AHRQ Quality Indicators™

INPATIENT QUALITY INDICATORS (IQI) PARAMETER ESTIMATES
Version 2020

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Agency for Healthcare Research and Quality
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Executive Summary

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

HCUP is a family of healthcare databases and related software tools and products developed through a Federal- State-Industry partnership.[2] HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988. The SID contain all-payer, encounter-level information on inpatient discharges, including clinical and resource information typically found on a billing record, such as patient demographics, up to 30 *International Classification of Diseases, Tenth Revision, Clinical Modification/Procedural Classification System (ICD-10-CM/PCS)* diagnoses and procedures, length of stay (LOS), expected payer, admission and discharge dates and discharge disposition. In 2017, the HCUP databases represent more than 97 percent of all annual discharges in the U.S.[3] The analytic dataset used to generate the risk adjustment regression models in this document consists of the same hospital discharge records that comprise the reference population for Version 2020 of the AHRQ QI software. This reference population file was limited to community hospitals and excludes rehabilitation and long-term acute care (LTAC) hospitals. Information on the type of hospital was obtained by the

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

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

[3] The states included in the analysis are Alaska, Arizona, Arkansas, California, Colorado, Connecticut, 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, Wisconsin, and Wyoming.

American Hospital Association (AHA) Annual Survey of Hospitals. AHA defines community hospitals as "all non-Federal, short-term, general, and other specialty hospitals, excluding hospital units of institutions." Included among community hospitals are specialty hospitals such as obstetrics-gynecology, ear-nose-throat, orthopedic, and pediatric institutions. Also included are public hospitals and academic medical centers.

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

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

This document is devoted to listing covariates and coefficients for risk adjustment regression models. The regression coefficients are used to calculate risk-adjusted rates that account for differences in patient populations across hospitals. IQI 21, IQI 22, IQI 33, and IQI 34 are not risk adjusted, and thus are not presented in this document.

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)[4] 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)

[4] 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: https://www.hcup-us.ahrq.gov/db/nation/nis/APR-DRGsV20MethodologyOverviewandBibliography.pdf

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	-2.723759138	0.3568572294	-7.6326298411	<.0001
Age_45_49	45 <= Age <= 49	1	-0.5508071875	1.1463426012	-0.4804908994	0.6309
Age_55_59	55 <= Age <= 59	1	0.4024406308	0.5874645836	0.6850466258	0.4933
Age_60_64	60 <= Age <= 64	1	-0.2513807420	0.6283751071	-0.4000488548	0.6891
Age_70_74	70 <= Age <= 74	1	-0.2438596044	0.6144303244	-0.3968873194	0.6915
Age_75_79	75 <= Age <= 79	1	-0.3098541144	0.6019870735	-0.5147188835	0.6067
Age_80_84	80 <= Age <= 84	1	0.8402670410	0.7253083544	1.1584962945	0.2467
Age_85_89	85 <= Age <= 89	1	0.6243381706	1.1790407988	0.5295305907	0.5964
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0499120128	0.3618356893	0.1379410995	0.8903
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.3780449757	1.2791006657	0.2955552958	0.7676
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.2868107287	0.6549854457	-0.4378887051	0.6615
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.7116099707	0.6516096720	1.0920801229	0.2748
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.3336668926	0.6586473857	0.5065941198	0.6124
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.3582900346	0.6533733550	0.5483695224	0.5834
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.1020872390	0.8072825847	-0.1264578735	0.8994
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.5258129525	1.3701772609	-0.3837554217	0.7012
ADX220_0001	DRG Major stomach, esophageal & duodenal procedures	1	-3.293363325	0.5375748238	-6.1263347513	<.0001
ADX220_0002	DRG Major stomach, esophageal & duodenal procedures	1	-3.868236505	0.5902057328	-6.5540476656	<.0001
ADX220_0003	DRG Major stomach, esophageal & duodenal procedures	1	-1.243410480	0.2564354989	-4.8488235280	<.0001
ADX220_0004	DRG Major stomach, esophageal & duodenal procedures	1	0.9570496381	0.1874678569	5.1051399097	<.0001
ADX240_0234	DRG Digestive malignancy	1	-1.079730541	0.9748943630	-1.1075359363	0.2681
TRNSFER	Transferred-in from another acute care facility	1	0.5522351720	0.3862261595	1.4298233261	0.1528

c-statistic=0.872

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-4.247538961	0.3855031946	-11.0181679954	<.0001
Age_35_39	35 <= Age <= 39	1	0.7969438935	0.7000800141	1.1383611550	0.2550
Age_40_44	40 <= Age <= 44	1	-0.6358598547	0.9876192802	-0.6438309452	0.5197
Age_45_49	45 <= Age <= 49	1	0.3985491198	0.8056909641	0.4946674811	0.6208
Age_50_54	50 <= Age <= 54	1	0.3270167650	0.5191007696	0.6299677908	0.5287
Age_55_59	55 <= Age <= 59	1	-0.2201293072	0.5188931177	-0.4242286123	0.6714
Age_60_64	60 <= Age <= 64	1	0.6183290737	0.3586609170	1.7239934558	0.0847
Age_70_74	70 <= Age <= 74	1	0.1241728259	0.3433813377	0.3616178640	0.7176
Age_75_79	75 <= Age <= 79	1	0.1236745493	0.3534826036	0.3498745003	0.7264
Age_80_84	80 <= Age <= 84	1	0.4378858011	0.3702384218	1.1827130176	0.2369
Age_85_89	85 <= Age <= 89	1	-0.1517346949	0.6182569869	-0.2454233403	0.8061
Age_90Plus	Age >= 90	1	1.1081901728	0.8819910276	1.2564642249	0.2089
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0923336446	0.3355562555	-0.2751659166	0.7832
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.0042286487	1.0080215653	0.0041949983	0.9967
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.1694994395	0.6288569707	-0.2695357567	0.7875
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.2262587773	0.7011431023	-0.3226998548	0.7469
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.3507667525	0.5035249146	-0.6966224357	0.4860
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.2175927048	0.4523717537	0.4810041807	0.6305
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.4329717925	0.4851526246	0.8924445020	0.3722
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.6876195582	0.5468330847	-1.2574578559	0.2086
Age_85_89_MALE	85 <= Age <= 89 MALE	1	1.0143406295	0.8021307677	1.2645576886	0.2060
ADX220_0004	DRG Major stomach, esophageal & duodenal procedures	1	2.9941184497	0.4193797081	7.1393975236	<.0001
ADX221_0034	DRG Major small & large bowel procedures	1	1.9325191355	0.5773907591	3.3469866032	0.0008
ADX260_0001	DRG Major pancreas, liver & shunt procedures	1	-2.478167985	0.5933495502	-4.1765734611	<.0001
ADX260_0002	DRG Major pancreas, liver & shunt procedures	1	-2.321117945	0.5094132403	-4.5564538991	<.0001
ADX260_0003	DRG Major pancreas, liver & shunt procedures	1	-0.5350706343	0.3745306031	-1.4286432935	0.1531
ADX260_0004	DRG Major pancreas, liver & shunt procedures	1	2.3621589736	0.3340630801	7.0709968092	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.1130586369	0.2998177328	0.3770912275	0.7061

c-statistic=0.914

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-2.944068506	0.3718838507	-7.9166344553	<.0001
Age_LT30	Age < 30	1	0.0226450869	0.5931469698	0.0381778683	0.9695
Age_30_34	30 <= Age <= 34	1	0.1765549496	0.6611897507	0.2670261440	0.7894
Age_35_39	35 <= Age <= 39	1	-0.4165943743	0.8075726163	-0.5158599560	0.6060
Age_40_44	40 <= Age <= 44	1	-1.666208227	1.0338811168	-1.6116052418	0.1070
Age_45_49	45 <= Age <= 49	1	-0.3661240876	0.6820848237	-0.5367720771	0.5914
Age_50_54	50 <= Age <= 54	1	0.3011031802	0.4781216843	0.6297626526	0.5288
Age_55_59	55 <= Age <= 59	1	0.1520434083	0.4821464100	0.3153469676	0.7525
Age_60_64	60 <= Age <= 64	1	0.2731919081	0.4435114053	0.6159749328	0.5379
Age_70_74	70 <= Age <= 74	1	0.0453262885	0.4108073555	0.1103346567	0.9121
Age_75_79	75 <= Age <= 79	1	0.5726813779	0.4535923492	1.2625463786	0.2068
Age_80_84	80 <= Age <= 84	1	0.6835683447	0.7296036045	0.9369037386	0.3488
Age_85_89	85 <= Age <= 89	1	0.2349974218	0.5315824117	0.4420714768	0.6584
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.8649383915	0.3568956590	2.4235049372	0.0154
Age_LT30_MALE	Age < 30 MALE	1	-0.4187567337	0.6479021794	-0.6463270954	0.5181
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.4854145849	0.7528727045	-0.6447498787	0.5191
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.3365152870	0.9013512604	0.3733453337	0.7089
Age_40_44_MALE	40 <= Age <= 44 MALE	1	1.3790491675	1.1257103658	1.2250479425	0.2206
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.6790501857	0.8108370663	-0.8374681103	0.4023
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.8925851432	0.5740525714	-1.5548839733	0.1200
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.4304964139	0.5913130551	-0.7280346851	0.4666
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.4259769667	0.5515525603	-0.7723234327	0.4399
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.2169246816	0.4954132252	-0.4378661500	0.6615
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.6617377769	0.5706438253	-1.1596336410	0.2462
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.7787862465	0.8644643875	-0.9008887558	0.3676
MDC_6	Digestive System	1	-2.471540167	0.4290832661	-5.7600479020	<.0001
MDC_7	Hepatobiliary System And Pancreas	1	-1.636883717	1.3332129895	-1.2277736039	0.2195
MDC_8	Musculoskeletal And Connective	1	-1.710339152	0.5022903546	-3.4050806194	0.0007

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
MDC_11	Kidney And Urinary Tract	1	-0.3532592670	0.4940258376	-0.7150623311	0.4746
MDC_16	Blood and Immunological	1	-1.346903659	0.7017451410	-1.9193629996	0.0549
MDC_17	Myeloproliferative DDs	1	-4.521391388	0.7754964149	-5.8303188779	<.0001
MDC_18	Infectious and Parasitic	1	0.5836328862	0.7710827166	0.7569004902	0.4491
MDC_24	Multiple Significant Trauma	1	0.0390029959	0.4808039416	0.0811203747	0.9353
ADX006_1234	DRG Pancreas transplant	1	-0.6052741026	0.9762673880	-0.6199880382	0.5353
ADX220_0002	DRG Major stomach, esophageal & duodenal procedures	1	-0.5322116715	1.0488734405	-0.5074126686	0.6119
ADX220_0003	DRG Major stomach, esophageal & duodenal procedures	1	0.7367999047	0.6013515698	1.2252398459	0.2205
ADX220_0004	DRG Major stomach, esophageal & duodenal procedures	1	3.5909642729	0.4273275337	8.4033065723	<.0001
ADX221_0003	DRG Major small & large bowel procedures	1	1.1724197449	0.8045559513	1.4572258685	0.1451
ADX221_0004	DRG Major small & large bowel procedures	1	3.2235938984	0.5539532140	5.8192529926	<.0001
ADX229_0034	DRG Other digestive system & abdominal procedures	1	2.3880200596	0.6596314384	3.6202338466	0.0003
ADX260_0001	DRG Major pancreas, liver & shunt procedures	1	-3.322207566	1.6240311869	-2.0456550297	0.0408
ADX260_0002	DRG Major pancreas, liver & shunt procedures	1	-2.744696318	1.6205079031	-1.6937259688	0.0903
ADX260_0003	DRG Major pancreas, liver & shunt procedures	1	-0.7732238371	1.3693895684	-0.5646485521	0.5723
ADX260_0004	DRG Major pancreas, liver & shunt procedures	1	2.0793470177	1.3250576885	1.5692501812	0.1166
ADX442_0034	DRG Kidney & urinary tract procedures for malignancy	1	0.7904486028	0.6261391217	1.2624168901	0.2068
ADX650_0034	DRG Splenectomy	1	1.8782410200	0.7882345660	2.3828452861	0.0172
ADX680_0003	DRG Major O.R. procedures for lymphatic/hematopoietic/other neoplasms	1	2.6249445316	0.8804207966	2.9814658420	0.0029
ADX680_0004	DRG Major O.R. procedures for lymphatic/hematopoietic/other neoplasms	1	5.2525868409	0.7711804408	6.8110996634	<.0001
ADX710_0004	DRG Infectious & parasitic diseases including HIV w O.R. procedure	1	0.5910310771	0.7815268148	0.7562518213	0.4495
ADX710_1230	DRG Infectious & parasitic diseases including HIV w O.R. procedure	1	-1.581232741	1.2352011938	-1.2801418500	0.2005
ADX911_0004	DRG Extensive abdominal/thoracic procedures for mult significant trauma	1	1.1784793588	0.3346850033	3.5211597390	0.0004
ADX950_0034	DRG Extensive procedure unrelated to principal diagnosis	1	1.7680431108	0.4521672629	3.9101528482	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.5581533264	0.2244213081	2.4870781264	0.0129

c-statistic=0.915

Table 4. Risk Adjustment Coefficients for IQI 11A – Abdominal Aortic Aneurysm (AAA) Repair Mortality: Stratum A: Open repair of ruptured AAA

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-0.4599519737	0.4069447519	-1.1302565558	0.2584
Age_50_54	50 <= Age <= 54	1	-1.488865622	0.6360651722	-2.3407438222	0.0192
Age_55_59	55 <= Age <= 59	1	0.2153804644	0.9547593140	0.2255861360	0.8215
Age_60_64	60 <= Age <= 64	1	-0.1760352976	0.5611716840	-0.3136924092	0.7538
Age_70_74	70 <= Age <= 74	1	0.1274857106	0.3620403495	0.3521312217	0.7247
Age_75_79	75 <= Age <= 79	1	0.6029326300	0.3348103825	1.8008181988	0.0717
Age_80_84	80 <= Age <= 84	1	1.0448381642	0.4058159722	2.5746600327	0.0100
Age_85_89	85 <= Age <= 89	1	1.0874076421	0.4462075305	2.4369997540	0.0148
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.1989722409	0.2972377240	-0.6694044019	0.5032
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.5518508782	0.9884963832	-0.5582730373	0.5767
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0196285425	0.6110113486	0.0321246775	0.9744
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0079046238	0.4134897565	-0.0191168551	0.9847
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.4471527603	0.3961867739	-1.1286413121	0.2590
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.1141005940	0.4534501796	-0.2516276301	0.8013
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0440514668	0.5376862114	-0.0819278342	0.9347
MDC_5	Circulatory System	1	0.0475644095	0.3737711217	0.1272554424	0.8987
ADX169_1234	DRG Major abdominal vascular procedures	1	-0.2126093228	0.2025452291	-1.0496881300	0.2939
ADX182_1234	DRG Other peripheral vascular procedures #	1	-0.1653788298	0.2333481596	-0.7087213805	0.4785

c-statistic=0.638

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-2.569485629	0.5129976831	-5.0087665387	<.0001
Age_50_54	50 <= Age <= 54	1	1.7455102260	0.7942576534	2.1976624569	0.0280
Age_55_59	55 <= Age <= 59	1	1.0637807412	0.6038017445	1.7618046831	0.0781
Age_60_64	60 <= Age <= 64	1	0.8356347392	0.6478875775	1.2897835492	0.1971
Age_70_74	70 <= Age <= 74	1	0.4516291741	0.4481499620	1.0077634997	0.3136
Age_75_79	75 <= Age <= 79	1	1.1643031980	0.4405223753	2.6430058113	0.0082
Age_80_84	80 <= Age <= 84	1	1.1533839312	0.5024545475	2.2954990398	0.0217
Age_85_89	85 <= Age <= 89	1	0.7532861448	0.8258901650	0.9120899809	0.3617
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.3322138745	0.4480109835	0.7415306471	0.4584
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-1.981190435	1.0892182595	-1.8189104138	0.0689
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.7184191070	0.7298096143	-0.9843924949	0.3249
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0482600636	0.7299238412	-0.0661165740	0.9473
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0847484660	0.5182185651	-0.1635380740	0.8701
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.5401404306	0.5350767590	-1.0094634491	0.3128
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.3252069093	0.5979370473	-0.5438815185	0.5865
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1121111579	0.9552971964	0.1173573609	0.9066
MDC_5	Circulatory System	1	-1.961807445	0.4309225364	-4.5525756457	<.0001
ADX167_0004	DRG Other cardiothoracic & thoracic vascular procedures	1	2.7685424569	0.4118655870	6.7219562508	<.0001
ADX167_1230	DRG Other cardiothoracic & thoracic vascular procedures	1	0.9402138141	0.5757744733	1.6329550159	0.1025
ADX169_0001	DRG Major abdominal vascular procedures	1	-1.799540061	0.7326012523	-2.4563704400	0.0140
ADX169_0002	DRG Major abdominal vascular procedures	1	-1.690124863	0.5477918046	-3.0853416360	0.0020
ADX169_0003	DRG Major abdominal vascular procedures	1	-1.113956245	0.4300196349	-2.5904776307	0.0096
ADX169_0004	DRG Major abdominal vascular procedures	1	2.5507147793	0.2540652457	10.0396052684	<.0001
ADX181_0004	DRG Lower extremity arterial procedures #	1	3.0166766773	0.4005061596	7.5321605040	<.0001
ADX182_0002	DRG Other peripheral vascular procedures #	1	-0.8147116620	0.7466021712	-1.0912259479	0.2752
ADX182_0004	DRG Other peripheral vascular procedures #	1	2.2056806108	0.3466350986	6.3631196599	<.0001

c-statistic=0.882

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-0.8980552208	0.4573036148	-1.9638052086	0.0496
Age_50_54	50 <= Age <= 54	1	-0.1104507452	0.6267641780	-0.1762237682	0.8601
Age_55_59	55 <= Age <= 59	1	-0.8322690556	1.0495249063	-0.7929960029	0.4278
Age_60_64	60 <= Age <= 64	1	-1.092995772	0.8045208441	-1.3585673757	0.1743
Age_70_74	70 <= Age <= 74	1	-0.4131025818	0.4529013278	-0.9121249077	0.3617
Age_75_79	75 <= Age <= 79	1	0.2536655993	0.4054999631	0.6255625707	0.5316
Age_80_84	80 <= Age <= 84	1	1.2311063715	0.4173429980	2.9498670816	0.0032
Age_85_89	85 <= Age <= 89	1	0.1611431288	0.5489246327	0.2935614822	0.7691
Age_90Plus	Age >= 90	1	0.2302791560	0.5064636815	0.4546804923	0.6493
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.1254860223	0.3516615338	-0.3568374992	0.7212
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.4755861213	1.1232899761	0.4233867758	0.6720
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.9397059464	0.8477035494	1.1085313339	0.2676
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.5999937542	0.4871818116	1.2315602511	0.2181
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0654313312	0.4594520824	0.1424116544	0.8868
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-1.350944802	0.4706036727	-2.8706635330	0.0041
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.1229576517	0.6080437689	0.2022184224	0.8397
Age_90Plus_MALE	Age >= 90 MALE	1	0.6559357864	0.5952016249	1.1020396434	0.2704
MDC_5	Circulatory System	1	-1.460176337	0.4497120509	-3.2469139624	0.0012
ADX169_1234	DRG Major abdominal vascular procedures	1	1.5136345353	0.3964402178	3.8180650382	0.0001
ADX181_0001	DRG Lower extremity arterial procedures #	1	-0.2550754895	0.5859215557	-0.4353406816	0.6633
ADX181_0003	DRG Lower extremity arterial procedures #	1	0.2449852835	0.4454574383	0.5499633914	0.5823
ADX181_0004	DRG Lower extremity arterial procedures #	1	1.5891136493	0.3539555529	4.4895853054	<.0001
ADX182_0004	DRG Other peripheral vascular procedures #	1	0.9870473879	0.3270346157	3.0181740422	0.0025
ADX182_1230	DRG Other peripheral vascular procedures #	1	-1.273682094	0.5192379591	-2.4529834001	0.0142

c-statistic=0.695

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-3.847696110	0.4714971859	-8.1605918875	<.0001
Age_55_59	55 <= Age <= 59	1	-0.0015756383	1.0434898690	-0.0015099699	0.9988
Age_70_74	70 <= Age <= 74	1	0.6659557502	0.4519722765	1.4734438035	0.1406
Age_75_79	75 <= Age <= 79	1	0.6200180182	0.4332760675	1.4309999207	0.1524
Age_80_84	80 <= Age <= 84	1	0.9852479669	0.4334069653	2.2732628818	0.0230
Age_85_89	85 <= Age <= 89	1	0.6719488311	0.4624274168	1.4530903807	0.1462
Age_90Plus	Age >= 90	1	-0.1294321179	0.8531212472	-0.1517159704	0.8794
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.4799236494	0.4068148719	1.1797101891	0.2381
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0816558117	1.1708549464	0.0697403312	0.9444
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.7028655591	0.5207749240	-1.3496532317	0.1771
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.8208603795	0.5025567578	-1.6333685035	0.1024
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.6095790827	0.4888556787	-1.2469510108	0.2124
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-1.145404746	0.5745267388	-1.9936491518	0.0462
Age_90Plus_MALE	Age >= 90 MALE	1	0.6482115253	0.9612753041	0.6743245380	0.5001
MDC_5	Circulatory System	1	-4.102611769	0.4107201760	-9.9888245314	<.0001
MDC_11	Kidney And Urinary Tract	1	0.7577964410	0.6273031377	1.2080227174	0.2270
ADX169_0003	DRG Major abdominal vascular procedures	1	3.9000238210	0.5395635363	7.2281085698	<.0001
ADX169_0004	DRG Major abdominal vascular procedures	1	6.6923523765	0.3519478437	19.0151822106	<.0001
ADX175_0034	DRG Percutaneous coronary intervention w/o AMI	1	5.0617206484	0.5148270605	9.8318853784	<.0001
ADX181_0002	DRG Lower extremity arterial procedures #	1	1.4219461843	0.4511023336	3.1521587860	0.0016
ADX181_0003	DRG Lower extremity arterial procedures #	1	2.8958264872	0.4132104150	7.0081159183	<.0001
ADX181_0004	DRG Lower extremity arterial procedures #	1	6.2702531785	0.3116310029	20.1207617995	<.0001
ADX182_0003	DRG Other peripheral vascular procedures #	1	2.8777684611	0.3618800692	7.9522712238	<.0001
ADX182_0004	DRG Other peripheral vascular procedures #	1	5.8223790405	0.3144090096	18.5184866296	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.0572011065	0.2522125721	0.2267972054	0.8206

c-statistic=0.948

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-2.761220039	0.1382940471	-19.9662971501	<.0001
Age_40_44	40 <= Age <= 44	1	0.3290605317	0.2195802355	1.4985890278	0.1340
Age_45_49	45 <= Age <= 49	1	-0.2054838169	0.1895256158	-1.0842007612	0.2783
Age_50_54	50 <= Age <= 54	1	-0.2961209373	0.1505838332	-1.9664855848	0.0492
Age_55_59	55 <= Age <= 59	1	-0.0853231488	0.1180885121	-0.7225355564	0.4700
Age_60_64	60 <= Age <= 64	1	-0.0645593429	0.0952203331	-0.6779995487	0.4978
Age_70_74	70 <= Age <= 74	1	-0.0131168045	0.0863233564	-0.1519496583	0.8792
Age_75_79	75 <= Age <= 79	1	0.3323704160	0.0865268096	3.8412420108	0.0001
Age_80_84	80 <= Age <= 84	1	0.3896154124	0.0972928040	4.0045655641	<.0001
Age_85_89	85 <= Age <= 89	1	0.7284844040	0.1352274224	5.3871055959	<.0001
Age_90Plus	Age >= 90	1	0.9395784419	0.3795131045	2.4757470318	0.0133
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.5211493895	0.0752597722	-6.9246740205	<.0001
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.1935323351	0.2837288175	-0.6821032024	0.4952
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.1462489888	0.2305604059	0.6343196187	0.5259
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.2989229779	0.1756190099	1.7021105977	0.0887
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0461653207	0.1430506988	0.3227199946	0.7469
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.1113451858	0.1155602020	0.9635253648	0.3353
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.2089969069	0.1058043471	1.9753149329	0.0482
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0607129730	0.1080706563	0.5617896203	0.5743
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1705624591	0.1192679283	1.4300781574	0.1527
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0696006856	0.1770895095	-0.3930254582	0.6943
Age_90Plus_MALE	Age >= 90 MALE	1	0.1990709469	0.4982514525	0.3995391200	0.6895
MDC_5	Circulatory System	1	-0.5937159617	0.1599918650	-3.7109134373	0.0002
ADX004_0004	DRG Tracheostomy w MV 96+ hours w extensive procedure or ECMO	1	4.3329005360	0.1494609158	28.9901912742	<.0001
ADX004_1230	DRG Tracheostomy w MV 96+ hours w extensive procedure or ECMO	1	4.5138892167	0.3034550169	14.8749862917	<.0001
ADX009_1234	DRG Extracorporeal membrane oxygenation (ECMO)	1	4.1872107266	0.1786578728	23.4370344931	<.0001
ADX160_0002	DRG Major cardiothoracic repair of heart anomaly	1	-1.219442107	0.4477144660	-2.7237049503	0.0065

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
ADX160_0004	DRG Major cardiothoracic repair of heart anomaly	1	1.9573044846	0.1411141370	13.8703642787	<.0001
ADX161_0003	DRG Cardiac defibrillator & heart assist implant	1	1.0969860364	0.2169312077	5.0568382850	<.0001
ADX161_0004	DRG Cardiac defibrillator & heart assist implant	1	2.7086144812	0.1310786915	20.6640335665	<.0001
ADX162_0002	DRG Cardiac valve procedures w AMI or complex PDX	1	-0.6395342679	0.3316455733	-1.9283666643	0.0538
ADX162_0004	DRG Cardiac valve procedures w AMI or complex PDX	1	1.9818698925	0.1279999015	15.4833704444	<.0001
ADX163_0002	DRG Cardiac valve procedures w/o AMI or complex PDX	1	-2.075091057	0.2121290543	-9.7822104739	<.0001
ADX163_0003	DRG Cardiac valve procedures w/o AMI or complex PDX	1	-0.8566301055	0.1417351889	-6.0438774028	<.0001
ADX163_0004	DRG Cardiac valve procedures w/o AMI or complex PDX	1	1.5836516120	0.1241800039	12.7528713362	<.0001
ADX165_0001	DRG Coronary bypass w AMI or complex PDX	1	-2.492041506	0.9019344019	-2.7629964007	0.0057
ADX165_0002	DRG Coronary bypass w AMI or complex PDX	1	-2.578095227	0.1856381141	-13.8877473488	<.0001
ADX165_0003	DRG Coronary bypass w AMI or complex PDX	1	-1.039555337	0.1325886887	-7.8404526550	<.0001
ADX165_0004	DRG Coronary bypass w AMI or complex PDX	1	1.3252075217	0.1196463856	11.0760347270	<.0001
ADX166_0001	DRG Coronary bypass w/o AMI or complex PDX	1	-3.481145073	0.2515906120	-13.8365459888	<.0001
ADX166_0002	DRG Coronary bypass w/o AMI or complex PDX	1	-3.043276947	0.1894827792	-16.0609684964	<.0001
ADX166_0003	DRG Coronary bypass w/o AMI or complex PDX	1	-1.358919038	0.1331447216	-10.2063305381	<.0001
ADX166_0004	DRG Coronary bypass w/o AMI or complex PDX	1	1.0998557341	0.1184610353	9.2845358897	<.0001
ADX710_0004	DRG Infectious & parasitic diseases including HIV w O.R. procedure	1	0.8452541683	0.1845248961	4.5807052929	<.0001

c-statistic=0.904

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-2.459956343	0.0408083371	-60.2807297717	<.0001
Age_LT30	Age < 30	1	-0.6259464601	0.3612001005	-1.7329631394	0.0831
Age_30_34	30 <= Age <= 34	1	-0.6115469489	0.2324930502	-2.6303880841	0.0085
Age_35_39	35 <= Age <= 39	1	-0.5274136128	0.1626615186	-3.2423994154	0.0012
Age_40_44	40 <= Age <= 44	1	-0.1605103788	0.1135635847	-1.4133965500	0.1575
Age_45_49	45 <= Age <= 49	1	-0.3393343851	0.0886739324	-3.8267659472	0.0001
Age_50_54	50 <= Age <= 54	1	-0.1435890733	0.0673246993	-2.1327844732	0.0329
Age_55_59	55 <= Age <= 59	1	-0.0517182815	0.0547175904	-0.9451856551	0.3446
Age_60_64	60 <= Age <= 64	1	0.0344678798	0.0486959694	0.7078179204	0.4791
Age_70_74	70 <= Age <= 74	1	0.0267215365	0.0429678316	0.6218963219	0.5340
Age_75_79	75 <= Age <= 79	1	0.1849558764	0.0427425361	4.3272087587	<.0001
Age_80_84	80 <= Age <= 84	1	0.1969594411	0.0404741556	4.8663014229	<.0001
Age_85_89	85 <= Age <= 89	1	0.3901410470	0.0405233659	9.6275577886	<.0001
Age_90Plus	Age >= 90	1	0.6088288364	0.0425673889	14.3027057092	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0531585814	0.0384928823	1.3809976867	0.1673
Age_LT30_MALE	Age < 30 MALE	1	-0.2028067099	0.4527054480	-0.4479882247	0.6542
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.1704378000	0.2876063548	0.5926079070	0.5534
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0410575271	0.2072759218	0.1980815077	0.8430
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.1717683665	0.1427174179	-1.2035557335	0.2288
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.0061658618	0.1060692393	0.0581305367	0.9536
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0114777258	0.0788127287	-0.1456328939	0.8842
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0073496194	0.0673866909	-0.1090663351	0.9131
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0162735120	0.0590187504	0.2757346075	0.7828
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0732385819	0.0526382413	1.3913569320	0.1641
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0073857179	0.0535369662	-0.1379554807	0.8903
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.0484266401	0.0513137900	0.9437353994	0.3453
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0279806272	0.0506937634	-0.5519540336	0.5810
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0079432107	0.0566077974	-0.1403200811	0.8884
ADX004_1234	DRG Tracheostomy w MV 96+ hours w extensive procedure or ECMO	1	3.0020997428	0.0795891755	37.7199502898	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
ADX009_1234	DRG Extracorporeal membrane oxygenation (ECMO)	1	3.0136548249	0.1372916673	21.9507482371	<.0001
ADX161_0004	DRG Cardiac defibrillator & heart assist implant	1	1.9060649432	0.0386609676	49.3020496550	<.0001
ADX165_0002	DRG Coronary bypass w AMI or complex PDX	1	-3.887142816	0.1577751181	-24.6372359785	<.0001
ADX165_0003	DRG Coronary bypass w AMI or complex PDX	1	-2.224729568	0.0757948438	-29.3519909482	<.0001
ADX169_0004	DRG Major abdominal vascular procedures	1	1.5192308560	0.0813881184	18.6664944047	<.0001
ADX174_0001	DRG Percutaneous coronary intervention w AMI	1	-4.644136670	0.1040583888	-44.6301035724	<.0001
ADX174_0002	DRG Percutaneous coronary intervention w AMI	1	-3.357203380	0.0637631380	-52.6511631193	<.0001
ADX174_0003	DRG Percutaneous coronary intervention w AMI	1	-1.663438287	0.0445770137	-37.3160548222	<.0001
ADX174_0004	DRG Percutaneous coronary intervention w AMI	1	0.9148434346	0.0296442796	30.8607072872	<.0001
ADX181_0004	DRG Lower extremity arterial procedures #	1	2.3832230829	0.1061387056	22.4538547908	<.0001
ADX182_0004	DRG Other peripheral vascular procedures #	1	2.6434332944	0.0643704990	41.0659127511	<.0001
ADX190_0001	DRG Acute myocardial infarction	1	-3.397277282	0.1070111504	-31.7469466560	<.0001
ADX190_0002	DRG Acute myocardial infarction	1	-2.307616846	0.0555147814	-41.5676111369	<.0001
ADX190_0003	DRG Acute myocardial infarction	1	-0.8950334258	0.0310357922	-28.8387491517	<.0001
ADX190_0004	DRG Acute myocardial infarction	1	1.2902559009	0.0287666517	44.8524880263	<.0001
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	1.7111390222	0.1157777740	14.7795121864	<.0001

c-statistic=0.9

Table 10. Risk Adjustment Coefficients for IQI 16 – Congestive Heart Failure (CHF) Morality

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
Intercept	Intercept	1	-4.140088230	0.0456084102	8240.0401041076	<.0001
Age_LT30	Age < 30	1	0.0701090292	0.1857072099	0.1425247790	0.7058
Age_30_34	30 <= Age <= 34	1	-0.3232710032	0.2070206639	2.4384065029	0.1184
Age_35_39	35 <= Age <= 39	1	0.0011666520	0.1427828235	0.0000667622	0.9935
Age_40_44	40 <= Age <= 44	1	-0.1497307450	0.1280751214	1.3667604968	0.2424
Age_45_49	45 <= Age <= 49	1	-0.1129540904	0.0955507496	1.3974482305	0.2372
Age_50_54	50 <= Age <= 54	1	-0.1088327327	0.0763188658	2.0335518625	0.1539
Age_55_59	55 <= Age <= 59	1	0.0509466568	0.0604836466	0.7095049776	0.3996
Age_60_64	60 <= Age <= 64	1	0.1517464338	0.0525053070	8.3527711479	0.0039
Age_70_74	70 <= Age <= 74	1	0.0821567371	0.0436532180	3.5420430729	0.0598
Age_75_79	75 <= Age <= 79	1	0.2588541774	0.0416735879	38.5823406631	<.0001
Age_80_84	80 <= Age <= 84	1	0.4412123796	0.0399909019	121.7230937070	<.0001
Age_85_89	85 <= Age <= 89	1	0.5905273524	0.0392922854	225.8735917690	<.0001
Age_90Plus	Age >= 90	1	0.8402211926	0.0384520462	477.4724877412	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1760742747	0.0433499773	16.4973453844	<.0001
Age_LT30_MALE	Age < 30 MALE	1	-0.1930607417	0.2403306714	0.6453117028	0.4218
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.1108412326	0.2487106359	0.1986158839	0.6558
Age_35_39_MALE	35 <= Age <= 39 MALE	1	-0.3774395890	0.1850360108	4.1608531439	0.0414
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.1404914088	0.1589615268	0.7811159104	0.3768
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.1461523289	0.1195201285	1.4953035931	0.2214
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0137240166	0.0947753509	0.0209687077	0.8849
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.1739423232	0.0773857804	5.0522891649	0.0246
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0773043067	0.0674678457	1.3128457207	0.2519
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0021664100	0.0568417532	0.0014526012	0.9696
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0378602916	0.0545458350	0.4817755090	0.4876
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0228939884	0.0527781286	0.1881633094	0.6644
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0372014505	0.0522255034	0.5074046906	0.4763
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0173527326	0.0524135116	0.1096097615	0.7406
ADX175_0004	DRG Percutaneous coronary intervention w/o AMI	1	1.1769212877	0.0671176450	307.4832175134	<.0001
ADX180_0004	DRG Other circulatory system procedures	1	1.9616801406	0.0847934870	535.2188502025	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
ADX181_0004	DRG Lower extremity arterial procedures #	1	3.0736190393	0.0952823044	1040.5802323120	<.0001
ADX182_0004	DRG Other peripheral vascular procedures #	1	3.0039594483	0.0528911277	3225.6888818320	<.0001
ADX192_0001	DRG Cardiac catheterization for other non-coronary conditions	1	-3.844820359	0.5008087121	58.9397590076	<.0001
ADX192_0002	DRG Cardiac catheterization for other non-coronary conditions	1	-3.432818461	0.2520647288	185.4716413144	<.0001
ADX192_0003	DRG Cardiac catheterization for other non-coronary conditions	1	-1.197561876	0.0784050680	233.2961928323	<.0001
ADX192_0004	DRG Cardiac catheterization for other non-coronary conditions	1	1.4217695800	0.0443766255	1026.4785712866	<.0001
ADX194_0001	DRG Heart failure	1	-1.763445497	0.0791775644	496.0435496021	<.0001
ADX194_0002	DRG Heart failure	1	-1.554751413	0.0406128289	1465.5324442300	<.0001
ADX194_0003	DRG Heart failure	1	-0.3712393933	0.0336769831	121.5183185644	<.0001
ADX194_0004	DRG Heart failure	1	1.4376258757	0.0327149916	1931.0705275654	<.0001
ADX950_0004	DRG Extensive procedure unrelated to principal diagnosis	1	2.5063608790	0.0899094415	777.0994583956	<.0001
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	2.4330720996	0.0764101715	1013.9291489903	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.6571513360	0.0216841679	918.4283250356	<.0001

c-statistic=0.823

Table 11. Risk Adjustment Coefficients for IQI 17A – Acute Stroke Mortality: Stratum A: Subarachnoid hemorrhage

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
Intercept	Intercept	1	-2.842743729	0.1041190528	745.4439658569	<.0001
Age_LT30	Age < 30	1	-0.7015996901	0.2242039966	9.7924661040	0.0018
Age_30_34	30 <= Age <= 34	1	-0.3401105863	0.2247012610	2.2910221110	0.1301
Age_35_39	35 <= Age <= 39	1	-0.3463448421	0.1603197826	4.6670582172	0.0307
Age_40_44	40 <= Age <= 44	1	-0.1494586415	0.1402100290	1.1362761794	0.2864
Age_45_49	45 <= Age <= 49	1	-0.2263148880	0.1204062144	3.5328764104	0.0602
Age_50_54	50 <= Age <= 54	1	-0.3003610137	0.1126035469	7.1151323313	0.0076
Age_55_59	55 <= Age <= 59	1	-0.1668411838	0.1054150389	2.5049633655	0.1135
Age_60_64	60 <= Age <= 64	1	-0.1231991750	0.1065447126	1.3370627645	0.2476
Age_70_74	70 <= Age <= 74	1	-0.0451732566	0.1079211910	0.1752061483	0.6755
Age_75_79	75 <= Age <= 79	1	-0.0253352737	0.1165530970	0.0472501907	0.8279
Age_80_84	80 <= Age <= 84	1	0.3483502795	0.1219020555	8.1660168016	0.0043
Age_85_89	85 <= Age <= 89	1	0.4664517412	0.1382136626	11.3896790397	0.0007
Age_90Plus	Age >= 90	1	0.7026511564	0.1613960272	18.9536933597	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.2655832203	0.1241296018	4.5777338676	0.0324
Age_LT30_MALE	Age < 30 MALE	1	0.4832614210	0.3091122822	2.4441718058	0.1180
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.1790045678	0.3169698253	0.3189278063	0.5723
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.4709304469	0.2527996859	3.4702477337	0.0625
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.2359758224	0.2228515486	1.1212532218	0.2896
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.3422514075	0.1940602666	3.1104071274	0.0778
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.3968367138	0.1796839381	4.8775886867	0.0272
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.2096107122	0.1744687159	1.4434170059	0.2296
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.3906503277	0.1736393376	5.0615105332	0.0245
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.1442024279	0.1821485775	0.6267488953	0.4286
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.4089435002	0.1936294870	4.4605008846	0.0347
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1499803058	0.2027088734	0.5474228856	0.4594
Age_85_89_MALE	85 <= Age <= 89 MALE	1	0.0646762727	0.2342689225	0.0762185369	0.7825
Age_90Plus_MALE	Age >= 90 MALE	1	0.0161370922	0.3043115510	0.0028119894	0.9577
ADX021_0004	DRG Craniotomy except for trauma	1	2.2057148683	0.0812796257	736.4365785984	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
ADX024_0001	DRG Extracranial vascular procedures	1	-2.950635804	0.5829995898	25.6150210871	<.0001
ADX024_0002	DRG Extracranial vascular procedures	1	-3.623605424	1.0022076247	13.0727331758	0.0003
ADX024_0003	DRG Extracranial vascular procedures	1	-1.429745216	0.3439830526	17.2760006367	<.0001
ADX024_0004	DRG Extracranial vascular procedures	1	1.7920231767	0.1127335114	252.6859967882	<.0001
ADX044_0003	DRG Intracranial hemorrhage	1	0.1833584038	0.1020203982	3.2301865981	0.0723
ADX044_0004	DRG Intracranial hemorrhage	1	3.4696916412	0.0861995732	1620.2108232692	<.0001
ADX044_1200	DRG Intracranial hemorrhage	1	-1.273561977	0.1652511590	59.3951715063	<.0001
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	3.7487119456	0.1604988989	545.5317426076	<.0001

c-statistic=0.868

Table 12. Risk Adjustment Coefficients for IQI 17B – Acute Stroke Mortality: Stratum B: Intracerebral hemorrhage

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
Intercept	Intercept	1	-2.655591856	0.0606674483	1916.0692363316	<.0001
Age_LT30	Age < 30	1	-0.4238655010	0.1576381718	7.2299178286	0.0072
Age_30_34	30 <= Age <= 34	1	0.1114943463	0.1706990256	0.4266223535	0.5137
Age_35_39	35 <= Age <= 39	1	-0.3010882121	0.1387577490	4.7083963459	0.0300
Age_40_44	40 <= Age <= 44	1	-0.1626221590	0.1124531578	2.0912990208	0.1481
Age_45_49	45 <= Age <= 49	1	-0.1941045087	0.0876343841	4.9059392903	0.0268
Age_50_54	50 <= Age <= 54	1	-0.0355401037	0.0741518753	0.2297169826	0.6317
Age_55_59	55 <= Age <= 59	1	0.0425092751	0.0689478145	0.3801249606	0.5375
Age_60_64	60 <= Age <= 64	1	0.0267354208	0.0658707940	0.1647358989	0.6848
Age_70_74	70 <= Age <= 74	1	0.1020587443	0.0595960769	2.9326828338	0.0868
Age_75_79	75 <= Age <= 79	1	0.2122248640	0.0581206257	13.3331254486	0.0003
Age_80_84	80 <= Age <= 84	1	0.3066448807	0.0581175446	27.8392110252	<.0001
Age_85_89	85 <= Age <= 89	1	0.5048289124	0.0590982358	72.9691699805	<.0001
Age_90Plus	Age >= 90	1	0.6118277405	0.0634667353	92.9321555320	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.1314708379	0.0591514634	4.9400105346	0.0262
Age_LT30_MALE	Age < 30 MALE	1	0.0358209024	0.2115668533	0.0286667059	0.8656
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.1909597190	0.2148840841	0.7897234514	0.3742
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.2466057841	0.1719370090	2.0571586324	0.1515
Age_40_44_MALE	40 <= Age <= 44 MALE	1	0.1318829644	0.1413929857	0.8700048438	0.3510
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.1538937127	0.1126866666	1.8650766706	0.1720
Age_50_54_MALE	50 <= Age <= 54 MALE	1	0.0625869949	0.0967567093	0.4184138187	0.5177
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.0339592115	0.0896493741	0.1434896818	0.7048
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0966346743	0.0859859698	1.2630216268	0.2611
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0241428753	0.0803561498	0.0902692311	0.7638
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0544180399	0.0792200208	0.4718629582	0.4921
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0288808730	0.0802125186	0.1296391953	0.7188
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0079793733	0.0832958045	0.0091768009	0.9237
Age_90Plus_MALE	Age >= 90 MALE	1	0.0844508730	0.0959004338	0.7754738240	0.3785
ADX021_0001	DRG Craniotomy except for trauma	1	-3.454633390	0.5794840260	35.5402922848	<.0001
ADX021_0002	DRG Craniotomy except for trauma	1	-2.035747086	0.2234395754	83.0094332492	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
ADX021_0004	DRG Craniotomy except for trauma	1	2.0194755614	0.0475991636	1800.0250966747	<.0001
ADX044_0001	DRG Intracranial hemorrhage	1	-0.5685984410	0.0667351923	72.5941285776	<.0001
ADX044_0002	DRG Intracranial hemorrhage	1	-0.5551238525	0.0541201022	105.2113419694	<.0001
ADX044_0003	DRG Intracranial hemorrhage	1	0.0775819173	0.0497224936	2.4345304757	0.1187
ADX044_0004	DRG Intracranial hemorrhage	1	2.7497036724	0.0446930677	3785.2228866868	<.0001
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	2.4714607766	0.0677715023	1329.8823420811	<.0001

c-statistic=0.842

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

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
Intercept	Intercept	1	-3.407268490	0.0574353410	3519.2839347685	<.0001
Age_LT30	Age < 30	1	-0.5622008357	0.1986256311	8.0114733715	0.0046
Age_30_34	30 <= Age <= 34	1	-0.5954150516	0.2068901364	8.2824733328	0.0040
Age_35_39	35 <= Age <= 39	1	-0.3390268051	0.1551872389	4.7726112624	0.0289
Age_40_44	40 <= Age <= 44	1	-0.2568336410	0.1209166571	4.5116100267	0.0337
Age_45_49	45 <= Age <= 49	1	-0.3197586897	0.1027361528	9.6871966190	0.0019
Age_50_54	50 <= Age <= 54	1	-0.0728840183	0.0821250290	0.7876142149	0.3748
Age_55_59	55 <= Age <= 59	1	0.0009354286	0.0704644146	0.0001762307	0.9894
Age_60_64	60 <= Age <= 64	1	0.0318145026	0.0627600370	0.2569708695	0.6122
Age_70_74	70 <= Age <= 74	1	0.0640464941	0.0532725365	1.4453864239	0.2293
Age_75_79	75 <= Age <= 79	1	0.1715835756	0.0511086267	11.2710143813	0.0008
Age_80_84	80 <= Age <= 84	1	0.3663829729	0.0487326416	56.5237098320	<.0001
Age_85_89	85 <= Age <= 89	1	0.5534177320	0.0477085251	134.5594361183	<.0001
Age_90Plus	Age >= 90	1	0.9009285635	0.0469645381	367.9938853210	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.0275970300	0.0526892164	0.2743349956	0.6004
Age_LT30_MALE	Age < 30 MALE	1	-0.2296654780	0.3117242095	0.5428131676	0.4613
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.1565813139	0.2773698466	0.3186848174	0.5724
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0196551745	0.2070427230	0.0090122632	0.9244
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.2373155359	0.1661169267	2.0409133440	0.1531
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.1255102620	0.1301976539	0.9292919075	0.3350
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0632521847	0.1044601410	0.3666484435	0.5448
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0233266877	0.0893901517	0.0680968152	0.7941
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0668065373	0.0805778003	0.6873961737	0.4071
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0357770073	0.0715579428	0.2499725534	0.6171
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0593219905	0.0695176154	0.7281849458	0.3935
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0699747974	0.0674291259	1.0769318953	0.2994
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0941322171	0.0677295555	1.9316130204	0.1646
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0728901091	0.0695551810	1.0981918834	0.2947
ADX021_0004	DRG Craniotomy except for trauma	1	2.4971184923	0.0597615256	1745.9626581844	<.0001
ADX024_0004	DRG Extracranial vascular procedures	1	2.1109429233	0.0491166660	1847.1204751649	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
ADX024_1200	DRG Extracranial vascular procedures	1	-1.738549140	0.1126482168	238.1909731584	<.0001
ADX045_0001	DRG CVA & precerebral occlusion w infarct	1	-3.236805646	0.0873600605	1372.8003886215	<.0001
ADX045_0002	DRG CVA & precerebral occlusion w infarct	1	-1.554674979	0.0484397301	1030.0914649277	<.0001
ADX045_0003	DRG CVA & precerebral occlusion w infarct	1	-0.3500540644	0.0458159239	58.3764057040	<.0001
ADX045_0004	DRG CVA & precerebral occlusion w infarct	1	2.0846052573	0.0432668665	2321.3293928421	<.0001
ADX950_0004	DRG Extensive procedure unrelated to principal diagnosis	1	1.5591535169	0.0928185923	282.1680272274	<.0001
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	2.4402934778	0.0614354526	1577.7783557443	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.2405246323	0.0211659961	129.1343247721	<.0001

c-statistic=0.898

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

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
Intercept	Intercept	1	-4.691364197	0.0859098470	2982.0327394851	<.0001
Age_LT30	Age < 30	1	-0.8023086177	0.2469556907	10.5546743320	0.0012
Age_30_34	30 <= Age <= 34	1	-0.5772129861	0.2386785545	5.8485120452	0.0156
Age_35_39	35 <= Age <= 39	1	-0.0879842476	0.1566846501	0.3153239399	0.5744
Age_40_44	40 <= Age <= 44	1	0.1359660738	0.1298846767	1.0958352801	0.2952
Age_45_49	45 <= Age <= 49	1	0.1149559740	0.1142837756	1.0117982676	0.3145
Age_50_54	50 <= Age <= 54	1	0.3039829735	0.0893597147	11.5721744287	0.0007
Age_55_59	55 <= Age <= 59	1	0.3143778317	0.0799389439	15.4663208619	<.0001
Age_60_64	60 <= Age <= 64	1	0.3590607488	0.0761398868	22.2388031567	<.0001
Age_70_74	70 <= Age <= 74	1	-0.0040568257	0.0696835460	0.0033893172	0.9536
Age_75_79	75 <= Age <= 79	1	0.0559042788	0.0682525464	0.6708916409	0.4127
Age_80_84	80 <= Age <= 84	1	0.2494807495	0.0662595492	14.1767645706	0.0002
Age_85_89	85 <= Age <= 89	1	0.4008743856	0.0660735615	36.8096070552	<.0001
Age_90Plus	Age >= 90	1	0.8400628718	0.0647701358	168.2185811509	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.2038999711	0.0644605244	10.0056811648	0.0016
Age_LT30_MALE	Age < 30 MALE	1	0.0472677152	0.3092499987	0.0233619886	0.8785
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.2133026837	0.2805132905	0.5782102070	0.4470
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.1010139631	0.1886156663	0.2868185894	0.5923
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.1861412519	0.1593658159	1.3642530083	0.2428
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.0159382540	0.1358034323	0.0137739974	0.9066
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0677521105	0.1084743564	0.3901139597	0.5322
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0376670909	0.0981286447	0.1473440355	0.7011
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0616250005	0.0940755244	0.4291020372	0.5124
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.1766460412	0.0895056775	3.8949927144	0.0484
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0161201481	0.0871498004	0.0342141113	0.8533
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.1503549766	0.0860443204	3.0534527003	0.0806
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0673492411	0.0862974543	0.6090731355	0.4351
Age_90Plus_MALE	Age >= 90 MALE	1	-0.2244850714	0.0884982497	6.4343631342	0.0112
MDC_6	Digestive System	1	-0.2104026600	0.0659974275	10.1636204155	0.0014

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
ADX220_0004	DRG Major stomach, esophageal & duodenal procedures	1	3.4458597282	0.0834281343	1705.9650352129	<.0001
ADX221_0004	DRG Major small & large bowel procedures	1	3.3634170371	0.0884137384	1447.1779314066	<.0001
ADX222_0004	DRG Other stomach, esophageal & duodenal procedures	1	3.4316941859	0.0975056280	1238.6761926186	<.0001
ADX223_0004	DRG Other small & large bowel procedures	1	2.9931431553	0.1568805025	364.0131172890	<.0001
ADX229_0002	DRG Other digestive system & abdominal procedures	1	-1.807009671	0.3811235077	22.4796466215	<.0001
ADX229_0004	DRG Other digestive system & abdominal procedures	1	3.1021637368	0.0679122694	2086.5699419097	<.0001
ADX241_0001	DRG Peptic ulcer & gastritis	1	-3.444787980	0.3196428675	116.1435130194	<.0001
ADX241_0002	DRG Peptic ulcer & gastritis	1	-1.675649683	0.1238322472	183.1044710482	<.0001
ADX241_0003	DRG Peptic ulcer & gastritis	1	0.0750888035	0.0704879221	1.1348042438	0.2868
ADX241_0004	DRG Peptic ulcer & gastritis	1	2.6036496815	0.0555633883	2195.7740960756	<.0001
ADX242_0001	DRG Major esophageal disorders	1	-3.846495624	0.9966864489	14.8940695776	0.0001
ADX242_0002	DRG Major esophageal disorders	1	-1.970668330	0.3568091351	30.5038842851	<.0001
ADX242_0004	DRG Major esophageal disorders	1	3.1436777127	0.0771643357	1659.7504274226	<.0001
ADX243_0002	DRG Other esophageal disorders	1	-1.515214175	0.3569752365	18.0165598648	<.0001
ADX243_0004	DRG Other esophageal disorders	1	2.5532770821	0.1091264587	547.4390458145	<.0001
ADX244_0001	DRG Diverticulitis & diverticulosis	1	-3.442268939	0.3808806262	81.6792668931	<.0001
ADX244_0002	DRG Diverticulitis & diverticulosis	1	-2.536636660	0.2234444075	128.8776328637	<.0001
ADX244_0003	DRG Diverticulitis & diverticulosis	1	-0.6129041102	0.1160660951	27.8852357854	<.0001
ADX244_0004	DRG Diverticulitis & diverticulosis	1	2.2396979578	0.0823088808	740.4325714316	<.0001
ADX253_0001	DRG Other & unspecified gastrointestinal hemorrhage	1	-2.144970050	0.1593930274	181.0939019764	<.0001
ADX253_0002	DRG Other & unspecified gastrointestinal hemorrhage	1	-0.7711741838	0.0727578467	112.3428120870	<.0001
ADX253_0003	DRG Other & unspecified gastrointestinal hemorrhage	1	0.7360860779	0.0549085632	179.7119878801	<.0001
ADX253_0004	DRG Other & unspecified gastrointestinal hemorrhage	1	3.2355001252	0.0515675809	3936.6728501993	<.0001
ADX254_0001	DRG Other digestive system diagnoses	1	-2.592999012	0.3051204847	72.2207461922	<.0001
ADX254_0002	DRG Other digestive system diagnoses	1	-1.502600908	0.1464529304	105.2667372100	<.0001
ADX254_0003	DRG Other digestive system diagnoses	1	0.4459188833	0.0743785563	35.9431586010	<.0001
ADX254_0004	DRG Other digestive system diagnoses	1	2.9524155634	0.0643839710	2102.8071901179	<.0001
ADX264_0004	DRG Other hepatobiliary, pancreas & abdominal procedures	1	3.6578485937	0.1075392664	1156.9572475271	<.0001
ADX279_0004	DRG Hepatic coma & other major acute liver disorders	1	4.3931966146	0.1536410942	817.6105708379	<.0001

Parameter	Label	DF	Estimate	Standard Error	Wald Chi Square	Prob Chi Square
ADX280_0004	DRG Alcoholic liver disease	1	3.6132530163	0.0863838421	1749.5715783764	<.0001
ADX283_0004	DRG Other disorders of the liver	1	3.3300809815	0.1081727055	947.7072565264	<.0001
ADX950_0003	DRG Extensive procedure unrelated to principal diagnosis	1	-0.3890697113	0.1456979052	7.1309637702	0.0076
ADX950_0004	DRG Extensive procedure unrelated to principal diagnosis	1	3.1243750552	0.0714412537	1912.6177808734	<.0001
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	4.0522213524	0.0703295014	3319.7948295547	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.2030511762	0.0312403194	42.2454643613	<.0001

c-statistic=0.909

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-3.944910626	0.1269602935	-31.0720030517	<.0001
Age_70_74	70 <= Age <= 74	1	0.0336326334	0.1286902120	0.2613456990	0.7938
Age_75_79	75 <= Age <= 79	1	0.2387918826	0.1149489021	2.0773741924	0.0378
Age_80_84	80 <= Age <= 84	1	0.3306597088	0.1119748658	2.9529815153	0.0031
Age_85_89	85 <= Age <= 89	1	0.5052482850	0.1083086923	4.6648913770	<.0001
Age_90Plus	Age >= 90	1	0.8042533239	0.1064945221	7.5520628455	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.2632934427	0.1406079494	1.8725359678	0.0611
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0244125292	0.1788320427	0.1365109342	0.8914
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.1271569863	0.1618849699	0.7854774064	0.4322
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.1362199544	0.1565325244	0.8702341892	0.3842
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0008189266	0.1531955230	-0.0053456302	0.9957
Age_90Plus_MALE	Age >= 90 MALE	1	0.0711715706	0.1491259523	0.4772581128	0.6332
MDC_8	Musculoskeletal And Connective	1	-0.2067652357	0.0830206639	-2.4905273682	0.0128
ADX301_0001	DRG Hip joint replacement	1	-3.668187158	0.2766630815	-13.2586796087	<.0001
ADX301_0002	DRG Hip joint replacement	1	-2.355041071	0.1196724486	-19.6790581108	<.0001
ADX301_0003	DRG Hip joint replacement	1	-0.7330453075	0.0871086618	-8.4152975462	<.0001
ADX301_0004	DRG Hip joint replacement	1	1.7291450712	0.0742717306	23.2813354183	<.0001
ADX308_0001	DRG Hip and femur fracture repair	1	-3.691967660	0.2214719274	-16.6701382976	<.0001
ADX308_0002	DRG Hip and femur fracture repair	1	-2.353457928	0.1011407473	-23.2691372233	<.0001
ADX308_0003	DRG Hip and femur fracture repair	1	-0.5747420738	0.0750135102	-7.6618474789	<.0001
ADX308_0004	DRG Hip and femur fracture repair	1	1.9715325650	0.0710601885	27.7445445458	<.0001
ADX340_0001	DRG Fracture of femur	1	-0.8802516341	0.1824082905	-4.8257216370	<.0001
ADX340_0003	DRG Fracture of femur	1	1.1942511636	0.0834659229	14.3082484633	<.0001
ADX340_0004	DRG Fracture of femur	1	3.0720992480	0.0880137520	34.9047640763	<.0001
ADX912_0002	DRG Musculoskeletal & other procedures for multiple significant trauma	1	-1.857003745	0.3030967980	-6.1267679421	<.0001
ADX912_0004	DRG Musculoskeletal & other procedures for multiple significant trauma	1	2.0111469714	0.1192577227	16.8638720013	<.0001
ADX930_0003	DRG Multiple significant trauma w/o O.R. procedure	1	1.2189520575	0.2284275352	5.3362746155	<.0001
ADX930_0004	DRG Multiple significant trauma w/o O.R. procedure	1	3.5485892513	0.2265840251	15.6612508329	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
ADX951_1234	DRG Moderately extensive procedure unrelated to principal diagnosis	1	3.1273248328	0.2460508612	12.7100747307	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.0193110564	0.0590364598	0.3271039024	0.7436

c-statistic=0.907

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-3.772513098	0.0659183172	-57.2301184155	<.0001
Age_LT30	Age < 30	1	-0.7978213815	0.1579027588	-5.0526120484	<.0001
Age_30_34	30 <= Age <= 34	1	-0.6631598016	0.1828257810	-3.6272772788	0.0003
Age_35_39	35 <= Age <= 39	1	-0.4434483361	0.1438812880	-3.0820431369	0.0021
Age_40_44	40 <= Age <= 44	1	-0.2482796303	0.1225083163	-2.0266349073	0.0427
Age_45_49	45 <= Age <= 49	1	-0.3581030738	0.1058901231	-3.3818364114	0.0007
Age_50_54	50 <= Age <= 54	1	-0.2317283521	0.0841487585	-2.7537940689	0.0059
Age_55_59	55 <= Age <= 59	1	0.0249841636	0.0719563188	0.3472129207	0.7284
Age_60_64	60 <= Age <= 64	1	0.1074049268	0.0668162054	1.6074682187	0.1080
Age_70_74	70 <= Age <= 74	1	0.0124837745	0.0565520126	0.2207485443	0.8253
Age_75_79	75 <= Age <= 79	1	0.1245977266	0.0542769885	2.2955902661	0.0217
Age_80_84	80 <= Age <= 84	1	0.2523610153	0.0541182131	4.6631438992	<.0001
Age_85_89	85 <= Age <= 89	1	0.5472882623	0.0515722048	10.6120780406	<.0001
Age_90Plus	Age >= 90	1	0.7406756205	0.0504258037	14.6884246965	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1097437024	0.0584599029	1.8772474287	0.0605
Age_LT30_MALE	Age < 30 MALE	1	0.0575141248	0.2149419659	0.2675797838	0.7890
Age_30_34_MALE	30 <= Age <= 34 MALE	1	-0.1327517191	0.2480858391	-0.5351039770	0.5926
Age_35_39_MALE	35 <= Age <= 39 MALE	1	-0.0621807369	0.1881126321	-0.3305505656	0.7410
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.3363378534	0.1771296662	-1.8988228262	0.0576
Age_45_49_MALE	45 <= Age <= 49 MALE	1	0.0544794429	0.1426249618	0.3819769149	0.7025
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0425373258	0.1169750692	-0.3636443744	0.7161
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0186482694	0.0951625860	-0.1959621967	0.8446
Age_60_64_MALE	60 <= Age <= 64 MALE	1	0.0554323078	0.0901093997	0.6151667634	0.5384
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0333347840	0.0754589923	0.4417602596	0.6587
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0468823600	0.0734028274	0.6386996475	0.5230
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.0062015700	0.0727325964	0.0852653459	0.9321
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0560415529	0.0723849822	-0.7742151925	0.4388
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0787366454	0.0713978836	-1.1027868255	0.2701
ADX120_0004	DRG Major respiratory & chest procedures	1	1.7934312277	0.1308088574	13.7103194898	<.0001
ADX121_0004	DRG Other respiratory & chest procedures	1	2.3593009333	0.0971605823	24.2824906807	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
ADX137_0001	DRG Major respiratory infections & inflammations	1	-2.780040586	0.3624194514	-7.6707819497	<.0001
ADX137_0002	DRG Major respiratory infections & inflammations	1	-1.587535344	0.1396209987	-11.3703193511	<.0001
ADX137_0003	DRG Major respiratory infections & inflammations	1	-0.0910204439	0.0697431772	-1.3050802600	0.1919
ADX137_0004	DRG Major respiratory infections & inflammations	1	1.6044377888	0.0601140632	26.6898909090	<.0001
ADX139_0001	DRG Other pneumonia	1	-3.062128532	0.1115977751	-27.4389747477	<.0001
ADX139_0002	DRG Other pneumonia	1	-1.516644800	0.0622628007	-24.3587629134	<.0001
ADX139_0003	DRG Other pneumonia	1	-0.1712519866	0.0536606619	-3.1913878890	0.0014
ADX139_0004	DRG Other pneumonia	1	1.4920414096	0.0540631000	27.5981475249	<.0001
ADX950_0004	DRG Extensive procedure unrelated to principal diagnosis	1	2.1030559841	0.1316802429	15.9709303174	<.0001
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	2.6995676558	0.0771811743	34.9770222968	<.0001
ADX952_0004	DRG Nonextensive procedure unrelated to principal diagnosis	1	2.0987462047	0.1413027793	14.8528303235	<.0001
TRNSFER	Transferred-in from another acute care facility	1	0.4858192984	0.0421500285	11.5259542185	<.0001

c-statistic=0.839

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-2.827511009	0.0749597485	-37.7203908117	<.0001
Age_40_44	40 <= Age <= 44	1	-0.0364481531	0.1573116602	-0.2316939067	0.8168
Age_45_49	45 <= Age <= 49	1	-0.2110619122	0.1172386851	-1.8002753274	0.0718
Age_50_54	50 <= Age <= 54	1	-0.1558807930	0.0937165815	-1.6633213737	0.0962
Age_55_59	55 <= Age <= 59	1	-0.0088715358	0.0765141234	-0.1159463824	0.9077
Age_60_64	60 <= Age <= 64	1	0.0718124891	0.0660875449	1.0866266742	0.2772
Age_70_74	70 <= Age <= 74	1	0.0619775148	0.0598718167	1.0351701042	0.3006
Age_75_79	75 <= Age <= 79	1	0.2004192875	0.0579524274	3.4583415456	0.0005
Age_80_84	80 <= Age <= 84	1	0.3172350292	0.0590315560	5.3739906350	<.0001
Age_85_89	85 <= Age <= 89	1	0.5562226632	0.0641637226	8.6688028778	<.0001
Age_90Plus	Age >= 90	1	0.9095717734	0.0799948855	11.3703740882	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	-0.0120510898	0.0546678226	-0.2204421039	0.8255
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.2163332877	0.1924976678	-1.1238229018	0.2611
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.0796792464	0.1382302465	-0.5764241071	0.5643
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0452346681	0.1115983521	-0.4053345524	0.6852
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.1185006297	0.0931217130	-1.2725348993	0.2032
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0238248444	0.0798946234	-0.2982033514	0.7655
Age_70_74_MALE	70 <= Age <= 74 MALE	1	-0.0266950217	0.0740645785	-0.3604289969	0.7185
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0131774336	0.0731998791	-0.1800198826	0.8571
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.0002348325	0.0763208838	-0.0030769100	0.9975
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.1234981323	0.0862548498	-1.4317818946	0.1522
Age_90Plus_MALE	Age >= 90 MALE	1	-0.2159575816	0.1183572760	-1.8246244671	0.0681
MDC_5	Circulatory System	1	-0.4916384867	0.0790000176	-6.2232705991	<.0001
ADX004_0004	DRG Tracheostomy w MV 96+ hours w extensive procedure or ECMO	1	3.9173089333	0.1252194798	31.2835426133	<.0001
ADX009_1234	DRG Extracorporeal membrane oxygenation (ECMO)	1	3.5539183245	0.1760416802	20.1879368625	<.0001
ADX161_0004	DRG Cardiac defibrillator & heart assist implant	1	2.8031612829	0.0621974505	45.0687489958	<.0001
ADX165_0004	DRG Coronary bypass w AMI or complex PDX	1	1.3624292125	0.1073932420	12.6863589145	<.0001

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
ADX167_0004	DRG Other cardiothoracic & thoracic vascular procedures	1	1.8409233087	0.1162408560	15.8371451493	<.0001
ADX169_0004	DRG Major abdominal vascular procedures	1	2.0552390587	0.0878928203	23.3834692178	<.0001
ADX174_0001	DRG Percutaneous coronary intervention w AMI	1	-3.866973206	0.1222902432	-31.6212733419	<.0001
ADX174_0002	DRG Percutaneous coronary intervention w AMI	1	-2.533528549	0.0811443518	-31.2224880048	<.0001
ADX174_0003	DRG Percutaneous coronary intervention w AMI	1	-0.8366004865	0.0667146834	-12.5399753694	<.0001
ADX174_0004	DRG Percutaneous coronary intervention w AMI	1	1.7743297837	0.0581316803	30.5225958579	<.0001
ADX175_0001	DRG Percutaneous coronary intervention w/o AMI	1	-5.619310634	0.3456435900	-16.2575288463	<.0001
ADX175_0002	DRG Percutaneous coronary intervention w/o AMI	1	-4.029375340	0.1776704505	-22.6789279229	<.0001
ADX175_0003	DRG Percutaneous coronary intervention w/o AMI	1	-2.108744699	0.0999436019	-21.0993466193	<.0001
ADX175_0004	DRG Percutaneous coronary intervention w/o AMI	1	1.0240619856	0.0636793703	16.0815344261	<.0001
ADX710_0004	DRG Infectious & parasitic diseases including HIV w O.R. procedure	1	0.9417066591	0.0734284537	12.8248194276	<.0001
ADX950_0004	DRG Extensive procedure unrelated to principal diagnosis	1	1.5899684268	0.1439156115	11.0479218323	<.0001
ADX951_0002	DRG Moderately extensive procedure unrelated to principal diagnosis	1	-3.281649284	0.5786886712	-5.6708372694	<.0001
ADX951_0003	DRG Moderately extensive procedure unrelated to principal diagnosis	1	-1.728271675	0.2463378247	-7.0158599335	<.0001
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	0.8509559335	0.0870993163	9.7699496350	<.0001

c-statistic=0.932

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

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-4.781743456	0.3174806591	-15.0615267992	<.0001
Age_35_39	35 <= Age <= 39	1	0.1316165136	1.4262384275	0.0922822658	0.9265
Age_40_44	40 <= Age <= 44	1	-0.3369017535	1.1170655165	-0.3015953393	0.7630
Age_45_49	45 <= Age <= 49	1	1.3990520361	0.9429992345	1.4836194822	0.1379
Age_50_54	50 <= Age <= 54	1	0.3192039725	0.5963859318	0.5352305538	0.5925
Age_55_59	55 <= Age <= 59	1	-0.6968960387	0.5691202685	-1.2245145311	0.2208

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Age_60_64	60 <= Age <= 64	1	0.3423559412	0.3956073811	0.8653932095	0.3868
Age_70_74	70 <= Age <= 74	1	-0.3152361914	0.3667329838	-0.8595795996	0.3900
Age_75_79	75 <= Age <= 79	1	-0.1356115631	0.3522600256	-0.3849757373	0.7003
Age_80_84	80 <= Age <= 84	1	0.7357393484	0.3108910051	2.3665507727	0.0180
Age_85_89	85 <= Age <= 89	1	0.1550623118	0.4944240487	0.3136221068	0.7538
Age_90Plus	Age >= 90	1	0.9173184489	0.6340081756	1.4468558675	0.1479
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.2448445532	0.3128693075	0.7825777324	0.4339
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-1.721102401	1.3823305906	-1.2450729319	0.2131
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.6821996529	0.8219319084	-0.8299953389	0.4065
Age_55_59_MALE	55 <= Age <= 59 MALE	1	0.4101999148	0.6780394533	0.6049794194	0.5452
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.3516396251	0.4961582994	-0.7087246661	0.4785
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.1607367432	0.4417629387	0.3638529382	0.7160
Age_75_79_MALE	75 <= Age <= 79 MALE	1	0.0921428213	0.4308626769	0.2138565865	0.8307
Age_80_84_MALE	80 <= Age <= 84 MALE	1	-0.5120678897	0.4139644863	-1.2369850715	0.2161
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.3383333390	0.6083266709	-0.5561704840	0.5781
Age_90Plus_MALE	Age >= 90 MALE	1	-0.9563243967	0.9228861049	-1.0362323061	0.3001
MDC_18	Infectious and Parasitic	1	0.8553296676	1.0389582239	0.8232570357	0.4104
ADX021_0004	DRG Craniotomy except for trauma	1	3.6197268175	0.4585370405	7.8940772454	<.0001
ADX024_0001	DRG Extracranial vascular procedures	1	-4.076412599	0.4597253823	-8.8670601112	<.0001
ADX024_0002	DRG Extracranial vascular procedures	1	-3.173915732	0.3754856530	-8.4528282412	<.0001
ADX024_0003	DRG Extracranial vascular procedures	1	-0.4097833337	0.2704139213	-1.5153928898	0.1297
ADX024_0004	DRG Extracranial vascular procedures	1	2.4249597187	0.2226240861	10.8926206557	<.0001
ADX162_1234	DRG Cardiac valve procedures w AMI or complex PDX	1	3.0601239131	0.5379729942	5.6882481950	<.0001
ADX163_0004	DRG Cardiac valve procedures w/o AMI or complex PDX	1	3.0667349479	0.4346956729	7.0549010237	<.0001
ADX165_0004	DRG Coronary bypass w AMI or complex PDX	1	2.7291388358	0.3678255836	7.4196547436	<.0001
ADX166_0004	DRG Coronary bypass w/o AMI or complex PDX	1	2.6144154558	0.3197115075	8.1774205629	<.0001
ADX167_1234	DRG Other cardiothoracic & thoracic vascular procedures	1	2.3490400961	0.6352962426	3.6975507466	0.0002
ADX169_1234	DRG Major abdominal vascular procedures	1	2.4373394206	0.6076695340	4.0109620186	<.0001
ADX175_0034	DRG Percutaneous coronary intervention w/o AMI	1	2.2073680755	0.6468666268	3.4124006159	0.0006
ADX182_0003	DRG Other peripheral vascular procedures #	1	-0.5795170977	1.0186447009	-0.5689099420	0.5694

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
ADX182_0004	DRG Other peripheral vascular procedures #	1	2.9156355900	0.3466713588	8.4103734438	<.0001
ADX710_0004	DRG Infectious & parasitic diseases including HIV w O.R. procedure	1	1.7805094319	0.9628704578	1.8491682008	0.0644

c-statistic=0.952

Table 19. Risk Adjustment Coefficients for IQI 32 - Acute Myocardial Infarction (AMI) Mortality Rate, Without Transfer Cases

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
Intercept	Intercept	1	-2.449212418	0.0464802240	-52.6936448736	<.0001
Age_LT30	Age < 30	1	-0.3642725181	0.3713959348	-0.9808198852	0.3267
Age_30_34	30 <= Age <= 34	1	-0.6028718446	0.2903345217	-2.0764731701	0.0379
Age_35_39	35 <= Age <= 39	1	-0.4902132265	0.1906633651	-2.5710929122	0.0101
Age_40_44	40 <= Age <= 44	1	-0.0702663075	0.1205125874	-0.5830619770	0.5599
Age_45_49	45 <= Age <= 49	1	-0.2723054880	0.0971985914	-2.8015373887	0.0051
Age_50_54	50 <= Age <= 54	1	-0.1552091540	0.0770523583	-2.0143335951	0.0440
Age_55_59	55 <= Age <= 59	1	-0.0434962329	0.0629411231	-0.6910622311	0.4895
Age_60_64	60 <= Age <= 64	1	0.0793746302	0.0567081402	1.3997043447	0.1616
Age_70_74	70 <= Age <= 74	1	0.0501880849	0.0490310928	1.0235971114	0.3060
Age_75_79	75 <= Age <= 79	1	0.2002432546	0.0475628801	4.2100742070	<.0001
Age_80_84	80 <= Age <= 84	1	0.2237439347	0.0461215535	4.8511794949	<.0001
Age_85_89	85 <= Age <= 89	1	0.4333994877	0.0464135222	9.3377849141	<.0001
Age_90Plus	Age >= 90	1	0.6511734175	0.0464961564	14.0048870095	<.0001
MALE	Patient Sex Flag: 1=Male / 0=Female	1	0.1031824532	0.0445997564	2.3135205552	0.0207
Age_LT30_MALE	Age < 30 MALE	1	-0.3326314159	0.4616865505	-0.7204702314	0.4712
Age_30_34_MALE	30 <= Age <= 34 MALE	1	0.2862393369	0.3486816811	0.8209187703	0.4117
Age_35_39_MALE	35 <= Age <= 39 MALE	1	0.0071355212	0.2397077024	0.0297675925	0.9763
Age_40_44_MALE	40 <= Age <= 44 MALE	1	-0.2080423944	0.1537410163	-1.3532003326	0.1760
Age_45_49_MALE	45 <= Age <= 49 MALE	1	-0.0380011470	0.1151706661	-0.3299550860	0.7414
Age_50_54_MALE	50 <= Age <= 54 MALE	1	-0.0257106288	0.0901032673	-0.2853462431	0.7754
Age_55_59_MALE	55 <= Age <= 59 MALE	1	-0.0122888772	0.0769703543	-0.1596572774	0.8732
Age_60_64_MALE	60 <= Age <= 64 MALE	1	-0.0329492534	0.0679052970	-0.4852236112	0.6275
Age_70_74_MALE	70 <= Age <= 74 MALE	1	0.0485427776	0.0606671377	0.8001494616	0.4236
Age_75_79_MALE	75 <= Age <= 79 MALE	1	-0.0319775909	0.0590980412	-0.5410939219	0.5884
Age_80_84_MALE	80 <= Age <= 84 MALE	1	0.0149225374	0.0583616524	0.2556907967	0.7982
Age_85_89_MALE	85 <= Age <= 89 MALE	1	-0.0822491060	0.0584607562	-1.4069114268	0.1595
Age_90Plus_MALE	Age >= 90 MALE	1	-0.0686814796	0.0613993977	-1.1186018462	0.2633

Parameter	Label	DF	Estimate	Standard Error	Z Statistics	Prob Z Statistics
ADX004_1234	DRG Tracheostomy w MV 96+ hours w extensive procedure or ECMO	1	2.9019554418	0.1081622112	26.8296608387	<.0001
ADX161_0004	DRG Cardiac defibrillator & heart assist implant	1	1.8354351861	0.0444742221	41.2696411441	<.0001
ADX165_0003	DRG Coronary bypass w AMI or complex PDX	1	-2.111936606	0.0893759944	-23.6297970318	<.0001
ADX165_1200	DRG Coronary bypass w AMI or complex PDX	1	-3.987565150	0.1984668001	-20.0918498551	<.0001
ADX169_0004	DRG Major abdominal vascular procedures	1	1.6509769505	0.0995529868	16.5839017339	<.0001
ADX174_0001	DRG Percutaneous coronary intervention w AMI	1	-4.693142927	0.1152922429	-40.7064934236	<.0001
ADX174_0002	DRG Percutaneous coronary intervention w AMI	1	-3.344453873	0.0695117469	-48.1135063307	<.0001
ADX174_0003	DRG Percutaneous coronary intervention w AMI	1	-1.697014727	0.0490966393	-34.5647839138	<.0001
ADX174_0004	DRG Percutaneous coronary intervention w AMI	1	0.8808190589	0.0333038853	26.4479369657	<.0001
ADX181_0004	DRG Lower extremity arterial procedures #	1	2.5404908021	0.1255035903	20.2423755125	<.0001
ADX182_0004	DRG Other peripheral vascular procedures #	1	2.6714371332	0.0738424530	36.1775242538	<.0001
ADX190_0001	DRG Acute myocardial infarction	1	-3.514081562	0.1232724909	-28.5066160144	<.0001
ADX190_0002	DRG Acute myocardial infarction	1	-2.370272469	0.0614491026	-38.5729387340	<.0001
ADX190_0003	DRG Acute myocardial infarction	1	-0.9146956568	0.0341674636	-26.7709557894	<.0001
ADX190_0004	DRG Acute myocardial infarction	1	1.2110107921	0.0315157562	38.4255666973	<.0001
ADX951_0004	DRG Moderately extensive procedure unrelated to principal diagnosis	1	1.7198394299	0.1247417628	13.7871983787	<.0001

c-statistic=0.895

Composite Weights

To utilize the IQI 90 composite and the National Quality Forum (NQF) endorsed IQI 91 composite, users must use these denominator weights when using the AHRQ QI™ software to compute the composite measure using their own data. These weights are included in the IQI_Composite_Wt_v2020.sas macro. Tables 20 and 21 provide the NQF weights for the composite measures. The sum of the weights for the indicators included in the same composite always equals one.

Table 20. Denominator Weights for IQI 90

INDICATOR	WEIGHT
IQI 08 Esophageal Resection Mortality Rate	0.0071
IQI 09 Pancreatic Resection Mortality Rate	0.0251
IQI 11 Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate	0.0492
IQI 12 Coronary Artery Bypass Graft (CABG) Mortality Rate	0.2478
IQI 30 Percutaneous Coronary Intervention (PCI) Mortality Rate	0.5784
IQI 31 Carotid Endarterectomy Mortality Rate	0.0924
SUM	1.0000

Source: 2017 State Inpatient Databases, Healthcare Cost and Utilization Project, Agency for Healthcare Research and Quality

Table 21. NQF Denominator Weights for IQI 91

INDICATOR	WEIGHT
IQI 15 Acute Myocardial Infarction (AMI) Mortality Rate	0.1611
IQI 16 Heart Failure Mortality Rate	0.3037
IQI 17 Acute Stroke Mortality Rate	0.1668
IQI 18 Gastrointestinal Hemorrhage Mortality Rate	0.1442
IQI 19 Hip Fracture Mortality Rate	0.0722
IQI 20 Pneumonia Mortality Rate	0.1520
SUM	1.0000

Source: 2017 State Inpatient Databases, Healthcare Cost and Utilization Project, Agency for Healthcare Research and Quality

Table A.1. Population Age Categories

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

Table A.2. 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

MDC	DESCRIPTION
9	DISEASES & DISORDERS OF THE SKIN, SUBCUTANEOUS TISSUE & BREAST
10	ENDOCRINE, NUTRITIONAL & METABOLIC DISEASES & DISORDERS
11	DISEASES & DISORDERS OF THE KIDNEY & URINARY TRACT
12	DISEASES & DISORDERS OF THE MALE REPRODUCTIVE SYSTEM
13	DISEASES & DISORDERS OF THE FEMALE REPRODUCTIVE SYSTEM
14	PREGNANCY, CHILDBIRTH & THE PUERPERIUM
15	NEWBORNS & OTHER NEONATES WITH CONDTN ORIG IN PERINATAL PERIOD
16	DISEASES & DISORDERS OF BLOOD, BLOOD FORMING ORGANS, IMMUNOLOGIC DISORDERS
17	MYELOPROLIFERATIVE DISEASES & DISORDERS, POORLY DIFFERENTIATED NEOPLASMS
18	INFECTIOUS & PARASITIC DISEASES, SYSTEMIC OR UNSPECIFIED SITES
19	MENTAL DISEASES & DISORDERS
20	ALCOHOL/DRUG USE & ALCOHOL/DRUG INDUCED ORGANIC MENTAL DISORDERS
21	INJURIES, POISONINGS & TOXIC EFFECTS OF DRUGS
22	BURNS
23	FACTORS INFLUENCING HEALTH STATUS & OTHER CONTACTS WITH HEALTH SERVICES
24	MULTIPLE SIGNIFICANT TRAUMA
25	HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS

Table A.3. 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