

PEDIATRIC QUALITY INDICATORS (PDI) PARAMETER ESTIMATES Version 2020

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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) Pediatric Quality Indicators (PDI). 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).¹

HCUP is a family of healthcare databases and related software tools and products developed through a Federal-State-Industry partnership.² 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.³

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 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

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

² 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

³ 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, Maryland, Maine, Massachusetts, 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.

obstetrics-gynecology, ear-nose-throat, orthopedic, and pediatric institutions. Also included are public hospitals and academic medical centers.

The 2017 HCUP SID includes information on all inpatient discharges from hospitals in participating States. Discharges from all 48 participating States are used to develop risk-adjustment models for the area-level PDIs.⁴ This document lists covariates and coefficients for area-level risk adjustment logistic regression models. The regression coefficients are used by the prediction module to calculate risk-adjusted rates that account for differences in patient populations across areas. Covariates that are considered as potential risk adjusters include sex and age and the interaction of sex and age.

Descriptions of the population age categories are provided in the Table A.1. 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 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.⁵ 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 lists covariates and coefficients for hospital-level risk adjustment regression models. The regression coefficients are used 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, AHRQ Clinical Classification Software Refined (CCSR), and patient point-of-origin and whether they were transferred from another facility. Several hospital-level PDIs have populations at risk that are complex, and are therefore stratified in a manner described in the technical specifications so analysts may examine observed rates for each stratum. Categorical variables are used to identify the strata. Whereas the risk adjustment models in some of the other AHRQ QI modules fit individual models for individual QI strata, which results in stratum-specific coefficients for each variable in the models, the PDI module includes at most one risk adjustment model per QI, pooling the data across strata to fit coefficients on the covariates, and using binary indicator covariates to fit a separate regression intercept for each stratum.

⁴ Colorado and Hawaii were not included in the reference population used to develop PDI 01, PDI 05, PDI 10, PDI 12, PDI 16, PDI 18, and NQI 03.

⁵ Colorado, Hawaii, and Wisconsin were not included in the reference population used to develop PDI 08 and PDI 09.

AHRQ Quality Indicators™
Pediatric Quality Indicators (PDI) Parameter Estimates

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. This document also provides a risk adjustment coefficient table for each risk-adjusted hospital-level PDI. Certain indicators (such as PDI 11 Postoperative Wound Dehiscence Rate) are not risk-adjusted because materially important risk factors (e.g., post-operative coughing) are not available in the Healthcare Cost and Utilization Project (HCUP) State Inpatient Database (SID).

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 (non SES) for PDI 01 – Accidental Puncture or Laceration Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-12.22068619	0.3213630894	-38.0276596521	<.0001
AGE_1_2	Age Days < 180	1	0.1753231027	0.1823471152	0.9614799908	0.3363
AGE_3	180 Days <= Age <= 364 Days	1	0.1508806190	0.2645787810	0.5702672694	0.5685
AGE_5	4 <= Age <= 9	1	0.2164939347	0.2267741624	0.9546675531	0.3397
AGE_6	10 <= Age <= 14	1	0.0930297616	0.2219996370	0.4190536652	0.6752
AGE_7	15 <= Age <= 17	1	0.0915184498	0.2289670830	0.3997013397	0.6894
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0846558556	0.2005811693	0.4220528571	0.6730
AGE_1_2_MALE	Age Days < 180 MALE	1	0.3912600532	0.2200040183	1.7784223046	0.0753
AGE_3_MALE	180 Days <= Age <= 364 Days MALE	1	-0.2148808124	0.3722410697	-0.5772625051	0.5638
AGE_5_MALE	4 <= Age <= 9 MALE	1	0.1275093998	0.2671461077	0.4773021060	0.6331
AGE_6_MALE	10 <= Age <= 14 MALE	1	0.2017695215	0.2771872984	0.7279176307	0.4667
AGE_7_MALE	15 <= Age <= 17 MALE	1	-0.0549767353	0.2825198276	-0.1945942547	0.8457
ODC903	Ventilator Dependence flag	1	-0.3455597127	0.3353798778	-1.0303531475	0.3028
ODC904	Adverse Neonatal Conditions flag	1	-0.2012779675	0.1765192792	-1.1402605334	0.2542
MDC_1	Nervous system	1	-0.4859300389	0.2260146775	-2.1499932849	0.0316
MDC_3	Ear nose mouth and throat	1	-0.5295211004	0.3392942167	-1.5606546602	0.1186
MDC_5	Circulatory system	1	1.0981486463	0.1911686058	5.7443984673	<.0001
MDC_6	Digestive system	1	1.3454237215	0.1996078270	6.7403354964	<.0001
MDC_7	Hepatobiliary system and pancreas	1	1.0401415181	0.3257406284	3.1931586894	0.0014
MDC_8	Musculoskeletal and connective	1	-0.7578463250	0.2041992900	-3.7113073455	0.0002
MDC_10	Endocrine nutritional and metabolic	1	1.1992587601	0.2323443209	5.1615583101	<.0001
MDC_11	Kidney and urinary tract	1	0.5338776325	0.2245193700	2.3778689229	0.0174
MDC_13	Female reproductive system	1	1.2917215695	0.4311934961	2.9956888990	0.0027
MDC_17	Myeloproliferative DDS	1	0.2427751661	0.3898463231	0.6227458148	0.5335
MDRG_302	Other ear, nose, mouth & throat OR procedures	1	-0.3221458761	0.4392916440	-0.7333303070	0.4634
MDRG_401	Major chest procedures	1	0.7563923703	0.2716454833	2.7844835157	0.0054
MDRG_503	Cardiac valve & oth maj cardiothoracic proc	1	-1.070410754	0.2540772847	-4.2129336943	<.0001
MDRG_505	Other cardiothoracic procedures	1	-0.9635475608	0.2015658234	-4.7803121815	<.0001
MDRG_601	Stomach, esophageal & duodenal proc	1	0.5079838008	0.2238421834	2.2693836927	0.0232
MDRG_602	Major small & large bowel procedures	1	0.2748626454	0.2171874008	1.2655552039	0.2057
MDRG_604	Peritoneal adhesiolysis	1	-1.618132114	0.4892350596	-3.3074737445	0.0009
MDRG_605	Appendectomy w complicated	1	-2.685655853	0.4349587635	-6.1745068239	<.0001

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
	Principal diag					
MDRG_606	Appendectomy w/o complicated principal diag	1	-2.039235500	0.4212647588	-4.8407455344	<.0001
MDRG_805	Wnd debrid & skn graft exc hand, for musculo-conn tiss dis	1	0.8598391485	0.4490208660	1.9149202489	0.0555
MDRG_1001	Adrenal & pituitary procedures	1	0.2092792572	0.4436729672	0.4716971118	0.6371
MDRG_1304	Uterine & adnexa proc for non-malignancy	1	-0.5303473075	0.5709533200	-0.9288803286	0.3530
MDRG_1502	Extreme immaturity or respiratory distress syndrome	1	0.5166687490	0.2475766305	2.0869043578	0.0369
MDRG_1505	Full term neonate w major problems	1	1.7072898226	0.1955909613	8.7288789382	<.0001
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.2088047514	0.3105142843	-0.6724481353	0.5013
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.0128877045	0.1648666427	-0.0781704792	0.9377
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	-0.3443592950	0.2108594775	-1.6331222059	0.1024
d_DXCCSR_BLD008_123	Immunity disorders	1	0.2096972258	0.2787806974	0.7521942075	0.4519
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.2080611893	0.2447660825	0.8500409335	0.3953
d_DXCCSR_CIR015_123	Other and ill-defined heart disease	1	-0.3175155835	0.3695603092	-0.8591712248	0.3902
d_DXCCSR_CIR016_123	Conduction disorders	1	-0.0682592131	0.3002021033	-0.2273775313	0.8201
d_DXCCSR_CIR019_123	Heart failure	1	-0.4513938579	0.2975874971	-1.5168441627	0.1293
d_DXCCSR_CIR039_123	Other specified diseases of veins and lymphatics	1	0.2386687927	0.3531507748	0.6758268980	0.4992
d_DXCCSR_DIG002_123	Disorders of teeth and gingiva	1	0.2208928512	0.2837494281	0.7784785777	0.4363
d_DXCCSR_DIG004_123	Esophageal disorders	1	0.1011180618	0.1309190010	0.7723711690	0.4399
d_DXCCSR_DIG009_123	Appendicitis and other appendiceal conditions	1	1.2619452450	0.2241511735	5.6298846233	<.0001
d_DXCCSR_DIG010_123	Abdominal hernia	1	-0.7995544288	0.2158657720	-3.7039426009	0.0002
d_DXCCSR_DIG011_123	Regional enteritis and ulcerative colitis	1	-0.4882023170	0.3145470544	-1.5520803970	0.1206
d_DXCCSR_DIG012_123	Intestinal obstruction and ileus	1	0.1098385366	0.1626121230	0.6754633946	0.4994
d_DXCCSR_DIG016_123	Peritonitis and intra-abdominal abscess	1	0.3138272161	0.2080247500	1.5086051832	0.1314
d_DXCCSR_DIG017_123	Biliary tract disease	1	0.7421464034	0.3062072821	2.4236732655	0.0154
d_DXCCSR_DIG020_123	Pancreatic disorders (excluding diabetes)	1	0.5599944088	0.3742611588	1.4962664324	0.1346
d_DXCCSR_DIG024_123	Postprocedural or postoperative digestive system complication	1	-0.6600860840	0.2504101823	-2.6360193423	0.0084
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.3092110773	0.1269307880	-2.4360604867	0.0148
d_DXCCSR_EAR004_123	Hearing loss	1	0.3698356112	0.2593024970	1.4262709211	0.1538
d_DXCCSR_END009_123	Obesity	1	0.1131815903	0.2756910186	0.4105378220	0.6814
d_DXCCSR_END012_123	Cystic fibrosis	1	0.5043580785	0.4556787407	1.1068281960	0.2684

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_END015_123	Other specified and unspecified endocrine disorders	1	0.0947180482	0.2226398185	0.4254317526	0.6705
d_DXCCSR_EYE010_123	Blindness and vision defects	1	-0.0958860436	0.3990603773	-0.2402795392	0.8101
d_DXCCSR_FAC004_123	Encounter for prophylactic or other procedures	1	0.3272599640	0.2044222206	1.6009021087	0.1094
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	0.3684705909	0.1513128350	2.4351575397	0.0149
d_DXCCSR_FAC010_123	Other aftercare encounter	1	0.1471943395	0.1827961848	0.8052374817	0.4207
d_DXCCSR_FAC012_123	Other specified encounters and counseling	1	0.4032821776	0.2813173515	1.4335488922	0.1517
d_DXCCSR_FAC016_123	Exposure, encounters, screening or contact with infectious disease	1	-0.4169768407	0.1424535611	-2.9271071739	0.0034
d_DXCCSR_FAC021_123	Personal/family history of disease	1	0.1656475491	0.0887124636	1.8672409982	0.0619
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	0.6067842036	0.2226009753	2.7258829519	0.0064
d_DXCCSR_FAC025_123	Other specified status	1	0.2978867018	0.0917401213	3.2470711561	0.0012
d_DXCCSR_GEN004_123	Urinary tract infections	1	0.3611835601	0.2294270878	1.5742847261	0.1154
d_DXCCSR_GEN006_123	Other specified and unspecified diseases of kidney and ureters	1	0.3931656087	0.1781083620	2.2074517124	0.0273
d_DXCCSR_GEN011_123	Vesicoureteral reflux	1	0.2859677417	0.3062121153	0.9338877444	0.3504
d_DXCCSR_GEN021_123	Menstrual disorders	1	0.8986413676	0.4184016884	2.1477957485	0.0317
d_DXCCSR_INF002_123	Septicemia	1	0.7226719534	0.2733519071	2.6437421313	0.0082
d_DXCCSR_INF003_123	Bacterial infections	1	-0.3459872618	0.1705146584	-2.0290763564	0.0425
d_DXCCSR_INF004_123	Fungal infections	1	0.1483001895	0.3589520225	0.4131476638	0.6795
d_DXCCSR_INJ017_123	Superficial injury; contusion, initial encounter	1	-0.0414767561	0.3606806130	-0.1149958012	0.9084
d_DXCCSR_MAL001_123	Cardiac and circulatory congenital anomalies	1	0.1737472412	0.1092218959	1.5907729842	0.1117
d_DXCCSR_MAL002_123	Digestive congenital anomalies	1	-0.1023446356	0.1233064960	-0.8300019780	0.4065
d_DXCCSR_MAL003_123	Genitourinary congenital anomalies	1	0.1486080074	0.1380676106	1.0763422845	0.2818
d_DXCCSR_MAL007_123	Respiratory congenital malformations	1	0.3243715651	0.1848201117	1.7550663835	0.0792
d_DXCCSR_MAL009_123	Chromosomal abnormalities	1	-0.0710680821	0.1467049358	-0.4844287052	0.6281
d_DXCCSR_MAL010_123	Other specified and unspecified congenital anomalies	1	-0.0340852850	0.1505107834	-0.2264640727	0.8208
d_DXCCSR_MBD002_123	Depressive disorders	1	0.0024163465	0.3412019850	0.0070818652	0.9943
d_DXCCSR_MBD007_123	Trauma- and stressor-related disorders	1	-0.2314785151	0.4122077881	-0.5615578400	0.5744
d_DXCCSR_MBD014_123	Neurodevelopmental disorders	1	-0.2703926625	0.1574654446	-1.7171555522	0.0860
d_DXCCSR_MBD015_123	Neonatal abstinence syndrome	1	0.0224874301	0.3274722870	0.0686697194	0.9453
d_DXCCSR_MUS011_123	Spondylopathies/spondyloarthropathy (including infective)	1	0.8265151252	0.4128161297	2.0021386415	0.0453

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_MUS028_123	Other specified bone disease and musculoskeletal deformities	1	-0.0880511665	0.3402389489	-0.2587921424	0.7958
d_DXCCSR_NE0048_123	Nervous system cancers - brain	1	0.5729775968	0.4153706544	1.3794368734	0.1678
d_DXCCSR_NE0056_123	Endocrine system cancers - all other types	1	1.1571197124	0.4866026757	2.3779559180	0.0174
d_DXCCSR_NE0070_123	Secondary malignancies	1	0.2771443203	0.3525406831	0.7861342919	0.4318
d_DXCCSR_NE0072_123	Neoplasms of unspecified nature or uncertain behavior	1	0.7651492877	0.2756931349	2.7753657629	0.0055
d_DXCCSR_NE0073_123	Benign neoplasms	1	0.3897346560	0.1916960054	2.0330869967	0.0420
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.7489143067	0.2767869895	-2.7057424483	0.0068
d_DXCCSR_PNL001_123	Liveborn	1	0.0471357462	0.1594389822	0.2956350173	0.7675
d_DXCCSR_PNL002_123	Short gestation; low birth weight; and fetal growth retardation	1	0.5595306174	0.1182456319	4.7319347722	<.0001
d_DXCCSR_PNL005_123	Respiratory distress syndrome	1	0.3460206286	0.1648662373	2.0987961775	0.0358
d_DXCCSR_PNL006_123	Respiratory perinatal condition	1	0.2073486610	0.1706723507	1.2148930986	0.2244
d_DXCCSR_PNL007_123	Hemolytic jaundice and perinatal jaundice	1	-0.4194273344	0.1646782799	-2.5469499357	0.0109
d_DXCCSR_PNL009_123	Perinatal infections	1	-0.5185989029	0.3230703121	-1.6052199273	0.1084
d_DXCCSR_PNL010_123	Newborn affected by maternal conditions or complications of labor/delivery	1	-0.1938407008	0.1686823065	-1.1491466106	0.2505
d_DXCCSR_PNL011_123	Hemorrhagic and hematologic disorders of newborn	1	0.3266127227	0.1741428631	1.8755446934	0.0607
d_DXCCSR_PNL012_123	Neonatal digestive and feeding disorders	1	-0.3017284252	0.1551367248	-1.9449193964	0.0518
d_DXCCSR_PNL013_123	Other specified and unspecified perinatal conditions	1	-0.2350044776	0.1391981455	-1.6882730497	0.0914
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	0.4741168523	0.3042722498	1.5581994498	0.1192
d_DXCCSR_RSP007_123	Other specified and unspecified upper respiratory disease	1	-0.5211148295	0.2955799871	-1.7630247387	0.0779
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.2950441892	0.2476995564	1.1911373338	0.2336
d_DXCCSR_SKN002_123	Other specified inflammatory condition of skin	1	0.0258585390	0.3900804855	0.0662902656	0.9471
d_DXCCSR_SYM005_123	Dysphagia	1	0.5371801253	0.1828229254	2.9382536358	0.0033
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	-0.0556102098	0.1708378551	-0.3255145633	0.7448
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	-0.2450431725	0.2997244546	-0.8175614928	0.4136
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.4536886347	0.2367092039	-1.9166497425	0.0553

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
TRNSFER_ALT	Transfer from acute - outborn	1	-0.0074286401	0.0901735816	-0.0823815579	0.9343
HPPD01_2	Minor therapeutic PR	1	2.2458560905	0.3160593846	7.1058041617	<.0001
HPPD01_3	1 major ther PR/no diag PR	1	3.7864115963	0.3225978592	11.7372496088	<.0001
HPPD01_4	1 major ther PR/minor diag PR	1	4.7914925558	0.3105412237	15.4294895186	<.0001
HPPD01_5	1 major ther PR/major diag PR	1	5.0277346849	0.4019177608	12.5093618033	<.0001
HPPD01_6	2 major therapeutic PR	1	5.6982762284	0.3169794058	17.9768026719	<.0001
HPPD01_7	3+ major therapeutic PR	1	6.5014972564	0.3205171586	20.2843968936	<.0001

c-statistic=0.957

Table 2. Risk Adjustment Coefficients (non SES) for PDI 05 – Iatrogenic Pneumothorax Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-11.19228809	0.4030566602	-27.7685228798	<.0001
AGE_1	Age Days <60	1	0.6604357898	0.4920773521	1.3421381558	0.1796
AGE_2	60 Days <= Age <= 179 Days	1	0.1375565114	0.5425471252	0.2535383657	0.7999
AGE_3	180 Days <= Age <= 364 Days	1	-0.4122096038	0.4744668533	-0.8687848285	0.3850
AGE_5	4 <= Age <= 9	1	0.3828323032	0.4681343926	0.8177829043	0.4135
AGE_6	10 <= Age <= 14	1	1.3297832181	0.3562335819	3.7328968564	0.0002
AGE_7	15 <= Age <= 17	1	1.3799351575	0.4347930411	3.1737747090	0.0015
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.1354148560	0.3888994277	-0.3482001937	0.7277
AGE_1_MALE	Age Days < 60 MALE	1	-0.5470661727	0.5687834315	-0.9618180529	0.3361
AGE_2_MALE	60 Days <= Age <= 179 Days MALE	1	0.3734840781	0.6981461504	0.5349654622	0.5927
AGE_5_MALE	4 <= Age <= 9 MALE	1	0.0531715827	0.5237057581	0.1015294979	0.9191
AGE_6_MALE	10 <= Age <= 14 MALE	1	0.3981773836	0.4698438658	0.8474674518	0.3967
AGE_7_MALE	15 <= Age <= 17 MALE	1	1.0685294734	0.4841112119	2.2071983611	0.0273
ODC903	Ventilator Dependence flag	1	-0.2972987484	0.5002345972	-0.5943186457	0.5523
ODC904	Adverse Neonatal Conditions flag	1	0.5718678538	0.34367778735	1.6639647118	0.0961
MDC_1	Nervous system	1	1.0553203796	0.3599162518	2.9321276110	0.0034
MDC_4	Respiratory system	1	2.9976762408	0.3125702247	9.5904088234	<.0001
MDC_5	Circulatory system	1	1.7835770205	0.4323588863	4.1252234593	<.0001
MDC_6	Digestive system	1	0.4910945180	0.3964075905	1.2388625490	0.2154
MDC_8	Musculoskeletal and connective	1	0.5261308228	0.4488113622	1.1722760765	0.2411
MDC_15	Newborn and other neonates	1	-1.272034183	0.4780137808	-2.6610826595	0.0078
MDC_18	Infectious and Parasitic	1	0.5451002328	0.6165340072	0.8841365220	0.3766
MDRG_103	Craniotomy & endovascular intracranial procedures	1	0.8023473237	0.4989443398	1.6080898403	0.1078
MDRG_415	Other respiratory system diagnoses	1	0.6701145302	0.3646922137	1.8374796745	0.0661
MDRG_416	Respiratory system diagnosis w ventilator support	1	0.4708317797	0.3665503249	1.2844942363	0.1990
MDRG_510	Permanent cardiac pacemaker implant and procedures	1	4.1897636769	0.5195647283	8.0639878891	<.0001
MDRG_514	Other vascular procedures	1	2.2891130915	0.5363555755	4.2679021088	<.0001
MDRG_541	Aortic and heart assist procedures except pulsation balloon	1	4.1901036536	0.5360586668	7.8165020237	<.0001
MDRG_802	Spinal fus exc cerv w spinal curv/malig/infec or ext fus	1	2.1502170004	0.5878592482	3.6577071925	0.0003
MDRG_826	Other musculoskelet sys & conn tiss OR proc	1	1.6432561789	0.4631163138	3.5482580289	0.0004
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	0.4706172583	0.4275023336	1.1008530746	0.2710
d_DXCCSR_CIR007_123	Essential hypertension	1	0.6943196697	0.3054331526	2.2732295553	0.0230

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.6311816442	0.4391770338	1.4371918284	0.1507
d_DXCCSR_CIR031_123	Hypotension	1	0.8671070586	0.3733849575	2.3222870694	0.0202
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.2880392349	0.2799483870	-1.0289012128	0.3035
d_DXCCSR_END008_123	Malnutrition	1	0.9897676681	0.3173145603	3.1192002890	0.0018
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	-0.1174158359	0.2228904424	-0.5267872175	0.5983
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	0.5755897123	0.2784447996	2.0671591396	0.0387
d_DXCCSR_EYE006_123	Neuro-ophthalmology	1	1.1994370378	0.4028018306	2.9777348231	0.0029
d_DXCCSR_EYE007_123	Strabismus	1	0.8567983396	0.4629891762	1.8505796324	0.0642
d_DXCCSR_FAC016_123	Exposure, encounters, screening or contact with infectious disease	1	0.0854671807	0.3375000282	0.2532360696	0.8001
d_DXCCSR_FAC021_123	Personal/family history of disease	1	-0.4276937801	0.1849064000	-2.3130285379	0.0207
d_DXCCSR_FAC025_123	Other specified status	1	-0.4369127167	0.1799933098	-2.4273830911	0.0152
d_DXCCSR_INF002_123	Septicemia	1	1.8684163614	0.5299073135	3.5259305048	0.0004
d_DXCCSR_INF003_123	Bacterial infections	1	-0.6658686373	0.3959150276	-1.6818473433	0.0926
d_DXCCSR_INF008_123	Viral infection	1	-0.3734099693	0.2439565973	-1.5306409974	0.1259
d_DXCCSR_INJ037_123	Complication of other surgical or medical care, injury, initial encounter	1	0.1425051104	0.5159277165	0.2762113874	0.7824
d_DXCCSR_MAL001_123	Cardiac and circulatory congenital anomalies	1	0.4074401817	0.2471019031	1.6488751261	0.0992
d_DXCCSR_MAL004_123	Nervous system congenital anomalies	1	-0.0902233986	0.3087154053	-0.2922542802	0.7701
d_DXCCSR_MAL008_123	Musculoskeletal congenital conditions	1	2.2970298505	0.1811852226	12.6777990904	<.0001
d_DXCCSR_MAL010_123	Other specified and unspecified congenital anomalies	1	0.1940492696	0.3315528942	0.5852739426	0.5584
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.2200446085	0.3441998913	-0.6392930797	0.5226
d_DXCCSR_MBD014_123	Neurodevelopmental disorders	1	-0.0824682921	0.1975597579	-0.4174346690	0.6764
d_DXCCSR_MUS022_123	Scoliosis and other postural dorsopathic deformities	1	0.9026090452	0.3102666815	2.9091394566	0.0036
d_DXCCSR_NEO073_123	Benign neoplasms	1	0.8861285965	0.4417292413	2.0060446842	0.0449
d_DXCCSR_NV007_123	Cerebral palsy	1	-0.2702585810	0.3884334949	-0.6957653871	0.4866
d_DXCCSR_NV008_123	Paralysis (other than cerebral palsy)	1	0.5645561087	0.5043924431	1.1192794747	0.2630
d_DXCCSR_NV013_123	Coma; stupor; and brain damage	1	0.9288895589	0.3940480016	2.3573005194	0.0184
d_DXCCSR_NV020_123	Other specified nervous system disorders	1	-0.1013424343	0.2753368160	-0.3680671396	0.7128
d_DXCCSR_PNL005_123	Respiratory distress syndrome	1	1.2866078217	0.5307365631	2.4241929257	0.0153
d_DXCCSR_PNL013_123	Other specified and unspecified perinatal conditions	1	-0.7444594800	0.4950259696	-1.5038796461	0.1326
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	-0.7084305574	0.3136261147	-2.2588379099	0.0239
d_DXCCSR_RSP005_123	Acute bronchitis	1	-0.9561394601	0.3853285292	-2.4813617150	0.0131

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_RSP007_123	Other specified and unspecified upper respiratory disease	1	-0.0791688904	0.4043785472	-0.1957791554	0.8448
d_DXCCSR_RSP009_123	Asthma	1	-0.7982143623	0.2323621317	-3.4352170744	0.0006
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.5519203229	0.2476442928	2.2286817785	0.0258
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	-0.4570339631	0.3392198379	-1.3473090663	0.1779
d_DXCCSR_SYM003_123	Shock	1	0.7246196717	0.4574157881	1.5841597307	0.1132
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	0.4254480040	0.3532464221	1.2043943759	0.2284
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.1780204762	0.3013801149	0.5906842136	0.5547
d_DXCCSR_SYM012_123	Circulatory signs and symptoms	1	-0.2568428732	0.2893440363	-0.8876729464	0.3747
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	-0.8126495663	0.3532313522	-2.3006156200	0.0214
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	-0.1337945810	0.2357314239	-0.5675721074	0.5703
TRNSFER_ALT	Transfer from acute - outborn	1	-0.2240847685	0.1957264338	-1.1448876074	0.2523

c-statistic=0.923

Table 3. Risk Adjustment Coefficients (non SES) for PDI 08 – Perioperative Hemorrhage or Hematoma Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-7.003175364	0.2722766417	-25.7208085185	<.0001
AGE_1	Age Days <60	1	0.1499691651	0.4998639402	0.3000199715	0.7642
AGE_2	60 Days <= Age <= 179 Days	1	0.0168397753	0.3683084221	0.0457219392	0.9635
AGE_3	180 Days <= Age <= 364 Days	1	0.1818896712	0.3492292486	0.5208317228	0.6025
AGE_5	4 <= Age <= 9	1	0.0265142276	0.2602090658	0.1018958639	0.9188
AGE_6	10 <= Age <= 14	1	0.4559178630	0.2401471009	1.8984941369	0.0576
AGE_7	15 <= Age <= 17	1	0.0749052331	0.3300280213	0.2269662825	0.8204
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.2023078497	0.1972893664	-1.0254371706	0.3052
AGE_2_MALE	60 Days <= Age <= 179 Days MALE	1	0.5398649985	0.4757742015	1.1347084327	0.2565
AGE_3_MALE	180 Days <= Age <= 364 Days MALE	1	0.0205543699	0.3976224536	0.0516931821	0.9588
AGE_5_MALE	4 <= Age <= 9 MALE	1	0.3923888848	0.3174243156	1.2361651753	0.2164
AGE_6_MALE	10 <= Age <= 14 MALE	1	-0.0575923422	0.3678293701	-0.1565735279	0.8756
AGE_7_MALE	15 <= Age <= 17 MALE	1	0.6036539822	0.4101359916	1.4718385965	0.1411
MDC_1	Nervous system	1	-0.8378239168	0.6922188464	-1.2103454293	0.2261
MDC_4	Respiratory system	1	0.7417363438	0.3258338981	2.2764247306	0.0228
MDC_5	Circulatory system	1	1.4821291136	0.2576033055	5.7535329783	<.0001
MDC_6	Digestive system	1	-0.3341197248	0.3756029969	-0.8895555348	0.3737
MDC_7	Hepatobiliary system and pancreas	1	0.8232727719	0.3772340451	2.1823925561	0.0291
MDC_8	Musculoskeletal and connective	1	-0.6371487441	0.3247078842	-1.9622213537	0.0497
MDC_11	Kidney and urinary tract	1	-0.6013844215	0.4585273136	-1.3115563754	0.1897
Mdrg_103	Craniotomy & endovascular intracranial procedures	1	1.4034707849	0.6843820716	2.0507123772	0.0403
MDRG_302	Other ear, nose, mouth & throat OR procedures	1	1.7417557633	0.4208866972	4.1383008177	<.0001
MDRG_505	Other cardiothoracic procedures	1	-0.0027990264	0.2043653514	-0.0136961884	0.9891
MDRG_7701	Heart transplant or implant of heart assist system	1	1.8327962009	0.5210062317	3.5178009192	0.0004
d_DXCCSR_BLD003_123	Aplastic anemia	1	0.0513048096	0.3961134285	0.1295205007	0.8969
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	-1.270304042	0.3049549030	-4.1655471979	<.0001
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	0.2398250684	0.2213236255	1.0835945231	0.2785
d_DXCCSR_CIR007_123	Essential hypertension	1	0.1411290478	0.3474612406	0.4061720598	0.6846
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	0.5209936299	0.4582118900	1.1370146460	0.2555
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.7053949817	0.2772074586	2.5446464725	0.0109
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.1128556277	0.3461764876	0.3260060455	0.7444
d_DXCCSR_CIR019_123	Heart failure	1	-0.8580951931	0.4148054759	-2.0686689131	0.0386

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_CIR032_123	Other specified and unspecified circulatory disease	1	0.9191644571	0.4397208101	2.0903364953	0.0366
d_DXCCSR_DIG004_123	Esophageal disorders	1	0.0341876002	0.1822917576	0.1875433132	0.8512
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.2413312563	0.5210898711	0.4631278973	0.6433
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.1691709582	0.3011244627	-0.5617974597	0.5743
d_DXCCSR_EAR001_123	Otitis media	1	-0.3571186532	0.3315929479	-1.0769790355	0.2815
d_DXCCSR_EAR006_123	Other specified and unspecified disorders of the ear	1	0.7377278877	0.4615945972	1.5982160367	0.1100
d_DXCCSR_END008_123	Malnutrition	1	-0.2505235768	0.5505692645	-0.4550264479	0.6491
d_DXCCSR_END009_123	Obesity	1	0.1116891617	0.3065022890	0.3643991113	0.7156
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	-0.6350851667	0.4307659734	-1.4743159998	0.1404
d_DXCCSR_END015_123	Other specified and unspecified endocrine disorders	1	0.4609575214	0.4628014655	0.9960156909	0.3192
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	0.0983325464	0.3260474861	0.3015896474	0.7630
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	0.0643862400	0.2358676751	0.2729761082	0.7849
d_DXCCSR_FAC021_123	Personal/family history of disease	1	0.0767128023	0.1434090540	0.5349230064	0.5927
d_DXCCSR_FAC025_123	Other specified status	1	0.0397824803	0.1556113313	0.2556528497	0.7982
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.6610374296	0.4668919003	1.4158254387	0.1568
d_DXCCSR_MAL006_123	Cleft lip or palate	1	-0.4238187551	0.5069452454	-0.8360247165	0.4031
d_DXCCSR_MAL008_123	Musculoskeletal congenital conditions	1	-0.2713138164	0.2602661946	-1.0424473944	0.2972
d_DXCCSR_MAL009_123	Chromosomal abnormalities	1	-0.7274919055	0.2557296810	-2.8447691431	0.0044
d_DXCCSR_MAL010_123	Other specified and unspecified congenital anomalies	1	0.1449866313	0.2681656551	0.5406607018	0.5887
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	0.4150082068	0.3212473185	1.2918651236	0.1964
d_DXCCSR_MBD014_123	Neurodevelopmental disorders	1	0.1525774224	0.2156670912	0.7074673355	0.4793
d_DXCCSR_MUS022_123	Scoliosis and other postural dorsopathic deformities	1	-0.7587971039	0.4015043075	-1.8898853379	0.0588
d_DXCCSR_NEO073_123	Benign neoplasms	1	0.2190309777	0.3785555404	0.5785966769	0.5629
d_DXCCSR_NVS007_123	Cerebral palsy	1	0.2570713896	0.3526294445	0.7290128311	0.4660
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	0.0308019550	0.2548083276	0.1208828426	0.9038
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.6507815841	0.2749359266	-2.3670299919	0.0179
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.4069465846	0.2973614553	1.3685249968	0.1711
d_DXCCSR_RSP004_123	Acute and chronic tonsillitis	1	0.9051520915	0.4114149327	2.2000953768	0.0278

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_RSP007_123	Other specified and unspecified upper respiratory disease	1	-0.4536515315	0.2522403192	-1.7984893646	0.0721
d_DXCCSR_RSP009_123	Asthma	1	0.1637458427	0.2140994598	0.7648120309	0.4444
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.5333335954	0.3485840457	1.5300000161	0.1260
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	0.1654374555	0.2580237410	0.6411714475	0.5214
d_DXCCSR_SKN007_123	Other specified and unspecified skin disorders	1	-0.1775884845	0.3892110300	-0.4562781392	0.6482
d_DXCCSR_SYM005_123	Dysphagia	1	0.2547041173	0.2575099397	0.9891040226	0.3226
d_DXCCSR_SYM012_123	Circulatory signs and symptoms	1	0.3181781458	0.4093504601	0.7772756520	0.4370
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	0.2404867011	0.2679148422	0.8976236594	0.3694
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.0198748871	0.1775365939	0.1119481151	0.9109
TRNSFER_ALT	Transfer from acute - outborn	1	0.0256146913	0.3825300112	0.0669612594	0.9466
GPPD08_2	Coagulopathy	1	2.7085113483	0.1975254028	13.7122178206	<.0001

c-statistic=0.833

Table 4. Risk Adjustment Coefficients (non SES) for PDI 09 – Postoperative Respiratory Failure Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-5.795991592	0.2351894878	-24.6439228501	<.0001
AGE_1	Age Days <60	1	0.9351185338	0.3482138498	2.6854719716	0.0072
AGE_2	60 Days <= Age <= 179 Days	1	0.5786233390	0.3253001368	1.7787368448	0.0753
AGE_3	180 Days <= Age <= 364 Days	1	0.2218086961	0.2837792813	0.7816239970	0.4344
AGE_5	4 <= Age <= 9	1	-0.4093140851	0.1621028774	-2.5250266478	0.0116
AGE_6	10 <= Age <= 14	1	-0.7348563928	0.1784865011	-4.1171538924	<.0001
AGE_7	15 <= Age <= 17	1	-1.004569981	0.2364262188	-4.2489787543	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.3442711739	0.1694865591	2.0312594445	0.0422
AGE_1_MALE	Age Days < 60 MALE	1	-0.1856210856	0.3821378486	-0.4857437866	0.6271
AGE_2_MALE	60 Days <= Age <= 179 Days MALE	1	-0.1737498396	0.4584162996	-0.3790219495	0.7047
AGE_3_MALE	180 Days <= Age <= 364 Days MALE	1	-0.0899819873	0.3833481769	-0.2347265299	0.8144
AGE_5_MALE	4 <= Age <= 9 MALE	1	-0.1072606223	0.2144142120	-0.5002495929	0.6169
AGE_6_MALE	10 <= Age <= 14 MALE	1	-0.1801999556	0.2853993951	-0.6313957166	0.5278
AGE_7_MALE	15 <= Age <= 17 MALE	1	-0.1364152941	0.2989667686	-0.4562891545	0.6482
ODC904	Adverse Neonatal Conditions flag	1	0.3453867176	0.2485504525	1.3896040587	0.1646
MDC_1	Nervous system	1	0.0018862297	0.3315059195	0.0056898823	0.9955
MDC_3	Ear nose mouth and throat	1	0.5149342839	0.3263300512	1.5779554534	0.1146
MDC_6	Digestive system	1	-0.2956751057	0.2573031598	-1.1491312660	0.2505
MDC_7	Hepatobiliary system and pancreas	1	-0.1375372761	0.5268268344	-0.2610673320	0.7940
MDC_8	Musculoskeletal and connective	1	-0.4432291976	0.3129129994	-1.4164614395	0.1566
MDC_11	Kidney and urinary tract	1	-0.0373445966	0.4414587179	-0.0845936326	0.9326
MDC_16	Blood and Immunological	1	0.7197302319	0.4307202853	1.6709921880	0.0947
MDC_21	Injuries poison and toxic	1	0.7324507033	0.6551466761	1.1179949925	0.2636
MDRG_103	Craniotomy & endovascular intracranial procedures	1	0.2973758147	0.3384316275	0.8786880143	0.3796
MDRG_105	Ventricular shunt procedures	1	-1.138087068	0.7381271454	-1.5418577618	0.1231
MDRG_108	Periph/cranial nerve & other nerv syst proc	1	-0.6039452935	0.5579260628	-1.0824826689	0.2790
MDRG_301	Cranial/facial procedures	1	0.2955514158	0.4001586334	0.7385856287	0.4602
MDRG_601	Stomach, esophageal & duodenal proc	1	0.6226188039	0.2617250521	2.3789041172	0.0174
MDRG_602	Major small & large bowel procedures	1	0.2631592873	0.2266116472	1.1612787360	0.2455
MDRG_701	Pancreas, liver & shunt procedures	1	2.3377989382	0.5478344199	4.2673458496	<.0001
MDRG_702	Biliary tract proc except only cholecyst w or w/o C.D.E.	1	1.1283333034	0.6052993830	1.8640912828	0.0623
MDRG_801	Combined anterior/posterior spinal fusion	1	2.6391168881	0.4417727053	5.9739247275	<.0001
MDRG_802	Spinal fus exc cerv w spinal curv/malig/infec or ext fus	1	1.6983711241	0.2913177478	5.8299610539	<.0001

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_803	Spinal fusion except cervical	1	1.8544590432	0.3209458379	5.7781059113	<.0001
MDRG_811	Hip & femur procedures except major joint	1	-0.6727183422	0.3279535816	-2.0512608487	0.0402
MDRG_815	Back & neck proc exc spinal fusion or disc device/neurostim	1	1.3924644059	0.3808110544	3.6565755902	0.0003
MDRG_826	Other musculoskelet sys & conn tiss O.R. proc	1	0.6202120125	0.4477707554	1.3851105840	0.1660
MDRG_1101	Kidney transplant	1	2.4520555239	0.6425410201	3.8161851882	0.0001
MDRG_1102	Major bladder procedures	1	1.4300251829	0.5136839534	2.7838618930	0.0054
MDRG_1104	Kidney & ureter procedures for non-neoplasm	1	-0.9480286788	0.5846384128	-1.6215641292	0.1049
MDRG_1801	Infectious & parasitic diseases w O.R. procedure	1	1.1448933635	0.5462958097	2.0957388712	0.0361
MDRG_2104	Other O.R. procedures for injuries	1	0.2378623396	0.7591258637	0.3133371565	0.7540
MDRG_7702	Liver transplant	1	3.5835178435	0.5771304296	6.2091992723	<.0001
MDRG_7705	Allogeneic or autologous bone marrow transplant	1	1.3970458557	0.5309802402	2.6310693880	0.0085
d_DXCCSR_BLD001_123	Nutritional anemia	1	0.7893340282	0.2632407047	2.9985257371	0.0027
d_DXCCSR_BLD003_123	Aplastic anemia	1	0.3488534619	0.1759367267	1.9828347865	0.0474
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.4680562961	0.1815229952	2.5784958854	0.0099
d_DXCCSR_BLD007_123	Diseases of white blood cells	1	0.3922730681	0.3451863791	1.1364094643	0.2558
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	-0.4838637434	0.5257179734	-0.9203865341	0.3574
d_DXCCSR_CIR007_123	Essential hypertension	1	0.4420862795	0.2106148188	2.0990274187	0.0358
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.3622544466	0.5033482467	-0.7196894973	0.4717
d_DXCCSR_CIR015_123	Other and ill-defined heart disease	1	1.1609361203	0.4934965534	2.3524705740	0.0186
d_DXCCSR_CIR016_123	Conduction disorders	1	0.8672583138	0.3281819988	2.6426139064	0.0082
d_DXCCSR_CIR025_123	Sequelae of cerebral infarction and other cerebrovascular disease	1	1.0130052954	0.3271917637	3.0960598888	0.0020
d_DXCCSR_CIR031_123	Hypotension	1	1.0562762206	0.4083566408	2.5866512630	0.0097
d_DXCCSR_CIR032_123	Other specified and unspecified circulatory disease	1	1.2491411961	0.4086344915	3.0568667646	0.0022
d_DXCCSR_DIG002_123	Disorders of teeth and gingiva	1	0.4145361984	0.2976409662	1.3927390562	0.1637
d_DXCCSR_DIG003_123	Diseases of mouth; excluding dental	1	0.2663498581	0.2871248220	0.9276448352	0.3536
d_DXCCSR_DIG004_123	Esophageal disorders	1	0.1389820341	0.1316083353	1.0560275972	0.2910
d_DXCCSR_DIG008_123	Other specified and unspecified disorders of stomach and duodenum	1	-0.6518018345	0.3937896436	-1.6552030891	0.0979
d_DXCCSR_DIG010_123	Abdominal hernia	1	0.4085026544	0.1926407296	2.1205414618	0.0340
d_DXCCSR_DIG012_123	Intestinal obstruction and ileus	1	0.2426846391	0.3479446158	0.6974806567	0.4855
d_DXCCSR_DIG017_123	Biliary tract disease	1	0.6566743350	0.3421604180	1.9192001780	0.0550
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.2647390634	0.3230297660	0.8195500580	0.4125

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_DIG024_123	Postprocedural or postoperative digestive system complication	1	0.3513062188	0.2276179213	1.5434031592	0.1227
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.2603501921	0.1663724596	-1.5648635158	0.1176
d_DXCCSR_EAR001_123	Otitis media	1	-0.1160396766	0.2422205276	-0.4790662366	0.6319
d_DXCCSR_EAR004_123	Hearing loss	1	-0.2052410175	0.1828448366	-1.1224873573	0.2617
d_DXCCSR_END001_123	Thyroid disorders	1	0.2944828865	0.1953957101	1.5071102958	0.1318
d_DXCCSR_END008_123	Malnutrition	1	0.4751956381	0.1802874173	2.6357670730	0.0084
d_DXCCSR_END009_123	Obesity	1	0.4051159298	0.2329779401	1.7388596086	0.0821
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.6452255271	0.2117715808	3.0467994082	0.0023
d_DXCCSR_END013_123	Pituitary disorders	1	0.3477678126	0.2336043041	1.4887046449	0.1366
d_DXCCSR_END015_123	Other specified and unspecified endocrine disorders	1	0.4286725543	0.1807201920	2.3720235663	0.0177
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	0.3446093500	0.1501018510	2.2958367783	0.0217
d_DXCCSR_EYE001_123	Cornea and external disease	1	0.6999280528	0.4557040470	1.5359267873	0.1246
d_DXCCSR_EYE007_123	Strabismus	1	0.2975441923	0.2718710857	1.0944311766	0.2738
d_DXCCSR_EYE008_123	Oculofacial plastics and orbital conditions	1	0.8314293397	0.4756143758	1.7481165035	0.0804
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	0.1181909774	0.1181994519	0.9999283042	0.3173
d_DXCCSR_FAC010_123	Other aftercare encounter	1	0.4685331058	0.2201952105	2.1278078874	0.0334
d_DXCCSR_FAC012_123	Other specified encounters and counseling	1	0.5246514797	0.3236957727	1.6208165941	0.1051
d_DXCCSR_FAC016_123	Exposure, encounters, screening or contact with infectious disease	1	0.4293671435	0.3091937419	1.3886669919	0.1649
d_DXCCSR_FAC021_123	Personal/family history of disease	1	0.0681478243	0.1102737512	0.6179877224	0.5366
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	0.1812101977	0.2606938030	0.6951074236	0.4870
d_DXCCSR_FAC023_123	Organ transplant status	1	-0.8607075976	0.4108384472	-2.0950025574	0.0362
d_DXCCSR_FAC024_123	Carrier status	1	0.8918275819	0.3393016807	2.6284207614	0.0086
d_DXCCSR_FAC025_123	Other specified status	1	0.4716029649	0.1234589294	3.8199178237	0.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.8952002588	0.6323417629	1.4156905509	0.1569
d_DXCCSR_GEN003_123	Chronic kidney disease	1	-0.5453852119	0.3411895911	-1.5984813902	0.1099
d_DXCCSR_GEN006_123	Other specified and unspecified diseases of kidney and ureters	1	-0.0556372985	0.2324973510	-0.2393029350	0.8109
d_DXCCSR_GEN007_123	Other specified and unspecified diseases of bladder and urethra	1	-0.1430769917	0.2510844926	-0.5698360350	0.5688
d_DXCCSR_GEN008_123	Urinary incontinence	1	-0.5912270640	0.4203243999	-1.4065970575	0.1595
d_DXCCSR_GEN011_123	Vesicoureteral reflux	1	-0.7721172409	0.3356352209	-2.3004654844	0.0214

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_GEN016_123	Other specified male genital disorders	1	-0.4734747741	0.3285829399	-1.4409596987	0.1496
d_DXCCSR_INF003_123	Bacterial infections	1	0.1206184171	0.2427630809	0.4968565097	0.6193
d_DXCCSR_INF004_123	Fungal infections	1	0.5140237670	0.3594361777	1.4300835558	0.1527
d_DXCCSR_INF008_123	Viral infection	1	0.2909262787	0.3426836715	0.8489645201	0.3959
d_DXCCSR_INJ037_123	Complication of other surgical or medical care, injury, initial encounter	1	0.3884038463	0.2472192294	1.5710907569	0.1162
d_DXCCSR_MAL001_123	Cardiac and circulatory congenital anomalies	1	0.6345994211	0.1376932882	4.6087897931	<.0001
d_DXCCSR_MAL002_123	Digestive congenital anomalies	1	0.1624698066	0.1803304984	0.9009557896	0.3676
d_DXCCSR_MAL004_123	Nervous system congenital anomalies	1	0.2731479732	0.1266049560	2.1574824695	0.0310
d_DXCCSR_MAL005_123	Congenital malformations of eye, ear, face, neck	1	-0.3598971207	0.2972315992	-1.2108306172	0.2260
d_DXCCSR_MAL006_123	Cleft lip or palate	1	-0.8319368691	0.3741165615	-2.2237370776	0.0262
d_DXCCSR_MAL007_123	Respiratory congenital malformations	1	0.5325792860	0.3621230482	1.4707135838	0.1414
d_DXCCSR_MAL008_123	Musculoskeletal congenital conditions	1	0.2734784641	0.1360829165	2.0096458186	0.0445
d_DXCCSR_MAL009_123	Chromosomal abnormalities	1	0.4118217508	0.1700460339	2.4218250869	0.0154
d_DXCCSR_MAL010_123	Other specified and unspecified congenital anomalies	1	0.4940487538	0.1597550261	3.0925396578	0.0020
d_DXCCSR_MBD014_123	Neurodevelopmental disorders	1	0.1784799374	0.1042443310	1.7121308734	0.0869
d_DXCCSR_MUS022_123	Scoliosis and other postural dorsopathic deformities	1	0.1496709046	0.2024822825	0.7391802520	0.4598
d_DXCCSR_MUS023_123	Acquired deformities (excluding foot)	1	-0.2269236450	0.2010088095	-1.1289238795	0.2589
d_DXCCSR_MUS026_123	Muscle disorders	1	0.3170069034	0.2904024513	1.0916123540	0.2750
d_DXCCSR_MUS028_123	Other specified bone disease and musculoskeletal deformities	1	-0.1815247219	0.2753467993	-0.6592585146	0.5097
d_DXCCSR_NEO045_123	Urinary system cancers - kidney	1	1.8387927341	0.4773538957	3.8520534780	0.0001
d_DXCCSR_NEO048_123	Nervous system cancers - brain	1	1.2376185147	0.2688459125	4.6034492525	<.0001
d_DXCCSR_NEO056_123	Endocrine system cancers - all other types	1	1.8997134032	0.3936138488	4.8263378154	<.0001
d_DXCCSR_NEO059_123	Leukemia - acute lymphoblastic leukemia (ALL)	1	1.3280833170	0.4188688089	3.1706426658	0.0015
d_DXCCSR_NEO070_123	Secondary malignancies	1	0.3137528235	0.3617793963	0.8672490106	0.3858
d_DXCCSR_NEO072_123	Neoplasms of unspecified nature or uncertain behavior	1	0.9426456068	0.2814010464	3.3498297857	0.0008
d_DXCCSR_NEO073_123	Benign neoplasms	1	0.5338805800	0.2278786501	2.3428284303	0.0191
d_DXCCSR_NVS007_123	Cerebral palsy	1	0.8055519837	0.1678540511	4.7991214903	<.0001
d_DXCCSR_NVS008_123	Paralysis (other than cerebral palsy)	1	0.8302477550	0.2122258728	3.9120949025	<.0001
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	0.5864333735	0.1295827473	4.5255513219	<.0001
d_DXCCSR_NVS010_123	Headache; including migraine	1	-0.2350543021	0.4935457844	-0.4762563262	0.6339
d_DXCCSR_NVS016_123	Sleep wake disorders	1	0.6729438367	0.1440896482	4.6703135523	<.0001

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_NVS019_123	Nervous system pain and pain syndromes	1	-0.3596870961	0.2985098808	-1.2049420110	0.2282
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.2407504491	0.1201589717	2.0035994458	0.0451
d_DXCCSR_PNL002_123	Short gestation; low birth weight; and fetal growth retardation	1	-0.6804871000	0.2951091683	-2.3058826125	0.0211
d_DXCCSR_PNL006_123	Respiratory perinatal condition	1	0.6784287445	0.3484337980	1.9470807608	0.0515
d_DXCCSR_PNL007_123	Hemolytic jaundice and perinatal jaundice	1	0.8444577649	0.5791025787	1.4582179322	0.1448
d_DXCCSR_PNL009_123	Perinatal infections	1	0.7010352844	0.4807789419	1.4581239389	0.1448
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	0.9999787646	0.4831586816	2.0696694538	0.0385
d_DXCCSR_RSP004_123	Acute and chronic tonsillitis	1	-0.2259275638	0.2508395130	-0.9006857056	0.3678
d_DXCCSR_RSP006_123	Other specified upper respiratory infections	1	0.3190477971	0.3987417764	0.8001363689	0.4236
d_DXCCSR_RSP007_123	Other specified and unspecified upper respiratory disease	1	0.3076994034	0.1909918603	1.6110602984	0.1072
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.6143639496	0.5087884604	1.2075037021	0.2272
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.9185780739	0.2936910544	3.1277019169	0.0018
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	0.6141775875	0.1959555498	3.1342699310	0.0017
d_DXCCSR_RSP017_123	Postprocedural or postoperative respiratory system complication	1	1.6509028863	0.5050326597	3.2689032175	0.0011
d_DXCCSR_SKN001_123	Skin and subcutaneous tissue infections	1	-0.6407328703	0.4685345419	-1.3675253646	0.1715
d_DXCCSR_SYM005_123	Dysphagia	1	0.1285043296	0.1620324395	0.7930777931	0.4277
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	-0.3744790635	0.2223788637	-1.6839687789	0.0922
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	-0.1863931333	0.2159711137	-0.8630465901	0.3881
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.1509656693	0.1120699593	1.3470663344	0.1780
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.6555300665	0.4425176362	-1.4813648380	0.1385
TRNSFER_ALT	Transfer from acute - outborn	1	0.9311864640	0.2289370636	4.0674342947	<.0001

c-statistic=0.849

Table 5. Risk Adjustment Coefficients (non SES) for PDI 10 – Postoperative Sepsis Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-6.884382563	0.2016679891	-34.1372103324	<.0001
AGE_1	Age Days <60	1	0.4187493538	0.2045501761	2.0471718079	0.0406
AGE_2	60 Days <= Age <= 179 Days	1	0.3241543497	0.1754735230	1.8473120280	0.0647
AGE_3	180 Days <= Age <= 364 Days	1	0.3116305403	0.1594644064	1.9542325920	0.0507
AGE_5	4 <= Age <= 9	1	-0.1668704597	0.1607880662	-1.0378286377	0.2993
AGE_6	10 <= Age <= 14	1	-0.4355871858	0.1597586892	-2.7265320457	0.0064
AGE_7	15 <= Age <= 17	1	-0.3919065553	0.1771863424	-2.2118327521	0.0270
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1420703181	0.1353805497	1.0494145455	0.2940
AGE_1_MALE	Age Days < 60 MALE	1	-0.2645478926	0.2221399274	-1.1909065414	0.2337
AGE_2_MALE	60 Days <= Age <= 179 Days MALE	1	-0.0664504527	0.1949680850	-0.3408273346	0.7332
AGE_3_MALE	180 Days <= Age <= 364 Days MALE	1	-0.5642489201	0.1935070442	-2.9159089394	0.0035
AGE_5_MALE	4 <= Age <= 9 MALE	1	-0.4711279521	0.2144609025	-2.1968011263	0.0280
AGE_6_MALE	10 <= Age <= 14 MALE	1	-0.0667510786	0.1906269991	-0.3501659203	0.7262
AGE_7_MALE	15 <= Age <= 17 MALE	1	0.1047539777	0.1975050344	0.5303863672	0.5958
ODC903	Ventilator Dependence flag	1	0.6405683863	0.1452619319	4.4097471245	<.0001
ODC904	Adverse Neonatal Conditions flag	1	0.3870724504	0.2128566579	1.8184653197	0.0690
MDC_1	Nervous system	1	0.2772960650	0.1416520615	1.9575858066	0.0503
MDC_4	Respiratory system	1	0.2663169911	0.1556013198	1.7115342685	0.0870
MDC_5	Circulatory system	1	1.2862635340	0.1392175630	9.2392332266	<.0001
MDC_9	Skin subcutaneous and breast	1	-0.7630514241	0.4086182145	-1.8673945434	0.0618
MDC_10	Endocrine nutritional and metabolic	1	0.4094284049	0.1746794736	2.3438838952	0.0191
MDC_11	Kidney and urinary tract	1	-0.3620211501	0.1586708059	-2.2815863824	0.0225
MDC_16	Blood and Immunological	1	0.7748551485	0.1767756904	4.3832675569	<.0001
MDC_17	Myeloproliferative DDS	1	0.5277808388	0.1960235825	2.6924354305	0.0071
MDC_22	Burns	1	1.6848954861	0.5053334005	3.3342254529	0.0009
MDRG_401	Major chest procedures	1	-0.6315231040	0.2565247674	-2.4618406655	0.0138
MDRG_402	Other resp system O.R. procedures	1	-0.3676768449	0.2585711201	-1.4219563450	0.1550
MDRG_505	Other cardiothoracic procedures	1	-0.3489728359	0.1543499080	-2.2609202714	0.0238
MDRG_514	Other vascular procedures	1	-1.096986027	0.3247230161	-3.3782207384	0.0007
MDRG_601	Stomach, esophageal & duodenal proc	1	-0.2588925487	0.1442474069	-1.7947813015	0.0727
MDRG_602	Major small & large bowel procedures	1	0.3254544833	0.1335326430	2.4372653460	0.0148
MDRG_1101	Kidney transplant	1	-0.6477956264	0.4352514269	-1.4883251066	0.1367
MDRG_2104	Other O.R. procedures for injuries	1	-0.3862870171	0.2396035772	-1.6121921948	0.1069
MDRG_2201	Full thickness burn w skin graft or inhal inj	1	-2.629155270	0.4382139308	-5.9997071866	<.0001

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_7701	Heart transplant or implant of heart assist system	1	1.3840619398	0.2782697473	4.9738139105	<.0001
MDRG_7702	Liver transplant	1	0.3515525909	0.1734193799	2.0271816859	0.0426
MDRG_7705	Allogeneic or autologous bone marrow transplant	1	2.9311356663	0.2572480255	11.3942008316	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	0.1577991863	0.1116748705	1.4130232308	0.1576
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.2139072164	0.1191248005	1.7956564504	0.0725
d_DXCCSR_BLD007_123	Diseases of white blood cells	1	-0.2122149866	0.1778019145	-1.1935472530	0.2327
d_DXCCSR_CIR006_123	Pericarditis and pericardial disease	1	0.3656588493	0.2566946651	1.4244894775	0.1543
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	0.3778742177	0.1643916624	2.2986215500	0.0215
d_DXCCSR_CIR019_123	Heart failure	1	-0.0077296040	0.1556069008	-0.0496739154	0.9604
d_DXCCSR_CIR021_123	Acute hemorrhagic cerebrovascular disease	1	0.7449529161	0.2305720008	3.2308906269	0.0012
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.7057333609	0.2015284014	3.5019052211	0.0005
d_DXCCSR_CIR031_123	Hypotension	1	0.1958845576	0.2219615781	0.8825156104	0.3775
d_DXCCSR_CIR033_123	Acute phlebitis; thrombophlebitis and thromboembolism	1	0.3009233490	0.2184544331	1.3775108374	0.1684
d_DXCCSR_CIR039_123	Other specified diseases of veins and lymphatics	1	0.2251343273	0.2064258965	1.0906302511	0.2754
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1282395375	0.1024330756	-1.2519348530	0.2106
d_DXCCSR_DIG006_123	Gastrointestinal and biliary perforation	1	1.4435674976	0.2336526814	6.1782620635	<.0001
d_DXCCSR_DIG008_123	Other specified and unspecified disorders of stomach and duodenum	1	0.4156478057	0.2004349762	2.0737289147	0.0381
d_DXCCSR_DIG010_123	Abdominal hernia	1	-0.1887299116	0.1246206893	-1.5144348229	0.1299
d_DXCCSR_DIG012_123	Intestinal obstruction and ileus	1	0.2763966979	0.1476507620	1.8719625570	0.0612
d_DXCCSR_DIG016_123	Peritonitis and intra-abdominal abscess	1	0.7457319954	0.1827946908	4.0796151808	<.0001
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.2175380554	0.1933111867	1.1253257463	0.2605
d_DXCCSR_DIG020_123	Pancreatic disorders (excluding diabetes)	1	0.4911508841	0.1800253758	2.7282314057	0.0064
d_DXCCSR_DIG024_123	Postprocedural or postoperative digestive system complication	1	0.2540779874	0.1565739044	1.6227352088	0.1046
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	0.1240706138	0.0889651367	1.3945981356	0.1631
d_DXCCSR_EAR004_123	Hearing loss	1	-0.5433741868	0.2109204406	-2.5762044930	0.0100
d_DXCCSR_END001_123	Thyroid disorders	1	0.3032707342	0.1583005865	1.9157903389	0.0554
d_DXCCSR_END007_123	Nutritional deficiencies	1	-0.2726662318	0.2060553760	-1.3232667698	0.1857
d_DXCCSR_END008_123	Malnutrition	1	0.1245896266	0.1370684668	0.9089590735	0.3634
d_DXCCSR_END009_123	Obesity	1	-0.2428362539	0.1864410561	-1.3024827202	0.1928
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.0739180937	0.0727823937	1.0156040494	0.3098

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_END015_123	Other specified and unspecified endocrine disorders	1	0.1790644907	0.1610950020	1.1115459113	0.2663
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	0.1163335495	0.1102094187	1.0555681250	0.2912
d_DXCCSR_EYE005_123	Retinal and vitreous conditions	1	-0.4175789429	0.1825357362	-2.2876558396	0.0222
d_DXCCSR_FAC006_123	Encounter for antineoplastic therapies	1	0.7653470120	0.3037955755	2.5192829451	0.0118
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.2299948305	0.1225639590	-1.8765290582	0.0606
d_DXCCSR_FAC010_123	Other aftercare encounter	1	0.3456930244	0.1275369722	2.7105318431	0.0067
d_DXCCSR_FAC014_123	Medical examination/evaluation	1	0.7724608048	0.3096882276	2.4943176268	0.0126
d_DXCCSR_FAC016_123	Exposure, encounters, screening or contact with infectious disease	1	0.4591789136	0.1424610610	3.2231889227	0.0013
d_DXCCSR_FAC021_123	Personal/family history of disease	1	-0.2208377261	0.0819789497	-2.6938345378	0.0071
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.2259126818	0.1912070750	-1.1815079638	0.2374
d_DXCCSR_FAC025_123	Other specified status	1	0.0865719705	0.0737197532	1.1743388546	0.2403
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.5532039187	0.1620305950	3.4141942064	0.0006
d_DXCCSR_GEN003_123	Chronic kidney disease	1	-0.3734146170	0.2180358806	-1.7126292054	0.0868
d_DXCCSR_GEN004_123	Urinary tract infections	1	0.3810226820	0.1927819748	1.9764435057	0.0481
d_DXCCSR_GEN007_123	Other specified and unspecified diseases of bladder and urethra	1	0.4398814530	0.1940231652	2.2671594526	0.0234
d_DXCCSR_INF003_123	Bacterial infections	1	0.1655355150	0.1225433834	1.3508319289	0.1767
d_DXCCSR_INF004_123	Fungal infections	1	0.2661744803	0.2034217957	1.3084855506	0.1907
d_DXCCSR_INF008_123	Viral infection	1	0.2662432256	0.1075975462	2.4744358492	0.0133
d_DXCCSR_INJ004_123	Fracture of the upper limb, initial encounter	1	-0.4775331727	0.1960648441	-2.4355879552	0.0149
d_DXCCSR_INJ005_123	Fracture of the lower limb (except hip), initial encounter	1	-0.6652831820	0.2298110949	-2.8949132424	0.0038
d_DXCCSR_INJ008_123	Traumatic brain injury (TBI); concussion, initial encounter	1	0.2560591761	0.1774327837	1.4431333978	0.1490
d_DXCCSR_INJ009_123	Spinal cord injury (SCI), initial encounter	1	0.3871353291	0.3474456951	1.1142326256	0.2652
d_DXCCSR_INJ010_123	Internal organ injury, initial encounter	1	0.1766181807	0.1871320275	0.9438158884	0.3453
d_DXCCSR_INJ012_123	Open wounds to limbs, initial encounter	1	-0.3363465592	0.2801917752	-1.2004155331	0.2300
d_DXCCSR_INJ016_123	Injury to blood vessels, initial encounter	1	0.7611553854	0.2782310362	2.7356954705	0.0062
d_DXCCSR_INJ019_123	Burn and corrosion, initial encounter	1	0.7481463177	0.4349527233	1.7200635324	0.0854
d_DXCCSR_INJ026_123	Other specified injury	1	0.4353862579	0.1977188542	2.2020472443	0.0277
d_DXCCSR_INJ037_123	Complication of other surgical or medical care, injury, initial encounter	1	-0.6842933735	0.1914899634	-3.5735208331	0.0004

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_MAL001_123	Cardiac and circulatory congenital anomalies	1	0.8094705105	0.1071887830	7.5518210725	<.0001
d_DXCCSR_MAL004_123	Nervous system congenital anomalies	1	0.3927887608	0.1148355814	3.4204447438	0.0006
d_DXCCSR_MAL006_123	Cleft lip or palate	1	-0.6001973431	0.2951926619	-2.0332393741	0.0420
d_DXCCSR_MAL007_123	Respiratory congenital malformations	1	0.2230496988	0.1310166744	1.7024527586	0.0887
d_DXCCSR_MAL008_123	Musculoskeletal congenital conditions	1	-0.1077362339	0.1070080733	-1.0068047264	0.3140
d_DXCCSR_MAL009_123	Chromosomal abnormalities	1	0.2408939769	0.1129987254	2.1318291520	0.0330
d_DXCCSR_MAL010_123	Other specified and unspecified congenital anomalies	1	0.1075677658	0.1390969832	0.7733292503	0.4393
d_DXCCSR_MBD002_123	Depressive disorders	1	0.5998707967	0.2221285523	2.7005569093	0.0069
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.3279060937	0.1934927338	-1.6946687728	0.0901
d_DXCCSR_MBD014_123	Neurodevelopmental disorders	1	0.0943263949	0.1053797762	0.8951090835	0.3707
d_DXCCSR_MUS023_123	Acquired deformities (excluding foot)	1	-0.8246920804	0.3509024351	-2.3502033555	0.0188
d_DXCCSR_MUS026_123	Muscle disorders	1	0.3491451341	0.2119917063	1.6469754415	0.0996
d_DXCCSR_NE0048_123	Nervous system cancers - brain	1	0.8397337223	0.2553747880	3.2882405073	0.0010
d_DXCCSR_NE0059_123	Leukemia - acute lymphoblastic leukemia (ALL)	1	1.0867400381	0.2664618563	4.0784075183	<.0001
d_DXCCSR_NE0060_123	Leukemia - acute myeloid leukemia (AML)	1	1.2864890046	0.2897785226	4.4395595397	<.0001
d_DXCCSR_NE0073_123	Benign neoplasms	1	-0.3572123934	0.2298915557	-1.5538299885	0.1202
d_DXCCSR_NVS007_123	Cerebral palsy	1	0.5923626576	0.1668633004	3.5499876609	0.0004
d_DXCCSR_NVS008_123	Paralysis (other than cerebral palsy)	1	0.4331071407	0.1968913952	2.1997260992	0.0278
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	0.2334838334	0.1063197702	2.1960528407	0.0281
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	0.5217772873	0.2200838337	2.3708115152	0.0177
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.2203417614	0.1050548948	2.0973964297	0.0360
d_DXCCSR_PNL002_123	Short gestation; low birth weight; and fetal growth retardation	1	-0.3738880172	0.1829451748	-2.0437161988	0.0410
d_DXCCSR_PNL006_123	Respiratory perinatal condition	1	0.3693494438	0.2301197326	1.6050316053	0.1085
d_DXCCSR_PNL011_123	Hemorrhagic and hematologic disorders of newborn	1	0.4682809843	0.2121463581	2.2073486837	0.0273
d_DXCCSR_PNL013_123	Other specified and unspecified perinatal conditions	1	-0.3849810521	0.2762889058	-1.3934003285	0.1635
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	0.3485993386	0.1375339075	2.5346428749	0.0113
d_DXCCSR_RSP003_123	Influenza	1	0.8351664520	0.3091473845	2.7015155032	0.0069
d_DXCCSR_RSP005_123	Acute bronchitis	1	0.3506826924	0.1937869196	1.8096303562	0.0704
d_DXCCSR_RSP007_123	Other specified and unspecified upper respiratory disease	1	-0.3507183359	0.1391543707	-2.5203544398	0.0117
d_DXCCSR_RSP009_123	Asthma	1	-0.0171730630	0.1147021812	-0.1497187133	0.8810

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_RSP010_123	Aspiration pneumonitis	1	0.2173671518	0.2288749081	0.9497203234	0.3423
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.2613404864	0.1170352433	2.2330067339	0.0255
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.3776169276	0.1196284552	3.1565811582	0.0016
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	0.1106789527	0.1190837321	0.9294212633	0.3527
d_DXCCSR_RSP017_123	Postprocedural or postoperative respiratory system complication	1	-0.2636988031	0.2583262479	-1.0207975584	0.3074
d_DXCCSR_SKN005_123	Contact dermatitis	1	-0.5884094782	0.2798262741	-2.1027670829	0.0355
d_DXCCSR_SYM004_123	Nausea and vomiting	1	-0.5837436497	0.2178396823	-2.6796938169	0.0074
d_DXCCSR_SYM005_123	Dysphagia	1	-0.1156000980	0.1393411796	-0.8296190570	0.4068
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	0.1462236414	0.1298842490	1.1257996449	0.2603
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.0997191411	0.1433908861	0.6954356993	0.4868
d_DXCCSR_SYM012_123	Circulatory signs and symptoms	1	-0.4452893947	0.1645101436	-2.7067595044	0.0068
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	-0.3815896504	0.1609217609	-2.3712743901	0.0177
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	-0.1359774916	0.0833935032	-1.6305525770	0.1030
TRNSFER_ALT	Transfer from acute - outborn	1	0.2571538615	0.1034434845	2.4859358009	0.0129
GPPD10_2	Non-elective clean	1	0.4017391040	0.1409429367	2.8503670592	0.0044
GPPD10_3	Elective clean-contam	1	1.4936280639	0.1223526086	12.2075702430	<.0001
GPPD10_4	Non-elective other*	1	1.9374579248	0.1585291342	12.2214628530	<.0001
HPPD10_2	Medium immune risk	1	0.8648042749	0.1677671846	5.1547880282	<.0001
HPPD10_3	High immune risk	1	1.4062716359	0.1363206024	10.3159141860	<.0001

c-statistic=0.904

Table 6. Risk Adjustment Coefficients (non SES) for PDI 12 – Central Venous Catheter-Related Blood Stream Infection Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-8.832617835	0.1857818883	-47.5429435868	<.0001
AGE_1	Age Days <60	1	0.1280689544	0.1752950290	0.7305909078	0.4650
AGE_2	60 Days <= Age <= 179 Days	1	-0.1156820333	0.2006139854	-0.5766399238	0.5642
AGE_3	180 Days <= Age <= 364 Days	1	-0.1763391540	0.2004756094	-0.8796040301	0.3791
AGE_5	4 <= Age <= 9	1	-0.4138803822	0.1864270234	-2.2200664613	0.0264
AGE_6	10 <= Age <= 14	1	-0.5989097457	0.2335500436	-2.5643743691	0.0103
AGE_7	15 <= Age <= 17	1	-0.9122221901	0.2202703624	-4.1413750809	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.1175818177	0.1533622119	-0.7666935438	0.4433
AGE_1_MALE	Age Days < 60 MALE	1	0.1810017389	0.1839248018	0.9841072933	0.3251
AGE_2_MALE	60 Days <= Age <= 179 Days MALE	1	0.1614243489	0.2402069227	0.6720220511	0.5016
AGE_3_MALE	180 Days <= Age <= 364 Days MALE	1	0.3042497842	0.2808917880	1.0831565648	0.2787
AGE_5_MALE	4 <= Age <= 9 MALE	1	-0.0894005948	0.2400766160	-0.3723836008	0.7096
AGE_6_MALE	10 <= Age <= 14 MALE	1	0.1047684219	0.3001540206	0.3490488705	0.7271
AGE_7_MALE	15 <= Age <= 17 MALE	1	0.0909339342	0.2907799674	0.3127242054	0.7545
ODC904	Adverse Neonatal Conditions flag	1	-0.3244353643	0.1407849650	-2.3044745184	0.0212
MDC_5	Circulatory System	1	1.5391039622	0.1842736010	8.3522759322	<.0001
MDC_6	Digestive System	1	0.5610962209	0.2519704849	2.2268331197	0.0260
MDC_7	Hepatobiliary System And Pancreas	1	0.7890150899	0.3021183007	2.6116097174	0.0090
MDC_8	Musculoskeletal And Connective	1	0.0629008361	0.2866029519	0.2194703009	0.8263
MDC_10	Endocrine Nutritional And Metabolic	1	1.1092430032	0.2310063648	4.8017854592	<.0001
MDC_11	Kidney And Urinary Tract	1	-0.1090872206	0.3869667212	-0.2819033644	0.7780
MDC_15	Newborn And Other Neonates	1	-0.5902271918	0.2003442437	-2.9460651375	0.0032
MDC_16	Blood and Immunological	1	1.3379452647	0.2312680433	5.7852578567	<.0001
MDC_17	Myeloproliferative DDs	1	0.9729724330	0.3800639353	2.5600230452	0.0105
MDC_18	Infectious and Parasitic	1	0.6324832903	0.3169772093	1.9953588827	0.0460
MDC_21	Injuries Poison And Toxic	1	0.9586597729	0.3253693296	2.9463741225	0.0032
MDC_22	Burns	1	0.9649124581	0.6377721657	1.5129422544	0.1303
MDRG_402	Other resp system O.R. procedures	1	1.8723828319	0.3076995510	6.0851009552	<.0001
MDRG_416	Respiratory system diagnosis w ventilator support	1	1.0879636543	0.2548867553	4.2684197259	<.0001
MDRG_505	Other cardiothoracic procedures	1	-0.1292141420	0.2099725111	-0.6153859919	0.5383
MDRG_601	Stomach, esophageal & duodenal proc	1	1.1982445591	0.2663599366	4.4985915462	<.0001

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDRG_602	Major small & large bowel procedures	1	1.3524732777	0.2657204339	5.0898354246	<.0001
MDRG_604	Peritoneal adhesiolysis	1	1.7343675524	0.4292629856	4.0403379994	<.0001
MDRG_620	Esophagitis, gastroent & misc digest disorders	1	-0.0053419813	0.3281178100	-0.0162806807	0.9870
MDRG_1008	Misc disorders of nutrition,metabolism,fluids/electrolytes	1	-0.9649187693	0.3656044968	-2.6392420712	0.0083
MDRG_1502	Extreme immaturity or respiratory distress syndrome	1	1.4309205359	0.2657218044	5.3850324366	<.0001
MDRG_1503	Prematurity w major problems	1	0.7542337489	0.2179974809	3.4598278198	0.0005
MDRG_1505	Full term neonate w major problems	1	0.4261278148	0.1659063403	2.5684842061	0.0102
MDRG_1710	Myeloprolif disord or poorly diff neopl w other O.R. proc	1	1.6443536954	0.5295622987	3.1051185090	0.0019
MDRG_1711	Acute leukemia w/o major O.R. procedure	1	1.4387429984	0.3800833003	3.7853359969	0.0002
MDRG_1712	Chemo w acute leukemia	1	0.6463907600	0.4480313575	1.4427355345	0.1491
MDRG_1715	Chemotherapy w/o acute leukemia as secondary diagnosis	1	-0.2772000321	0.4480574475	-0.6186707388	0.5361
MDRG_1801	Infectious & parasitic diseases w O.R. procedure	1	1.0262362961	0.3375551239	3.0402035800	0.0024
MDRG_7701	Heart transplant or implant of heart assist system	1	1.1163334059	0.2733539508	4.0838385646	<.0001
MDRG_7702	Liver transplant	1	1.2917314068	0.4014798380	3.2174253465	0.0013
MDRG_7705	Allogeneic or autologous bone marrow transplant	1	2.9003267358	0.2581485601	11.2351071609	<.0001
d_DXCCSR_BLD002_123	Hemolytic anemia	1	0.4287080572	0.2963494191	1.4466303274	0.1480
d_DXCCSR_BLD005_123	Sickle cell trait/anemia	1	-0.9985822926	0.4451509464	-2.2432442314	0.0249
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.1413587761	0.1356084364	1.0424039971	0.2972
d_DXCCSR_BLD007_123	Diseases of white blood cells	1	-0.2383399810	0.1771448792	-1.3454522766	0.1785
d_DXCCSR_CIR001_123	Chronic rheumatic heart disease	1	0.0457883477	0.3894892631	0.1175599743	0.9064
d_DXCCSR_CIR005_123	Myocarditis and cardiomyopathy	1	0.5232921471	0.2042082101	2.5625421566	0.0104
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	0.4817789722	0.1856349350	2.5953033698	0.0095
d_DXCCSR_CIR015_123	Other and ill-defined heart disease	1	-0.2439500703	0.2723684957	-0.8956618484	0.3704
d_DXCCSR_CIR031_123	Hypotension	1	0.3539947022	0.1782721230	1.9856985842	0.0471
d_DXCCSR_CIR036_123	Postthrombotic syndrome and venous insufficiency/hypertension	1	0.2316329347	0.4132666800	0.5604926454	0.5751
d_DXCCSR_DIG001_123	Intestinal infection	1	0.5052749731	0.1697601777	2.9764045952	0.0029
d_DXCCSR_DIG002_123	Disorders of teeth and gingiva	1	0.3646508142	0.1837831859	1.9841358853	0.0472
d_DXCCSR_DIG007_123	Gastritis and duodenitis	1	0.5490453613	0.2694184383	2.0378908174	0.0416
d_DXCCSR_DIG008_123	Other specified and unspecified disorders of stomach and duodenum	1	0.7083930418	0.2117754564	3.3450195490	0.0008
d_DXCCSR_DIG010_123	Abdominal hernia	1	-0.7969638476	0.2613701686	-3.0491767741	0.0023
d_DXCCSR_DIG011_123	Regional enteritis and ulcerative colitis	1	1.0873244658	0.2983724707	3.6441849456	0.0003
d_DXCCSR_DIG012_123	Intestinal obstruction and ileus	1	0.3659053288	0.2078339375	1.7605658307	0.0783
d_DXCCSR_DIG017_123	Biliary tract disease	1	0.2864300664	0.2531029048	1.1316743544	0.2578

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_DIG018_123	Hepatic failure	1	0.2513899399	0.3092959295	0.8127812749	0.4163
d_DXCCSR_DIG020_123	Pancreatic disorders (excluding diabetes)	1	0.4880934147	0.2516141096	1.9398491419	0.0524
d_DXCCSR_DIG022_123	Noninfectious gastroenteritis	1	0.3116790532	0.2493467936	1.2499821981	0.2113
d_DXCCSR_DIG024_123	Postprocedural or postoperative digestive system complication	1	0.9754892187	0.1555612174	6.2707738789	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	0.0904735851	0.2070276577	0.4370120695	0.6621
d_DXCCSR_END008_123	Malnutrition	1	0.1589676607	0.1477597221	1.0758524611	0.2820
d_DXCCSR_END015_123	Other specified and unspecified endocrine disorders	1	0.3459892578	0.1514815929	2.2840349851	0.0224
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	0.1820859166	0.1138691026	1.5990809834	0.1098
d_DXCCSR_EYE005_123	Retinal and vitreous conditions	1	0.1002702962	0.1941853279	0.5163639154	0.6056
d_DXCCSR_FAC006_123	Encounter for antineoplastic therapies	1	0.5007966774	0.4395951022	1.1392226050	0.2546
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.3899356039	0.1733683055	-2.2491746847	0.0245
d_DXCCSR_FAC014_123	Medical examination/evaluation	1	-0.5339218326	0.3605795182	-1.4807325587	0.1387
d_DXCCSR_FAC015_123	Resistance to antimicrobial drugs	1	0.8960426131	0.3225943587	2.7776140188	0.0055
d_DXCCSR_FAC016_123	Exposure, encounters, screening or contact with infectious disease	1	-0.7522583185	0.1459490985	-5.1542512181	<.0001
d_DXCCSR_FAC021_123	Personal/family history of disease	1	-0.1460404577	0.1049767216	-1.3911699225	0.1642
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	0.6119640997	0.1807908375	3.3849287278	0.0007
d_DXCCSR_FAC023_123	Organ transplant status	1	-0.1300484243	0.1567202521	-0.8298125007	0.4066
d_DXCCSR_FAC024_123	Carrier status	1	0.5381702059	0.2781700942	1.9346803170	0.0530
d_DXCCSR_FAC025_123	Other specified status	1	0.3498040063	0.0882642877	3.9631431379	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.3737859819	0.1967048311	1.9002379347	0.0574
d_DXCCSR_GEN003_123	Chronic kidney disease	1	-0.2234062437	0.2543765322	-0.8782502137	0.3798
d_DXCCSR_INF002_123	Septicemia	1	0.1165646717	0.1628040614	0.7159813504	0.4740
d_DXCCSR_INF004_123	Fungal infections	1	0.5883260858	0.1814257128	3.2427933000	0.0012
d_DXCCSR_INJ008_123	Traumatic brain injury (TBI); concussion, initial encounter	1	0.8638072469	0.4029458772	2.1437302024	0.0321
d_DXCCSR_INJ019_123	Burn and corrosion, initial encounter	1	1.2635027545	0.6795280981	1.8593826482	0.0630
d_DXCCSR_INJ028_123	Adverse effects of medical drugs, initial encounter	1	-0.5130221243	0.1831984523	-2.8003627648	0.0051
d_DXCCSR_INJ030_123	Drug induced or toxic related condition	1	0.2607063554	0.2271562092	1.1476963639	0.2511
d_DXCCSR_INJ031_123	Allergic reactions	1	-0.1026180127	0.2030425988	-0.5054013952	0.6133
d_DXCCSR_INJ033_123	Complication of cardiovascular device, implant or graft, initial encounter	1	-0.1299661681	0.3039526334	-0.4275869126	0.6690
d_DXCCSR_INJ036_123	Complication of transplanted organs or tissue, initial encounter	1	0.4040155852	0.2156808743	1.8732100679	0.0610
d_DXCCSR_INJ037_123	Complication of other surgical or medical care, injury, initial encounter	1	-0.5831412572	0.3005812799	-1.9400451601	0.0524
d_DXCCSR_MAL001_123	Cardiac and circulatory congenital anomalies	1	1.2000638252	0.1161729131	10.3299796249	<.0001

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_MAL002_123	Digestive congenital anomalies	1	0.3317191104	0.1439826181	2.3038830299	0.0212
d_DXCCSR_MAL006_123	Cleft lip or palate	1	-0.5126519812	0.4387926318	-1.1683240421	0.2427
d_DXCCSR_MAL007_123	Respiratory congenital malformations	1	0.4420130485	0.1524171841	2.9000210911	0.0037
d_DXCCSR_MAL008_123	Musculoskeletal congenital conditions	1	0.4403381475	0.1286712363	3.4221956670	0.0006
d_DXCCSR_MAL009_123	Chromosomal abnormalities	1	0.0076857545	0.1252902105	0.0613436152	0.9511
d_DXCCSR_MAL010_123	Other specified and unspecified congenital anomalies	1	0.3716578330	0.1269851718	2.9267813541	0.0034
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.1967013010	0.2744087995	-0.7168184889	0.4735
d_DXCCSR_MBD007_123	Trauma- and stressor-related disorders	1	-0.0636264070	0.2570585640	-0.2475171650	0.8045
d_DXCCSR_MBD014_123	Neurodevelopmental disorders	1	0.1344465887	0.1322686367	1.0164661258	0.3094
d_DXCCSR_NEO060_123	Leukemia - acute myeloid leukemia (AML)	1	1.3042210876	0.1925757391	6.7725098368	<.0001
d_DXCCSR_NEO064_123	Leukemia - all other types	1	0.8431158641	0.3175734132	2.6548691707	0.0079
d_DXCCSR_NEO070_123	Secondary malignancies	1	0.0924179759	0.2030836924	0.4550733484	0.6491
d_DXCCSR_NEO072_123	Neoplasms of unspecified nature or uncertain behavior	1	0.7881907079	0.2435780289	3.2358858949	0.0012
d_DXCCSR_NEO073_123	Benign neoplasms	1	0.1069817398	0.2500957803	0.4277630742	0.6688
d_DXCCSR_NEO074_123	Conditions due to neoplasm or the treatment of neoplasm	1	0.3185589135	0.1748993120	1.8213846001	0.0685
d_DXCCSR_NVS007_123	Cerebral palsy	1	0.6676972652	0.1754648135	3.8053057587	0.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	0.3120345561	0.1751114337	1.7819199443	0.0748
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.4475848131	0.1422973813	3.1454184832	0.0017
d_DXCCSR_PNL001_123	Liveborn	1	0.0712748597	0.2174995518	0.3277011798	0.7431
d_DXCCSR_PNL002_123	Short gestation; low birth weight; and fetal growth retardation	1	0.4115897852	0.1302644667	3.1596474139	0.0016
d_DXCCSR_PNL004_123	Neonatal cerebral disorders	1	-1.120918355	0.3481052595	-3.2200557876	0.0013
d_DXCCSR_PNL005_123	Respiratory distress syndrome	1	0.0790246981	0.2336462324	0.3382237208	0.7352
d_DXCCSR_PNL006_123	Respiratory perinatal condition	1	0.7292466893	0.1183941179	6.1594841222	<.0001
d_DXCCSR_PNL007_123	Hemolytic jaundice and perinatal jaundice	1	-0.4969547559	0.1192019549	-4.1690151492	<.0001
d_DXCCSR_PNL010_123	Newborn affected by maternal conditions or complications of labor/delivery	1	-0.1601269991	0.1311025198	-1.2213876538	0.2219
d_DXCCSR_PNL011_123	Hemorrhagic and hematologic disorders of newborn	1	0.5105939416	0.1208695297	4.2243396068	<.0001
d_DXCCSR_PNL012_123	Neonatal digestive and feeding disorders	1	0.3775746954	0.1324258963	2.8512149499	0.0044
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	-0.0344548347	0.1607275704	-0.2143679181	0.8303
d_DXCCSR_RSP005_123	Acute bronchitis	1	-0.5662222119	0.2470132435	-2.2922747137	0.0219
d_DXCCSR_RSP006_123	Other specified upper respiratory infections	1	-0.5909038830	0.2215970219	-2.6665696044	0.0077
d_DXCCSR_RSP009_123	Asthma	1	-0.6327127312	0.1921140050	-3.2934232522	0.0010
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.4415276610	0.1845339195	2.3926639730	0.0167
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.5285207842	0.1754697292	3.0120339646	0.0026

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
d_DXCCSR_SKN001_123	Skin and subcutaneous tissue infections	1	-0.0037385921	0.2155943103	-0.0173408661	0.9862
d_DXCCSR_SYM002_123	Fever	1	-0.2844750729	0.2368474731	-1.2010897530	0.2297
d_DXCCSR_SYM003_123	Shock	1	0.2384657866	0.2676493281	0.8909635168	0.3729
d_DXCCSR_SYM004_123	Nausea and vomiting	1	-0.3779425588	0.2357549020	-1.6031164384	0.1089
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	0.0815381665	0.1585021282	0.5144294743	0.6070
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.2947144978	0.1934078317	1.5237981586	0.1276
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	-0.7865271585	0.2329144506	-3.3768929172	0.0007
d_DXCCSR_SYM014_123	Skin/Subcutaneous signs and symptoms	1	-0.4448943586	0.2935919349	-1.5153493873	0.1297
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.0358450831	0.1502269449	-0.2386062174	0.8114
TRNSFER_ALT	Transfer from acute - outborn	1	0.4604841611	0.1424233145	3.2332077278	0.0012
GPPD12_2	Medium immune risk	1	0.5691913620	0.2631947669	2.1626241612	0.0306
GPPD12_3	High immune risk	1	1.6085406432	0.1371590062	11.7275612247	<.0001

c-statistic=0.953

Table 7. Risk Adjustment Coefficients (non SES) for PDI 14 – Asthma Admission Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Wald Chi Square	Pr > Chi Square
INTERCEPT	Intercept	1	-6.243757370	0.0093137748	449407.7632622010	<.0001
SEX	Female	1	-0.4636194573	0.0151950670	930.9322360467	<.0001
AGECAT2	5 <= Age <= 9	1	-0.4668893256	0.0129648259	1296.8642247302	<.0001
AGECAT3	10 <= Age <= 14	1	-1.268365267	0.0162468373	6094.6815230349	<.0001
AGECAT4	15 <= Age <= 17	1	-2.133070842	0.0279093079	5841.3391945890	<.0001
FAGECAT2	Female, 5 <= Age <= 9	1	0.0274961411	0.0210577672	1.7049783027	0.1916
FAGECAT3	Female, 10 <= Age <= 14	1	0.2127794109	0.0254068595	70.1386227516	<.0001
FAGECAT4	Female, 15 <= Age <= 17	1	0.7472290357	0.0383015995	380.6042700612	<.0001

c-statistic=0.599

Table 8. Risk Adjustment Coefficients (non SES) for PDI 15 – Diabetes Short-Term Complications Admission Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Wald Chi Square	Pr > Chi Square
INTERCEPT	Intercept	1	-8.001493065	0.0218098646	134597.2313692220	<.0001
SEX	Female	1	0.2102909160	0.0296294703	50.3724703618	<.0001
AGECAT2	5 <= Age <= 9	1	-1.124764334	0.0401439331	785.0245391665	<.0001
AGECAT3	10 <= Age <= 14	1	-0.2733647578	0.0292475241	87.3588348638	<.0001
FAGECAT2	Female, 5 <= Age <= 9	1	-0.0281394513	0.0547899798	0.2637721678	0.6075
FAGECAT3	Female, 10 <= Age <= 14	1	-0.0293558056	0.0398511475	0.5426331787	0.4613

c-statistic=0.553

Table 9. Risk Adjustment Coefficients (non SES) for PDI 16 – Gastroenteritis Admission Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Wald Chi Square	Pr > Chi Square
INTERCEPT	Intercept	1	-6.975535300	0.0106607902	428130.6215345570	<.0001
SEX	Female	1	-0.1205561755	0.0157425576	58.6446421847	<.0001
AGECAT2	5 <= Age <= 9	1	-1.354009893	0.0228783623	3502.6263360113	<.0001
AGECAT3	10 <= Age <= 14	1	-2.017195052	0.0298656504	4561.9637995284	<.0001
AGECAT4	15 <= Age <= 17	1	-2.073346374	0.0383251584	2926.6838164367	<.0001
FAGECAT2	Female, 5 <= Age <= 9	1	0.0498095106	0.0334159306	2.2218637823	0.1361
FAGECAT3	Female, 10 <= Age <= 14	1	0.1080013156	0.0429874815	6.3121031502	0.0120
FAGECAT4	Female, 15 <= Age <= 17	1	0.4648550122	0.0510408029	82.9468772869	<.0001

c-statistic=0.651

Table 10. Risk Adjustment Coefficients (non SES) for PDI 18 – Urinary Tract Infection Admission Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Wald Chi Square	Pr > Chi Square
INTERCEPT	Intercept	1	-8.739081369	0.0257277941	115378.9179118960	<.0001
SEX	Female	1	1.3715440803	0.0289459808	2245.1377936258	<.0001
AGECAT2	5 <= Age <= 9	1	-1.238088894	0.0528174002	549.4771213847	<.0001
AGECAT3	10 <= Age <= 14	1	-1.403437466	0.0558481715	631.4925253852	<.0001
AGECAT4	15 <= Age <= 17	1	-1.416659932	0.0689959322	421.5841246006	<.0001
FAGECAT2	Female, 5 <= Age <= 9	1	0.3270651338	0.0580695293	31.7228273018	<.0001
FAGECAT3	Female, 10 <= Age <= 14	1	-0.1729567395	0.0637798328	7.3537392389	0.0067
FAGECAT4	Female, 15 <= Age <= 17	1	0.8542304630	0.0734741385	135.1702463254	<.0001

c-statistic=0.682

Table 11. Risk Adjustment Coefficients (non SES) for PDI 90 – Pediatric Quality Overall Composite

PARAMETER	LABEL	DF	Estimate	Standard Error	Wald Chi Square	Pr > Chi Square
INTERCEPT	Intercept	1	-7.230215760	0.0148368347	237476.1509978930	<.0001
SEX	Female	1	0.5484126769	0.0187881449	852.0148551608	<.0001
AGECAT2	5 <= Age <= 9	1	0.7362937011	0.0173793420	1794.8803759744	<.0001
AGECAT3	10 <= Age <= 14	1	0.2904526017	0.0178940910	263.4700533329	<.0001
FAGECAT2	Female, 5 <= Age <= 9	1	-0.6793277563	0.0230720411	866.9352938218	<.0001
FAGECAT3	Female, 10 <= Age <= 14	1	-0.5279981449	0.0235647362	502.0415132492	<.0001

c-statistic=0.527

Table 12. Risk Adjustment Coefficients (non SES) for PDI 91 – Pediatric Quality Acute Composite

PARAMETER	LABEL	DF	Estimate	Standard Error	Wald Chi Square	Pr > Chi Square
INTERCEPT	Intercept	1	-8.746973697	0.0316559711	76349.1768467730	<.0001
SEX	Female	1	1.2112918304	0.0362451661	1116.8565304309	<.0001
AGECAT2	5 <= Age <= 9	1	0.5145567672	0.0383002360	180.4943817041	<.0001
AGECAT3	10 <= Age <= 14	1	0.0476262423	0.0397814015	1.4332847364	0.2312
FAGECAT2	Female, 5 <= Age <= 9	1	-0.6728018237	0.0454067047	219.5504594614	<.0001
FAGECAT3	Female, 10 <= Age <= 14	1	-0.7773940040	0.0478166206	264.3167060930	<.0001

c-statistic=0.573

Table 13. Risk Adjustment Coefficients (non SES) for PDI 92 – Pediatric Quality Chronic Composite

PARAMETER	LABEL	DF	Estimate	Standard Error	Wald Chi Square	Pr > Chi Square
INTERCEPT	Intercept	1	-7.478242038	0.0167930825	198307.0677622020	<.0001
SEX	Female	1	0.2408571130	0.0226568818	113.0104685427	<.0001
AGECAT2	5 <= Age <= 9	1	0.7904727636	0.0195291061	1638.3590774603	<.0001
AGECAT3	10 <= Age <= 14	1	0.3492699899	0.0200718054	302.7956762885	<.0001
FAGECAT2	Female, 5 <= Age <= 9	1	-0.5993858694	0.0275872383	472.0592879853	<.0001
FAGECAT3	Female, 10 <= Age <= 14	1	-0.3331952766	0.0277922192	143.7312557801	<.0001

c-statistic=0.539

Table 14. Risk Adjustment Coefficients (non SES) for NQI 03 – Neonatal Blood Stream Infection Rate

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-5.227682547	0.2870861840	-18.2094535983	<.0001
AGEDAY_0	AgeDay=0	1	0.0478000227	0.2369984272	0.2016891977	0.8402
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0958183872	0.2821996286	0.3395411527	0.7342
AGEDAY_0_MALE	AgeDay=0 MALE	1	0.1439219064	0.2897196159	0.4967627267	0.6194
ODC904	Adverse Neonatal Conditions flag	1	0.2099360878	0.1036104248	2.0262062268	0.0427
MDC_15	Newborn and other neonates	1	0.2679480094	0.1725773876	1.5526252492	0.1205
MDRG_1502	Extreme immaturity or respiratory distress syndrome	1	-0.1829805538	0.0719536776	-2.5430326834	0.0110
MDRG_1503	Prematurity w major problems	1	-0.4072385115	0.1277136770	-3.1886836328	0.0014
MDRG_1505	Full term neonate w major problems	1	-0.2952599541	0.1708321234	-1.7283631918	0.0839
d_DXCCSR_BLD007_123	Diseases of white blood cells	1	-0.3879355635	0.2496754689	-1.5537592268	0.1202
d_DXCCSR_DIG012_123	Intestinal obstruction and ileus	1	1.1274593192	0.3709181841	3.0396442326	0.0024
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	-0.2526846813	0.1669302621	-1.5137140390	0.1301
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.3008650845	0.2336961257	-1.2874200788	0.1979
d_DXCCSR_EYE005_123	Retinal and vitreous conditions	1	-0.0777320603	0.0772459330	-1.0062932422	0.3143
d_DXCCSR_FAC003_123	Encounter for observation and examination for conditions ruled out (excludes infectious disease, neoplasm, mental disorders)	1	-0.1741316454	0.1651909318	-1.0541235131	0.2918
d_DXCCSR_FAC004_123	Encounter for prophylactic or other procedures	1	-0.1675703569	0.1589805582	-1.0540304979	0.2919
d_DXCCSR_FAC016_123	Exposure, encounters, screening or contact with infectious disease	1	-0.8255269346	0.0690317657	-11.9586530458	<.0001
d_DXCCSR_FAC017_123	No immunization or underimmunization	1	-0.9776256463	0.3974904357	-2.4594947666	0.0139
d_DXCCSR_FAC025_123	Other specified status	1	0.4760750835	0.1227929893	3.8770542691	0.0001
d_DXCCSR_INF003_123	Bacterial infections	1	0.5484290736	0.2990537775	1.8338811105	0.0667
d_DXCCSR_MAL001_123	Cardiac and circulatory congenital anomalies	1	0.8085238610	0.0708181190	11.4169067460	<.0001
d_DXCCSR_MAL002_123	Digestive congenital anomalies	1	0.2121550690	0.1090098474	1.9462009538	0.0516
d_DXCCSR_MAL004_123	Nervous system congenital anomalies	1	0.3745303780	0.0992660587	3.7729953528	0.0002
d_DXCCSR_MAL005_123	Congenital malformations of eye, ear, face, neck	1	-0.3418507525	0.1989709828	-1.7180935010	0.0858
d_DXCCSR_MAL007_123	Respiratory congenital malformations	1	0.1586977851	0.1414134354	1.1222256548	0.2618
d_DXCCSR_MAL008_123	Musculoskeletal congenital conditions	1	0.1951758038	0.1018640746	1.9160415927	0.0554
d_DXCCSR_MBD015_123	Neonatal abstinence syndrome	1	0.2883405488	0.1351795086	2.1330196553	0.0329
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	-0.9428104085	0.3200532465	-2.9457923605	0.0032
d_DXCCSR_PNL001_123	Liveborn	1	0.0566896186	0.1342799130	0.4221749725	0.6729
d_DXCCSR_PNL002_123	Short gestation; low birth weight; and fetal	1	0.7065802098	0.1232208050	5.7342606224	<.0001

PARAMETER	LABEL	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
	growth retardation					
d_DXCCSR_PNL004_123	Neonatal cerebral disorders	1	-0.3452228186	0.1676735170	-2.0588988932	0.0395
d_DXCCSR_PNL005_123	Respiratory distress syndrome	1	-0.1077171906	0.0732265111	-1.4710135576	0.1413
d_DXCCSR_PNL006_123	Respiratory perinatal condition	1	0.0126804681	0.0665555938	0.1905244537	0.8489
d_DXCCSR_PNL007_123	Hemolytic jaundice and perinatal jaundice	1	-0.4544060852	0.0705804931	-6.4381256850	<.0001
d_DXCCSR_PNL009_123	Perinatal infections	1	-0.3332669548	0.1758714777	-1.8949460095	0.0581
d_DXCCSR_PNL010_123	Newborn affected by maternal conditions or complications of labor/delivery	1	-0.4248904037	0.0719651495	-5.9041134004	<.0001
d_DXCCSR_PNL011_123	Hemorrhagic and hematologic disorders of newborn	1	0.1582119965	0.0672647117	2.3520801997	0.0187
d_DXCCSR_PNL013_123	Other specified and unspecified perinatal conditions	1	-0.2233248146	0.0644140335	-3.4670211203	0.0005
d_DXCCSR_SYM012_123	Circulatory signs and symptoms	1	-0.6493323303	0.3121816404	-2.0799824402	0.0375
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	0.2236020579	0.1500899466	1.4897870443	0.1363
TRNSFER_ALT	Transfer from acute - outborn	1	-0.0202342576	0.1338499910	-0.1511711542	0.8798
BWHTCAT_2	Birth Weight 2000 to 2499 grams	1	-0.2727342261	0.1606939075	-1.6972281672	0.0897
BWHTCAT_3	Birth Weight 1750 to 1999 grams	1	-0.1057502813	0.2104787828	-0.5024272751	0.6154
BWHTCAT_4	Birth Weight 1500 to 1749 grams	1	-0.0251041385	0.1903143471	-0.1319088072	0.8951
BWHTCAT_5	Birth Weight 1250 to 1499 grams	1	0.1212208615	0.1570289549	0.7719650276	0.4401
BWHTCAT_6	Birth Weight 1000 to 1249 grams	1	0.5003659524	0.1450813755	3.4488641335	0.0006
BWHTCAT_7	Birth Weight 750 to 999 grams	1	1.3531798592	0.1494641418	9.0535418252	<.0001
BWHTCAT_8	Birth Weight <=749 grams	1	2.0134050874	0.1464684307	13.7463416362	<.0001

c-statistic=0.829

Table A.1. Population Age and Birth Weight Categories

AGE IN YEARS CATEGORIES (AGECAT)	
5	13 to 17 years
4	6 to 12 years
3	3 to 5 years
2	1 to 2 years
1	<1 year
AGE IN DAYS CATEGORIES (AGEDCAT)	
4	4
91+ days	91+ days
3	3
61 to 90 days	61 to 90 days
BIRTH WEIGHT CATEGORIES (BWHTCAT)	
9	2500+ grams
8	2000-2499 grams
7	1750-1999 grams
6	1500-1749 grams
5	1250-1499 grams
4	1000-1249 grams
3	750-999 grams
2	500-749 grams
1	<500 grams