



# Inpatient Quality Indicators (IQI) Parameter Estimates, v2021

**Prepared for:**

Agency for Healthcare Research and Quality  
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## Executive Summary

This document provides statistical parameters associated with Version 2021 Agency for Healthcare Research and Quality (AHRQ) Quality Indicators™ (QI) Inpatient Quality Indicators (IQI). The parameter estimates derived for the AHRQ QI are based on analysis of the 2018 AHRQ 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. 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 2018, the HCUP databases represent more than 97 percent of all annual discharges in the U.S.<sup>2</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 2021 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 obstetrics-gynecology, ear-nose-throat, orthopedic, and pediatric institutions. Also included are public hospitals and academic medical centers.

In 2018, 46 of the SID participants include indicators of the diagnoses being present on admission (POA). Discharges from these 46 participating States are used to develop hospital-level indicators. 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 (Centers for Medicare and Medicaid Services, <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

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<sup>1</sup> Healthcare Cost and Utilization Project (HCUP) 2018 State Inpatient Databases (SID). Agency for Healthcare Research and Quality, Rockville, MD.

<sup>2</sup> The states included in the analysis are Alaska, Arizona, Arkansas, California, Colorado, , Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

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. IQI 21, IQI 22, and IQI 33 are not risk adjusted, and thus are not presented in this document.<sup>3</sup>

Covariates that are considered as potential risk adjusters for the hospital-level IQI include sex and age, Major Diagnostic Categories (MDC), 3M All-Payer Refined Diagnosis-Related Group (APR-DRGs)<sup>4</sup>, AHRQ Clinical Classification Software Refined (CCSR), and Risk of Mortality subclass categories, 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, this document provides the weights used in the hospital-level composites (IQI 90 and IQI 91).

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>)

## Acknowledgments

The AHRQ QI program would like to acknowledge the HCUP Partner organizations that participated in the HCUP SID: **Alaska** State Hospital and Nursing Home Association, **Alaska** Department of Health and Social Services, **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, **Hawaii** University of Hawaii at Hilo, **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,

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<sup>3</sup> IQI 34 was retired in v2021 of the software.

<sup>4</sup> Averill RF, Goldfield N, Hughes JS, Bonazelli J, McCullough EC, Steinbeck BA, Mullin R, Tang AM. All Patient Refined Diagnosis Related Groups (APR-DRGs). Version 20.0. Methodology Overview. Document number GRP-041. Wallingford, CT: 3M Health Information Systems; 2003. Product website: [http://www.3m.com/3M/en\\_US/company-us/all-3m-products/~/3M-APR-DRG-Software?N=5002385+3293081278&rt=rud](http://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-APR-DRG-Software?N=5002385+3293081278&rt=rud).

**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** Office of Health Analytics, **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** Department of Health and Human Resources , **Wisconsin** Department of Health Services, **Wyoming** Hospital Association.

## Parameter Estimates Tables

**Table 1. Risk Adjustment Coefficients for IQI 08 – Esophageal Resection Mortality Rate**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-3.658083815	0.8536528852	-4.2852122666	<.0001
Age_LT60	Age<60	1	0.9996135891	0.8019837502	1.2464262385	0.2126
Age_60_64	60 <= Age <= 64	1	1.2426498575	0.8159913606	1.5228713410	0.1278
Age_70_74	70 <= Age <= 74	1	1.0517574852	0.8175826911	1.2864233754	0.1983
Age_75_79	75 <= Age <= 79	1	1.8483691533	0.7671012071	2.4095505732	0.0160
Age_80_84	80 <= Age <= 84	1	2.7111990474	0.9509993249	2.8508948182	0.0044
Age_85Plus	Age >= 85	1	1.9137204736	1.2687171917	1.5083901173	0.1315
MALE	Patient Sex Flag: 1=Male / 0=Female	1	1.2217553346	0.7271583731	1.6801777712	0.0929
Age_LT60_MALE	Age<=60 MALE	1	-1.347765671	0.8569465686	-1.5727534480	0.1158
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-1.104530593	0.8561292179	-1.2901447231	0.1970
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-1.137492539	0.8639803814	-1.3165721861	0.1880
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-1.572676662	0.8048424984	-1.9540179173	0.0507
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-2.364406167	1.0154855842	-2.3283503021	0.0199
Age_85Plus_MALE	Age >= 85 MALE	1	-1.630111354	1.4291375125	-1.1406259651	0.2540
MDC_6	Digestive System	1	-1.863858214	0.4244909214	-4.3908081877	<.0001
ADX220_0002	DRG Major stomach, esophageal & duodenal procedures	1	-1.353320977	0.5354104914	-2.5276325332	0.0115
ADX220_0004	DRG Major stomach, esophageal & duodenal procedures	1	3.1331731582	0.2411421787	12.9930532085	<.0001
ADX222_0034	DRG Other stomach, esophageal & duodenal procedures	1	2.2144272172	0.4690711550	4.7208769792	<.0001
ADX229_0034	DRG Other digestive system & abdominal procedures	1	2.9532148790	0.4954379197	5.9608172110	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.4898071134	0.1735431784	-2.8223933542	0.0048
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.3363065825	0.1522588630	-2.2087816488	0.0272
d_DXCCSR_END008_123	Malnutrition	1	0.1364954124	0.1595610518	0.8554431730	0.3923
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.1129522641	0.5368840178	0.2103848511	0.8334

c-statistic=0.901

**Table 2. Risk Adjustment Coefficients for IQI 09 – Pancreatic Resection Mortality Rate Stratum A: Presence Of Pancreatic Cancer**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-1.842260628	0.4449904843	-4.1400000516	<.0001
Age_LT60	Age<60	1	-0.5499726244	0.4113228578	-1.3370825714	0.1812
Age_60_64	60 <= Age <= 64	1	0.3825968434	0.3448648698	1.1094108937	0.2673
Age_70_74	70 <= Age <= 74	1	-0.5530759598	0.3588069911	-1.5414302773	0.1232
Age_75_79	75 <= Age <= 79	1	-0.1805354081	0.3642811811	-0.4955935621	0.6202
Age_80_84	80 <= Age <= 84	1	-0.2670225149	0.4198495109	-0.6359957745	0.5248
Age_85Plus	Age >= 85	1	0.3843583968	0.4637211376	0.8288567539	0.4072
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0894225767	0.3353482973	-0.2666558246	0.7897
Age_LT60_MALE	Age<=60 MALE	1	0.4275701686	0.5327231422	0.8026123416	0.4222
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.3427938281	0.4817015180	-0.7116311974	0.4767
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.5752971734	0.4706206581	1.2224222704	0.2215
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.3843964391	0.4493201393	0.8555068101	0.3923
Age_80_84_MALE	80 <= Age <= 84 MALE	1	1.0542148570	0.5158652745	2.0435856204	0.0410
Age_85Plus_MALE	Age >= 85 MALE	1	-0.2074935223	0.6812843924	-0.3045622719	0.7607
MDC_6	Digestive System	1	-2.480331398	0.6079705418	-4.0796900969	<.0001



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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
MDC_7	Hepatobiliary System And Pancreas	1	-4.714848101	0.5187934552	-9.0881025081	<.0001
ADX220_0004	DRG Major stomach, esophageal & duodenal procedures	1	3.5859628929	0.5643881321	6.3537177498	<.0001
ADX260_0003	DRG Major pancreas, liver & shunt procedures	1	2.6273216906	0.4399498551	5.9718662479	<.0001
ADX260_0004	DRG Major pancreas, liver & shunt procedures	1	5.4604326146	0.4345039697	12.5670488544	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.0986872327	0.1705645721	-0.5785916234	0.5629
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.1329546231	0.1841930496	0.7218221500	0.4704
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.3111595837	0.1483179974	-2.0979219590	0.0359
d_DXCCSR_DIG017_123	Biliary tract disease	1	-0.1443546161	0.1609631263	-0.8968179198	0.3698
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.2207911923	0.1657331669	-1.3322088535	0.1828
d_DXCCSR_END008_123	Malnutrition	1	-0.4179987147	0.1712182657	-2.4413208081	0.0146
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.4740965281	0.1609367054	-2.9458570497	0.0032
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.0341733037	0.1815685574	0.1882115727	0.8507
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	0.1815887541	0.1838734101	0.9875748433	0.3234
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.5031059505	0.1929268528	2.6077549244	0.0091
d_DXCCSR_NEO051_123	Endocrine system cancers - pancreas	1	-0.1846443968	0.1814526799	-1.0175898034	0.3089

c-statistic=0.935

**Table 3. Risk Adjustment Coefficients for IQI 09 – Pancreatic Resection Mortality Rate Stratum B: Absence Of Pancreatic Cancer**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-5.562874863	0.4630781530	-12.0128207896	<.0001
Age_LT30	Age < 30	1	-0.0566395056	0.5838951312	-0.0970028736	0.9227
Age_30_34	30 <= Age <= 34	1	0.0530513813	0.7246348651	0.0732111908	0.9416
Age_45_49	45 <= Age <= 49	1	0.7185714688	0.5574434627	1.2890481580	0.1974
Age_50_54	50 <= Age <= 54	1	0.3232576875	0.5418002431	0.5966362910	0.5508
Age_55_59	55 <= Age <= 59	1	0.0226439267	0.4770305353	0.0474685058	0.9621
Age_60_64	60 <= Age <= 64	1	0.2068954159	0.5321276048	0.3888078987	0.6974
Age_70_74	70 <= Age <= 74	1	1.1465373562	0.4228469241	2.7114714351	0.0067
Age_75_79	75 <= Age <= 79	1	1.6505361343	0.4207890137	3.9224791535	<.0001
Age_80_84	80 <= Age <= 84	1	1.3613092783	0.5632093279	2.4170574079	0.0156
Age_85Plus	Age >= 85	1	2.3497037066	0.6170557597	3.8079276786	0.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.4361772159	0.4060037863	1.0743180992	0.2827
Age_LT30_MALE	Age < 30 MALE	1	-0.1874370292	0.6617524458	-0.2832434249	0.7770
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.6166311081	0.9172027920	-0.6722952803	0.5014
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-1.210151826	0.6812335865	-1.7764124521	0.0757
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0794185861	0.6577996110	0.1207337078	0.9039
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.6959503973	0.5912760943	1.1770311773	0.2392
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.1836109545	0.6427978003	0.2856434082	0.7752
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.8935025197	0.5576210412	-1.6023472101	0.1091
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.3881377463	0.5157924868	-0.7525075613	0.4517
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.6157731606	0.8102315145	-0.7599965560	0.4473
Age_85Plus_MALE	Age >= 85 MALE	1	-1.051296879	0.9867434422	-1.0654206897	0.2867
MDC_5	Circulatory System	1	1.6866935120	0.8229646473	2.0495333760	0.0404

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
MDC_6	Digestive System	1	-0.1526613262	0.4025039695	-0.3792790574	0.7045
MDC_7	Hepatobiliary System And Pancreas	1	-1.167975818	0.5138685093	-2.2729079461	0.0230
MDC_8	Musculoskeletal And Connective	1	-0.9400969931	0.8560180236	-1.0982210271	0.2721
MDC_11	Kidney And Urinary Tract	1	0.6720194175	0.7892176238	0.8515007739	0.3945
MDC_16	Blood and Immunological	1	-1.798788211	0.9462912150	-1.9008822893	0.0573
MDC_21	Injuries Poison And Toxic	1	3.1264576802	0.6360092217	4.9157426870	<.0001
MDC_24	Multiple Significant Trauma	1	0.3487883185	0.5394990514	0.6465040441	0.5180
ADX220_0004	DRG Major stomach, esophageal & duodenal procedures	1	2.9033436858	0.3724568678	7.7951138428	<.0001
ADX229_0034	DRG Other digestive system & abdominal procedures	1	2.2632627526	0.6217375511	3.6402220660	0.0003
ADX230_0004	DRG DRG Major small bowel procedures	1	3.2805803862	0.6272424045	5.2301635902	<.0001
ADX231_0034	DRG DRG Major large bowel procedures	1	1.3689506477	0.8068293821	1.6967040096	0.0898
ADX260_0002	DRG Major pancreas, liver & shunt procedures	1	-0.1055244002	0.7315093682	-0.1442557058	0.8853
ADX260_0003	DRG Major pancreas, liver & shunt procedures	1	0.9363659829	0.6051679516	1.5472828335	0.1218
ADX260_0004	DRG Major pancreas, liver & shunt procedures	1	3.9590820894	0.4520126878	8.7587853084	<.0001
ADX320_0034	DRG Other musculoskeletal system & connective tissue procedures	1	2.9368106289	1.1357418114	2.5858083233	0.0097
ADX442_0034	DRG Kidney & urinary tract procedures for malignancy	1	2.1603400478	0.9437378838	2.2891314260	0.0221
ADX650_0034	DRG Splenectomy	1	2.6696953325	1.1434773400	2.3347164295	0.0196
ADX680_0003	DRG Major O.R. procedures for lymphatic/hematopoietic/other	1	0.6941353203	0.5588215741	1.2421412352	0.2142

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
	neoplasms					
ADX680_0004	DRG Major O.R. procedures for lymphatic/hematopoietic/other neoplasms	1	3.0121346297	0.4232592186	7.1165245721	<.0001
ADX710_0004	DRG Infectious & parasitic diseases including HIV w O.R. procedure	1	3.1727653065	0.4459886204	7.1140050700	<.0001
ADX911_0004	DRG Extensive abdominal/thoracic procedures for mult significant trauma	1	1.8085996167	0.4366427071	4.1420584544	<.0001
ADX950_0034	DRG Extensive procedure unrelated to principal diagnosis	1	4.6777208509	0.6498024326	7.1986816547	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	1.0110967695	0.2008829474	5.0332633148	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.6342791932	0.1879683926	-3.3743928129	0.0007
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.0761792920	0.2071557160	-0.3677392709	0.7131
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.1364960239	0.1861212359	0.7333715752	0.4633
d_DXCCSR_INJ010_123	Internal organ injury, initial encounter	1	1.5537420877	0.4721725373	3.2906235857	0.0010

c-statistic=0.924

**Table 4. Risk Adjustment Coefficients for IQI 11 – Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate Stratum: Open Repair of Ruptured AAA**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-0.6097025349	0.4980457253	-1.2241898763	0.2209
Age_LT60	Age<60	1	-1.340475884	0.6897603743	-1.9433935814	0.0520
Age_60_64	60 <= Age <= 64	1	-0.3133867170	0.5633804409	-0.5562612654	0.5780

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_70_74	70 <= Age <= 74	1	-0.1775318013	0.4819141120	-0.3683888827	0.7126
Age_75_79	75 <= Age <= 79	1	0.7061078163	0.4576973504	1.5427395761	0.1229
Age_80_84	80 <= Age <= 84	1	0.8435943675	0.4508039172	1.8713110851	0.0613
Age_85_89	85 <= Age <= 89	1	0.4971869346	0.5453584294	0.9116700279	0.3619
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0993806098	0.3845393855	0.2584406529	0.7961
Age_LT60_MALE	Age<=60 MALE	1	0.3848498819	0.7629487202	0.5044243103	0.6140
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.1402365685	0.6199890628	0.2261920039	0.8211
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0590703981	0.5421745501	-0.1089508870	0.9132
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.4237230835	0.5261011269	-0.8054023492	0.4206
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.7545610190	0.5188606150	-1.4542653598	0.1459
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1665874605	0.6483820764	0.2569279235	0.7972
MDC_5	Circulatory System	1	0.2052369888	0.3494483454	0.5873171000	0.5570
ADX181_1234	DRG Lower extremity arterial procedures #	1	-1.108195926	0.4406684441	-2.5148066339	0.0119
ADX182_1234	DRG Other peripheral vascular procedures #	1	0.1440035998	0.1893785377	0.7604008434	0.4470
d_DXCCSR_BLD004_123	Acute posthemorrhagic anemia	1	0.1306639001	0.1702375254	0.7675387655	0.4428
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.4000732874	0.1675168028	2.3882576593	0.0169
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.5706805097	0.1657379467	-3.4432700594	0.0006
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.2484443473	0.2412565603	-1.0297931255	0.3031
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.2519432385	0.1475019869	1.7080667437	0.0876
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	-0.1823121200	0.1720208769	-1.0598255475	0.2892
d_DXCCSR_CIR019_123	Heart failure	1	0.0940232265	0.2366274401	0.3973470976	0.6911
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.2275905901	0.1681872495	1.3531976456	0.1760

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR030_123	Aortic and peripheral arterial embolism or thrombosis	1	0.3664163941	0.2091194117	1.7521873803	0.0797
d_DXCCSR_CIR031_123	Hypotension	1	0.2089405725	0.1921269580	1.0875130416	0.2768
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	0.0259301952	0.1535281581	0.1688953707	0.8659
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.2525272093	0.1836965209	-1.3746978334	0.1692
d_DXCCSR_END009_123	Obesity	1	0.0091449153	0.1872033957	0.0488501572	0.9610
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2383440383	0.1456889911	-1.6359783704	0.1018
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.0535651602	0.1533357882	0.3493324083	0.7268
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.0473442772	0.1700383034	0.2784330137	0.7807
d_DXCCSR_GEN003_123	Chronic kidney disease	1	-0.2951300724	0.2336157282	-1.2633142242	0.2065
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.3203526282	0.1457820076	-2.1974771338	0.0280
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	-0.2849257315	0.1541131078	-1.8488091993	0.0645
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.4047151162	0.1998178996	2.0254197292	0.0428
d_DXCCSR_SYM003_123	Shock	1	0.6015574472	0.1661391494	3.6208049050	0.0003

c-statistic=0.715

**Table 5. Risk Adjustment Coefficients for IQI 11 – Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate Stratum: Open Repair of Unruptured AAA**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-0.8079037669	0.4446875495	-1.8167897164	0.0692
Age_LT60	Age<60	1	-0.8554992851	0.4503579586	-1.8995984611	0.0575
Age_60_64	60 <= Age <= 64	1	0.2075615089	0.4662562958	0.4451661259	0.6562
Age_70_74	70 <= Age <= 74	1	-0.3333279849	0.3655569965	-0.9118358780	0.3619

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_75_79	75 <= Age <= 79	1	0.3513122157	0.3535884233	0.9935625505	0.3204
Age_80_84	80 <= Age <= 84	1	0.4038165069	0.3814899305	1.0585246808	0.2898
Age_85Plus	Age >= 85	1	0.7451124307	0.4165559452	1.7887451597	0.0737
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.9754022830	0.3077899938	-3.1690513098	0.0015
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.4523372043	0.5644374590	0.8013947286	0.4229
Age_70_74_MALE	70 <= Age <= 74 MALE	1	1.0445154381	0.4711736412	2.2168375876	0.0266
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.4615156490	0.4602223659	1.0028101265	0.3160
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.8549425898	0.4892077292	1.7476064640	0.0805
MDC_5	Circulatory System	1	-2.777377519	0.3617506962	-7.6776010337	<.0001
ADX167_0004	DRG Other cardiothoracic & thoracic vascular procedures	1	2.9686020715	0.3556405207	8.3471986416	<.0001
ADX167_1230	DRG Other cardiothoracic & thoracic vascular procedures	1	1.0814795410	0.6046116617	1.7887176339	0.0737
ADX169_0001	DRG Major abdominal vascular procedures	1	-1.423224795	0.7583727848	-1.8766823171	0.0606
ADX169_0002	DRG Major abdominal vascular procedures	1	-0.9588136529	0.4645379136	-2.0640159281	0.0390
ADX169_0004	DRG Major abdominal vascular procedures	1	2.4820568226	0.2096171787	11.8409036795	<.0001
ADX182_0004	DRG Other peripheral vascular procedures #	1	1.6640120201	0.4299029917	3.8706686209	0.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.3458144708	0.2125687900	-1.6268355801	0.1038
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.5649610231	0.2467625207	-2.2894928352	0.0221
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.1094186943	0.1475554115	0.7415430798	0.4584
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.2850546477	0.1578035340	1.8063895055	0.0709

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.4673117496	0.1492091401	-3.1319244204	0.0017
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.3396713395	0.2541852966	1.3363138782	0.1814
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	0.2627794862	0.1640690870	1.6016392297	0.1092
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.1081661116	0.1611236055	0.6713238033	0.5020
TRANSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.1704720087	0.2550028089	0.6685103174	0.5038

c-statistic=0.869

**Table 6. Risk Adjustment Coefficients for IQI 11 – Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate Stratum: Endovascular Repair of Ruptured AAA**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.254440635	0.4883765861	-4.6161931154	<.0001
Age_LT60	Age<60	1	0.0644466506	0.7338628950	0.0878183800	0.9300
Age_60_64	60 <= Age <= 64	1	0.3159170467	0.6832671973	0.4623623787	0.6438
Age_70_74	70 <= Age <= 74	1	0.4400380274	0.4918395688	0.8946779709	0.3710
Age_75_79	75 <= Age <= 79	1	1.1642675108	0.4775536311	2.4379827415	0.0148
Age_80_84	80 <= Age <= 84	1	1.0017567480	0.5030817717	1.9912403993	0.0465
Age_85_89	85 <= Age <= 89	1	1.2016738473	0.5214319411	2.3045650882	0.0212
Age_90Plus	Age >= 90	1	1.5787178487	0.5512269068	2.8640072339	0.0042
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1096506391	0.4683191788	0.2341365549	0.8149
Age_LT60_MALE	Age<=60 MALE	1	-0.0937610580	0.8070326235	-0.1161800096	0.9075
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.5914812418	0.7558899874	-0.7824964634	0.4339
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.1578673980	0.5634076271	-0.2802010311	0.7793
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.6927589633	0.5556116697	-1.2468401964	0.2125



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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.6748280819	0.5740876194	-1.1754792457	0.2398
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.7004976006	0.6113510027	-1.1458190098	0.2519
Age_90Plus_MALE	Age >= 90 MALE	1	-1.376962919	0.7512354411	-1.8329312543	0.0668
ADX169_1234	DRG Major abdominal vascular procedures	1	1.8311896755	0.3229158747	5.6707948382	<.0001
ADX181_0002	DRG Lower extremity arterial procedures #	1	-0.8401749373	0.7416370776	-1.1328653363	0.2573
ADX181_0004	DRG Lower extremity arterial procedures #	1	1.0703596628	0.2615092000	4.0930095877	<.0001
ADX182_0004	DRG Other peripheral vascular procedures #	1	0.7623726388	0.2362728165	3.2266625083	0.0013
ADX182_1230	DRG Other peripheral vascular procedures #	1	-1.553073132	0.5673938336	-2.7372048127	0.0062
d_DXCCSR_BLD004_123	Acute posthemorrhagic anemia	1	-0.3354267290	0.1562835135	-2.1462707191	0.0319
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.1529616302	0.1688621221	0.9058374267	0.3650
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.6925430194	0.1509177861	-4.5888760854	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.5131481143	0.2198132308	-2.3344732819	0.0196
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.3367563170	0.1580410711	2.1308152039	0.0331
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	-0.1386262038	0.1658152977	-0.8360278317	0.4031
d_DXCCSR_CIR019_123	Heart failure	1	-0.2632839455	0.2074252105	-1.2692957856	0.2043
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.1419545179	0.1581714013	0.8974727206	0.3695
d_DXCCSR_CIR031_123	Hypotension	1	0.4445092811	0.1781256755	2.4954812381	0.0126
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.1731122673	0.1424271032	-1.2154446963	0.2242
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.2041065810	0.1833340857	-1.1133040553	0.2656

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_END009_123	Obesity	1	0.0590352925	0.1763333477	0.3347936918	0.7378
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2884603331	0.1348044871	-2.1398422213	0.0324
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.1711059163	0.1395771950	1.2258873401	0.2202
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.2558515549	0.1810325362	-1.4132904522	0.1576
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.0631791511	0.1519751805	0.4157201913	0.6776
d_DXCCSR_GEN003_123	Chronic kidney disease	1	-0.3688718349	0.2089783512	-1.7651198450	0.0775
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.3402581580	0.1471411992	-2.3124601388	0.0208
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	-0.0424880697	0.1400520645	-0.3033733905	0.7616
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.8102382405	0.1639866679	4.9408787363	<.0001
d_DXCCSR_SYM003_123	Shock	1	1.1722788250	0.1546630120	7.5795680555	<.0001

c-statistic=0.807

**Table 7. Risk Adjustment Coefficients for IQI 11 – Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate Stratum: Endovascular Repair of Unruptured AAA**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.997024921	0.6033924781	-4.9669577100	<.0001
Age_60_64	60 <= Age <= 64	1	0.0521472505	0.4759120483	0.1095732934	0.9127
Age_70_74	70 <= Age <= 74	1	-0.6356835703	0.4625730887	-1.3742337930	0.1694
Age_75_79	75 <= Age <= 79	1	-0.0393235776	0.4475740055	-0.0878593865	0.9300
Age_80_84	80 <= Age <= 84	1	0.2077407351	0.4262263139	0.4873953772	0.6260
Age_85_89	85 <= Age <= 89	1	0.4115816553	0.4667127405	0.8818736228	0.3778
Age_90Plus	Age >= 90	1	0.4074219979	0.4927089498	0.8269019632	0.4083
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-1.249356866	0.3906671046	-3.1980088692	0.0014

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_70_74_MALE	70 <= Age <= 74 MALE	1	1.0903726790	0.5686594439	1.9174440707	0.0552
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.3804879135	0.5308151769	0.7167992364	0.4735
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.7663553873	0.4919812308	1.5576923250	0.1193
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1290831980	0.5632729003	0.2291663559	0.8187
MDC_5	Circulatory System	1	-2.727604231	0.6414774494	-4.2520656551	<.0001
ADX169_0003	DRG Major abdominal vascular procedures	1	2.1263346561	0.8043912019	2.6434086438	0.0082
ADX169_0004	DRG Major abdominal vascular procedures	1	5.5577005518	0.4589578618	12.1093917650	<.0001
ADX175_0034	DRG Percutaneous coronary intervention w/o AMI	1	4.5135510541	0.5708744714	7.9063809649	<.0001
ADX181_0003	DRG Lower extremity arterial procedures #	1	2.1031552210	0.4888367642	4.3023671194	<.0001
ADX181_0004	DRG Lower extremity arterial procedures #	1	5.2955047058	0.4228859563	12.5222997512	<.0001
ADX182_0001	DRG Other peripheral vascular procedures #	1	-1.521252213	0.6795024462	-2.2387737102	0.0252
ADX182_0002	DRG Other peripheral vascular procedures #	1	-1.080314148	0.6887292407	-1.5685614663	0.1168
ADX182_0003	DRG Other peripheral vascular procedures #	1	1.2170017636	0.5315662339	2.2894640140	0.0221
ADX182_0004	DRG Other peripheral vascular procedures #	1	4.5778310034	0.4123268942	11.1024312697	<.0001
ADX950_1234	DRG Extensive procedure unrelated to principal diagnosis	1	0.6597997442	0.7276242837	0.9067863168	0.3645
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.7401813538	0.2639243379	-2.8045210222	0.0050
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other	1	-0.1129667979	0.2033744449	-0.5554621083	0.5786

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
	heart disease					
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.3064290443	0.2788318212	1.0989744392	0.2718

c-statistic=0.961

**Table 8. Risk Adjustment Coefficients for IQI 12 – Coronary Artery Bypass Graft (CABG) Mortality Rate**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-1.625444602	0.1577622466	-10.3031278888	<.0001
Age_40_44	40 <= Age <= 44	1	-0.9183454863	0.2973079876	-3.0888692017	0.0020
Age_45_49	45 <= Age <= 49	1	-0.2895584360	0.1943574101	-1.4898245242	0.1363
Age_50_54	50 <= Age <= 54	1	-0.2622769884	0.1530138224	-1.7140738286	0.0865
Age_55_59	55 <= Age <= 59	1	-0.1629828134	0.1137781727	-1.4324611608	0.1520
Age_60_64	60 <= Age <= 64	1	-0.0223496951	0.0970955559	-0.2301824720	0.8179
Age_70_74	70 <= Age <= 74	1	0.0661800638	0.0789123658	0.8386526394	0.4017
Age_75_79	75 <= Age <= 79	1	0.1783139767	0.0827787850	2.1541023670	0.0312
Age_80_84	80 <= Age <= 84	1	0.4159196018	0.1000139950	4.1586140213	<.0001
Age_85_89	85 <= Age <= 89	1	0.5448820890	0.1604052844	3.3969085932	0.0007
Age_90Plus	Age >= 90	1	1.1075445902	0.4270755591	2.5933223442	0.0095
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.5407081228	0.0796548864	-6.7881350102	<.0001
Age_40_44_MALE	40 <= Age <= 44 MALE	1	1.1777242200	0.3507381772	3.3578443881	0.0008
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.1789662806	0.2458248005	-0.7280236991	0.4666
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0001998908	0.1846739874	-0.0010823982	0.9991
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0539753619	0.1430265441	0.3773800324	0.7059
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0222726206	0.1245500803	0.1788246182	0.8581
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0636170238	0.1027845047	0.6189359371	0.5360

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.1312331593	0.1051369892	1.2482111220	0.2120
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.0587533704	0.1266823991	0.4637847945	0.6428
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1427997567	0.1949347896	0.7325514187	0.4638
Age_90Plus_MALE	Age >= 90 MALE	1	-0.3233838036	0.5560337782	-0.5815902131	0.5608
MDC_5	Circulatory System	1	0.0282469131	0.1645337482	0.1716785367	0.8637
ADX009_0004	DRG DRG Extracorporeal membrane oxygenation (ECMO)	1	3.5840515529	0.1358960957	26.3734696343	<.0001
ADX009_1230	DRG DRG Extracorporeal membrane oxygenation (ECMO)	1	3.4102077613	0.4034989674	8.4515898100	<.0001
ADX161_0004	DRG Cardiac defibrillator & heart assist implant	1	1.8727701140	0.1176954466	15.9120014294	<.0001
ADX162_0002	DRG Cardiac valve procedures w AMI or complex PDX	1	-1.663353420	0.4566400583	-3.6425919926	0.0003
ADX162_0004	DRG Cardiac valve procedures w AMI or complex PDX	1	1.2129018401	0.1134304806	10.6929092979	<.0001
ADX163_0002	DRG Cardiac valve procedures w/o AMI or complex PDX	1	-2.733461112	0.2011187265	-13.5912809256	<.0001
ADX163_0003	DRG Cardiac valve procedures w/o AMI or complex PDX	1	-1.577769419	0.1390714569	-11.3450268990	<.0001
ADX163_0004	DRG Cardiac valve procedures w/o AMI or complex PDX	1	0.8849479156	0.1088179087	8.1323738568	<.0001
ADX165_0002	DRG Coronary bypass w AMI or complex PDX	1	-3.018173697	0.1786168617	-16.8974735547	<.0001
ADX165_0003	DRG Coronary bypass w AMI or complex PDX	1	-1.472189226	0.1214257225	-12.1241957315	<.0001
ADX165_0004	DRG Coronary bypass w AMI or complex PDX	1	0.7200193109	0.1037928517	6.9370799523	<.0001
ADX166_0001	DRG Coronary bypass w/o AMI or	1	-4.464913117	0.2764727166	-16.1495614175	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
	complex PDX					
ADX166_0002	DRG Coronary bypass w/o AMI or complex PDX	1	-3.633500642	0.1639715249	-22.1593392217	<.0001
ADX166_0003	DRG Coronary bypass w/o AMI or complex PDX	1	-2.201960373	0.1194389454	-18.4358658450	<.0001
ADX166_0004	DRG Coronary bypass w/o AMI or complex PDX	1	0.2939697530	0.1081207385	2.7189025638	0.0065
ADX710_0004	DRG Infectious & parasitic diseases including HIV w O.R. procedure	1	0.5992310189	0.2118562906	2.8284787636	0.0047
d_DXCCSR_BLD003_123	Aplastic anemia	1	0.1492398036	0.0487666881	3.0602817114	0.0022
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.1846485718	0.0472664732	3.9065443061	<.0001
d_DXCCSR_CIR001_123	Chronic rheumatic heart disease	1	0.0275521458	0.0575125346	0.4790633204	0.6319
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	-0.1721783446	0.0453224389	-3.7989646774	0.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.0552366809	0.0534506945	-1.0334137175	0.3014
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.1996562318	0.0479568711	-4.1632455847	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	-0.2241783412	0.0479369467	-4.6765252436	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	-0.6137246854	0.0586877480	-10.4574584341	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	-0.0015791835	0.0366127873	-0.0431320198	0.9656
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.3537749433	0.0448388541	7.8899193671	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1307178402	0.0431404467	-3.0300530062	0.0024
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	-0.1706746140	0.0370908841	-4.6015245547	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.0389520958	0.0389208298	-1.0008033245	0.3169
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.4141828842	0.0357544953	-11.5840786207	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.1104016252	0.0407220296	2.7111032121	0.0067

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	0.0313112697	0.0388519311	0.8059128287	0.4203
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	-0.1151739382	0.0465276091	-2.4753891376	0.0133
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.2573024554	0.0438767676	5.8642071703	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.2297535418	0.0502514291	-4.5720797606	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2491467643	0.0485081491	-5.1361836904	<.0001
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.1046309011	0.0392327745	2.6669258668	0.0077
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	-0.3974024331	0.0540690917	-7.3499002983	<.0001
d_DXCCSR_SYM003_123	Shock	1	0.2472111965	0.0583630779	4.2357463895	<.0001

c-statistic=0.913

**Table 9. Risk Adjustment Coefficients for IQI 15 – Acute Myocardial Infarction (AMI) Mortality Rate**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-3.058119764	0.0413480389	-73.9604548734	<.0001
Age_LT30	Age < 30	1	-0.9886632020	0.3453615648	-2.8626903012	0.0042
Age_30_34	30 <= Age <= 34	1	-1.443143374	0.2923657069	-4.9360897669	<.0001
Age_35_39	35 <= Age <= 39	1	-1.075139281	0.1633912240	-6.5801531686	<.0001
Age_40_44	40 <= Age <= 44	1	-1.078724932	0.1304983360	-8.2661968343	<.0001
Age_45_49	45 <= Age <= 49	1	-0.7964490346	0.0851137108	-9.3574704655	<.0001
Age_50_54	50 <= Age <= 54	1	-0.6278307733	0.0682455435	-9.1995863874	<.0001
Age_55_59	55 <= Age <= 59	1	-0.3739038037	0.0553426055	-6.7561655260	<.0001
Age_60_64	60 <= Age <= 64	1	-0.2429754855	0.0494076975	-4.9177658075	<.0001
Age_70_74	70 <= Age <= 74	1	0.2212113471	0.0418947265	5.2801716495	<.0001
Age_75_79	75 <= Age <= 79	1	0.4083590103	0.0429757127	9.5020881412	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_80_84	80 <= Age <= 84	1	0.5338383051	0.0416368095	12.8213067194	<.0001
Age_85_89	85 <= Age <= 89	1	0.7289302055	0.0420721120	17.3257336110	<.0001
Age_90Plus	Age >= 90	1	0.9973244737	0.0432654197	23.0513070173	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.1646482070	0.0402291389	-4.0927599175	<.0001
Age_LT30_MALE	Age < 30 MALE	1	-0.4624429578	0.4359555071	-1.0607572338	0.2888
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.4268888723	0.3451172094	1.2369388158	0.2161
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0589842214	0.2011337850	0.2932586455	0.7693
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.0756280823	0.1570602147	0.4815228504	0.6301
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.0935076093	0.1027324372	-0.9102053049	0.3627
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0259315736	0.0868012364	-0.2987465923	0.7651
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0799243627	0.0692886305	-1.1534989533	0.2487
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0326965767	0.0626005565	0.5223048881	0.6015
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0736053312	0.0540543484	1.3616912120	0.1733
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.1303390450	0.0566182182	2.3020690003	0.0213
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.2361759660	0.0548704496	4.3042469645	<.0001
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1877166675	0.0554709244	3.3840551520	0.0007
Age_90Plus_MALE	Age >= 90 MALE	1	0.1441078667	0.0578320272	2.4918349509	0.0127
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.3065951035	0.0378164748	-8.1074480148	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3161483040	0.0285499717	11.0735067350	<.0001
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	0.0653127141	0.0214902134	3.0391840604	0.0024
d_DXCCSR_CIR005_123	Myocarditis and cardiomyopathy	1	-0.1075370872	0.0185558715	-5.7953131992	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.2996419269	0.0213812065	-14.0142665477	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.3102240720	0.0217745490	-14.2470951559	<.0001



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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	-0.4316083067	0.0181117090	-23.8303467808	<.0001
d_DXCCSR_CIR016_123	Conduction disorders	1	0.0525153917	0.0197340060	2.6611622459	0.0078
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.0307915475	0.0162424992	1.8957395104	0.0580
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	1.1979082904	0.0335852178	35.6677243115	<.0001
d_DXCCSR_CIR019_123	Heart failure	1	0.2791097123	0.0203416122	13.7211204789	<.0001
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.2859941087	0.0230219094	12.4226928275	<.0001
d_DXCCSR_CIR031_123	Hypotension	1	0.4448353194	0.0268375257	16.5751241410	<.0001
d_DXCCSR_CIR032_123	Other specified and unspecified circulatory disease	1	0.2096510307	0.0275563686	7.6080790422	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1481801106	0.0186473306	-7.9464516124	<.0001
d_DXCCSR_DIG018_123	Hepatic failure	1	0.4783160966	0.0443891854	10.7755096724	<.0001
d_DXCCSR_DIG021_123	Gastrointestinal hemorrhage	1	0.3604263755	0.0435038772	8.2849253598	<.0001
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.1424922228	0.0373274652	-3.8173559924	0.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1388538819	0.0206063393	-6.7384060635	<.0001
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	0.1244678715	0.0158780234	7.8390028813	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.1081089867	0.0201070254	-5.3766772677	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.4422306414	0.0158111756	-27.9694978419	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.4377230512	0.0158897283	27.5475478859	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.2514324455	0.0307313327	-8.1816316945	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.0677914318	0.0167865937	-4.0384269225	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.3889252475	0.0181323864	21.4492036242	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.2513929837	0.0190217127	13.2161066801	<.0001
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.2022860966	0.0329861486	-6.1324557521	<.0001
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.3120893574	0.0294350240	-10.6026534064	<.0001
d_DXCCSR_INF002_123	Septicemia	1	0.7683419556	0.0637634167	12.0498868345	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	-0.3764988762	0.0464539725	-8.1047724366	<.0001
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.0549983643	0.0266198937	-2.0660625036	0.0388
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.1121164958	0.0267125357	-4.1971491203	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.2552093219	0.0201951896	-12.6371342502	<.0001
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.1545346500	0.0269300618	-5.7383696682	<.0001
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	0.2890252953	0.0412401548	7.0083465145	<.0001
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	1.4999659283	0.0446359293	33.6044516537	<.0001
d_DXCCSR_NVS015_123	Polyneuropathies	1	-0.1411514652	0.0370944974	-3.8051860830	0.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2457425388	0.0256182148	-9.5924927161	<.0001
d_DXCCSR_NVS019_123	Nervous system pain and pain syndromes	1	-0.2123048459	0.0331295893	-6.4083150513	<.0001
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.1652800798	0.0256688115	6.4389455705	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	0.0976687221	0.0278198537	3.5107561377	0.0004
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.0356314195	0.0189684099	1.8784610616	0.0603
d_DXCCSR_RSP010_123	Aspiration pneumonitis	1	-0.2246899557	0.0492061651	-4.5662968248	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.6759126494	0.0207730733	32.5379224475	<.0001
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	0.3964598567	0.0345510685	11.4746048018	<.0001
d_DXCCSR_SYM003_123	Shock	1	1.7043669401	0.0227833880	74.8074402870	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.3268312046	0.0341790130	9.5623359536	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.1474589972	0.0319882898	4.6097805859	<.0001
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1661947326	0.0243854348	-6.8153278308	<.0001
TRANSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.1227845885	0.0201259117	6.1008211804	<.0001

c-statistic=0.875

**Table 10. Risk Adjustment Coefficients for IQI 16 – Heart Failure Mortality Rate**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.233785311	0.0511380696	-82.7912619034	<.0001
Age_LT30	Age < 30	1	-0.4483796502	0.1586621302	-2.8260029643	0.0047
Age_30_34	30 <= Age <= 34	1	-0.6515691058	0.1643839162	-3.9637035108	<.0001
Age_35_39	35 <= Age <= 39	1	-0.6756687053	0.1388770432	-4.8652296293	<.0001
Age_40_44	40 <= Age <= 44	1	-0.8134141178	0.1266779426	-6.4211187907	<.0001
Age_45_49	45 <= Age <= 49	1	-0.6457632722	0.0950184299	-6.7961896780	<.0001
Age_50_54	50 <= Age <= 54	1	-0.4014978984	0.0663341217	-6.0526602018	<.0001
Age_55_59	55 <= Age <= 59	1	-0.3433038141	0.0563911095	-6.0879067126	<.0001
Age_60_64	60 <= Age <= 64	1	-0.1609279379	0.0489170069	-3.2898157119	0.0010
Age_70_74	70 <= Age <= 74	1	0.2064275878	0.0389792935	5.2958268238	<.0001
Age_75_79	75 <= Age <= 79	1	0.3250268526	0.0393826848	8.2530394913	<.0001
Age_80_84	80 <= Age <= 84	1	0.4435816220	0.0380784052	11.6491649065	<.0001
Age_85_89	85 <= Age <= 89	1	0.5762277867	0.0385167214	14.9604578359	<.0001
Age_90Plus	Age >= 90	1	0.7654253986	0.0370193386	20.6763661494	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0428869146	0.0420086328	1.0209071732	0.3073

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_LT30_MALE	Age < 30 MALE	1	-0.0806133977	0.1973519503	-0.4084753028	0.6829
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.0528654101	0.2048928934	-0.2580148544	0.7964
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0430564592	0.1722324977	0.2499903314	0.8026
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.2436847074	0.1469751323	1.6579995783	0.0973
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.0033623263	0.1162333559	-0.0289273789	0.9769
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.1492387162	0.0843920740	-1.7683973049	0.0770
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0150204134	0.0705299870	-0.2129649257	0.8314
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0132816041	0.0636265752	0.2087430297	0.8346
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0588412240	0.0519409787	1.1328478122	0.2573
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0982988402	0.0535724370	1.8348771423	0.0665
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1348584787	0.0511513510	2.6364597616	0.0084
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1556004233	0.0503845237	3.0882582940	0.0020
Age_90Plus_MALE	Age >= 90 MALE	1	0.1436806996	0.0501761993	2.8635229766	0.0042
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.2754264405	0.0222707542	-12.3671806504	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.1402782467	0.0149175808	-9.4035519947	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3289888045	0.0208344567	15.7906111416	<.0001
d_DXCCSR_CIR001_123	Chronic rheumatic heart disease	1	-0.0689629268	0.0204453958	-3.3730296796	0.0007
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	0.0267019737	0.0147450897	1.8109061530	0.0702
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.3692851813	0.0226733146	-16.2872164029	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.4543157890	0.0233288306	19.4744347188	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.0635417714	0.0136738712	4.6469482144	<.0001
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.0861331487	0.0150153596	5.7363360397	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR016_123	Conduction disorders	1	-0.1278354605	0.0167538661	-7.6302066594	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.1138004874	0.0137425565	8.2808819157	<.0001
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	2.6020542473	0.0547801179	47.4999753289	<.0001
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.0943569193	0.0210196992	4.4889757294	<.0001
d_DXCCSR_CIR031_123	Hypotension	1	0.5589862680	0.0227803643	24.5380741575	<.0001
d_DXCCSR_CIR032_123	Other specified and unspecified circulatory disease	1	0.1425431697	0.0246044773	5.7933833798	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1474796953	0.0157718163	-9.3508377803	<.0001
d_DXCCSR_DIG018_123	Hepatic failure	1	0.8497325640	0.0444904646	19.0992063460	<.0001
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.2260201807	0.0253106893	8.9298311077	<.0001
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.1249020149	0.0263123869	-4.7468903359	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.0483023309	0.0156536225	-3.0856966819	0.0020
d_DXCCSR_END002_123	Diabetes mellitus without complication	1	-0.0404278712	0.0258345714	-1.5648748588	0.1176
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.1162023452	0.0154746194	-7.5092215329	<.0001
d_DXCCSR_END008_123	Malnutrition	1	0.4730657403	0.0222487876	21.2625401312	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.1142137523	0.0172154448	-6.6343770846	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2645301666	0.0139086178	-19.0191555768	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.3351061538	0.0139172397	24.0784925645	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.1185486633	0.0209766532	-5.6514574653	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.2203856596	0.0146658466	-15.0271351541	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.2276842013	0.0218783755	-10.4068147683	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.5159623261	0.0151322699	34.0968227613	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.2888516364	0.0153359259	18.8349656136	<.0001
d_DXCCSR_GEN006_123	Other specified and unspecified diseases of kidney and ureters	1	-0.0549626084	0.0251588906	-2.1846197134	0.0289
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.2791944625	0.0237412554	-11.7598862361	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	0.0538189049	0.0231565048	2.3241376635	0.0201
d_DXCCSR_INJ028_123	Adverse effects of drugs and medicaments, initial encounter	1	-0.2998019164	0.0324987922	-9.2250171809	<.0001
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.1144662597	0.0208981985	-5.4773266682	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.4205803215	0.0244297315	-17.2159207791	<.0001
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.2332695040	0.0213546703	-10.9235825595	<.0001
d_DXCCSR_MUS033_123	Gout	1	-0.1457646533	0.0248069790	-5.8759534354	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	0.1181269141	0.0192350526	6.1412316785	<.0001
d_DXCCSR_NVS015_123	Polyneuropathies	1	-0.1244332142	0.0265242870	-4.6912934677	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2291818047	0.0173721083	-13.1925153187	<.0001
d_DXCCSR_NVS019_123	Nervous system pain and pain syndromes	1	-0.1637170918	0.0282220650	-5.8010316320	<.0001
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.4948906196	0.0188297167	26.2824251220	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	0.2996529594	0.0170515818	17.5733232920	<.0001
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.1497736031	0.0195309369	7.6685314194	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.5281953107	0.0146418569	36.0743391543	<.0001
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	0.2456953204	0.0260605424	9.4278667224	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_SKN001_123	Skin and subcutaneous tissue infections	1	0.1244999604	0.0296735883	4.1956489726	<.0001
d_DXCCSR_SKN003_123	Pressure ulcer of skin	1	0.4500524151	0.0282140604	15.9513522289	<.0001
d_DXCCSR_SKN004_123	Non-pressure ulcer of skin	1	0.0481567569	0.0359676506	1.3388908098	0.1806
d_DXCCSR_SYM003_123	Shock	1	1.5486268574	0.0319994324	48.3954477028	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	0.3033959218	0.0333684993	9.0922854841	<.0001
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	0.2387782342	0.0249282529	9.5786188776	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.2862708125	0.0298466565	9.5913863113	<.0001
d_DXCCSR_SYM012_123	Circulatory signs and symptoms	1	-0.1180809866	0.0311580011	-3.7897484529	0.0002
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	-0.2423722238	0.0270646875	-8.9552936461	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.4150406679	0.0234179814	17.7231615946	<.0001
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1256945739	0.0193131301	-6.5082445600	<.0001
TRANSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.4553361515	0.0396879787	11.4728985194	<.0001

c-statistic=0.796

**Table 11. Risk Adjustment Coefficients for IQI 17 – Acute Stroke Mortality Rate Stratum: Subarachnoid Hemorrhage**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.274221360	0.1078577956	-21.0853684377	<.0001
Age_LT30	Age < 30	1	-0.7667704463	0.2063370313	-3.7161068067	0.0002
Age_30_34	30 <= Age <= 34	1	-0.3799846750	0.2199554055	-1.7275532476	0.0841
Age_35_39	35 <= Age <= 39	1	-0.5283397387	0.1518615553	-3.4790881575	0.0005
Age_40_44	40 <= Age <= 44	1	-0.7920609778	0.1513775995	-5.2323526111	<.0001
Age_45_49	45 <= Age <= 49	1	-0.6610501375	0.1316004372	-5.0231606482	<.0001
Age_50_54	50 <= Age <= 54	1	-0.5112176006	0.1158954520	-4.4110238292	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_55_59	55 <= Age <= 59	1	-0.3610147522	0.1033361417	-3.4935962024	0.0005
Age_60_64	60 <= Age <= 64	1	-0.3773767097	0.1079147243	-3.4969899826	0.0005
Age_70_74	70 <= Age <= 74	1	0.1373233788	0.1113038301	1.2337704701	0.2173
Age_75_79	75 <= Age <= 79	1	0.5370032977	0.1138235996	4.7178555190	<.0001
Age_80_84	80 <= Age <= 84	1	0.7963397679	0.1163015659	6.8471972966	<.0001
Age_85_89	85 <= Age <= 89	1	1.0645847031	0.1348011047	7.8974479137	<.0001
Age_90Plus	Age >= 90	1	1.3139556306	0.1607653901	8.1731250084	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.2159952020	0.1205365725	1.7919474365	0.0731
Age_LT30_MALE	Age < 30 MALE	1	-0.3625820671	0.2891312706	-1.2540396145	0.2098
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.3981229551	0.2841397284	-1.4011520222	0.1612
Age_35_39_MALE	35 <= Age <= 39 MALE	1	-0.2713603623	0.2558295523	-1.0607076465	0.2888
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.0840789050	0.2219313177	-0.3788510151	0.7048
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.1025319286	0.1941066120	-0.5282248121	0.5973
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0445432132	0.1732733255	-0.2570690730	0.7971
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.2257472333	0.1789805556	-1.2612947397	0.2072
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0343832522	0.1685102376	-0.2040425123	0.8383
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.2263803334	0.1786839635	-1.2669314528	0.2052
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.2647251035	0.1941871354	-1.3632473796	0.1728
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.2762713972	0.1838565276	-1.5026466599	0.1329
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.3379697312	0.2149732652	-1.5721477313	0.1159
Age_90Plus_MALE	Age >= 90 MALE	1	-0.5518652755	0.2717885543	-2.0304949076	0.0423
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.4360689969	0.1542522174	-2.8269868930	0.0047
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.1791905133	0.0732137682	-2.4474974812	0.0144
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3245594299	0.0889266272	3.6497440666	0.0003
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.1285339710	0.0467010583	-2.7522710529	0.0059



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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.1718990746	0.0649525825	2.6465317908	0.0081
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.1881509051	0.0669011114	2.8123733839	0.0049
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	2.3981662486	0.1740394460	13.7794408332	<.0001
d_DXCCSR_CIR024_123	Other and ill-defined cerebrovascular disease	1	-0.5042907265	0.0578529545	-8.7167670291	<.0001
d_DXCCSR_CIR031_123	Hypotension	1	0.8496797342	0.1051809212	8.0782686077	<.0001
d_DXCCSR_CIR033_123	Acute phlebitis; thrombophlebitis and thromboembolism	1	-0.5218545043	0.1937737495	-2.6931124868	0.0071
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.0558302807	0.0680439239	-0.8205035446	0.4119
d_DXCCSR_DIG007_123	Gastritis and duodenitis	1	-1.565333819	0.3932040891	-3.9809703466	<.0001
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.5132488553	0.1418504651	-3.6182387916	0.0003
d_DXCCSR_END001_123	Thyroid disorders	1	-0.2057326483	0.0670569081	-3.0680306348	0.0022
d_DXCCSR_END007_123	Nutritional deficiencies	1	-0.6990410432	0.1921962231	-3.6371216460	0.0003
d_DXCCSR_END008_123	Malnutrition	1	-0.5228505437	0.1224215032	-4.2709044567	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.1255970014	0.0681153324	-1.8438873751	0.0652
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2843067930	0.0480230914	-5.9202101415	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.1089184212	0.0472626119	2.3045366483	0.0212
d_DXCCSR_END013_123	Pituitary disorders	1	0.5503206080	0.1248230217	4.4088069694	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.2719003447	0.0805628062	-3.3750108475	0.0007
d_DXCCSR_EYE010_123	Blindness and vision defects	1	-0.6076367120	0.1356031937	-4.4809911568	<.0001
d_DXCCSR_EYE012_123	Other specified eye disorders	1	0.6540099253	0.1650234983	3.9631321110	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.1757989587	0.0854286862	-2.0578445776	0.0396

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.0865390096	0.0802155677	1.0788306066	0.2807
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.1624300626	0.0834500541	1.9464344792	0.0516
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.4229827793	0.0991311152	-4.2669022562	<.0001
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.4106739060	0.1385156518	-2.9648195034	0.0030
d_DXCCSR_INF003_123	Bacterial infections	1	-0.2257044633	0.0960271071	-2.3504244809	0.0188
d_DXCCSR_INJ028_123	Adverse effects of drugs and medicaments, initial encounter	1	-0.4572018207	0.1492774277	-3.0627659371	0.0022
d_DXCCSR_INJ030_123	Drug induced or toxic related condition	1	-1.032448218	0.2401630898	-4.2989462639	<.0001
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.2850549239	0.0804406680	-3.5436667935	0.0004
d_DXCCSR_MBD019_123	Cannabis-related disorders	1	-0.4071623828	0.1567304687	-2.5978508589	0.0094
d_DXCCSR_MBD021_123	Stimulant-related disorders	1	0.4274175646	0.1245040380	3.4329614626	0.0006
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.1076770812	0.0553243040	-1.9462889437	0.0516
d_DXCCSR_MUS011_123	Spondylopathies/spondyloarthropathy (including infective)	1	-0.5829714451	0.1272731535	-4.5804745845	<.0001
d_DXCCSR_NVS008_123	Paralysis (other than cerebral palsy)	1	-0.2539392550	0.0648552317	-3.9154783421	<.0001
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	-0.0877956976	0.0634716019	-1.3832280109	0.1666
d_DXCCSR_NVS010_123	Headache; including migraine	1	-0.8362470749	0.1016168194	-8.2294159553	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	-0.2422649251	0.0884636520	-2.7385815478	0.0062
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	1.4845620203	0.0986852024	15.0434105989	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.5040002805	0.0900392181	-5.5975639407	<.0001
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.7922963432	0.0519670744	15.2461217597	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	-0.2831205000	0.1410245474	-2.0075972952	0.0447
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease	1	0.1711730099	0.0761714170	2.2472078987	0.0246

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
	and bronchiectasis					
d_DXCCSR_RSP009_123	Asthma	1	-0.2902959590	0.1074033248	-2.7028582167	0.0069
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	1.5628083953	0.0499850312	31.2655280289	<.0001
d_DXCCSR_SYM003_123	Shock	1	1.5125428835	0.1268817007	11.9208906802	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	-1.337547950	0.1050951707	-12.7270162899	<.0001
d_DXCCSR_SYM007_123	Malaise and fatigue	1	-0.9176396307	0.2027653636	-4.5256231863	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.4260209240	0.0442074946	9.6368484101	<.0001
d_DXCCSR_SYM011_123	Genitourinary signs and symptoms	1	-0.8270311493	0.1827738388	-4.5248879953	<.0001
d_DXCCSR_SYM014_123	Skin/Subcutaneous signs and symptoms	1	-1.016714655	0.2243309042	-4.5322094964	<.0001

c-statistic=0.872

**Table 12. Risk Adjustment Coefficients for IQI 17 – Acute Stroke Mortality Rate Stratum: Intracerebral Hemorrhage**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.001041577	0.0594544924	-33.6566926517	<.0001
Age_LT30	Age < 30	1	-0.6105429435	0.1540190858	-3.9640732864	<.0001
Age_30_34	30 <= Age <= 34	1	-0.6223168609	0.1679122687	-3.7062024448	0.0002
Age_35_39	35 <= Age <= 39	1	-0.4197785850	0.1260892180	-3.3292187215	0.0009
Age_40_44	40 <= Age <= 44	1	-0.4945859375	0.1087060559	-4.5497551470	<.0001
Age_45_49	45 <= Age <= 49	1	-0.3052524625	0.0845369859	-3.6108746871	0.0003
Age_50_54	50 <= Age <= 54	1	-0.2587801607	0.0775028898	-3.3389743462	0.0008
Age_55_59	55 <= Age <= 59	1	-0.1966933508	0.0689059047	-2.8545209834	0.0043
Age_60_64	60 <= Age <= 64	1	-0.0858890161	0.0626698769	-1.3704991977	0.1705
Age_70_74	70 <= Age <= 74	1	0.0857360906	0.0597439761	1.4350583303	0.1513
Age_75_79	75 <= Age <= 79	1	0.3246032064	0.0578597868	5.6101694175	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_80_84	80 <= Age <= 84	1	0.4659804079	0.0582011722	8.0063749667	<.0001
Age_85_89	85 <= Age <= 89	1	0.6211532821	0.0612537625	10.1406551425	<.0001
Age_90Plus	Age >= 90	1	0.6667507386	0.0650274640	10.2533713930	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0621366721	0.0574215597	-1.0821139718	0.2792
Age_LT30_MALE	Age < 30 MALE	1	-0.2025667012	0.1961849203	-1.0325294158	0.3018
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.1303803237	0.2107430531	0.6186696159	0.5361
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0558411574	0.1581414563	0.3531089105	0.7240
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.0301758287	0.1401510300	0.2153093606	0.8295
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.0485748520	0.1053866335	0.4609204265	0.6449
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0192765879	0.0994126362	0.1939048058	0.8463
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0558844597	0.0865023935	-0.6460452408	0.5183
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0172906297	0.0806174292	0.2144775623	0.8302
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0226438675	0.0772588634	-0.2930908705	0.7695
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0042420579	0.0745284077	-0.0569186708	0.9546
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0045565832	0.0773100568	-0.0589390747	0.9530
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0210842953	0.0798999787	-0.2638836162	0.7919
Age_90Plus_MALE	Age >= 90 MALE	1	0.0512300371	0.0933708050	0.5486729730	0.5832
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.3622363555	0.0655721220	-5.5242433012	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.1814395066	0.0319608392	-5.6769318646	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3378356423	0.0302678342	11.1615399926	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.1178426951	0.0240196762	-4.9060900761	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.1071043647	0.0245496313	-4.3627687647	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.1482291301	0.0245477990	6.0383878138	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.1209855673	0.0238630411	5.0699978598	<.0001
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	2.2622512021	0.1519956656	14.8836560081	<.0001
d_DXCCSR_CIR020_123	Cerebral infarction	1	-0.0719038803	0.0270848983	-2.6547590993	0.0079
d_DXCCSR_CIR023_123	Occlusion or stenosis of precerebral or cerebral arteries without infarction	1	-0.3516266812	0.0623711319	-5.6376511110	<.0001
d_DXCCSR_CIR024_123	Other and ill-defined cerebrovascular disease	1	-0.4130140744	0.0488965840	-8.4466856525	<.0001
d_DXCCSR_CIR025_123	Sequela of cerebral infarction and other cerebrovascular disease	1	-0.1559843731	0.0424314325	-3.6761514726	0.0002
d_DXCCSR_CIR031_123	Hypotension	1	0.5696001546	0.0533119515	10.6842863335	<.0001
d_DXCCSR_CIR033_123	Acute phlebitis; thrombophlebitis and thromboembolism	1	-0.5276176122	0.0882757972	-5.9769226549	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1280216672	0.0293549475	-4.3611615061	<.0001
d_DXCCSR_DIG007_123	Gastritis and duodenitis	1	-1.278001734	0.1593170243	-8.0217524751	<.0001
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.4727296596	0.0607800827	-7.7777067475	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1996439930	0.0282463817	-7.0679492789	<.0001
d_DXCCSR_END008_123	Malnutrition	1	-0.5035362006	0.0526882328	-9.5569005353	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.2998332953	0.0337305037	-8.8890844205	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2907838588	0.0214336864	-13.5666750767	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	-0.0588211114	0.0237962430	-2.4718654745	0.0134
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.2859250196	0.0375313803	-7.6182921370	<.0001
d_DXCCSR_EYE010_123	Blindness and vision defects	1	-0.8210502051	0.0474703993	-17.2960459096	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.1313117582	0.0311272970	4.2185403375	<.0001
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.6078959494	0.0453660659	-13.3997942666	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.2590628100	0.0417075655	-6.2114104988	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	-0.2970497142	0.0527451788	-5.6317889345	<.0001
d_DXCCSR_INJ028_123	Adverse effects of drugs and medicaments, initial encounter	1	-0.3068035901	0.0478835577	-6.4072847793	<.0001
d_DXCCSR_MAL001_123	Cardiac and circulatory congenital anomalies	1	-0.5739490298	0.0773924370	-7.4160867870	<.0001
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.0872666806	0.0355523770	-2.4545948289	0.0141
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.1421102871	0.0396008452	-3.5885670235	0.0003
d_DXCCSR_MBD017_123	Alcohol-related disorders	1	-0.1258214921	0.0426471247	-2.9502925028	0.0032
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.0660735355	0.0308172473	-2.1440440415	0.0320
d_DXCCSR_MUS010_123	Musculoskeletal pain, not low back pain	1	-0.5860491136	0.0811310639	-7.2234861109	<.0001
d_DXCCSR_MUS011_123	Spondylopathies/spondyloarthropathy (including infective)	1	-0.4889076996	0.0632153615	-7.7340014878	<.0001
d_DXCCSR_NEO073_123	Benign neoplasms	1	-0.9294837550	0.0881798638	-10.5407710456	<.0001
d_DXCCSR_NVS008_123	Paralysis (other than cerebral palsy)	1	-0.3092450112	0.0230793982	-13.3991800414	<.0001
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	-0.2668968853	0.0322325778	-8.2803456440	<.0001
d_DXCCSR_NVS010_123	Headache; including migraine	1	-0.8857990615	0.0707577020	-12.5187652648	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	-0.2028408874	0.0313187109	-6.4766678222	<.0001
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	1.5314761693	0.0538728506	28.4276059905	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2710576842	0.0375356612	-7.2213376715	<.0001
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.7291438684	0.0244916590	29.7711097398	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	-0.2313910876	0.0635920963	-3.6386768344	0.0003
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.0818598962	0.0325846843	2.5122200209	0.0120

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	2.0608825726	0.0271598830	75.8796556579	<.0001
d_DXCCSR_SYM003_123	Shock	1	1.5790869255	0.0940969849	16.7814827174	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	-1.170926109	0.0507176665	-23.0871447619	<.0001
d_DXCCSR_SYM007_123	Malaise and fatigue	1	-0.6263619271	0.0731932611	-8.5576447526	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.3431217915	0.0239503789	14.3263617244	<.0001
d_DXCCSR_SYM011_123	Genitourinary signs and symptoms	1	-0.8051276645	0.0709422669	-11.3490546606	<.0001
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	0.7023624119	0.0652089956	10.7709435718	<.0001
d_DXCCSR_SYM014_123	Skin/Subcutaneous signs and symptoms	1	-0.9711201326	0.1044452851	-9.2978838797	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	-0.0881856170	0.0421560146	-2.0918869578	0.0364
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1060038335	0.0316875394	-3.3452844712	0.0008

c-statistic=0.843

**Table 13. Risk Adjustment Coefficients for IQI 17 – Acute Stroke Mortality Rate Stratum : Ischemic Stroke**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-3.701889958	0.0543813559	-68.0727778135	<.0001
Age_LT30	Age < 30	1	-1.307906203	0.2219688343	-5.8922965772	<.0001
Age_30_34	30 <= Age <= 34	1	-1.322416319	0.2408650843	-5.4902781900	<.0001
Age_35_39	35 <= Age <= 39	1	-0.8772696736	0.1535954872	-5.7115589096	<.0001
Age_40_44	40 <= Age <= 44	1	-0.7023404541	0.1143541737	-6.1417999156	<.0001
Age_45_49	45 <= Age <= 49	1	-0.4439507731	0.0866124409	-5.1257159909	<.0001
Age_50_54	50 <= Age <= 54	1	-0.3429432594	0.0758080385	-4.5238376583	<.0001
Age_55_59	55 <= Age <= 59	1	-0.1497097647	0.0636219588	-2.3531146693	0.0186
Age_60_64	60 <= Age <= 64	1	-0.1835522868	0.0565747825	-3.2444187785	0.0012
Age_70_74	70 <= Age <= 74	1	0.1653088240	0.0506387714	3.2644714621	0.0011

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_75_79	75 <= Age <= 79	1	0.2415731316	0.0479292651	5.0402010322	<.0001
Age_80_84	80 <= Age <= 84	1	0.4762377432	0.0461616877	10.3167316274	<.0001
Age_85_89	85 <= Age <= 89	1	0.6348393135	0.0474185840	13.3879854584	<.0001
Age_90Plus	Age >= 90	1	0.9685363203	0.0482041466	20.0923859972	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0197455801	0.0503113936	-0.3924673654	0.6947
Age_LT30_MALE	Age < 30 MALE	1	0.5830388955	0.2908475117	2.0046205385	0.0450
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.5956807575	0.2837813827	2.0990832865	0.0358
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0659162789	0.2006792172	0.3284658963	0.7426
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.1843466750	0.1553680604	1.1865159065	0.2354
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.1220918280	0.1120767033	1.0893595588	0.2760
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0240208613	0.0948402624	0.2532770444	0.8001
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0748200320	0.0808250048	-0.9257040213	0.3546
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0956299270	0.0724319890	1.3202720011	0.1867
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0014624314	0.0681354241	0.0214635992	0.9829
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0222002349	0.0657510991	0.3376405137	0.7356
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0302036496	0.0633873304	-0.4764934794	0.6337
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0045422448	0.0663514297	-0.0684573762	0.9454
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0325623140	0.0684171064	-0.4759381926	0.6341
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.4027195797	0.0333806471	12.0644629473	<.0001
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	-0.2224921355	0.0318618722	-6.9830214005	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.3079641402	0.0234332056	-13.1422113153	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.3319494104	0.0259084443	-12.8124022859	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.6875096918	0.0355479893	19.3403257488	<.0001



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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.1548685551	0.0198255104	7.8115797080	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.3101988253	0.0181713977	17.0707190450	<.0001
d_DXCCSR_CIR019_123	Heart failure	1	0.2382636211	0.0251746153	9.4644394104	<.0001
d_DXCCSR_CIR021_123	Acute hemorrhagic cerebrovascular disease	1	0.6043051447	0.0335706092	18.0010181090	<.0001
d_DXCCSR_CIR024_123	Other and ill-defined cerebrovascular disease	1	-0.2753783408	0.0343385557	-8.0195085541	<.0001
d_DXCCSR_CIR025_123	Sequela of cerebral infarction and other cerebrovascular disease	1	0.0860038021	0.0264410838	3.2526579787	0.0011
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1975461553	0.0235773357	-8.3786462641	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.2019188853	0.0213271767	-9.4676800307	<.0001
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	-0.1234303901	0.0283820263	-4.3488928150	<.0001
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.0373557430	0.0237149322	-1.5751992318	0.1152
d_DXCCSR_END008_123	Malnutrition	1	0.1202098027	0.0365592856	3.2880785479	0.0010
d_DXCCSR_END009_123	Obesity	1	-0.2001487663	0.0263472908	-7.5965596420	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.4354391895	0.0174085441	-25.0129583933	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.1172935126	0.0202765125	5.7846985474	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.1074658534	0.0355468356	-3.0232185674	0.0025
d_DXCCSR_EYE010_123	Blindness and vision defects	1	-0.3641645735	0.0348890538	-10.4377887534	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.1296266693	0.0213022810	-6.0851074826	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.2247301814	0.0297950769	-7.5425273074	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.1578887395	0.0236742159	6.6692278221	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.0900181429	0.0269401408	3.3414132326	0.0008

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.3948017934	0.0321358646	-12.2853950971	<.0001
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.2461011801	0.0349147721	-7.0486262809	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	0.0974159280	0.0393355482	2.4765366813	0.0133
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.2350739239	0.0306748896	-7.6633991888	<.0001
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.1134887478	0.0328290977	-3.4569560491	0.0005
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.2514466059	0.0254459676	-9.8815894977	<.0001
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.2686888712	0.0304405115	-8.8266871359	<.0001
d_DXCCSR_NVS008_123	Paralysis (other than cerebral palsy)	1	0.3875762524	0.0182283662	21.2622594784	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	-0.1765174931	0.0245565490	-7.1882043832	<.0001
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	1.8883230533	0.0534085795	35.3561744696	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2119007694	0.0312247582	-6.7863061811	<.0001
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.9269100760	0.0197132253	47.0197069474	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	0.2749942605	0.0418813703	6.5660282423	<.0001
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	-0.0174305522	0.0245917414	-0.7087969864	0.4785
d_DXCCSR_RSP010_123	Aspiration pneumonitis	1	0.5455534646	0.0396718150	13.7516638769	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	1.7940472621	0.0246333728	72.8299481686	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	-0.2258254601	0.0300854074	-7.5061459931	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.0942597751	0.0213848340	4.4077861494	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.1063725152	0.0319398782	3.3303982733	0.0009
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1224199617	0.0282222543	-4.3377102438	<.0001
TRANSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.4871773670	0.0303051141	16.0757476411	<.0001

c-statistic=0.843

**Table 14. Risk Adjustment Coefficients for IQI 18 – Gastrointestinal Hemorrhage Mortality Rate**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.045751769	0.0616264921	-65.6495548257	<.0001
Age_LT30	Age < 30	1	-1.972515846	0.2604394817	-7.5737973106	<.0001
Age_30_34	30 <= Age <= 34	1	-0.6286906361	0.1551418443	-4.0523602053	<.0001
Age_35_39	35 <= Age <= 39	1	-0.9658991674	0.1560679630	-6.1889650437	<.0001
Age_40_44	40 <= Age <= 44	1	-0.4607261943	0.1236357368	-3.7264807597	0.0002
Age_45_49	45 <= Age <= 49	1	-0.4461857332	0.1048886752	-4.2538980736	<.0001
Age_50_54	50 <= Age <= 54	1	-0.3432210362	0.0904750799	-3.7935422291	0.0001
Age_55_59	55 <= Age <= 59	1	-0.0413400533	0.0761014737	-0.5432227695	0.5870
Age_60_64	60 <= Age <= 64	1	-0.0543943405	0.0762111865	-0.7137317115	0.4754
Age_70_74	70 <= Age <= 74	1	0.2044869866	0.0689766607	2.9645822867	0.0030
Age_75_79	75 <= Age <= 79	1	0.3195440413	0.0675729586	4.7288745067	<.0001
Age_80_84	80 <= Age <= 84	1	0.4515299185	0.0680108366	6.6390878472	<.0001
Age_85_89	85 <= Age <= 89	1	0.6954083414	0.0689310782	10.0884587892	<.0001
Age_90Plus	Age >= 90	1	0.9037461174	0.0667234724	13.5446505474	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1174818166	0.0664600938	1.7677046479	0.0771
Age_LT30_MALE	Age < 30 MALE	1	0.3393498494	0.3034608211	1.1182657721	0.2635
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.4772183050	0.2210154091	-2.1592082963	0.0308
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.1107302759	0.1846819086	0.5995729452	0.5488
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.1174161981	0.1557500127	-0.7538760099	0.4509
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.0054935999	0.1300588425	-0.0422393421	0.9663
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0591181887	0.1114180542	0.5305979277	0.5957
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.1266395273	0.0932384755	-1.3582324966	0.1744
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0205694207	0.0952287550	0.2160001015	0.8290

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.1227290948	0.0893893573	-1.3729721138	0.1698
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0732103591	0.0897538007	-0.8156797651	0.4147
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.0101547491	0.0876738176	0.1158241923	0.9078
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0031422164	0.0891586089	-0.0352429954	0.9719
Age_90Plus_MALE	Age >= 90 MALE	1	0.0163421149	0.0888214694	0.1839883420	0.8540
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.5030964039	0.0324367422	-15.5100780594	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.1855332672	0.0268605318	-6.9072819814	<.0001
d_DXCCSR_BLD004_123	Acute posthemorrhagic anemia	1	-0.3689154622	0.0233022226	-15.8317714406	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3739378304	0.0253806197	14.7332033169	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.2752676709	0.0279251247	-9.8573479712	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.2144292780	0.0358412912	-5.9827442237	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.1317580575	0.0264596353	4.9795870509	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.0738865148	0.0253051913	2.9198164944	0.0035
d_DXCCSR_CIR019_123	Heart failure	1	0.3099076794	0.0321073260	9.6522419718	<.0001
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.0604870283	0.0344772219	1.7544055186	0.0794
d_DXCCSR_CIR031_123	Hypotension	1	0.2657798973	0.0297209033	8.9425242059	<.0001
d_DXCCSR_CIR039_123	Other specified diseases of veins and lymphatics	1	0.0628496618	0.0378473357	1.6606099394	0.0968
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.2845814331	0.0222914119	-12.7664157859	<.0001
d_DXCCSR_DIG007_123	Gastritis and duodenitis	1	-0.7282074262	0.0330370733	-22.0421288562	<.0001
d_DXCCSR_DIG008_123	Other specified and unspecified disorders of stomach and duodenum	1	-0.7616854906	0.0350936099	-21.7043926797	<.0001
d_DXCCSR_DIG010_123	Abdominal hernia	1	-0.4413951242	0.0339289705	-13.0093874704	<.0001
d_DXCCSR_DIG013_123	Diverticulosis and diverticulitis	1	-0.9072818096	0.0320474585	-28.3105697505	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_DIG018_123	Hepatic failure	1	1.0078424204	0.0378424926	26.6325590630	<.0001
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.4324016758	0.0375617213	11.5117641381	<.0001
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.1150024945	0.0350396031	-3.2820718377	0.0010
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1571077524	0.0305310357	-5.1458376361	<.0001
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.1607986415	0.0243720808	-6.5976574974	<.0001
d_DXCCSR_END008_123	Malnutrition	1	0.4068945229	0.0307115203	13.2489215265	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.2056389698	0.0352304857	-5.8369609646	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2378490794	0.0238073011	-9.9905939873	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.4267105328	0.0227837296	18.7287393265	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.1275732602	0.0332668010	-3.8348520521	0.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.3690214565	0.0272159873	-13.5589957491	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.4941700597	0.0240687040	20.5316438775	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.2106623938	0.0322346776	6.5352722396	<.0001
d_DXCCSR_INF003_123	Bacterial infections	1	0.1471257386	0.0354447755	4.1508441336	<.0001
d_DXCCSR_INF007_123	Hepatitis	1	0.1383039848	0.0377205827	3.6665389266	0.0002
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.1615237339	0.0350228080	-4.6119584116	<.0001
d_DXCCSR_MBD017_123	Alcohol-related disorders	1	0.1637032245	0.0335825389	4.8746530168	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.1445734500	0.0321683439	-4.4942770638	<.0001
d_DXCCSR_NEO070_123	Secondary malignancies	1	1.1856693010	0.0410399288	28.8906276301	<.0001
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	0.2153804041	0.0329488028	6.5368203277	<.0001
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.3723975498	0.0329176841	11.3129936035	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.0227376121	0.0272157523	0.8354577851	0.4035
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.9824788007	0.0304847919	32.2284897173	<.0001
d_DXCCSR_SYM003_123	Shock	1	1.4626966463	0.0273213570	53.5367495746	<.0001
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	0.0792829257	0.0360774084	2.1975781859	0.0280
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.3744583601	0.0338948006	11.0476637669	<.0001
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1038358871	0.0328311296	-3.1627266108	0.0016
TRANSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.3341424313	0.0336287964	9.9361995337	<.0001

c-statistic=0.861

**Table 15. Risk Adjustment Coefficients for IQI 19 – Hip Fracture Mortality Rate**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.478306952	0.1321470672	-33.8888107543	<.0001
Age_70_74	70 <= Age <= 74	1	0.1528856220	0.1323838748	1.1548658938	0.2481
Age_75_79	75 <= Age <= 79	1	0.5008866391	0.1239268644	4.0417922426	<.0001
Age_80_84	80 <= Age <= 84	1	0.6724859926	0.1222822950	5.4994551152	<.0001
Age_85_89	85 <= Age <= 89	1	0.8452161553	0.1180847965	7.1577051412	<.0001
Age_90Plus	Age >= 90	1	1.3379419576	0.1154751973	11.5864011366	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.5926140577	0.1454051874	4.0756046476	<.0001
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0189381010	0.1796509853	0.1054160709	0.9160
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0658071347	0.1645826382	-0.3998425075	0.6893
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.2093597196	0.1609270400	-1.3009604829	0.1933

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.1604777353	0.1585710407	-1.0120242301	0.3115
Age_90Plus_MALE	Age >= 90 MALE	1	-0.3086972396	0.1539703391	-2.0049136828	0.0450
MDC_8	Musculoskeletal And Connective	1	-0.8455786818	0.0579083557	-14.6020150446	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	0.1038867074	0.0365808921	2.8399172783	0.0045
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.1692622312	0.0476723682	3.5505312134	0.0004
d_DXCCSR_CIR003_123	Nonrheumatic and unspecified valve disorders	1	0.1003293869	0.0452862701	2.2154482277	0.0267
d_DXCCSR_CIR005_123	Myocarditis and cardiomyopathy	1	0.2707329357	0.0492032923	5.5023337454	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.2820026158	0.0425082223	-6.6340721950	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.2789983314	0.0470821046	-5.9257829232	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.3296465738	0.0351081762	9.3894531100	<.0001
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.3788717094	0.0484724179	7.8162329321	<.0001
d_DXCCSR_CIR016_123	Conduction disorders	1	0.0311752389	0.0442018335	0.7052928900	0.4806
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.3069995186	0.0314139661	9.7727080118	<.0001
d_DXCCSR_CIR019_123	Heart failure	1	0.6829413679	0.0434098270	15.7324139549	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1712781709	0.0353667440	-4.8429160207	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.1960107677	0.0350926627	-5.5855199490	<.0001
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	0.0990311164	0.0411777907	2.4049642930	0.0162
d_DXCCSR_END008_123	Malnutrition	1	0.5965366984	0.0428541745	13.9201537644	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.2136506553	0.0305068560	-7.0033652550	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.2777341133	0.0337741730	8.2232690934	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.3653841594	0.0360692919	-10.1300619086	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.2301379571	0.0399376243	5.7624348289	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.3856057263	0.0425228259	9.0682055524	<.0001
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.1198990744	0.0436625402	-2.7460398267	0.0060
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.0623126873	0.0452036057	-1.3784893111	0.1681
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	-0.0780671646	0.0486212992	-1.6056165903	0.1084
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.3139304137	0.0449692197	-6.9810064780	<.0001
d_DXCCSR_MUS013_123	Osteoporosis	1	-0.0753525837	0.0384712286	-1.9586737026	0.0502
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	0.1746401469	0.0325307479	5.3684639412	<.0001
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	0.2353114972	0.0354112376	6.6451079753	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.7568971479	0.0515380711	14.6861753086	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.2689067414	0.0447486001	6.0092771848	<.0001
TRANSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.1180335226	0.0519715564	2.2711177184	0.0231

c-statistic=0.772

**Table 16. Risk Adjustment Coefficients for IQI 20 – Pneumonia Mortality Rate**

Parameter	Label	DF	Estimate	Standard Error	Wald Chi-Square	Prob Z-Statistics
Intercept	Intercept	1	-3.743746533	0.0867984889	1860.32381859 17	<.0001
Age_LT30	Age < 30	1	-1.157554867	0.0856646436	182.591243499 2	<.0001
Age_30_34	30 <= Age <= 34	1	-0.8428907767	0.0922912551	83.4106486701	<.0001
Age_35_39	35 <= Age <= 39	1	-0.7447505798	0.0802059483	86.2201043116	<.0001
Age_40_44	40 <= Age <= 44	1	-0.6812167265	0.0728327006	87.4818137664	<.0001



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Parameter	Label	DF	Estimate	Standard Error	Wald Chi-Square	Prob Z-Statistics
Age_45_49	45 <= Age <= 49	1	-0.4525473430	0.0564524143	64.2632963125	<.0001
Age_50_54	50 <= Age <= 54	1	-0.4123374416	0.0471341370	76.5304776385	<.0001
Age_55_59	55 <= Age <= 59	1	-0.2666964619	0.0384118318	48.2063746628	<.0001
Age_60_64	60 <= Age <= 64	1	-0.1089762695	0.0345853643	9.9283977023	0.0016
Age_70_74	70 <= Age <= 74	1	0.1385074850	0.0306954447	20.3609776401	<.0001
Age_75_79	75 <= Age <= 79	1	0.3094907304	0.0297529357	108.2020887958	<.0001
Age_80_84	80 <= Age <= 84	1	0.4527556765	0.0292465169	239.6511435937	<.0001
Age_85_89	85 <= Age <= 89	1	0.6211101092	0.0289920130	458.9659367509	<.0001
Age_90Plus	Age >= 90	1	0.8453905058	0.0282849522	893.3133690965	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0583943204	0.0307687626	3.6018129545	0.0577
Age_LT30_MALE	Age < 30 MALE	1	-0.1158374979	0.1134597219	1.0423532075	0.3073
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.2331851357	0.1274375432	3.3481657163	0.0673
Age_35_39_MALE	35 <= Age <= 39 MALE	1	-0.2045112037	0.1104130209	3.4307859696	0.0640
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.0945583246	0.0985961793	0.9197702640	0.3375
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.1684962410	0.0776304675	4.7110317385	0.0300
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0292617235	0.0627750172	0.2172831880	0.6411
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0087167373	0.0509937387	0.0292195958	0.8643
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0236750509	0.0459181799	0.2658352155	0.6061
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0003521137	0.0408351493	0.0000743529	0.9931
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0109097091	0.0394854471	0.0763400111	0.7823
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0194115738	0.0388833091	0.2492269815	0.6176
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0021113880	0.0384184241	0.0030203481	0.9562

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Parameter	Label	DF	Estimate	Standard Error	Wald Chi-Square	Prob Z-Statistics
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0549943074	0.0379628463	2.0985433216	0.1474
MDC_4	Respiratory System	1	-0.3216557664	0.0802009812	16.0850834993	<.0001
MDC_18	Infectious and Parasitic	1	0.1841516820	0.0800960305	5.2860271918	0.0215
d_DXCCSR_BLD001_123	Nutritional anemia	1	-0.1980549035	0.0190233926	108.391507935 2	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.0547137071	0.0107373836	25.9654194188	<.0001
d_DXCCSR_BLD006_123	Coagulation and hemorrhagic disorders	1	0.3183442067	0.0146033769	475.211907415 7	<.0001
d_DXCCSR_CIR005_123	Myocarditis and cardiomyopathy	1	0.0753819218	0.0174950860	18.5653116913	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.2603973303	0.0128493388	410.687509954 0	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.2754939489	0.0148664098	343.409202939 2	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.4386862504	0.0184024489	568.272716512 9	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.0501794723	0.0112589834	19.8634106833	<.0001
d_DXCCSR_CIR013_123	Acute pulmonary embolism	1	0.3556766550	0.0337823646	110.848707336 3	<.0001
d_DXCCSR_CIR014_123	Pulmonary heart disease	1	0.1290893550	0.0163837859	62.0800894107	<.0001
d_DXCCSR_CIR017_123	Cardiac dysrhythmias	1	0.2356147168	0.0102435278	529.060977646 1	<.0001
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	2.4490468655	0.0357217707	4700.32875198 04	<.0001
d_DXCCSR_CIR019_123	Heart failure	1	0.3202434227	0.0133724210	573.509158270 5	<.0001
d_DXCCSR_CIR026_123	Peripheral and visceral vascular disease	1	0.1348539240	0.0184543593	53.3985216245	<.0001
d_DXCCSR_CIR031_123	Hypotension	1	0.2408761079	0.0182098038	174.975369268	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Wald Chi-Square	Prob Z-Statistics
					5	
d_DXCCSR_CIR033_123	Acute phlebitis; thrombophlebitis and thromboembolism	1	0.2171691942	0.0304615569	50.8267390575	<.0001
d_DXCCSR_DIG004_123	Esophageal disorders	1	-0.1484272568	0.0113694840	170.4299102171	<.0001
d_DXCCSR_DIG010_123	Abdominal hernia	1	-0.2711943908	0.0288913799	88.1099255414	<.0001
d_DXCCSR_DIG012_123	Intestinal obstruction and ileus	1	0.4080171744	0.0303030103	181.2947974480	<.0001
d_DXCCSR_DIG018_123	Hepatic failure	1	1.0067146336	0.0323922512	965.8962921445	<.0001
d_DXCCSR_DIG019_123	Other specified and unspecified liver disease	1	0.3249490108	0.0230478517	198.7785579449	<.0001
d_DXCCSR_DIG021_123	Gastrointestinal hemorrhage	1	0.3963978012	0.0250896373	249.6167395520	<.0001
d_DXCCSR_DIG025_123	Other specified and unspecified gastrointestinal disorders	1	-0.1152285000	0.0185816442	38.4548867293	<.0001
d_DXCCSR_EAR004_123	Hearing loss	1	-0.1154526764	0.0259083614	19.8576621104	<.0001
d_DXCCSR_END001_123	Thyroid disorders	1	-0.0966352883	0.0119496074	65.3979630984	<.0001
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	-0.0387812324	0.0185080571	4.3905765562	0.0361
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	-0.0502932627	0.0156336373	10.3490278538	0.0013
d_DXCCSR_END007_123	Nutritional deficiencies	1	-0.1912950631	0.0304323241	39.5127524117	<.0001
d_DXCCSR_END008_123	Malnutrition	1	0.3398078126	0.0116657666	848.4771541060	<.0001
d_DXCCSR_END009_123	Obesity	1	-0.2115933117	0.0163307200	167.8777747719	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.1990551860	0.0102427813	377.6688712626	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.1990114849	0.0095777198	431.749684709	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Wald Chi-Square	Prob Z-Statistics
					1	
d_DXCCSR_END015_123	Other specified and unspecified endocrine disorders	1	0.2042172846	0.0301572424	45.8565883929	<.0001
d_DXCCSR_END016_123	Other specified and unspecified nutritional and metabolic disorders	1	-0.1127420052	0.0152105765	54.9389256387	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.1756810240	0.0120961267	210.9390846535	<.0001
d_DXCCSR_FAC022_123	Acquired absence of limb or organ	1	-0.2126419508	0.0160975406	174.4933328771	<.0001
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.3795118243	0.0106922669	1259.8273682646	<.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.1363799221	0.0135380450	101.4819886278	<.0001
d_DXCCSR_GEN004_123	Urinary tract infections	1	-0.0558194609	0.0126582534	19.4457054411	<.0001
d_DXCCSR_GEN006_123	Other specified and unspecified diseases of kidney and ureters	1	-0.0739663402	0.0228152186	10.5103939394	0.0012
d_DXCCSR_GEN012_123	Hyperplasia of prostate	1	-0.2270730033	0.0178725861	161.4195797268	<.0001
d_DXCCSR_INF004_123	Fungal infections	1	0.1503759221	0.0232491855	41.8351298566	<.0001
d_DXCCSR_INF008_123	Viral infection	1	-0.1658495819	0.0201219836	67.9339986994	<.0001
d_DXCCSR_INJ020_123	Effect of foreign body entering opening, initial encounter	1	0.2466240522	0.0349527136	49.7862094107	<.0001
d_DXCCSR_INJ028_123	Adverse effects of drugs and medicaments, initial encounter	1	-0.2983432473	0.0228013809	171.2025094013	<.0001
d_DXCCSR_MBD002_123	Depressive disorders	1	-0.1105263003	0.0149289747	54.8114514320	<.0001
d_DXCCSR_MBD005_123	Anxiety and fear-related disorders	1	0.0946330916	0.0144239388	43.0445640301	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.3381688663	0.0167781701	406.2356706582	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Wald Chi-Square	Prob Z-Statistics
d_DXCCSR_MUS006_123	Osteoarthritis	1	-0.1290126415	0.0168046734	58.9392194472	<.0001
d_DXCCSR_MUS010_123	Musculoskeletal pain, not low back pain	1	-0.3212131160	0.0320153412	100.663093507 2	<.0001
d_DXCCSR_MUS011_123	Spondylopathies/spondyloarthropathy (including infective)	1	-0.1596493487	0.0282274676	31.9882489609	<.0001
d_DXCCSR_MUS033_123	Gout	1	-0.1226359221	0.0262035373	21.9036028242	<.0001
d_DXCCSR_NEO022_123	Respiratory cancers	1	0.5134282480	0.0203336867	637.569104442 2	<.0001
d_DXCCSR_NEO070_123	Secondary malignancies	1	0.9925148636	0.0181917662	2976.62626155 18	<.0001
d_DXCCSR_NEO074_123	Conditions due to neoplasm or the treatment of neoplasm	1	0.4471507879	0.0237181251	355.424440508 0	<.0001
d_DXCCSR_NVS009_123	Epilepsy; convulsions	1	-0.0599899136	0.0199844998	9.0109360418	0.0027
d_DXCCSR_NVS011_123	Neurocognitive disorders	1	0.0619805019	0.0120625868	26.4015407527	<.0001
d_DXCCSR_NVS013_123	Coma; stupor; and brain damage	1	0.9495998943	0.0313307807	918.626314793 4	<.0001
d_DXCCSR_NVS015_123	Polyneuropathies	1	-0.0911547180	0.0217411189	17.5790144329	<.0001
d_DXCCSR_NVS016_123	Sleep wake disorders	1	-0.2880335965	0.0164029187	308.350053444 8	<.0001
d_DXCCSR_NVS019_123	Nervous system pain and pain syndromes	1	-0.1386434280	0.0188845150	53.8997692187	<.0001
d_DXCCSR_NVS020_123	Other specified nervous system disorders	1	0.2407213794	0.0113012336	453.709237111 9	<.0001
d_DXCCSR_RSP002_123	Pneumonia (except that caused by tuberculosis)	1	-0.1614844139	0.0219337700	54.2044141671	<.0001
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	-0.1825791862	0.0102695540	316.081713174 1	<.0001
d_DXCCSR_RSP009_123	Asthma	1	-0.4627132043	0.0250400176	341.471549462	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Wald Chi-Square	Prob Z-Statistics
					8	
d_DXCCSR_RSP010_123	Aspiration pneumonitis	1	0.3010435623	0.0216964602	192.522247395 2	<.0001
d_DXCCSR_RSP011_123	Pleurisy, pleural effusion and pulmonary collapse	1	0.2068975543	0.0126473739	267.614718446 8	<.0001
d_DXCCSR_RSP012_123	Respiratory failure; insufficiency; arrest	1	0.7572049124	0.0099833342	5752.75165946 21	<.0001
d_DXCCSR_RSP016_123	Other specified and unspecified lower respiratory disease	1	0.4317220069	0.0167773540	662.157705371 9	<.0001
d_DXCCSR_SKN003_123	Pressure ulcer of skin	1	0.2831515363	0.0157603697	322.778831321 6	<.0001
d_DXCCSR_SYM003_123	Shock	1	0.9438789099	0.0330830080	813.996589358 0	<.0001
d_DXCCSR_SYM005_123	Dysphagia	1	-0.1032796094	0.0142975225	52.1804228417	<.0001
d_DXCCSR_SYM006_123	Abdominal pain and other digestive/abdomen signs and symptoms	1	0.0729804882	0.0203850306	12.8171301347	0.0003
d_DXCCSR_SYM007_123	Malaise and fatigue	1	-0.2817953202	0.0239204931	138.780132540 5	<.0001
d_DXCCSR_SYM010_123	Nervous system signs and symptoms	1	0.1737242918	0.0162037363	114.945181118 0	<.0001
d_DXCCSR_SYM011_123	Genitourinary signs and symptoms	1	-0.1846869998	0.0256488038	51.8487658215	<.0001
d_DXCCSR_SYM013_123	Respiratory signs and symptoms	1	-0.1689344376	0.0182230992	85.9393178963	<.0001
d_DXCCSR_SYM016_123	Other general signs and symptoms	1	0.3284434221	0.0127861049	659.849076414 3	<.0001
d_DXCCSR_SYM017_123	Abnormal findings without diagnosis	1	-0.1256200244	0.0146174670	73.8539120195	<.0001
TRNSFER	TRANSFER FROM ANOTHER ACUTE CARE HOSPITAL	1	0.4958923210	0.0181813641	743.912470858 5	<.0001

c-statistic=0.819

Table 17. Risk Adjustment Coefficients for IQI 30 – Percutaneous Coronary Intervention (PCI) Mortality Rate

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-2.081973076	0.0740900769	- 28.1005657172	<.0001
Age_40_44	40 <= Age <= 44	1	-0.7278233322	0.1856516290	-3.9203713749	<.0001
Age_45_49	45 <= Age <= 49	1	-0.5367921599	0.1241640532	-4.3232493304	<.0001
Age_50_54	50 <= Age <= 54	1	-0.2481247146	0.0937545512	-2.6465351434	0.0081
Age_55_59	55 <= Age <= 59	1	-0.1343823714	0.0792174906	-1.6963724857	0.0898
Age_60_64	60 <= Age <= 64	1	-0.0827018543	0.0708231773	-1.1677230167	0.2429
Age_70_74	70 <= Age <= 74	1	0.1923529696	0.0599044361	3.2109970821	0.0013
Age_75_79	75 <= Age <= 79	1	0.3465607318	0.0606785407	5.7114216605	<.0001
Age_80_84	80 <= Age <= 84	1	0.5051000997	0.0624378471	8.0896463214	<.0001
Age_85_89	85 <= Age <= 89	1	0.7716794811	0.0680595788	11.3382935162	<.0001
Age_90Plus	Age >= 90	1	0.9947174973	0.0842353951	11.8087829427	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0928423034	0.0555379956	-1.6716898479	0.0946
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.0195840680	0.2240579183	0.0874062751	0.9303
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.0090223572	0.1489877929	-0.0605576940	0.9517
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.2116515228	0.1132336165	-1.8691580233	0.0616
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0982868639	0.0955800484	-1.0283198799	0.3038
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0319486423	0.0851766191	0.3750869981	0.7076
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0433006000	0.0747287430	-0.5794370176	0.5623
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0564022419	0.0762355178	-0.7398420517	0.4594
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0415688456	0.0797375522	-0.5213208133	0.6021
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.1440962380	0.0857487830	-1.6804464506	0.0929
Age_90Plus_MALE	Age >= 90 MALE	1	-0.1399801067	0.1221361760	-1.1460986530	0.2518
MDC_5	Circulatory System	1	-1.774356500	0.0506363431	-	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
					35.0411659213	
ADX009_0004	DRG DRG Extracorporeal membrane oxygenation (ECMO)	1	4.5581528024	0.1124911871	40.5200880220	<.0001
ADX161_0003	DRG Cardiac defibrillator & heart assist implant	1	2.0211915481	0.0940671031	21.4866991924	<.0001
ADX161_0004	DRG Cardiac defibrillator & heart assist implant	1	3.5713269407	0.0530791037	67.2831056817	<.0001
ADX165_0004	DRG Coronary bypass w AMI or complex PDX	1	2.2756375628	0.1062263134	21.4225410736	<.0001
ADX167_0004	DRG Other cardiothoracic & thoracic vascular procedures	1	2.8470171233	0.1276273467	22.3072656196	<.0001
ADX169_0004	DRG Major abdominal vascular procedures	1	3.1433523504	0.0743300800	42.2891022109	<.0001
ADX174_0001	DRG Percutaneous coronary intervention w AMI	1	-2.721337625	0.1192934428	-22.8121308297	<.0001
ADX174_0002	DRG Percutaneous coronary intervention w AMI	1	-1.434450982	0.0734127582	-19.5395325926	<.0001
ADX174_0004	DRG Percutaneous coronary intervention w AMI	1	2.5004129851	0.0433496323	57.6801429456	<.0001
ADX175_0002	DRG Percutaneous coronary intervention w/o AMI	1	-2.603811390	0.1725220510	-15.0926294651	<.0001
ADX175_0003	DRG Percutaneous coronary intervention w/o AMI	1	-0.7958993093	0.0863136585	-9.2210123348	<.0001
ADX175_0004	DRG Percutaneous coronary intervention w/o AMI	1	2.1729224452	0.0470602716	46.1731811687	<.0001
ADX950_0004	DRG Extensive procedure unrelated to principal diagnosis	1	1.4905782596	0.1404247131	10.6147858673	<.0001
ADX951_0003	DRG Moderately extensive procedure unrelated to principal diagnosis	1	-1.660477521	0.1887161343	-8.7988105878	<.0001



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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	0.5003749830	0.0779065259	6.4227608339	<.0001
d_DXCCSR_BLD003_123	Aplastic anemia	1	-0.1529388031	0.0282202235	-5.4194752621	<.0001
d_DXCCSR_CIR005_123	Myocarditis and cardiomyopathy	1	-0.2521327271	0.0251813105	-10.0126928125	<.0001
d_DXCCSR_CIR007_123	Essential hypertension	1	-0.1112810670	0.0321566487	-3.4605927988	0.0005
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.2805298017	0.0316914990	-8.8518943761	<.0001
d_DXCCSR_CIR009_123	Acute myocardial infarction	1	0.2584468138	0.0291003775	8.8812185810	<.0001
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	-0.3823912070	0.0339964458	-11.2479760157	<.0001
d_DXCCSR_CIR018_123	Cardiac arrest and ventricular fibrillation	1	0.4706041206	0.0316573702	14.8655468933	<.0001
d_DXCCSR_CIR019_123	Heart failure	1	-0.2975875642	0.0290499045	-10.2440117847	<.0001
d_DXCCSR_END003_123	Diabetes mellitus with complication	1	0.0239890403	0.0360829638	0.6648300960	0.5062
d_DXCCSR_END005_123	Diabetes mellitus, Type 2	1	0.0659909816	0.0323153798	2.0420920926	0.0411
d_DXCCSR_END009_123	Obesity	1	-0.1184900232	0.0278872879	-4.2488901578	<.0001
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.4748706442	0.0227617596	-20.8626509272	<.0001
d_DXCCSR_END011_123	Fluid and electrolyte disorders	1	0.3393563268	0.0218781039	15.5112311455	<.0001
d_DXCCSR_FAC009_123	Implant, device or graft related encounter	1	-0.0715246610	0.0228980707	-3.1236108074	0.0018
d_DXCCSR_GEN002_123	Acute and unspecified renal failure	1	0.0904717496	0.0238581560	3.7920679850	0.0001
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.1917283554	0.0307227062	6.2406076473	<.0001
d_DXCCSR_MBD024_123	Tobacco-related disorders	1	-0.1618940355	0.0294439609	-5.4983782956	<.0001
d_DXCCSR_RSP008_123	Chronic obstructive pulmonary disease and bronchiectasis	1	-0.0827361590	0.0280965027	-2.9447137902	0.0032
d_DXCCSR_SYM003_123	Shock	1	0.8236673519	0.0268830584	30.6389005726	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
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c-statistic=0.939

**Table 18. Risk Adjustment Coefficients for IQI 31 – Carotid Endarterectomy Mortality Rate**

Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
Intercept	Intercept	1	-4.194522878	0.3462730499	-12.1133391081	<.0001
Age_LT60	Age<60	1	-0.2039474001	0.4759788183	-0.4284799917	0.6683
Age_60_64	60 <= Age <= 64	1	0.0430600118	0.4509780998	0.0954813811	0.9239
Age_70_74	70 <= Age <= 74	1	0.5690292230	0.3174337425	1.7925921124	0.0730
Age_75_79	75 <= Age <= 79	1	0.2381308826	0.3435177391	0.6932127675	0.4882
Age_80_84	80 <= Age <= 84	1	0.1965144888	0.3845912370	0.5109697513	0.6094
Age_85_89	85 <= Age <= 89	1	0.2586194101	0.4472712488	0.5782160396	0.5631
Age_90Plus	Age >= 90	1	1.5462619250	0.5991309037	2.5808415415	0.0099
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1885056472	0.3343390785	0.5638157765	0.5729
Age_LT60_MALE	Age<=60 MALE	1	-0.1838738894	0.6484837638	-0.2835443224	0.7768
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.1791282675	0.5772125762	-0.3103332721	0.7563
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.7270334347	0.4273951215	-1.7010803311	0.0889
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.2608846063	0.4414769170	-0.5909360065	0.5546
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0717304075	0.4773713536	-0.1502612316	0.8806
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0691867965	0.5700405242	0.1213717158	0.9034
Age_90Plus_MALE	Age >= 90 MALE	1	-0.4751210754	0.7951993139	-0.5974867774	0.5502
MDC_1	Nervous System	1	-3.939205903	0.3100248755	-12.7060962329	<.0001
ADX021_0004	DRG Craniotomy except for trauma	1	7.0283901616	0.4273139156	16.4478382408	<.0001
ADX024_0002	DRG Extracranial vascular procedures	1	0.1073400520	0.4362329371	0.2460613193	0.8056
ADX024_0003	DRG Extracranial vascular procedures	1	2.5915270941	0.3015289216	8.5946219696	<.0001

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Parameter	Label	DF	Estimate	Standard Error	Z-Statistics	Prob Z-Statistics
ADX024_0004	DRG Extracranial vascular procedures	1	5.9817504892	0.2667545391	22.4241750859	<.0001
ADX163_0004	DRG Cardiac valve procedures w/o AMI or complex PDX	1	2.5480275356	0.4025230356	6.3301409123	<.0001
ADX165_0004	DRG Coronary bypass w AMI or complex PDX	1	2.4974247977	0.3533862776	7.0671244347	<.0001
ADX166_0004	DRG Coronary bypass w/o AMI or complex PDX	1	2.0091270928	0.3678668480	5.4615606270	<.0001
ADX182_0004	DRG Other peripheral vascular procedures #	1	2.7791164567	0.3533842139	7.8642914646	<.0001
d_DXCCSR_CIR008_123	Hypertension with complications and secondary hypertension	1	-0.3870778068	0.2387499025	-1.6212689627	0.1050
d_DXCCSR_CIR011_123	Coronary atherosclerosis and other heart disease	1	0.0936978242	0.1446644647	0.6476906708	0.5172
d_DXCCSR_CIR019_123	Heart failure	1	0.0761410884	0.1835975477	0.4147173495	0.6783
d_DXCCSR_END010_123	Disorders of lipid metabolism	1	-0.4875631707	0.1344149206	-3.6272994746	0.0003
d_DXCCSR_GEN003_123	Chronic kidney disease	1	0.3715070399	0.1992072219	1.8649275679	0.0622

c-statistic=0.962

## Composite Weights

To utilize the IQI 90 and IQI 91 composites, users must use the denominator weights below when using the AHRQ QI™ software to compute the composite measure using their own data. These weights are included in the IQI\_Composite\_Wt\_v2021.sas macro. Tables 19 and 20 provide the denominator weights for the composite measures. The sum of the weights for the indicators included in the same composite always equals one.

**Table 19. Denominator Weights for IQI 90, v2021**

INDICATOR	WEIGHT
IQI 08 Esophageal Resection Mortality Rate	0.0073
IQI 09 Pancreatic Resection Mortality Rate	0.0259
IQI 11 Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate	0.0481
IQI 12 Coronary Artery Bypass Graft (CABG) Mortality Rate	0.2466
IQI 30 Percutaneous Coronary Intervention (PCI) Mortality Rate	0.5827
IQI 31 Carotid Endarterectomy Mortality Rate	0.0893
SUM	1.0000

Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, State Inpatient Databases (SID), 2018.

**Table 20. NQF Denominator Weights for IQI 91, v2021**

INDICATOR	WEIGHT
IQI 15 Acute Myocardial Infarction (AMI) Mortality Rate	0.1254
IQI 16 Heart Failure Mortality Rate	0.2624
IQI 17 Acute Stroke Mortality Rate	0.1398
IQI 18 Gastrointestinal Hemorrhage Mortality Rate	0.1210
IQI 19 Hip Fracture Mortality Rate	0.0607
IQI 20 Pneumonia Mortality Rate	0.2908
SUM	1.0000

Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, State Inpatient Databases (SID), 2018.

## Appendix: Additional Tables

**Table 21. Population Age Categories<sup>5</sup>**

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 22. 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

<sup>5</sup> To account for small cell sizes, Age\_LT60 (Age less than 60) and Age\_85\_Plus (Age 85 plus) are also included in certain IQI measures.

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MDC	DESCRIPTION
14	PREGNANCY, CHILDBIRTH & THE PUERPERIUM
15	NEWBORNS & OTHER NEONATES WITH CONDTN ORIG IN PERINATAL PERIOD
16	DISEASES & DISORDERS OF BLOOD, BLOOD FORMING ORGANS, IMMUNOLOGIC
17	MYELOPROLIFERATIVE DISEASES & DISORDERS, POORLY DIFFERENTIATED
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
24	MULTIPLE SIGNIFICANT TRAUMA
25	HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS

**Table 23. Categorical Variable Definitions: Transfer, Point of Origin**

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