	-2.154484029	0.3241886148	-6.6457732657	<.0001
MDRG_107	Extracranial procedures	1	-3.028060310	0.2087842330	-14.5032997334	<.0001
MDRG_301	Cranial/facial procedures	1	-0.7828907833	0.2331490556	-3.3578981528	0.0008
MDRG_401	Major chest procedures	1	-0.8310555552	0.0895074791	-9.2847610454	<.0001
MDRG_402	Other resp system O.R procedures	1	-0.9615125347	0.0876790795	-10.9662708625	<.0001
MDRG_501	Other heart assist system implant	1	0.4830010016	0.1269936578	3.8033474264	0.0001
MDRG_502	Perc cardiovasc proc w non-drug-eluting stent	1	-0.9100412365	0.1631166402	-5.5790827694	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	0.0217036356	0.0639334657	0.3394722217	0.7343
MDRG_504	Cardiac defibrillator implant	1	-0.8093600525	0.1280401888	-6.3211407310	<.0001
MDRG_506	Coronary bypass w ptca	1	0.7377921705	0.1673007560	4.4099751139	<.0001
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-1.591281613	0.0711243683	-22.3732266633	<.0001
MDRG_513	Perc cardiovasc proc w/o coronary artery stent	1	-1.635682662	0.2616086790	-6.2524021308	<.0001
MDRG_514	Other vascular procedures	1	-0.5226244458	0.0692190950	-7.5502929580	<.0001
MDRG_519	Other circulatory system O.R procedures	1	-0.7936241882	0.1497067987	-5.3011900255	<.0001
MDRG_540	Endovascular cardiac valve replacement	1	-1.138238390	0.1365835186	-8.3336437817	<.0001
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	-0.4210359473	0.1113440890	-3.7813946918	0.0002
MDRG_542	Other major cardiovascular procedures	1	0.1092951825	0.0781993192	1.3976487728	0.1622
MDRG_543	Percutaneous intracardiac procedures	1	-0.9784248247	0.1459732348	-6.7027686670	<.0001
MDRG_601	Stomach, esophageal & duodenal proc	1	0.1417870440	0.0667972118	2.1226491385	0.0338
MDRG_602	Major small & large bowel procedures	1	-0.0239500397	0.0561615981	-0.4264486862	0.6698
MDRG_604	Peritoneal adhesiolysis	1	0.0745939794	0.0783058097	0.9525982767	0.3408
MDRG_605	Appendectomy w complicated principal diag	1	-1.539304473	0.1767476769	-8.7090506621	<.0001
MDRG_606	Appendectomy w/o complicated principal diag	1	-1.885397509	0.2025828818	-9.3067957783	<.0001
MDRG_608	Anal & stomal procedures	1	-1.816478885	0.3591707186	-5.0574247574	<.0001
MDRG_609	Inguinal & femoral hernia procedures	1	-0.9603120386	0.1811254542	-5.3019165255	<.0001
MDRG_611	Other digestive system O.R procedures	1	-0.2135550666	0.0927328012	-2.3029075349	0.0213
MDRG_701	Pancreas, liver & shunt procedures	1	-0.1059367644	0.0926999948	-1.1427914821	0.2531
MDRG_704	Cholecystectomy except by laparoscope w/o C.D.E.	1	-0.8617495519	0.1624709084	-5.3040237203	<.0001
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	-1.962860001	0.1047652407	-18.7357943065	<.0001
MDRG_801	Combined anterior/posterior spinal fusion	1	0.6374386038	0.0810606248	7.8637267568	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_802	Spinal fus exc cerv w spinal curv/malig/infec or ext fus	1	1.3086703336	0.0755987173	17.3107478591	<.0001
MDRG_803	Spinal fusion except cervical	1	0.0787736274	0.0571094296	1.3793453716	0.1678
MDRG_804	Bilateral or multiple major joint procs of lower extremity	1	0.6609238861	0.1085814355	6.0868958220	<.0001
MDRG_805	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis	1	0.2518967145	0.0778104701	3.2373113046	0.0012
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-0.3392426828	0.0415456236	-8.1655455748	<.0001
MDRG_808	Cervical spinal fusion	1	-0.7346495773	0.0846689725	-8.6767272046	<.0001
MDRG_811	Hip & femur procedures except major joint	1	0.4658770664	0.0439774241	10.5935505708	<.0001
MDRG_812	Major joint/limb reattachment procedure of upper extremities	1	-1.140981654	0.1122979474	-10.1603072946	<.0001
MDRG_814	Knee procedures w/o pdx of infection	1	0.2616784977	0.1329985994	1.9675282208	0.0491
MDRG_816	Lower extrem & humer proc except hip,foot,femur	1	-0.2101258085	0.0698374601	-3.0087836555	0.0026
MDRG_820	Foot procedures	1	-1.123664319	0.2589409899	-4.3394609682	<.0001
MDRG_826	Other musculoskelet sys & conn tiss O.R proc	1	-0.1970530603	0.0812510070	-2.4252383757	0.0153
MDRG_903	Other skin, subcut tiss & breast proc	1	-0.6122075664	0.1730187466	-3.5383886345	0.0004
MDRG_1003	O.R. procedures for obesity	1	-1.177683513	0.1751797726	-6.7227140160	<.0001
MDRG_1102	Major bladder procedures	1	1.0016611752	0.0908609280	11.0241134087	<.0001
MDRG_1103	Kidney & ureter procedures for neoplasm	1	0.2308258537	0.0893497672	2.5833962521	0.0098
MDRG_1104	Kidney & ureter procedures for non-neoplasm	1	-0.4625245957	0.1280961357	-3.6107615063	0.0003
MDRG_1107	Transurethral procedures	1	-0.7035389408	0.1157413424	-6.0785448483	<.0001
MDRG_1109	Other kidney & urinary tract procedures	1	0.0435550678	0.1139884755	0.3821006251	0.7024
MDRG_1201	Major male pelvic procedures	1	-0.5567785824	0.1830216365	-3.0421462345	0.0023
MDRG_1304	Uterine & adnexa proc for non-malignancy	1	-1.301664895	0.1031107749	-12.6239463944	<.0001
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	-0.4670150828	0.0498461404	-9.3691322669	<.0001
MDRG_7701	Heart transplant or implant of heart assist system	1	0.8859893769	0.1396568727	6.3440442265	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.4899540535	0.0269477251	18.1816480746	<.0001

c-statistic=0.744

**Table 11. Risk Adjustment Coefficients for PSI 13 – Postoperative Sepsis Rate**

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
Intercept	Intercept	1	-5.097354485	0.0391337874	16966.2518845291	<.0001
Age_LT30	Age < 30	1	-0.4967464827	0.0941244017	27.8525616759	<.0001
Age_30_34	30 <= Age <= 34	1	-0.7159696606	0.1157548349	38.2570042400	<.0001
Age_35_39	35 <= Age <= 39	1	-0.5346394508	0.0912286817	34.3446587588	<.0001
Age_40_44	40 <= Age <= 44	1	-0.6433855773	0.0868256175	54.9094230778	<.0001
Age_45_49	45 <= Age <= 49	1	-0.3663821013	0.0685243157	28.5876912806	<.0001
Age_50_54	50 <= Age <= 54	1	-0.2938397381	0.0609221328	23.2632752052	<.0001
Age_55_59	55 <= Age <= 59	1	-0.1520348961	0.0540447900	7.9136874852	0.0049
Age_60_64	60 <= Age <= 64	1	-0.1617044585	0.0521566374	9.6122447554	0.0019
Age_70_74	70 <= Age <= 74	1	0.0722542026	0.0487673349	2.1951701147	0.1384
Age_75_79	75 <= Age <= 79	1	0.1646163559	0.0514493672	10.2373108720	0.0014
Age_80_84	80 <= Age <= 84	1	0.1255157683	0.0605365382	4.2989403007	0.0381
Age_85_89	85 <= Age <= 89	1	0.0693862907	0.0781045974	0.7892128473	0.3743
Age_90Plus	Age >= 90	1	-0.1958922084	0.1375273502	2.0288791278	0.1543
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.2359614441	0.0449549101	27.5503945754	<.0001
Age_LT30_MALE	Age < 30 MALE	1	-0.0277305712	0.1309156516	0.0448677704	0.8322
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.3061447261	0.1594915418	3.6844973787	0.0549
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0204048638	0.1350370943	0.0228329083	0.8799
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.2159013197	0.1209225082	3.1878384208	0.0742
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.0744000860	0.0949599197	0.6138555650	0.4333
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0662499610	0.0811951338	0.6657501151	0.4145
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0723442351	0.0719188084	1.0118657404	0.3145
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0591119032	0.0678676367	0.7586202510	0.3838
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0526703745	0.0634071789	0.6900108965	0.4062
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0532148100	0.0667363338	0.6358290151	0.4252
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1338069070	0.0778387657	2.9550523730	0.0856
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1128318574	0.1019413640	1.2250747658	0.2684
Age_90Plus_MALE	Age >= 90 MALE	1	0.2335527232	0.1820776458	1.6453436229	0.1996
ALCOHOL	Alcohol abuse	1	0.3089133535	0.0552991255	31.2059089349	<.0001
ANEMDEF	Deficiency anemias	1	0.0799902253	0.0256687716	9.7109936516	0.0018
CHF	Congestive heart failure	1	1.0854082912	0.0294366162	1359.5979377736	<.0001
CHRNLUNG	Chronic pulmonary disease	1	-0.0878517033	0.0229164291	14.6962483715	0.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
COAG	Coagulopathy	1	0.5637718870	0.0369097964	233.3047236371	<.0001
DM	Diabetes w/o chronic complications	1	-0.4812254060	0.0340806577	199.3798017961	<.0001
DMCX	Diabetes w/ chronic complications	1	0.1362828920	0.0269059113	25.6559008990	<.0001
DRUG	Drug abuse	1	0.4867763416	0.0707265330	47.3689966337	<.0001
HTN_C	Hypertension	1	-0.1944958192	0.0193700151	100.8232341145	<.0001
LIVER	Liver disease	1	0.2666932691	0.0403830740	43.6139439222	<.0001
LYTES	Fluid and electrolyte disorders	1	0.7436499726	0.0262966233	799.7185385460	<.0001
METS	Metastatic cancer	1	0.3767886976	0.0336780935	125.1701393755	<.0001
NEURO	Neurological disease	1	0.2157321536	0.0380024424	32.2260250188	<.0001
OBESE	Obesity	1	0.2400537143	0.0222722175	116.1689169299	<.0001
PARA	Paralysis	1	0.7355143962	0.0501554184	215.0535617640	<.0001
PERIVASC	Peripheral vascular disease	1	0.1985967820	0.0305645944	42.2189219699	<.0001
PSYCH	Psychoses	1	0.3953336380	0.0564795784	48.9941970945	<.0001
PULMCIRC	Pulmonary circulation disease	1	0.5606403191	0.0553542029	102.5811237427	<.0001
RENLFAIL	Renal failure	1	0.4100307508	0.0259393302	249.8707054547	<.0001
TUMOR	Solid tumor w/out metastasis	1	0.0787659464	0.0473042340	2.7725345248	0.0959
ULCER	Peptic ulcer Disease x bleeding	1	0.4617776184	0.0803204850	33.0531698180	<.0001
VALVE	Valvular disease	1	0.1405249488	0.0417605782	11.3233221828	0.0008
WGHTLOSS	Weight loss	1	1.4052588521	0.0266251536	2785.6619734816	<.0001
MDRG_103	Craniotomy & endovascular intracranial procedures	1	-1.132151626	0.0846311916	178.9568297644	<.0001
MDRG_104	Spinal procedures	1	-1.332158286	0.2143686950	38.6179248091	<.0001
MDRG_106	Carotid artery stent procedure	1	-2.593103031	0.4090306603	40.1909081225	<.0001
MDRG_107	Extracranial procedures	1	-2.552019135	0.1536848209	275.7438923776	<.0001
MDRG_301	Cranial/facial procedures	1	-1.213659918	0.1683446116	51.9751293442	<.0001
MDRG_402	Other resp system O.R procedures	1	-0.9821207245	0.1260955628	60.6638742151	<.0001
MDRG_501	Other heart assist system implant	1	1.2485232820	0.1286332895	94.2077299529	<.0001
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	-0.0266020019	0.0424752670	0.3922440871	0.5311
MDRG_507	Coronary bypass w/o ptca	1	-0.4915210172	0.0545968039	81.0493892295	<.0001
MDRG_511	Perc cardiovasc proc w drug-eluting stent	1	-1.680285874	0.1379594944	148.3416701584	<.0001
MDRG_514	Other vascular procedures	1	-1.048957998	0.0791898578	175.4595739819	<.0001
MDRG_540	Endovascular cardiac valve replacement	1	-1.371782222	0.0969703130	200.1210373264	<.0001
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	-0.5931462326	0.0841134475	49.7270487782	<.0001
MDRG_543	Percutaneous intracardiac procedures	1	-1.033541552	0.1594777364	42.0006254578	<.0001
MDRG_601	Stomach, esophageal & duodenal proc	1	0.5600912140	0.0384788105	211.8723306716	<.0001
MDRG_602	Major small & large bowel procedures	1	0.3900156182	0.0266202821	214.6538540601	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
MDRG_610	Hernia procedures except inguinal & femoral	1	-0.5801702302	0.0896604318	41.8706042474	<.0001
MDRG_701	Pancreas, liver & shunt procedures	1	0.6777283746	0.0481522082	198.0974667856	<.0001
MDRG_801	Combined anterior/posterior spinal fusion	1	-0.9497972098	0.0918785265	106.8645682904	<.0001
MDRG_803	Spinal fusion except cervical	1	-1.219021911	0.0547963406	494.9027991056	<.0001
MDRG_804	Bilateral or multiple major joint procs of lower extremity	1	-2.121522110	0.2244342850	89.3545602290	<.0001
MDRG_806	Revision of hip or knee replacement	1	-1.854951015	0.1131604794	268.7047433385	<.0001
MDRG_807	Major joint replacement or reattachment of lower extremity	1	-2.609853756	0.0457512821	3254.0618787972	<.0001
MDRG_808	Cervical spinal fusion	1	-2.025339406	0.1073884190	355.6974305004	<.0001
MDRG_811	Hip & femur procedures except major joint	1	-1.366749339	0.1602837680	72.7107556765	<.0001
MDRG_812	Major joint/limb reattachment procedure of upper extremities	1	-2.715590383	0.1384798179	384.5524267221	<.0001
MDRG_814	Knee procedures w/o pdx of infection	1	-1.919589369	0.3341098469	33.0094373181	<.0001
MDRG_815	Back & neck proc exc spinal fusion or disc device/neurostim	1	-1.923646073	0.1485023155	167.7968832490	<.0001
MDRG_816	Lower extrem & humer proc except hip,foot,femur	1	-1.882255004	0.1778270179	112.0369892156	<.0001
MDRG_819	Soft tissue procedures	1	-1.863792489	0.2895556195	41.4315440597	<.0001
MDRG_826	Other musculoskelet sys & conn tiss O.R proc	1	-1.601476102	0.1273225503	158.2086652670	<.0001
MDRG_903	Other skin, subcut tiss & breast proc	1	-2.090395844	0.2246978620	86.5484284500	<.0001
MDRG_1003	O.R. procedures for obesity	1	-1.782356069	0.0950037873	351.9711773390	<.0001
MDRG_1005	Thyroid, parathyroid & thyroglossal procedures	1	-1.720542566	0.2435245198	49.9166523424	<.0001
MDRG_1102	Major bladder procedures	1	0.8276180707	0.0602271185	188.8320718170	<.0001
MDRG_1104	Kidney & ureter procedures for non-neoplasm	1	0.0184359561	0.0727317849	0.0642514359	0.7999
MDRG_1201	Major male pelvic procedures	1	-1.698611374	0.1111079734	233.7209287605	<.0001
MDRG_1304	Uterine & adnexa proc for non-malignancy	1	-1.359473868	0.0879708948	238.8161585237	<.0001
MDRG_1709	Myeloprolif disord or poorly diff neopl w maj O.R proc	1	0.5795708229	0.1007995350	33.0594763574	<.0001
MDRG_7701	Heart transplant or implant of heart assist system	1	1.6506782038	0.1067585757	239.0668123735	<.0001
MDRG_7705	Allogeneic or autologous bone marrow transplant	1	3.3129008610	0.1856365659	318.4856198751	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.4464776384	0.0572120135	60.9010752138	<.0001

c-statistic=0.862

**Table 12. Risk Adjustment Coefficients for PSI 14 – Postoperative Wound Dehiscence Rate – Stratum A**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-7.164087937	0.1678340607	-42.6855425378	<.0001
Age_LT30	Age < 30	1	-0.7188620722	0.3851624751	-1.8663865736	0.0620
Age_30_34	30 <= Age <= 34	1	-0.7210689494	0.4348583232	-1.6581698245	0.0973
Age_35_39	35 <= Age <= 39	1	-0.5669539350	0.3445039486	-1.6457109919	0.0998
Age_40_44	40 <= Age <= 44	1	-1.044757537	0.3901609059	-2.6777606900	0.0074
Age_45_49	45 <= Age <= 49	1	-0.1531684223	0.2463587855	-0.6217290850	0.5341
Age_50_54	50 <= Age <= 54	1	-0.2232208097	0.2411387702	-0.9256944018	0.3546
Age_55_59	55 <= Age <= 59	1	-0.0042979807	0.2132659231	-0.0201531527	0.9839
Age_60_64	60 <= Age <= 64	1	0.1273426772	0.2041217854	0.6238563755	0.5327
Age_70_74	70 <= Age <= 74	1	0.1546924552	0.1935073908	0.7994136791	0.4241
Age_75_79	75 <= Age <= 79	1	0.0910010263	0.2176505358	0.4181061442	0.6759
Age_80_84	80 <= Age <= 84	1	0.2375580621	0.2312012750	1.0274946021	0.3042
Age_85_89	85 <= Age <= 89	1	-0.2344109872	0.3113761475	-0.7528225559	0.4516
Age_90Plus	Age >= 90	1	-0.0189736637	0.3846018486	-0.0493332618	0.9607
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.8216027997	0.1713023814	4.7962135312	<.0001
Age_LT30_MALE	Age < 30 MALE	1	0.3385747378	0.4303268742	0.7867850188	0.4314
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.3741432117	0.4934551581	0.7582111678	0.4483
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.2528009931	0.4080671235	0.6195083568	0.5356
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.3989846920	0.4588450487	0.8695412387	0.3846
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.2021903416	0.3156021838	-0.6406493743	0.5218
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.2138765774	0.2826607891	0.7566545686	0.4493
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.1336549891	0.2661749216	-0.5021321629	0.6156
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0956060244	0.2313220910	0.4133026119	0.6794
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.1039663765	0.2371941024	0.4383177130	0.6612
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.1316659616	0.2617361615	-0.5030484167	0.6149
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.2429750067	0.2910779564	-0.8347420386	0.4039
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.3160872369	0.3787949294	0.8344547731	0.4040
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0928823478	0.4808333719	-0.1931695119	0.8468
ALCOHOL	Alcohol abuse	1	0.5437989792	0.1199229277	4.5345705759	<.0001
ANEMDEF	Deficiency anemias	1	0.0584513939	0.0883118692	0.6618747224	0.5081
BLDLOSS	Chronic blood loss anemia	1	-0.4677227769	0.2906626758	-1.6091600874	0.1076
CHF	Congestive heart failure	1	0.2752050778	0.1050668416	2.6193333075	0.0088

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Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
CHRNLUNG	Chronic pulmonary disease	1	0.5305963908	0.0696077795	7.6226593402	<.0001
COAG	Coagulopathy	1	0.0843870364	0.1343023984	0.6283360341	0.5298
DEPRESS	Depression	1	-0.0442255292	0.1019020494	-0.4340003904	0.6643
DM	Diabetes w/o chronic complications	1	-0.6164994682	0.1177658183	-5.2349610206	<.0001
DMCX	Diabetes w/ chronic complications	1	-0.4496202697	0.1160688788	-3.8737366479	0.0001
HTN_C	Hypertension	1	-0.0775279392	0.0676531869	-1.1459613766	0.2518
HYPOTHY	Hypothyroidism	1	0.0808714197	0.0950638710	0.8507061502	0.3949
LIVER	Liver disease	1	0.1176473639	0.1266624091	0.9288261975	0.3530
LYTES	Fluid and electrolyte disorders	1	0.2124509783	0.0730903764	2.9066887980	0.0037
METS	Metastatic cancer	1	-0.1362905580	0.1196323280	-1.1392452209	0.2546
NEURO	Neurological disease	1	0.1598683562	0.1150155867	1.3899712268	0.1645
OBESE	Obesity	1	0.3177243941	0.0776003063	4.0943703602	<.0001
PARA	Paralysis	1	0.2511462715	0.1629076895	1.5416477405	0.1232
PERIVASC	Peripheral vascular disease	1	0.1275373827	0.0996007489	1.2804861827	0.2004
PSYCH	Psychoses	1	0.5583368918	0.1368914668	4.0786829507	<.0001
PULMCIRC	Pulmonary circulation disease	1	0.1788194074	0.1954364589	0.9149746589	0.3602
RENLFAIL	Renal failure	1	0.0393561457	0.1078528026	0.3649061012	0.7152
TUMOR	Solid tumor w/out metastasis	1	-0.3638149703	0.1626587226	-2.2366766719	0.0253
ULCER	Peptic ulcer disease x bleeding	1	0.3464287750	0.1879898299	1.8428059387	0.0654
WGHTLOSS	Weight loss	1	0.5012017120	0.0921035196	5.4417216011	<.0001
MDC_4	Respiratory system	1	1.1133558123	0.2465402336	4.5159193536	<.0001
MDC_8	Musculoskeletal and connective	1	-2.019927465	0.3284958263	-6.1490201782	<.0001
MDC_9	Skin subcutaneous and breast	1	-1.183321368	0.5820113118	-2.0331587107	0.0420
MDC_12	Male reproductive system	1	-0.3169809155	0.7043176735	-0.4500538996	0.6527
MDC_13	Female reproductive system	1	-0.4324185981	0.2662057421	-1.6243774261	0.1043
MDC_18	Infectious and Parasitic	1	0.4991080958	0.1186171213	4.2077238962	<.0001
MDC_21	Injuries poison and toxic	1	0.1093559996	0.2622915719	0.4169253276	0.6767
MDC_24	Multiple significant trauma	1	1.0522010489	0.1948249463	5.4007511302	<.0001
MDRG_401	Major chest procedures	1	-2.180772187	1.0185737702	-2.1410056404	0.0323
MDRG_514	Other vascular procedures	1	-1.694609781	0.9896369666	-1.7123549731	0.0868
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	0.5283797430	0.2647523977	1.9957505488	0.0460
MDRG_601	Stomach, esophageal & duodenal proc	1	0.1150473224	0.1505087850	0.7643894167	0.4446
MDRG_602	Major small & large bowel procedures	1	0.4476849710	0.0897660472	4.9872416658	<.0001
MDRG_604	Peritoneal adhesiolysis	1	-0.6108100501	0.2080788612	-2.9354738225	0.0033
MDRG_605	Appendectomy w complicated principal diag	1	0.3616496793	0.3110914394	1.1625189047	0.2450

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_609	Inguinal & femoral hernia procedures	1	-3.053482668	0.9905846092	-3.0825056632	0.0021
MDRG_610	Hernia procedures except inguinal & femoral	1	-2.488574114	0.4950803485	-5.0266065327	<.0001
MDRG_611	Other digestive system O.R procedures	1	-0.7763189962	0.4114729889	-1.8866827645	0.0592
MDRG_704	Cholecystectomy except by laparoscope w/o C.D.E.	1	-0.9953419258	0.3209492595	-3.1012438772	0.0019
MDRG_803	Spinal fusion except cervical	1	-1.543979087	0.7472318426	-2.0662651125	0.0388
MDRG_805	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis	1	3.3826129737	0.5960800396	5.6747630335	<.0001
MDRG_819	Soft tissue procedures	1	3.5804205729	0.5519127120	6.4872949923	<.0001
MDRG_826	Other musculoskelet sys & conn tiss O.R proc	1	-1.194677753	0.9924047711	-1.2038210490	0.2287
MDRG_1102	Major bladder procedures	1	0.9553340982	0.1638301005	5.8312489283	<.0001
MDRG_1201	Major male pelvic procedures	1	-1.213452244	0.9026960076	-1.3442534741	0.1789
MDRG_1304	Uterine & adnexa proc for non-malignancy	1	-0.7382168471	0.3380523858	-2.1837350604	0.0290
MDRG_2101	Wound debridements for injuries	1	1.2691919139	0.5194108435	2.4435221747	0.0145
TRNSFER	Transferred-in from another acute care facility	1	0.3790492248	0.1109747290	3.4156355083	0.0006

c-statistic=0.8

**Table 13. Risk Adjustment Coefficients for PSI 14 – Postoperative Wound Dehiscence Rate – Stratum B**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-11.25798965	0.5148615683	-21.8660516641	<.0001
Age_LT60	Age<60	1	-1.881608264	0.8471061109	-2.2212190892	0.0263
Age_70Plus	Age >= 70	1	-0.0894831953	0.5707466253	-0.1567826971	0.8754
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.2572919339	0.6274291859	-0.4100732636	0.6818
Age_LT60_MALE	Age<60 MALE	1	2.0966411563	1.0179699513	2.0596297107	0.0394
Age_70Plus_MALE	Age >= 70 MALE	1	0.8905408000	0.8006260964	1.1123054870	0.2660
ANEMDEF	Deficiency Anemias	1	0.2924186489	0.3772354865	0.7751620918	0.4382
CHF	Congestive heart failure	1	0.2846631967	0.5841759438	0.4872901730	0.6261
CHRNLUNG	Chronic pulmonary disease	1	0.4575483625	0.4024345208	1.1369510788	0.2556
DEPRESS	Depression	1	1.1752127613	0.3956634752	2.9702331277	0.0030
DM	Diabetes w/o chronic complications	1	-0.0895329709	0.5040820356	-0.1776158731	0.8590
DMCX	Diabetes w/ chronic complications	1	-0.4927608555	0.5790847872	-0.8509304102	0.3948
HTN_C	Hypertension	1	0.0003549472	0.3707390339	0.0009574044	0.9992
HYPOTHY	Hypothyroidism	1	-0.0460441069	0.5249653221	-0.0877088543	0.9301
LYTES	Fluid and electrolyte disorders	1	0.2604135233	0.4362662979	0.5969141430	0.5506
OBSESE	Obesity	1	0.2340709398	0.4117934395	0.5684183316	0.5698
PERIVASC	Peripheral vascular disease	1	0.3535929936	0.6167655868	0.5733020797	0.5664
RENLFAIL	Renal failure	1	0.4781660000	0.5072872435	0.9425941735	0.3459
VALVE	Valvular disease	1	-0.0797114642	0.7984034597	-0.0998385756	0.9205
WGHTLOSS	Weight loss	1	0.8402046988	0.5005082851	1.6787028781	0.0932
MDRG_602	Major small & large bowel procedures	1	2.2108958649	0.4342198187	5.0916512092	<.0001
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	0.9834085205	0.5060983405	1.9431174574	0.0520
MDRG_1103	Kidney & ureter procedures for neoplasm	1	2.0492794980	0.7112439373	2.8812611125	0.0040
TRNSFER	Transferred-in from another acute care facility	1	0.0042714928	0.7400367796	0.0057720006	0.9954

c-statistic=0.819

**Table 14. Risk Adjustment Coefficients for PSI 15 – Abdominopelvic Accidental Puncture/Laceration Rate**

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-7.089463907	0.0733030826	-96.7144035092	<.0001
Age_LT30	Age < 30	1	-0.7458868877	0.1408304391	-5.2963470991	<.0001
Age_30_34	30 <= Age <= 34	1	-0.8196634836	0.1601063991	-5.1194923395	<.0001
Age_35_39	35 <= Age <= 39	1	-0.4884116339	0.1206848893	-4.0469990625	<.0001
Age_40_44	40 <= Age <= 44	1	-0.3623901799	0.1036429409	-3.4965254443	0.0005
Age_45_49	45 <= Age <= 49	1	-0.2084902114	0.0904898860	-2.3040167307	0.0212
Age_50_54	50 <= Age <= 54	1	-0.2497404593	0.0955830025	-2.6128124551	0.0090
Age_55_59	55 <= Age <= 59	1	-0.2237856458	0.0849772259	-2.6334778923	0.0085
Age_60_64	60 <= Age <= 64	1	-0.1179881829	0.0812009832	-1.4530388459	0.1462
Age_70_74	70 <= Age <= 74	1	-0.0270889956	0.0809041286	-0.3348283461	0.7378
Age_75_79	75 <= Age <= 79	1	0.0393919963	0.0880785236	0.4472372455	0.6547
Age_80_84	80 <= Age <= 84	1	0.0115073014	0.0918071163	0.1253421506	0.9003
Age_85_89	85 <= Age <= 89	1	-0.0933743228	0.1097670711	-0.8506587799	0.3950
Age_90Plus	Age >= 90	1	-0.2205685571	0.1513084034	-1.4577416201	0.1449
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.2008513361	0.0863916947	-2.3248917255	0.0201
Age_LT30_MALE	Age < 30 MALE	1	0.2585523457	0.1936820416	1.3349319508	0.1819
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.4119913164	0.2438453730	1.6895597045	0.0911
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.1416079059	0.1935119827	0.7317784866	0.4643
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.1530067624	0.1795213664	0.8523039096	0.3940
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.2065130478	0.1412524580	1.4620138348	0.1437
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.2420175086	0.1364743224	1.7733556343	0.0762
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0759228277	0.1307051407	0.5808710144	0.5613
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.1127380502	0.1194446666	0.9438516878	0.3452
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0482009369	0.1250985780	0.3853036358	0.7000
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.1077399738	0.1324557340	0.8134036216	0.4160
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1696632386	0.1383283907	1.2265250671	0.2200
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0003746215	0.1725365538	0.0021712589	0.9983
Age_90Plus_MALE	Age >= 90 MALE	1	0.1592165013	0.2398831853	0.6637251423	0.5069
ANEMDEF	Deficiency anemias	1	-0.0686263491	0.0438299128	-1.5657423158	0.1174
ARTH	Rheumatoid arthritis/collagen vas	1	0.0522533750	0.0888454518	0.5881378726	0.5564
BLDLOSS	Chronic blood loss anemia	1	-0.1038881606	0.1104535696	-0.9405595580	0.3469
CHF	Congestive heart failure	1	0.2755747732	0.0547946132	5.0292311084	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
CHRNLUNG	Chronic pulmonary disease	1	-0.0246305929	0.0417024512	-0.5906269827	0.5548
COAG	Coagulopathy	1	0.1217157744	0.0643067116	1.8927382745	0.0584
DEPRESS	Depression	1	0.0618199563	0.0483270196	1.2792006782	0.2008
DM	Diabetes w/o chronic complications	1	-0.3972567725	0.0584651280	-6.7947644339	<.0001
DMCX	Diabetes w/ chronic complications	1	-0.1554144895	0.0568046222	-2.7359479505	0.0062
HTN_C	Hypertension	1	-0.1276036044	0.0358863880	-3.5557661734	0.0004
HYPOTHY	Hypothyroidism	1	-0.1130245260	0.0520312619	-2.1722426443	0.0298
LYTES	Fluid and electrolyte disorders	1	0.1722208868	0.0409685419	4.2037348336	<.0001
METS	Metastatic cancer	1	0.0081603913	0.0617413459	0.1321706097	0.8948
NEURO	Neurological disease	1	-0.0143167158	0.0624715324	-0.2291718364	0.8187
OBESE	Obesity	1	0.1553590238	0.0390356038	3.9799313629	<.0001
PARA	Paralysis	1	-0.0322295447	0.0916509788	-0.3516552159	0.7251
PERIVASC	Peripheral vascular disease	1	0.2248312524	0.0576213445	3.9018744565	<.0001
PSYCH	Psychoses	1	0.2393039238	0.0881650359	2.7142724029	0.0066
PULMCIRC	Pulmonary circulation disease	1	0.1111632544	0.0934454651	1.1896056615	0.2342
RENLF FAIL	Renal failure	1	0.1132332360	0.0537043509	2.1084555377	0.0350
TUMOR	Solid tumor w/out metastasis	1	-0.1522758116	0.0866735895	-1.7568882576	0.0789
ULCER	Peptic ulcer disease x bleeding	1	0.1852271928	0.0881360313	2.1016057797	0.0356
VALVE	Valvular disease	1	0.0417020045	0.0749755797	0.5562078297	0.5781
WGHTLOSS	Weight loss	1	0.6725751578	0.0449257831	14.9708054402	<.0001
MDRG_404	Respiratory infections & inflammations	1	-1.462710199	0.5062266664	-2.8894372748	0.0039
MDRG_507	Coronary bypass w/o ptca	1	1.3234346669	0.2566528293	5.1565169592	<.0001
MDRG_514	Other vascular procedures	1	0.0184286284	0.2020111292	0.0912258074	0.9273
MDRG_524	Heart failure & shock	1	-2.379955986	0.5990153077	-3.9731138004	<.0001
MDRG_540	Endovascular cardiac valve replacement	1	2.1582121605	0.2433318293	8.8694198659	<.0001
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	0.3177427539	0.1701928608	1.8669570069	0.0619
MDRG_542	Other major cardiovascular procedures	1	0.6586942539	0.1521390834	4.3295531899	<.0001
MDRG_601	Stomach, esophageal & duodenal proc	1	1.5617745990	0.0655347468	23.8312448633	<.0001
MDRG_602	Major small & large bowel procedures	1	1.6799678010	0.0478580887	35.1031110505	<.0001
MDRG_605	Appendectomy w complicated principal diag	1	-1.478639277	0.4285334777	-3.4504638581	0.0006
MDRG_606	Appendectomy w/o complicated principal diag	1	-1.616636953	0.4063847394	-3.9780946395	<.0001
MDRG_610	Hernia procedures except inguinal & femoral	1	-1.763128695	0.3953312524	-4.4598768371	<.0001
MDRG_612	Major esophageal disorders	1	-2.799471683	1.0725607925	-2.6100820601	0.0091
MDRG_613	Major gastrointestinal disorders & peritoneal infections	1	-2.103717021	0.6192131603	-3.3974036024	0.0007
MDRG_614	Digestive malignancy	1	-1.511458443	0.3546096283	-4.2623164252	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_615	G.I. hemorrhage	1	-3.120294574	0.3089725385	-10.0989382086	<.0001
MDRG_616	Complicated peptic ulcer	1	-1.589331639	0.4617538362	-3.4419457175	0.0006
MDRG_619	G.I. obstruction	1	-1.909750874	0.5045098995	-3.7853585749	0.0002
MDRG_620	Esophagitis, gastroent & misc digest disorders	1	-2.169819438	0.2947923686	-7.3605007089	<.0001
MDRG_621	Other digestive system diagnoses	1	-1.554132053	0.2686098970	-5.7858331744	<.0001
MDRG_701	Pancreas, liver & shunt procedures	1	1.1595522774	0.1183125287	9.8007564403	<.0001
MDRG_702	Biliary tract proc except only cholecyst w or w/o C.D.E.	1	3.0562720965	0.1169641263	26.1299955329	<.0001
MDRG_703	Cholecystectomy w C.D.E.	1	2.7228510051	0.2293506119	11.8720023581	<.0001
MDRG_704	Cholecystectomy except by laparoscope w/o C.D.E.	1	1.9256179920	0.1146101660	16.8014588828	<.0001
MDRG_705	Laparoscopic cholecystectomy w/o C.D.E.	1	0.0768330734	0.0906675652	0.8474152058	0.3968
MDRG_706	Hepatobiliary diagnostic procedures	1	1.6024725489	0.2220190350	7.2177259437	<.0001
MDRG_707	Other hepatobiliary or pancreas O.R procedures	1	1.6243657998	0.2289839401	7.0937979279	<.0001
MDRG_708	Cirrhosis & alcoholic hepatitis	1	-4.442183293	1.3163220371	-3.3746934016	0.0007
MDRG_709	Malignancy of hepatobiliary system or pancreas	1	-1.016374065	0.3281261398	-3.0975102008	0.0020
MDRG_711	Disorders of liver except malig,cirr,alc hepa	1	-3.025332729	0.7976220001	-3.7929404269	0.0001
MDRG_801	Combined anterior/posterior spinal fusion	1	0.4101662661	0.1815098532	2.2597465584	0.0238
MDRG_803	Spinal fusion except cervical	1	-0.6213263946	0.1988838200	-3.1240670784	0.0018
MDRG_815	Back & neck proc exc spinal fusion or disc device/neurostim	1	-2.243971826	0.8047486308	-2.7884133513	0.0053
MDRG_1003	O.R. procedures for obesity	1	-0.7174936203	0.1742686837	-4.1171689902	<.0001
MDRG_1102	Major bladder procedures	1	1.9269880255	0.1214677207	15.8641984452	<.0001
MDRG_1103	Kidney & ureter procedures for neoplasm	1	0.9092962552	0.1224172761	7.4278425719	<.0001
MDRG_1104	Kidney & ureter procedures for non-neoplasm	1	0.8172591026	0.1312279502	6.2277822751	<.0001
MDRG_1107	Transurethral procedures	1	-0.9771848025	0.2788997718	-3.5037131659	0.0005
MDRG_1110	Renal failure	1	-2.922150162	0.6064809231	-4.8182062311	<.0001
MDRG_1113	Kidney & urinary tract infections	1	-1.288869735	0.3580783282	-3.5994072626	0.0003
MDRG_1115	Urinary stones w/o esw lithotripsy	1	-1.008124049	0.3089040097	-3.2635511931	0.0011
MDRG_1118	Other kidney & urinary tract diagnoses	1	-3.053616235	0.8448617819	-3.6143382266	0.0003
MDRG_1302	Uterine & adnexa proc for ovarian or adnexal malignancy	1	0.6822532535	0.2394660126	2.8490609008	0.0044
MDRG_1303	Uterine,adnexa proc for non-ovarian/adnexal malig	1	0.8373105313	0.2131166833	3.9288830809	<.0001
MDRG_1304	Uterine & adnexa proc for non-malignancy	1	0.8066487930	0.0904267413	8.9204673503	<.0001
MDRG_1306	Vagina, cervix & vulva procedures	1	1.5728510714	0.2965404185	5.3040023334	<.0001
MDRG_1604	Red blood cell disorders	1	-2.419795145	0.5242069065	-4.6161069524	<.0001
MDRG_1801	Infectious & parasitic diseases w O.R procedure	1	0.9430611068	0.0724592015	13.0150634673	<.0001
MDRG_1807	Septicemia or severe sepsis w mv >96 hours	1	-1.238828494	0.4343899749	-2.8518809492	0.0043
MDRG_1808	Septicemia or severe sepsis w/o mv >96 hours	1	-2.082673822	0.2220518505	-9.3792229929	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_2104	Other O.R procedures for injuries	1	1.0480421942	0.1560110866	6.7177417788	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.2737043731	0.0631550840	4.3338454473	<.0001

c-statistic=0.809

## Composite Weights for PSI 90

To utilize the National Quality Forum (NQF) endorsed composite, users must use these “Component Weights” when using the AHRQ QI™ software to compute the composite measure using their own data. Table 15 provides the NQF weights for this composite measure. These component weights are included in the PSI \_Composite\_Wt\_v2020.sas macro. The sum of the weights for the indicators included in the same composite always equals one.

**Table 15. Composite Weights for PSI 90 v2020**

INDICATOR	HARM WEIGHT	VOLUME WEIGHT	COMPONENT WEIGHT
PSI 03 Pressure Ulcer Rate	0.3080	0.1149	0.1810
PSI 06 Iatrogenic Pneumothorax Rate	0.1381	0.0513	0.0362
PSI 08 In Hospital Fall With Hip Fracture Rate	0.1440	0.0164	0.0121
PSI 09 Perioperative Hemorrhage or Hematoma Rate	0.0570	0.1621	0.0473
PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis Rate	0.3584	0.0340	0.0623
PSI 11 Postoperative Respiratory Failure Rate	0.2219	0.1485	0.1685
PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	0.1557	0.2569	0.2045
PSI 13 Postoperative Sepsis Rate	0.3102	0.1510	0.2395
PSI 14 Postoperative Wound Dehiscence Rate	0.1441	0.0137	0.0101
PSI 15 Abdominopelvic Accidental Puncture or Laceration Rate	0.1474	0.0512	0.0386

Source: 2017 State Inpatient Databases, Healthcare Cost and Utilization Program, Agency for Healthcare Research and Quality. 2012-2013 Medicare Fee-for-Service claims data.

**Table A.1. Population Age Categories**

POPCAT	AGE RANGE
Age_LT30	< 30
Age_30_34	30 - 34
Age_35_39	35 - 39
Age_40_44	40 - 44
Age_45_49	45 - 49
Age_50_54	50 - 54
Age_55_59	55 - 59
Age_60_64	60 - 64
Age_65_69	65 - 69
Age_70_74	70 - 74
Age_75_79	75 - 79
Age_80_84	80 - 84
Age_85_89	85 - 89
Age_90Plus	90 plus

### Table A.2. Modified Diagnosis-Related Group (MDRG) Categories

The modified DRG (MDRG) pools individual CMS-DRGs and MS-DRGs into a larger category. The MDRG is a four digit code. The first two digits are the MDC, and the second two digits are a sequence number (e.g., 01-04) within MDC. MS-DRGs that are divided into separate MS-DRGs due to the presence of CC and Major CC (MCC) are pooled into a single MDRG. The CMS crosswalk was used to pool MS-DRGs into a single MDRG. Note Column Headings:

- MDC – Major Diagnostic Category
- M/S – Medical / Surgical DRG Indicator
- MDRG – Modified DRG
- MS-DRG – Diagnosis-Related Group (DRG) Version 37

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
01	S	0101	020	Intracranial vascular procedures w pdx hemorrhage w MCC
01	S	0101	021	Intracranial vascular procedures w pdx hemorrhage w CC
01	S	0101	022	Intracranial vascular procedures w pdx hemorrhage w/o CC/MCC
01	S	0102	023	Craniotomy w major device implant or acute complex CNS pdx w MCC or chemotherapy implant or epilepsy w neurostimulator
01	S	0102	024	Cranio w major dev impl/acute complex CNS pdx w/o MCC
01	S	0103	025	Craniotomy & endovascular intracranial procedures w MCC
01	S	0103	026	Craniotomy & endovascular intracranial procedures w CC
01	S	0103	027	Craniotomy & endovascular intracranial procedures w/o CC/MCC
01	S	0104	028	Spinal procedures w MCC
01	S	0104	029	Spinal procedures w CC or spinal neurostimulators
01	S	0104	030	Spinal procedures w/o CC/MCC
01	S	0105	031	Ventricular shunt procedures w MCC
01	S	0105	032	Ventricular shunt procedures w CC
01	S	0105	033	Ventricular shunt procedures w/o CC/MCC
01	S	0106	034	Carotid artery stent procedure w MCC
01	S	0106	035	Carotid artery stent procedure w CC
01	S	0106	036	Carotid artery stent procedure w/o CC/MCC
01	S	0107	037	Extracranial procedures w MCC
01	S	0107	038	Extracranial procedures w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
01	S	0107	039	Extracranial procedures w/o CC/MCC
01	S	0108	040	Periph/cranial nerve & other nerv syst proc w MCC
01	S	0108	041	Periph/cranial nerve & other nerv syst proc w CC or periph neurostim
01	S	0108	042	Periph/cranial nerve & other nerv syst proc w/o CC/MCC
01	M	0109	052	Spinal disorders & injuries w CC/MCC
01	M	0109	053	Spinal disorders & injuries w/o CC/MCC
01	M	0110	054	Nervous system neoplasms w MCC
01	M	0110	055	Nervous system neoplasms w/o MCC
01	M	0111	056	Degenerative nervous system disorders w MCC
01	M	0111	057	Degenerative nervous system disorders w/o MCC
01	M	0112	058	Multiple sclerosis & cerebellar ataxia w MCC
01	M	0112	059	Multiple sclerosis & cerebellar ataxia w CC
01	M	0112	060	Multiple sclerosis & cerebellar ataxia w/o CC/MCC
01	M	0113	061	Ischemic stroke, precerebral occlusion or transient ischemia w thrombolytic agent w MCC
01	M	0113	062	Ischemic stroke, precerebral occlusion or transient ischemia w thrombolytic agent w CC
01	M	0113	063	Ischemic stroke, precerebral occlusion or transient ischemia w thrombolytic agent w/o CC/MCC
01	M	0114	064	Intracranial hemorrhage or cerebral infarction w MCC
01	M	0114	065	Intracranial hemorrhage or cerebral infarction w CC or tpa in 24 hrs
01	M	0114	066	Intracranial hemorrhage or cerebral infarction w/o CC/MCC
01	M	0115	067	Nonspecific cva & precerebral occlusion w/o infarct w MCC
01	M	0115	068	Nonspecific cva & precerebral occlusion w/o infarct w/o MCC
01	M	0116	069	Transient ischemia w/o thrombolytic
01	M	0117	070	Nonspecific cerebrovascular disorders w MCC
01	M	0117	071	Nonspecific cerebrovascular disorders w CC
01	M	0117	072	Nonspecific cerebrovascular disorders w/o CC/MCC
01	M	0118	073	Cranial & peripheral nerve disorders w MCC
01	M	0118	074	Cranial & peripheral nerve disorders w/o MCC
01	M	0119	075	Viral meningitis w CC/MCC
01	M	0119	076	Viral meningitis w/o CC/MCC
01	M	0120	077	Hypertensive encephalopathy w MCC
01	M	0120	078	Hypertensive encephalopathy w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
01	M	0120	079	Hypertensive encephalopathy w/o CC/MCC
01	M	0121	080	Nontraumatic stupor & coma w MCC
01	M	0121	081	Nontraumatic stupor & coma w/o MCC
01	M	0122	082	Traumatic stupor & coma, coma >1 hr w MCC
01	M	0122	083	Traumatic stupor & coma, coma >1 hr w CC
01	M	0122	084	Traumatic stupor & coma, coma >1 hr w/o CC/MCC
01	M	0123	085	Traumatic stupor & coma, coma <1 hr w MCC
01	M	0123	086	Traumatic stupor & coma, coma <1 hr w CC
01	M	0123	087	Traumatic stupor & coma, coma <1 hr w/o CC/MCC
01	M	0124	088	Concussion w MCC
01	M	0124	089	Concussion w CC
01	M	0124	090	Concussion w/o CC/MCC
01	M	0125	091	Other disorders of nervous system w MCC
01	M	0125	092	Other disorders of nervous system w CC
01	M	0125	093	Other disorders of nervous system w/o CC/MCC
01	M	0126	094	Bacterial & tuberculous infections of nervous system w MCC
01	M	0126	095	Bacterial & tuberculous infections of nervous system w CC
01	M	0126	096	Bacterial & tuberculous infections of nervous system w/o CC/MCC
01	M	0127	097	Non-bacterial infect of nervous sys exc viral meningitis w MCC
01	M	0127	098	Non-bacterial infect of nervous sys exc viral meningitis w CC
01	M	0127	099	Non-bacterial infect of nervous sys exc viral meningitis w/o CC/MCC
01	M	0128	100	Seizures w MCC
01	M	0128	101	Seizures w/o MCC
01	M	0129	102	Headaches w MCC
01	M	0129	103	Headaches w/o MCC
02	S	0201	113	Orbital procedures w CC/MCC
02	S	0201	114	Orbital procedures w/o CC/MCC
02	S	0202	115	Extraocular procedures except orbit
02	S	0203	116	Intraocular procedures w CC/MCC
02	S	0203	117	Intraocular procedures w/o CC/MCC
02	M	0204	121	Acute major eye infections w CC/MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
02	M	0204	122	Acute major eye infections w/o CC/MCC
02	M	0205	123	Neurological eye disorders
02	M	0206	124	Other disorders of the eye w MCC
02	M	0206	125	Other disorders of the eye w/o MCC
03	S	0301	129	Major head & neck procedures w CC/MCC or major device
03	S	0301	130	Major head & neck procedures w/o CC/MCC
03	S	0301	131	Cranial/facial procedures w CC/MCC
03	S	0301	132	Cranial/facial procedures w/o CC/MCC
03	S	0302	133	Other ear, nose, mouth & throat O.R procedures w CC/MCC
03	S	0302	134	Other ear, nose, mouth & throat O.R procedures w/o CC/MCC
03	S	0303	135	Sinus & mastoid procedures w CC/MCC
03	S	0303	136	Sinus & mastoid procedures w/o CC/MCC
03	S	0304	137	Mouth procedures w CC/MCC
03	S	0304	138	Mouth procedures w/o CC/MCC
03	S	0305	139	Salivary gland procedures
03	M	0306	146	Ear, nose, mouth & throat malignancy w MCC
03	M	0306	147	Ear, nose, mouth & throat malignancy w CC
03	M	0306	148	Ear, nose, mouth & throat malignancy w/o CC/MCC
03	M	0307	149	Dysequilibrium
03	M	0308	150	Epistaxis w MCC
03	M	0308	151	Epistaxis w/o MCC
03	M	0309	152	Otitis media & uri w MCC
03	M	0309	153	Otitis media & uri w/o MCC
03	M	0310	154	Other ear, nose, mouth & throat diagnoses w MCC
03	M	0310	155	Other ear, nose, mouth & throat diagnoses w CC
03	M	0310	156	Other ear, nose, mouth & throat diagnoses w/o CC/MCC
03	M	0311	157	Dental & oral diseases w MCC
03	M	0311	158	Dental & oral diseases w CC
03	M	0311	159	Dental & oral diseases w/o CC/MCC
04	S	0401	163	Major chest procedures w MCC
04	S	0401	164	Major chest procedures w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
04	S	0401	165	Major chest procedures w/o CC/MCC
04	S	0402	166	Other resp system O.R procedures w MCC
04	S	0402	167	Other resp system O.R procedures w CC
04	S	0402	168	Other resp system O.R procedures w/o CC/MCC
04	M	0403	175	Pulmonary embolism w MCC or acute cor pulmonale
04	M	0403	176	Pulmonary embolism w/o MCC
04	M	0404	177	Respiratory infections & inflammations w MCC
04	M	0404	178	Respiratory infections & inflammations w CC
04	M	0404	179	Respiratory infections & inflammations w/o CC/MCC
04	M	0405	180	Respiratory neoplasms w MCC
04	M	0405	181	Respiratory neoplasms w CC
04	M	0405	182	Respiratory neoplasms w/o CC/MCC
04	M	0406	183	Major chest trauma w MCC
04	M	0406	184	Major chest trauma w CC
04	M	0406	185	Major chest trauma w/o CC/MCC
04	M	0407	186	Pleural effusion w MCC
04	M	0407	187	Pleural effusion w CC
04	M	0407	188	Pleural effusion w/o CC/MCC
04	M	0408	189	Pulmonary edema & respiratory failure
04	M	0409	190	Chronic obstructive pulmonary disease w MCC
04	M	0409	191	Chronic obstructive pulmonary disease w CC
04	M	0409	192	Chronic obstructive pulmonary disease w/o CC/MCC
04	M	0410	193	Simple pneumonia & pleurisy w MCC
04	M	0410	194	Simple pneumonia & pleurisy w CC
04	M	0410	195	Simple pneumonia & pleurisy w/o CC/MCC
04	M	0411	196	Interstitial lung disease w MCC
04	M	0411	197	Interstitial lung disease w CC
04	M	0411	198	Interstitial lung disease w/o CC/MCC
04	M	0412	199	Pneumothorax w MCC
04	M	0412	200	Pneumothorax w CC
04	M	0412	201	Pneumothorax w/o CC/MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
04	M	0413	202	Bronchitis & asthma w CC/MCC
04	M	0413	203	Bronchitis & asthma w/o CC/MCC
04	M	0414	204	Respiratory signs & symptoms
04	M	0415	205	Other respiratory system diagnoses w MCC
04	M	0415	206	Other respiratory system diagnoses w/o MCC
04	M	0416	207	Respiratory system diagnosis w ventilator support >96 hours
04	M	0416	208	Respiratory system diagnosis w ventilator support <=96 hours
05	S	0501	215	Other heart assist system implant
05	S	0502	248	Percutaneous cardiovascular procedures w non-drug-eluting stent w MCC or 4+ arteries or stents
05	S	0502	249	Perc cardiovasc proc w non-drug-eluting stent w/o MCC
05	S	0503	216	Cardiac valve & oth maj cardiothoracic proc w card cath w MCC
05	S	0503	217	Cardiac valve & oth maj cardiothoracic proc w card cath w CC
05	S	0503	218	Cardiac valve & oth maj cardiothoracic proc w card cath w/o CC/MCC
05	S	0503	219	Cardiac valve & oth maj cardiothoracic proc w/o card cath w MCC
05	S	0503	220	Cardiac valve & oth maj cardiothoracic proc w/o card cath w CC
05	S	0503	221	Cardiac valve & oth maj cardiothoracic proc w/o card cath w/o CC/MCC
05	S	0504	222	Cardiac defib implant w cardiac cath w ami/hf/shock w MCC
05	S	0504	223	Cardiac defib implant w cardiac cath w ami/hf/shock w/o MCC
05	S	0504	224	Cardiac defib implant w cardiac cath w/o ami/hf/shock w MCC
05	S	0504	225	Cardiac defib implant w cardiac cath w/o ami/hf/shock w/o MCC
05	S	0504	226	Cardiac defibrillator implant w/o cardiac cath w MCC
05	S	0504	227	Cardiac defibrillator implant w/o cardiac cath w/o MCC
05	S	0505	228	Other cardiothoracic procedures w MCC
05	S	0505	229	Other cardiothoracic procedures w/o MCC
05	S	0506	231	Coronary bypass w ptca w MCC
05	S	0506	232	Coronary bypass w ptca w/o MCC
05	S	0507	233	Coronary bypass w cardiac cath w MCC
05	S	0507	234	Coronary bypass w cardiac cath w/o MCC
05	S	0507	235	Coronary bypass w/o cardiac cath w MCC
05	S	0507	236	Coronary bypass w/o cardiac cath w/o MCC
05	S	0509	239	Amputation for circ sys disorders exc upper limb & toe w MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
05	S	0509	240	Amputation for circ sys disorders exc upper limb & toe w CC
05	S	0509	241	Amputation for circ sys disorders exc upper limb & toe w/o CC/MCC
05	S	0510	242	Permanent cardiac pacemaker implant w MCC
05	S	0510	243	Permanent cardiac pacemaker implant w CC
05	S	0510	244	Permanent cardiac pacemaker implant w/o CC/MCC
05	S	0510	245	Aicd generator procedures
05	S	0510	265	Aicd lead procedures
05	S	0511	246	Percutaneous cardiovascular procedures w drug-eluting stent w MCC or 4+ arteries or stents
05	S	0511	247	Perc cardiovasc proc w drug-eluting stent w/o MCC
05	S	0513	250	Perc cardiovasc proc w/o coronary artery stent w MCC
05	S	0513	251	Perc cardiovasc proc w/o coronary artery stent w/o MCC
05	S	0514	252	Other vascular procedures w MCC
05	S	0514	253	Other vascular procedures w CC
05	S	0514	254	Other vascular procedures w/o CC/MCC
05	S	0515	255	Upper limb & toe amputation for circ system disorders w MCC
05	S	0515	256	Upper limb & toe amputation for circ system disorders w CC
05	S	0515	257	Upper limb & toe amputation for circ system disorders w/o CC/MCC
05	S	0516	258	Cardiac pacemaker device replacement w MCC
05	S	0516	259	Cardiac pacemaker device replacement w/o MCC
05	S	0517	260	Cardiac pacemaker revision except device replacement w MCC
05	S	0517	261	Cardiac pacemaker revision except device replacement w CC
05	S	0517	262	Cardiac pacemaker revision except device replacement w/o CC/MCC
05	S	0518	263	Vein ligation & stripping
05	S	0519	264	Other circulatory system O.R procedures
05	M	0520	280	Acute myocardial infarction, discharged alive w MCC
05	M	0520	281	Acute myocardial infarction, discharged alive w CC
05	M	0520	282	Acute myocardial infarction, discharged alive w/o CC/MCC
05	M	0520	283	Acute myocardial infarction, expired w MCC
05	M	0520	284	Acute myocardial infarction, expired w CC
05	M	0520	285	Acute myocardial infarction, expired w/o CC/MCC
05	M	0522	286	Circulatory disorders except ami, w card cath w MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
05	M	0522	287	Circulatory disorders except ami, w card cath w/o MCC
05	M	0523	288	Acute & subacute endocarditis w MCC
05	M	0523	289	Acute & subacute endocarditis w CC
05	M	0523	290	Acute & subacute endocarditis w/o CC/MCC
05	M	0524	291	Heart failure & shock w MCC
05	M	0524	292	Heart failure & shock w CC
05	M	0524	293	Heart failure & shock w/o CC/MCC
05	M	0525	294	Deep vein thrombophlebitis w CC/MCC
05	M	0525	295	Deep vein thrombophlebitis w/o CC/MCC
05	M	0526	296	Cardiac arrest, unexplained w MCC
05	M	0526	297	Cardiac arrest, unexplained w CC
05	M	0526	298	Cardiac arrest, unexplained w/o CC/MCC
05	M	0527	299	Peripheral vascular disorders w MCC
05	M	0527	300	Peripheral vascular disorders w CC
05	M	0527	301	Peripheral vascular disorders w/o CC/MCC
05	M	0528	302	Atherosclerosis w MCC
05	M	0528	303	Atherosclerosis w/o MCC
05	M	0529	304	Hypertension w MCC
05	M	0529	305	Hypertension w/o MCC
05	M	0530	306	Cardiac congenital & valvular disorders w MCC
05	M	0530	307	Cardiac congenital & valvular disorders w/o MCC
05	M	0531	308	Cardiac arrhythmia & conduction disorders w MCC
05	M	0531	309	Cardiac arrhythmia & conduction disorders w CC
05	M	0531	310	Cardiac arrhythmia & conduction disorders w/o CC/MCC
05	M	0532	311	Angina pectoris
05	M	0533	312	Syncope & collapse
05	M	0534	313	Chest pain
05	M	0535	314	Other circulatory system diagnoses w MCC
05	M	0535	315	Other circulatory system diagnoses w CC
05	M	0535	316	Other circulatory system diagnoses w/o CC/MCC
05	S	0536	319	Other endovascular cardiac valve procedures w MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
05	S	0536	320	Other endovascular cardiac valve procedures w/o MCC
05	S	0540	266	Endovascular cardiac valve replacement & supplement procedures w MCC
05	S	0540	267	Endovascular cardiac valve replacement & supplement procedures w/o MCC
05	S	0541	268	Aortic and heart assist procedures except pulsation balloon w MCC
05	S	0541	269	Aortic and heart assist procedures except pulsation balloon w/o MCC
05	S	0542	270	Other major cardiovascular procedures w MCC
05	S	0542	271	Other major cardiovascular procedures w CC
05	S	0542	272	Other major cardiovascular procedures w/o CC/MCC
05	S	0543	273	Percutaneous intracardiac procedures w MCC
05	S	0543	274	Percutaneous intracardiac procedures w/o MCC
06	S	0601	326	Stomach, esophageal & duodenal proc w MCC
06	S	0601	327	Stomach, esophageal & duodenal proc w CC
06	S	0601	328	Stomach, esophageal & duodenal proc w/o CC/MCC
06	S	0602	329	Major small & large bowel procedures w MCC
06	S	0602	330	Major small & large bowel procedures w CC
06	S	0602	331	Major small & large bowel procedures w/o CC/MCC
06	S	0603	332	Rectal resection w MCC
06	S	0603	333	Rectal resection w CC
06	S	0603	334	Rectal resection w/o CC/MCC
06	S	0604	335	Peritoneal adhesiolysis w MCC
06	S	0604	336	Peritoneal adhesiolysis w CC
06	S	0604	337	Peritoneal adhesiolysis w/o CC/MCC
06	S	0605	338	Appendectomy w complicated principal diag w MCC
06	S	0605	339	Appendectomy w complicated principal diag w CC
06	S	0605	340	Appendectomy w complicated principal diag w/o CC/MCC
06	S	0606	341	Appendectomy w/o complicated principal diag w MCC
06	S	0606	342	Appendectomy w/o complicated principal diag w CC
06	S	0606	343	Appendectomy w/o complicated principal diag w/o CC/MCC
06	S	0607	344	Minor small & large bowel procedures w MCC
06	S	0607	345	Minor small & large bowel procedures w CC
06	S	0607	346	Minor small & large bowel procedures w/o CC/MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
06	S	0608	347	Anal & stomal procedures w MCC
06	S	0608	348	Anal & stomal procedures w CC
06	S	0608	349	Anal & stomal procedures w/o CC/MCC
06	S	0609	350	Inguinal & femoral hernia procedures w MCC
06	S	0609	351	Inguinal & femoral hernia procedures w CC
06	S	0609	352	Inguinal & femoral hernia procedures w/o CC/MCC
06	S	0610	353	Hernia procedures except inguinal & femoral w MCC
06	S	0610	354	Hernia procedures except inguinal & femoral w CC
06	S	0610	355	Hernia procedures except inguinal & femoral w/o CC/MCC
06	S	0611	356	Other digestive system O.R procedures w MCC
06	S	0611	357	Other digestive system O.R procedures w CC
06	S	0611	358	Other digestive system O.R procedures w/o CC/MCC
06	M	0612	368	Major esophageal disorders w MCC
06	M	0612	369	Major esophageal disorders w CC
06	M	0612	370	Major esophageal disorders w/o CC/MCC
06	M	0613	371	Major gastrointestinal disorders & peritoneal infections w MCC
06	M	0613	372	Major gastrointestinal disorders & peritoneal infections w CC
06	M	0613	373	Major gastrointestinal disorders & peritoneal infections w/o CC/MCC
06	M	0614	374	Digestive malignancy w MCC
06	M	0614	375	Digestive malignancy w CC
06	M	0614	376	Digestive malignancy w/o CC/MCC
06	M	0615	377	G.I. hemorrhage w MCC
06	M	0615	378	G.I. hemorrhage w CC
06	M	0615	379	G.I. hemorrhage w/o CC/MCC
06	M	0616	380	Complicated peptic ulcer w MCC
06	M	0616	381	Complicated peptic ulcer w CC
06	M	0616	382	Complicated peptic ulcer w/o CC/MCC
06	M	0617	383	Uncomplicated peptic ulcer w MCC
06	M	0617	384	Uncomplicated peptic ulcer w/o MCC
06	M	0618	385	Inflammatory bowel disease w MCC
06	M	0618	386	Inflammatory bowel disease w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
06	M	0618	387	Inflammatory bowel disease w/o CC/MCC
06	M	0619	388	G.I. obstruction w MCC
06	M	0619	389	G.I. obstruction w CC
06	M	0619	390	G.I. obstruction w/o CC/MCC
06	M	0620	391	Esophagitis, gastroent & misc digest disorders w MCC
06	M	0620	392	Esophagitis, gastroent & misc digest disorders w/o MCC
06	M	0621	393	Other digestive system diagnoses w MCC
06	M	0621	394	Other digestive system diagnoses w CC
06	M	0621	395	Other digestive system diagnoses w/o CC/MCC
07	S	0701	405	Pancreas, liver & shunt procedures w MCC
07	S	0701	406	Pancreas, liver & shunt procedures w CC
07	S	0701	407	Pancreas, liver & shunt procedures w/o CC/MCC
07	S	0702	408	Biliary tract proc except only cholecyst w or w/o C.D.E. w MCC
07	S	0702	409	Biliary tract proc except only cholecyst w or w/o C.D.E. w CC
07	S	0702	410	Biliary tract proc except only cholecyst w or w/o C.D.E. w/o CC/MCC
07	S	0703	411	Cholecystectomy w C.D.E. w MCC
07	S	0703	412	Cholecystectomy w C.D.E. w CC
07	S	0703	413	Cholecystectomy w C.D.E. w/o CC/MCC
07	S	0704	414	Cholecystectomy except by laparoscope w/o C.D.E. w MCC
07	S	0704	415	Cholecystectomy except by laparoscope w/o C.D.E. w CC
07	S	0704	416	Cholecystectomy except by laparoscope w/o C.D.E. w/o CC/MCC
07	S	0705	417	Laparoscopic cholecystectomy w/o C.D.E. w MCC
07	S	0705	418	Laparoscopic cholecystectomy w/o C.D.E. w CC
07	S	0705	419	Laparoscopic cholecystectomy w/o C.D.E. w/o CC/MCC
07	S	0706	420	Hepatobiliary diagnostic procedures w MCC
07	S	0706	421	Hepatobiliary diagnostic procedures w CC
07	S	0706	422	Hepatobiliary diagnostic procedures w/o CC/MCC
07	S	0707	423	Other hepatobiliary or pancreas O.R procedures w MCC
07	S	0707	424	Other hepatobiliary or pancreas O.R procedures w CC
07	S	0707	425	Other hepatobiliary or pancreas O.R procedures w/o CC/MCC
07	M	0708	432	Cirrhosis & alcoholic hepatitis w MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
07	M	0708	433	Cirrhosis & alcoholic hepatitis w CC
07	M	0708	434	Cirrhosis & alcoholic hepatitis w/o CC/MCC
07	M	0709	435	Malignancy of hepatobiliary system or pancreas w MCC
07	M	0709	436	Malignancy of hepatobiliary system or pancreas w CC
07	M	0709	437	Malignancy of hepatobiliary system or pancreas w/o CC/MCC
07	M	0710	438	Disorders of pancreas except malignancy w MCC
07	M	0710	439	Disorders of pancreas except malignancy w CC
07	M	0710	440	Disorders of pancreas except malignancy w/o CC/MCC
07	M	0711	441	Disorders of liver except malig, cirr, alc hepa w MCC
07	M	0711	442	Disorders of liver except malig, cirr, alc hepa w CC
07	M	0711	443	Disorders of liver except malig, cirr, alc hepa w/o CC/MCC
07	M	0712	444	Disorders of the biliary tract w MCC
07	M	0712	445	Disorders of the biliary tract w CC
07	M	0712	446	Disorders of the biliary tract w/o CC/MCC
08	S	0801	453	Combined anterior/posterior spinal fusion w MCC
08	S	0801	454	Combined anterior/posterior spinal fusion w CC
08	S	0801	455	Combined anterior/posterior spinal fusion w/o CC/MCC
08	S	0802	456	Spinal fus exc cerv w spinal curv/malig/infec or ext fus w MCC
08	S	0802	457	Spinal fus exc cerv w spinal curv/malig/infec or ext fus w CC
08	S	0802	458	Spinal fus exc cerv w spinal curv/malig/infec or ext fus w/o CC/MCC
08	S	0803	459	Spinal fusion except cervical w MCC
08	S	0803	460	Spinal fusion except cervical w/o MCC
08	S	0804	461	Bilateral or multiple major joint procs of lower extremity w MCC
08	S	0804	462	Bilateral or multiple major joint procs of lower extremity w/o MCC
08	S	0805	463	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w MCC
08	S	0805	464	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w CC
08	S	0805	465	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w/o CC/MCC
08	S	0806	466	Revision of hip or knee replacement w MCC
08	S	0806	467	Revision of hip or knee replacement w CC
08	S	0806	468	Revision of hip or knee replacement w/o CC/MCC
08	S	0807	469	Major hip and knee joint replacement or reattachment of lower extremity w MCC or total ankle replacement

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
08	S	0807	470	Major hip and knee joint replacement or reattachment of lower extremity w/o MCC
08	S	0808	471	Cervical spinal fusion w MCC
08	S	0808	472	Cervical spinal fusion w CC
08	S	0808	473	Cervical spinal fusion w/o CC/MCC
08	S	0809	474	Amputation for musculoskeletal sys & conn tissue dis w MCC
08	S	0809	475	Amputation for musculoskeletal sys & conn tissue dis w CC
08	S	0809	476	Amputation for musculoskeletal sys & conn tissue dis w/o CC/MCC
08	S	0810	477	Biopsies of musculoskeletal system & connective tissue w MCC
08	S	0810	478	Biopsies of musculoskeletal system & connective tissue w CC
08	S	0810	479	Biopsies of musculoskeletal system & connective tissue w/o CC/MCC
08	S	0811	480	Hip & femur procedures except major joint w MCC
08	S	0811	481	Hip & femur procedures except major joint w CC
08	S	0811	482	Hip & femur procedures except major joint w/o CC/MCC
08	S	0812	483	Major joint/limb reattachment procedure of upper extremities
08	S	0813	485	Knee procedures w pdx of infection w MCC
08	S	0813	486	Knee procedures w pdx of infection w CC
08	S	0813	487	Knee procedures w pdx of infection w/o CC/MCC
08	S	0814	488	Knee procedures w/o pdx of infection w CC/MCC
08	S	0814	489	Knee procedures w/o pdx of infection w/o CC/MCC
08	S	0815	518	Back & neck proc exc spinal fusion w MCC or disc device/neurostim
08	S	0815	519	Back & neck proc exc spinal fusion w CC
08	S	0815	520	Back & neck proc exc spinal fusion w/o CC/MCC
08	S	0816	492	Lower extrem & humer proc except hip, foot, femur w MCC
08	S	0816	493	Lower extrem & humer proc except hip, foot, femur w CC
08	S	0816	494	Lower extrem & humer proc except hip, foot, femur w/o CC/MCC
08	S	0817	495	Local excision & removal int fix devices exc hip & femur w MCC
08	S	0817	496	Local excision & removal int fix devices exc hip & femur w CC
08	S	0817	497	Local excision & removal int fix devices exc hip & femur w/o CC/MCC
08	S	0818	498	Local excision & removal int fix devices of hip & femur w CC/MCC
08	S	0818	499	Local excision & removal int fix devices of hip & femur w/o CC/MCC
08	S	0819	500	Soft tissue procedures w MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
08	S	0819	501	Soft tissue procedures w CC
08	S	0819	502	Soft tissue procedures w/o CC/MCC
08	S	0820	503	Foot procedures w MCC
08	S	0820	504	Foot procedures w CC
08	S	0820	505	Foot procedures w/o CC/MCC
08	S	0821	506	Major thumb or joint procedures
08	S	0822	507	Major shoulder or elbow joint procedures w CC/MCC
08	S	0822	508	Major shoulder or elbow joint procedures w/o CC/MCC
08	S	0823	509	Arthroscopy
08	S	0824	510	Shoulder, elbow or forearm proc, exc major joint proc w MCC
08	S	0824	511	Shoulder, elbow or forearm proc, exc major joint proc w CC
08	S	0824	512	Shoulder, elbow or forearm proc, exc major joint proc w/o CC/MCC
08	S	0825	513	Hand or wrist proc, except major thumb or joint proc w CC/MCC
08	S	0825	514	Hand or wrist proc, except major thumb or joint proc w/o CC/MCC
08	S	0826	515	Other musculoskelet sys & conn tiss O.R proc w MCC
08	S	0826	516	Other musculoskelet sys & conn tiss O.R proc w CC
08	S	0826	517	Other musculoskelet sys & conn tiss O.R proc w/o CC/MCC
08	M	0827	533	Fractures of femur w MCC
08	M	0827	534	Fractures of femur w/o MCC
08	M	0828	535	Fractures of hip & pelvis w MCC
08	M	0828	536	Fractures of hip & pelvis w/o MCC
08	M	0829	537	Sprains, strains, & dislocations of hip, pelvis & thigh w CC/MCC
08	M	0829	538	Sprains, strains, & dislocations of hip, pelvis & thigh w/o CC/MCC
08	M	0830	539	Osteomyelitis w MCC
08	M	0830	540	Osteomyelitis w CC
08	M	0830	541	Osteomyelitis w/o CC/MCC
08	M	0831	542	Pathological fractures & musculoskelet & conn tiss malig w MCC
08	M	0831	543	Pathological fractures & musculoskelet & conn tiss malig w CC
08	M	0831	544	Pathological fractures & musculoskelet & conn tiss malig w/o CC/MCC
08	M	0832	545	Connective tissue disorders w MCC
08	M	0832	546	Connective tissue disorders w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
08	M	0832	547	Connective tissue disorders w/o CC/MCC
08	M	0833	548	Septic arthritis w MCC
08	M	0833	549	Septic arthritis w CC
08	M	0833	550	Septic arthritis w/o CC/MCC
08	M	0834	551	Medical back problems w MCC
08	M	0834	552	Medical back problems w/o MCC
08	M	0835	553	Bone diseases & arthropathies w MCC
08	M	0835	554	Bone diseases & arthropathies w/o MCC
08	M	0836	555	Signs & symptoms of musculoskeletal system & conn tissue w MCC
08	M	0836	556	Signs & symptoms of musculoskeletal system & conn tissue w/o MCC
08	M	0837	557	Tendonitis, myositis & bursitis w MCC
08	M	0837	558	Tendonitis, myositis & bursitis w/o MCC
08	M	0838	559	Aftercare, musculoskeletal system & connective tissue w MCC
08	M	0838	560	Aftercare, musculoskeletal system & connective tissue w CC
08	M	0838	561	Aftercare, musculoskeletal system & connective tissue w/o CC/MCC
08	M	0839	562	Fx, sprn, strn & disl except femur, hip, pelvis & thigh w MCC
08	M	0839	563	Fx, sprn, strn & disl except femur, hip, pelvis & thigh w/o MCC
08	M	0840	564	Other musculoskeletal sys & connective tissue diagnoses w MCC
08	M	0840	565	Other musculoskeletal sys & connective tissue diagnoses w CC
08	M	0840	566	Other musculoskeletal sys & connective tissue diagnoses w/o CC/MCC
09	S	0901	570	Skin debridement w MCC
09	S	0901	571	Skin debridement w CC
09	S	0901	572	Skin debridement w/o CC/MCC
09	S	0901	573	Skin graft for skin ulcer or cellulitis w MCC
09	S	0901	574	Skin graft for skin ulcer or cellulitis w CC
09	S	0901	575	Skin graft for skin ulcer or cellulitis w/o CC/MCC
09	S	0902	576	Skin graft exc for skin ulcer or cellulitis w MCC
09	S	0902	577	Skin graft exc for skin ulcer or cellulitis w CC
09	S	0902	578	Skin graft exc for skin ulcer or cellulitis w/o CC/MCC
09	S	0903	579	Other skin, subcut tiss & breast proc w MCC
09	S	0903	580	Other skin, subcut tiss & breast proc w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
09	S	0903	581	Other skin, subcut tiss & breast proc w/o CC/MCC
09	S	0904	582	Mastectomy for malignancy w CC/MCC
09	S	0904	583	Mastectomy for malignancy w/o CC/MCC
09	S	0905	584	Breast biopsy, local excision & other breast procedures w CC/MCC
09	S	0905	585	Breast biopsy, local excision & other breast procedures w/o CC/MCC
09	M	0906	592	Skin ulcers w MCC
09	M	0906	593	Skin ulcers w CC
09	M	0906	594	Skin ulcers w/o CC/MCC
09	M	0907	595	Major skin disorders w MCC
09	M	0907	596	Major skin disorders w/o MCC
09	M	0908	597	Malignant breast disorders w MCC
09	M	0908	598	Malignant breast disorders w CC
09	M	0908	599	Malignant breast disorders w/o CC/MCC
09	M	0909	600	Non-malignant breast disorders w CC/MCC
09	M	0909	601	Non-malignant breast disorders w/o CC/MCC
09	M	0910	602	Cellulitis w MCC
09	M	0910	603	Cellulitis w/o MCC
09	M	0911	604	Trauma to the skin, subcut tiss & breast w MCC
09	M	0911	605	Trauma to the skin, subcut tiss & breast w/o MCC
09	M	0912	606	Minor skin disorders w MCC
09	M	0912	607	Minor skin disorders w/o MCC
10	S	1001	614	Adrenal & pituitary procedures w CC/MCC
10	S	1001	615	Adrenal & pituitary procedures w/o CC/MCC
10	S	1002	616	Amputat of lower limb for endocrine, nutrit, & metabol dis w MCC
10	S	1002	617	Amputat of lower limb for endocrine, nutrit, & metabol dis w CC
10	S	1002	618	Amputat of lower limb for endocrine, nutrit, & metabol dis w/o CC/MCC
10	S	1003	619	O.R. procedures for obesity w MCC
10	S	1003	620	O.R. procedures for obesity w CC
10	S	1003	621	O.R. procedures for obesity w/o CC/MCC
10	S	1004	622	Skin grafts & wound debrid for endoc, nutrit & metab dis w MCC
10	S	1004	623	Skin grafts & wound debrid for endoc, nutrit & metab dis w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
10	S	1004	624	Skin grafts & wound debrid for endoc, nutrit & metab dis w/o CC/MCC
10	S	1005	625	Thyroid, parathyroid & thyroglossal procedures w MCC
10	S	1005	626	Thyroid, parathyroid & thyroglossal procedures w CC
10	S	1005	627	Thyroid, parathyroid & thyroglossal procedures w/o CC/MCC
10	S	1006	628	Other endocrine, nutrit & metab O.R proc w MCC
10	S	1006	629	Other endocrine, nutrit & metab O.R proc w CC
10	S	1006	630	Other endocrine, nutrit & metab O.R proc w/o CC/MCC
10	M	1007	637	Diabetes w MCC
10	M	1007	638	Diabetes w CC
10	M	1007	639	Diabetes w/o CC/MCC
10	M	1008	640	Misc disorders of nutrition, metabolism, fluids/electrolytes w MCC
10	M	1008	641	Misc disorders of nutrition, metabolism, fluids/electrolytes w/o MCC
10	M	1009	642	Inborn and other disorders of metabolism
10	M	1010	643	Endocrine disorders w MCC
10	M	1010	644	Endocrine disorders w CC
10	M	1010	645	Endocrine disorders w/o CC/MCC
11	S	1101	652	Kidney transplant
11	S	1102	653	Major bladder procedures w MCC
11	S	1102	654	Major bladder procedures w CC
11	S	1102	655	Major bladder procedures w/o CC/MCC
11	S	1103	656	Kidney & ureter procedures for neoplasm w MCC
11	S	1103	657	Kidney & ureter procedures for neoplasm w CC
11	S	1103	658	Kidney & ureter procedures for neoplasm w/o CC/MCC
11	S	1104	659	Kidney & ureter procedures for non-neoplasm w MCC
11	S	1104	660	Kidney & ureter procedures for non-neoplasm w CC
11	S	1104	661	Kidney & ureter procedures for non-neoplasm w/o CC/MCC
11	S	1105	662	Minor bladder procedures w MCC
11	S	1105	663	Minor bladder procedures w CC
11	S	1105	664	Minor bladder procedures w/o CC/MCC
11	S	1106	665	Prostatectomy w MCC
11	S	1106	666	Prostatectomy w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
11	S	1106	667	Prostatectomy w/o CC/MCC
11	S	1107	668	Transurethral procedures w MCC
11	S	1107	669	Transurethral procedures w CC
11	S	1107	670	Transurethral procedures w/o CC/MCC
11	S	1108	671	Urethral procedures w CC/MCC
11	S	1108	672	Urethral procedures w/o CC/MCC
11	S	1109	673	Other kidney & urinary tract procedures w MCC
11	S	1109	674	Other kidney & urinary tract procedures w CC
11	S	1109	675	Other kidney & urinary tract procedures w/o CC/MCC
11	M	1110	682	Renal failure w MCC
11	M	1110	683	Renal failure w CC
11	M	1110	684	Renal failure w/o CC/MCC
11	M	1112	686	Kidney & urinary tract neoplasms w MCC
11	M	1112	687	Kidney & urinary tract neoplasms w CC
11	M	1112	688	Kidney & urinary tract neoplasms w/o CC/MCC
11	M	1113	689	Kidney & urinary tract infections w MCC
11	M	1113	690	Kidney & urinary tract infections w/o MCC
11	M	1115	693	Urinary stones w MCC
11	M	1115	694	Urinary stones w/o MCC
11	M	1116	695	Kidney & urinary tract signs & symptoms w MCC
11	M	1116	696	Kidney & urinary tract signs & symptoms w/o MCC
11	M	1117	697	Urethral stricture
11	M	1118	698	Other kidney & urinary tract diagnoses w MCC
11	M	1118	699	Other kidney & urinary tract diagnoses w CC
11	M	1118	700	Other kidney & urinary tract diagnoses w/o CC/MCC
12	S	1201	707	Major male pelvic procedures w CC/MCC
12	S	1201	708	Major male pelvic procedures w/o CC/MCC
12	S	1202	709	Penis procedures w CC/MCC
12	S	1202	710	Penis procedures w/o CC/MCC
12	S	1203	711	Testes procedures w CC/MCC
12	S	1203	712	Testes procedures w/o CC/MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
12	S	1204	713	Transurethral prostatectomy w CC/MCC
12	S	1204	714	Transurethral prostatectomy w/o CC/MCC
12	S	1205	715	Other male reproductive system O.R proc for malignancy w CC/MCC
12	S	1205	716	Other male reproductive system O.R proc for malignancy w/o CC/MCC
12	S	1206	717	Other male reproductive system O.R proc exc malignancy w CC/MCC
12	S	1206	718	Other male reproductive system O.R proc exc malignancy w/o CC/MCC
12	M	1207	722	Malignancy, male reproductive system w MCC
12	M	1207	723	Malignancy, male reproductive system w CC
12	M	1207	724	Malignancy, male reproductive system w/o CC/MCC
12	M	1208	725	Benign prostatic hypertrophy w MCC
12	M	1208	726	Benign prostatic hypertrophy w/o MCC
12	M	1209	727	Inflammation of the male reproductive system w MCC
12	M	1209	728	Inflammation of the male reproductive system w/o MCC
12	M	1210	729	Other male reproductive system diagnoses w CC/MCC
12	M	1210	730	Other male reproductive system diagnoses w/o CC/MCC
13	S	1301	734	Pelvic evisceration, rad hysterectomy & rad vulvectomy w CC/MCC
13	S	1301	735	Pelvic evisceration, rad hysterectomy & rad vulvectomy w/o CC/MCC
13	S	1302	736	Uterine & adnexa proc for ovarian or adnexal malignancy w MCC
13	S	1302	737	Uterine & adnexa proc for ovarian or adnexal malignancy w CC
13	S	1302	738	Uterine & adnexa proc for ovarian or adnexal malignancy w/o CC/MCC
13	S	1303	739	Uterine, adnexa proc for non-ovarian/adnexal malig w MCC
13	S	1303	740	Uterine, adnexa proc for non-ovarian/adnexal malig w CC
13	S	1303	741	Uterine, adnexa proc for non-ovarian/adnexal malig w/o CC/MCC
13	S	1304	742	Uterine & adnexa proc for non-malignancy w CC/MCC
13	S	1304	743	Uterine & adnexa proc for non-malignancy w/o CC/MCC
13	S	1305	744	D&c, conization, laparoscopy & tubal interruption w CC/MCC
13	S	1305	745	D&c, conization, laparoscopy & tubal interruption w/o CC/MCC
13	S	1306	746	Vagina, cervix & vulva procedures w CC/MCC
13	S	1306	747	Vagina, cervix & vulva procedures w/o CC/MCC
13	S	1307	748	Female reproductive system reconstructive procedures
13	S	1308	749	Other female reproductive system O.R procedures w CC/MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
13	S	1308	750	Other female reproductive system O.R procedures w/o CC/MCC
13	M	1309	754	Malignancy, female reproductive system w MCC
13	M	1309	755	Malignancy, female reproductive system w CC
13	M	1309	756	Malignancy, female reproductive system w/o CC/MCC
13	M	1310	757	Infections, female reproductive system w MCC
13	M	1310	758	Infections, female reproductive system w CC
13	M	1310	759	Infections, female reproductive system w/o CC/MCC
13	M	1311	760	Menstrual & other female reproductive system disorders w CC/MCC
13	M	1311	761	Menstrual & other female reproductive system disorders w/o CC/MCC
14	S	1401	783	Cesarean section w sterilization w MCC
14	S	1401	784	Cesarean section w sterilization w CC
14	S	1401	785	Cesarean section w sterilization w/o CC/MCC
14	S	1401	786	Cesarean section w/o sterilization w MCC
14	S	1401	787	Cesarean section w/o sterilization w CC
14	S	1401	788	Cesarean section w/o sterilization w/o CC/MCC
14	S	1402	768	Vaginal delivery w O.R proc except steril &/or d&c
14	S	1403	769	Postpartum & post abortion diagnoses w O.R procedure
14	S	1404	770	Abortion w d&c, aspiration curettage or hysterotomy
14	M	1405	805	Vaginal delivery w/o sterilization/d&c w MCC
14	M	1405	806	Vaginal delivery w/o sterilization/d&c w CC
14	M	1405	807	Vaginal delivery w/o sterilization/d&c w/o CC/MCC
14	M	1406	776	Postpartum & post abortion diagnoses w/o O.R procedure
14	M	1409	779	Abortion w/o d&c
14	M	1411	831	Other antepartum diagnoses w/o O.R procedure w MCC
14	M	1411	832	Other antepartum diagnoses w/o O.R procedure w CC
14	M	1411	833	Other antepartum diagnoses w/o O.R procedure w/o CC/MCC
14	S	1413	796	Vaginal delivery w sterilization/d&c w MCC
14	S	1413	797	Vaginal delivery w sterilization/d&c w CC
14	S	1413	798	Vaginal delivery w sterilization/d&c w/o CC/MCC
14	S	1414	817	Other antepartum diagnoses w O.R procedure w MCC
14	S	1414	818	Other antepartum diagnoses w O.R procedure w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
14	S	1414	819	Other antepartum diagnoses w O.R procedure w/o CC/MCC
15	M	1501	789	Neonates, died or transferred to another acute care facility
15	M	1502	790	Extreme immaturity or respiratory distress syndrome, neonate
15	M	1503	791	Prematurity w major problems
15	M	1504	792	Prematurity w/o major problems
15	M	1505	793	Full term neonate w major problems
15	M	1506	794	Neonate w other significant problems
15	M	1507	795	Normal newborn
16	S	1601	799	Splenectomy w MCC
16	S	1601	800	Splenectomy w CC
16	S	1601	801	Splenectomy w/o CC/MCC
16	S	1602	802	Other O.R proc of the blood & blood forming organs w MCC
16	S	1602	803	Other O.R proc of the blood & blood forming organs w CC
16	S	1602	804	Other O.R proc of the blood & blood forming organs w/o CC/MCC
16	M	1603	808	Major hematol/immun diag exc sickle cell crisis & coagul w MCC
16	M	1603	809	Major hematol/immun diag exc sickle cell crisis & coagul w CC
16	M	1603	810	Major hematol/immun diag exc sickle cell crisis & coagul w/o CC/MCC
16	M	1604	811	Red blood cell disorders w MCC
16	M	1604	812	Red blood cell disorders w/o MCC
16	M	1605	813	Coagulation disorders
16	M	1606	814	Reticuloendothelial & immunity disorders w MCC
16	M	1606	815	Reticuloendothelial & immunity disorders w CC
16	M	1606	816	Reticuloendothelial & immunity disorders w/o CC/MCC
17	S	1707	820	Lymphoma & leukemia w major O.R procedure w MCC
17	S	1707	821	Lymphoma & leukemia w major O.R procedure w CC
17	S	1707	822	Lymphoma & leukemia w major O.R procedure w/o CC/MCC
17	S	1708	823	Lymphoma & non-acute leukemia w other proc w MCC
17	S	1708	824	Lymphoma & non-acute leukemia w other proc w CC
17	S	1708	825	Lymphoma & non-acute leukemia w other proc w/o CC/MCC
17	S	1709	826	Myeloprolif disord or poorly diff neopl w maj O.R proc w MCC
17	S	1709	827	Myeloprolif disord or poorly diff neopl w maj O.R proc w CC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
17	S	1709	828	Myeloprolif disord or poorly diff neopl w maj O.R proc w/o CC/MCC
17	S	1710	829	Myeloproliferative disorders or poorly differentiated neoplasms w other procedure w CC/MCC
17	S	1710	830	Myeloproliferative disorders or poorly differentiated neoplasms w other procedure w/o CC/MCC
17	M	1711	834	Acute leukemia w/o major O.R procedure w MCC
17	M	1711	835	Acute leukemia w/o major O.R procedure w CC
17	M	1711	836	Acute leukemia w/o major O.R procedure w/o CC/MCC
17	M	1712	837	Chemo w acute leukemia as sdx or w high dose chemo agent w MCC
17	M	1712	838	Chemo w acute leukemia as sdx w CC or high dose chemo agent
17	M	1712	839	Chemo w acute leukemia as sdx w/o CC/MCC
17	M	1713	840	Lymphoma & non-acute leukemia w MCC
17	M	1713	841	Lymphoma & non-acute leukemia w CC
17	M	1713	842	Lymphoma & non-acute leukemia w/o CC/MCC
17	M	1714	843	Other myeloprolif dis or poorly diff neopl diag w MCC
17	M	1714	844	Other myeloprolif dis or poorly diff neopl diag w CC
17	M	1714	845	Other myeloprolif dis or poorly diff neopl diag w/o CC/MCC
17	M	1715	846	Chemotherapy w/o acute leukemia as secondary diagnosis w MCC
17	M	1715	847	Chemotherapy w/o acute leukemia as secondary diagnosis w CC
17	M	1715	848	Chemotherapy w/o acute leukemia as secondary diagnosis w/o CC/MCC
17	M	1716	849	Radiotherapy
18	S	1801	853	Infectious & parasitic diseases w O.R procedure w MCC
18	S	1801	854	Infectious & parasitic diseases w O.R procedure w CC
18	S	1801	855	Infectious & parasitic diseases w O.R procedure w/o CC/MCC
18	S	1802	856	Postoperative or post-traumatic infections w O.R proc w MCC
18	S	1802	857	Postoperative or post-traumatic infections w O.R proc w CC
18	S	1802	858	Postoperative or post-traumatic infections w O.R proc w/o CC/MCC
18	M	1803	862	Postoperative & post-traumatic infections w MCC
18	M	1803	863	Postoperative & post-traumatic infections w/o MCC
18	M	1804	864	Fever and inflammatory conditions
18	M	1805	865	Viral illness w MCC
18	M	1805	866	Viral illness w/o MCC
18	M	1806	867	Other infectious & parasitic diseases diagnoses w MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
18	M	1806	868	Other infectious & parasitic diseases diagnoses w CC
18	M	1806	869	Other infectious & parasitic diseases diagnoses w/o CC/MCC
18	M	1807	870	Septicemia or severe sepsis w mv >96 hours
18	M	1808	871	Septicemia or severe sepsis w/o mv >96 hours w MCC
18	M	1808	872	Septicemia or severe sepsis w/o mv >96 hours w/o MCC
19	S	1909	876	O.R. procedure w principal diagnoses of mental illness
19	M	1910	880	Acute adjustment reaction & psychosocial dysfunction
19	M	1911	881	Depressive neuroses
19	M	1912	882	Neuroses except depressive
19	M	1913	883	Disorders of personality & impulse control
19	M	1914	884	Organic disturbances & intellectual disability
19	M	1915	885	Psychoses
19	M	1916	886	Behavioral & developmental disorders
19	M	1917	887	Other mental disorder diagnoses
20	M	2018	894	Alcohol/drug abuse or dependence, left ama
20	M	2018	895	Alcohol/drug abuse or dependence w rehabilitation therapy
20	M	2018	896	Alcohol/drug abuse or dependence w/o rehabilitation therapy w MCC
20	M	2018	897	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC
21	S	2101	901	Wound debridements for injuries w MCC
21	S	2101	902	Wound debridements for injuries w CC
21	S	2101	903	Wound debridements for injuries w/o CC/MCC
21	S	2102	904	Skin grafts for injuries w CC/MCC
21	S	2102	905	Skin grafts for injuries w/o CC/MCC
21	S	2103	906	Hand procedures for injuries
21	S	2104	907	Other O.R procedures for injuries w MCC
21	S	2104	908	Other O.R procedures for injuries w CC
21	S	2104	909	Other O.R procedures for injuries w/o CC/MCC
21	M	2105	913	Traumatic injury w MCC
21	M	2105	914	Traumatic injury w/o MCC
21	M	2106	915	Allergic reactions w MCC
21	M	2106	916	Allergic reactions w/o MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
21	M	2107	917	Poisoning & toxic effects of drugs w MCC
21	M	2107	918	Poisoning & toxic effects of drugs w/o MCC
21	M	2108	919	Complications of treatment w MCC
21	M	2108	920	Complications of treatment w CC
21	M	2108	921	Complications of treatment w/o CC/MCC
21	M	2109	922	Other injury, poisoning & toxic effect diag w MCC
21	M	2109	923	Other injury, poisoning & toxic effect diag w/o MCC
22	S	2201	928	Full thickness burn w skin graft or inhal inj w CC/MCC
22	S	2201	929	Full thickness burn w skin graft or inhal inj w/o CC/MCC
22	S	2210	927	Extensive burns or full thickness burns w mv >96 hrs w skin graft
22	M	2212	933	Extensive burns or full thickness burns w mv >96 hrs w/o skin graft
22	M	2213	934	Full thickness burn w/o skin graft or inhal inj
22	M	2214	935	Non-extensive burns
23	S	2301	939	O.R. proc w diagnoses of other contact w health services w MCC
23	S	2301	940	O.R. proc w diagnoses of other contact w health services w CC
23	S	2301	941	O.R. proc w diagnoses of other contact w health services w/o CC/MCC
23	M	2302	945	Rehabilitation w CC/MCC
23	M	2302	946	Rehabilitation w/o CC/MCC
23	M	2303	947	Signs & symptoms w MCC
23	M	2303	948	Signs & symptoms w/o MCC
23	M	2304	949	Aftercare w CC/MCC
23	M	2304	950	Aftercare w/o CC/MCC
23	M	2305	951	Other factors influencing health status
24	S	2406	955	Craniotomy for multiple significant trauma
24	S	2407	956	Limb reattachment, hip & femur proc for multiple significant trauma
24	S	2408	957	Other O.R procedures for multiple significant trauma w MCC
24	S	2408	958	Other O.R procedures for multiple significant trauma w CC
24	S	2408	959	Other O.R procedures for multiple significant trauma w/o CC/MCC
24	M	2409	963	Other multiple significant trauma w MCC
24	M	2409	964	Other multiple significant trauma w CC
24	M	2409	965	Other multiple significant trauma w/o CC/MCC

MDC	M/S	MDRG	MS DRG	MS DRG DESCRIPTION
25	S	2501	969	HIV w extensive O.R procedure w MCC
25	S	2501	970	HIV w extensive O.R procedure w/o MCC
25	M	2502	974	HIV w major related condition w MCC
25	M	2502	975	HIV w major related condition w CC
25	M	2502	976	HIV w major related condition w/o CC/MCC
25	M	2503	977	HIV w or w/o other related condition
PR	S	7701	001	Heart transplant or implant of heart assist system w MCC
PR	S	7701	002	Heart transplant or implant of heart assist system w/o MCC
PR	S	7702	005	Liver transplant w MCC or intestinal transplant
PR	S	7702	006	Liver transplant w/o MCC
PR	S	7703	007	Lung transplant
PR	S	7704	008	Simultaneous pancreas/kidney transplant
PR	S	7705	014	Allogeneic bone marrow transplant
PR	S	7705	016	Autologous bone marrow transplant w CC/MCC or t-cell immunotherapy
PR	S	7705	017	Autologous bone marrow transplant w/o CC/MCC
PR	S	7706	010	Pancreas transplant
PR	S	7799	003	Ecmo or trach w mv >96 hrs or pdx exc face, mouth & neck w maj O.R
PR	S	7799	004	Trach w mv >96 hrs or pdx exc face, mouth & neck w/o maj O.R
PR	S	7799	011	Tracheostomy for face, mouth & neck diagnoses or laryngectomy w MCC
PR	S	7799	012	Tracheostomy for face, mouth & neck diagnoses or laryngectomy w CC
PR	S	7799	013	Tracheostomy for face, mouth & neck diagnoses or laryngectomy w/o CC/MCC
*1	S	8897	987	Non-extensive O.R proc unrelated to principal diagnosis w MCC
*1	S	8897	988	Non-extensive O.R proc unrelated to principal diagnosis w CC
*1	S	8897	989	Non-extensive O.R proc unrelated to principal diagnosis w/o CC/MCC
*1	*	8898	998	Principal diagnosis invalid as discharge diagnosis
*1	*	8898	999	Ungroupable
*1	S	8899	981	Extensive O.R procedure unrelated to principal diagnosis w MCC
*1	S	8899	982	Extensive O.R procedure unrelated to principal diagnosis w CC
*1	S	8899	983	Extensive O.R procedure unrelated to principal diagnosis w/o CC/MCC

<sup>1</sup> These DRG and MS-DRG codes are not assigned to an MDC.

**Table A.3. Major Diagnostic Categories (MDC)**

MDC	DESCRIPTION
1	Diseases & disorders of the nervous system
2	Diseases & disorders of the eye
3	Diseases & disorders of the ear, nose, mouth & throat
4	Diseases & disorders of the respiratory system
5	Diseases & disorders of the circulatory system
6	Diseases & disorders of the digestive system
7	Diseases & disorders of the hepatobiliary system & pancreas
8	Diseases & disorders of the musculoskeletal system & connective tissue
9	Diseases & disorders of the skin, subcutaneous tissue & breast
10	Endocrine, nutritional & metabolic diseases & disorders
11	Diseases & disorders of the kidney & urinary tract
12	Diseases & disorders of the male reproductive system
13	Diseases & disorders of the female reproductive system
14	Pregnancy, childbirth & the puerperium
15	Newborns & other neonates with condtn orig in perinatal period
16	Diseases & disorders of blood, blood forming organs, immunologic disorders
17	Myeloproliferative diseases & disorders, poorly differentiated neoplasms
18	Infectious & parasitic diseases, systemic or unspecified sites
19	Mental diseases & disorders
20	Alcohol/drug use & alcohol/drug induced organic mental disorders
21	Injuries, poisonings & toxic effects of drugs
22	Burns
23	Factors influencing health status & other contacts with health services
24	Multiple significant trauma
25	Human immunodeficiency virus infections

**Table A.4. Comorbidity Categories (COMORB), HCUP Comorbidity Software, Version 2020.1\***

COMORBIDITY	DESCRIPTION
AIDS	HIV and AIDS (Acquired immune deficiency syndrome)
ALCOHOL	Alcohol abuse
ANEMDEF	Deficiency anemias
ARTH	Rheumatoid arthritis/collagen vascular diseases
BLDLOSS	Blood loss anemia
CHF	Congestive heart failure
CHRNLUNG	Chronic pulmonary disease
COAG	Coagulation deficiency
DEPRESS	Depression
DM	Diabetes w/o chronic complications
DMCX	Diabetes w/ chronic complications
DRUG	Drug abuse
HTN_C (using HTN, HTNCX)	Hypertension (combine uncomplicated and complicated)
HYPOTHY	Hypothyroidism
LIVER	Liver disease
LYMPH	Lymphoma
LYTES	Fluid and electrolyte disorders
METS	Metastatic cancer
NEURO	Other neurological disorders
OBESE	Obesity
PARA	Paralysis
PERIVASC	Peripheral vascular disease
PSYCH	Psychoses
PULMCIRC	Pulmonary circulation disease
RENLFAIL	Renal failure
TUMOR	Solid tumor w/out metastasis
ULCER	Chronic peptic ulcer disease
VALVE	Valvular disease
WGHTLOSS	Weight loss

\*HCUP Comorbidity Software, Version 2020.1 Healthcare Cost and Utilization Project (HCUP). 2019. Agency for Healthcare Research and Quality, Rockville, MD.  
[https://www.hcup-us.ahrq.gov/toolssoftware/comorbidityicd10/comorbidity\\_icd10.jsp](https://www.hcup-us.ahrq.gov/toolssoftware/comorbidityicd10/comorbidity_icd10.jsp) Accessed May 4, 2020.

**Table A.5. Categorical Variables Definitions: Transfer**

CATEGORY	DESCRIPTION	DEFINITION
TRNSFER	Transfer-in	If admission type (ATYPE) not equal to '4' (newborn) and - admission source (ASOURCE) equal to '2' (Another Hospital) or - point of origin (POINTOFORIGINUB04) equal to '4' (Transfer from a Hospital), then TRNSFER=1

**Table A.6. SEVDPEDX: Severe pulmonary embolism or deep vein thrombosis diagnosis codes**

DIAGNOSIS CODE	DESCRIPTION
I2602	Saddle embolus of pulmonary artery with acute cor pulmonale
I2609	Other pulmonary embolism with acute cor pulmonale
I2692	Saddle embolus of pulmonary artery without acute
I2694	Multiple subsegmental pulmonary emboli without acute cor pulmonale
I2699	Other pulmonary embolism without acute cor pulmonale

Note: The SEVDPEDX setname is used in the risk-adjustment model for PSI 04 deep vein thrombosis/pulmonary embolism stratum.

**Table A.7. SEVPNEUDX: Severe pneumonia diagnosis codes**

DIAGNOSIS CODE	DESCRIPTION
J150	Pneumonia due to Klebsiella pneumoniae
J151	Pneumonia due to Pseudomonas
J1520	Pneumonia due to staphylococcus, unspecified
J15211	Pneumonia due to Methicillin susceptible Staphylococcus aureus
J15212	Pneumonia due to Methicillin resistant Staphylococcus aureus
J1529	Pneumonia due to other staphylococcus
J155	Pneumonia due to Escherichia coli
J156	Pneumonia due to other Gram-negative bacteria
J158	Pneumonia due to other specified bacteria
J690	Pneumonitis due to inhalation of food and vomit

Note: The SEVPNEUDX setname is used in the risk-adjustment model for PSI 04 pneumonia stratum.

**Table A.8. SEVSEPDX: Severe sepsis diagnosis codes**

DIAGNOSIS CODE	DESCRIPTION
R6520	Severe sepsis without septic shock
R6521	Severe sepsis with septic shock
T8112XA	Postprocedural septic shock, initial encounter

Note: The SEVSEPDX setname is used in the risk-adjustment model for PSI 04 sepsis stratum.

**Table A.9. SEVSCKDX: Severe shock or cardiac arrest diagnosis codes**

DIAGNOSIS CODE	DESCRIPTION
I462	Cardiac arrest due to underlying cardiac condition
I468	Cardiac arrest due to other underlying condition
I469	Cardiac arrest, cause unspecified
R092	Respiratory arrest

Note: The SEVSCKDX setname is used in the risk-adjustment model for PSI 04 shock/cardiac arrest stratum.

**Table A.10. SEVGIHDX: Severe gastrointestinal hemorrhage or acute ulcer diagnosis codes**

DIAGNOSIS CODE	DESCRIPTION
I8501	Esophageal varices with bleeding
I8511	Secondary esophageal varices with bleeding
K251	Acute gastric ulcer with perforation
K252	Acute gastric ulcer with both hemorrhage and perforation
K261	Acute duodenal ulcer with perforation
K262	Acute duodenal ulcer with both hemorrhage and perforation
K271	Acute peptic ulcer, site unspecified, with perforation
K272	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation
K281	Acute gastrojejunal ulcer with perforation
K282	Acute gastrojejunal ulcer with both hemorrhage and perforation

Note: The SEVGIHDX setname is used in the risk-adjustment model for PSI 04 gastrointestinal hemorrhage stratum.