

Stroke	2.20%	2.20%	2.10%	2.10%	2.10%	2.10%	1.80%
Vascular Disease with Complications	22.80%	22.90%	22.20%	21.80%	21.70%	21.60%	21.40%
Chronic Obstructive Pulmonary Disease	14.00%	14.20%	13.60%	13.10%	12.80%	12.30%	12.00%

Complication							
Risk Model Variable	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	(Total N=294,268)	(Total N=291,198)	(Total N=294,905)	(Total N=306,429)	(Total N=303,433)	(Total N=321,065)	(Total N=337,525)
Pneumonia	4.20%	4.20%	4.00%	4.10%	3.90%	4.00%	3.70%
End Stage Renal Disease or Dialysis	0.10%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
Renal Failure	7.60%	8.30%	8.60%	9.00%	12.90%	13.40%	14.10%
Decubitus Ulcer	2.60%	2.60%	2.50%	2.40%	2.40%	2.30%	2.10%
Cellulitis	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other Injuries	27.50%	28.30%	28.30%	27.80%	28.00%	27.80%	26.70%
Major Symptoms	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Skeletal Disorders	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
Posttraumatic Osteoarthritis	0.40%	0.40%	0.40%	0.40%	0.40%	0.30%	0.10%
Other Neoplasms	17.80%	18.00%	17.90%	17.80%	18.00%	18.20%	18.30%
Bone Infection	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.60%
Osteoarthritis	95.90%	96.10%	96.30%	96.20%	96.30%	96.40%	96.90%
Osteoporosis	25.20%	25.60%	24.90%	23.90%	23.90%	23.90%	23.40%
Cardiogenic Shock	2.10%	2.20%	2.30%	2.50%	2.40%	2.50%	2.50%
Pleural Effusion	1.50%	1.60%	1.50%	1.50%	1.40%	1.40%	1.40%
Trauma	4.50%	4.80%	4.70%	4.70%	4.90%	5.00%	4.60%
Vertebral Fracture	1.20%	1.20%	1.20%	1.20%	1.20%	1.10%	1.00%
Prior Major Complications	3.50%	3.50%	3.50%	3.50%	5.20%	5.20%	4.90%

Readmission							
Risk Model Variable	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	(Total N=300,299)	(Total N=302,272)	(Total N=306,019)	(Total N=318,489)	(Total N=317,859)	(Total N=340,491)	(Total N=355,009)
Mean Age (years)	75	74.9	74.7	74.5	74.4	74.3	74.3
Male	36.40%	36.40%	36.70%	37.30%	37.20%	37.40%	37.40%
THA Admissions	28.70%	30.00%	30.50%	31.00%	32.10%	32.80%	32.90%
Bilateral THA/TKA	2.70%	2.40%	2.30%	2.30%	2.10%	2.00%	1.70%
Morbid Obesity	4.60%	5.40%	5.90%	6.20%	8.40%	8.80%	9.40%
History of Infection	17.80%	17.90%	17.90%	17.60%	17.50%	17.50%	17.00%
Metastatic Cancer	0.50%	0.60%	0.60%	0.60%	0.50%	0.50%	0.60%
Cancer	18.50%	18.70%	18.40%	18.40%	18.30%	18.30%	18.10%
Diabetes	28.70%	28.90%	28.70%	28.20%	28.10%	27.80%	27.10%
Malnutrition	0.70%	0.80%	0.80%	0.70%	0.70%	0.70%	0.70%
Disorders of Fluids and Electrolytes	12.50%	13.00%	13.10%	12.90%	12.00%	11.90%	11.90%
Rheumatoid Arthritis	8.90%	9.20%	9.30%	9.20%	9.60%	9.70%	10.20%

Table B: Estimated Parameter Coefficients for THA/TKA Readmission and Complication Measure Risk Model Variables over Time

The following two tables present the parameter coefficients for each risk variable in the risk models for the Complication and Readmission measures, respectively. Each model uses a hospital intercept and defines the individual estimate for each variable in the columns marked EST for each 12 month period between July 2010 and June 2017. The next column lists the Standard Error (S.E.); the next, the p-value. The final column for each time period is the Odds Ratio (OR). ORs statistically significantly greater than 1.0 (with p-value <0.05) mean that the variable is significantly associated with a higher risk of readmission or complication; ORs statistically significantly less than 1.0 mean the variable is significantly associated with a reduced risk of the outcome. Each risk variable (except age) is defined using Condition Categories (CCs) CC that map International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) codes (for discharges on or after October 1, 2015) and International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) codes (for discharges prior to October 1, 2015) into clinically coherent groups; the measures use CCs to group ICD-9/10 codes in order to keep as much comorbidity information as possible in the risk models. The CC maps are publicly posted on CMS.gov.

Complication	2010-2011	2010-2011	2010-2011	2010-2011
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.029	0.056	0.000	0
AGE in years over 65	0.027	0.002	0.000	1.027
Bone/joint/muscle infections/necrosis (CC 39)	0.071	0.055	0.196	1.073
Other major cancers (CC 9-12)	-0.037	0.031	0.23	0.964
Cardio-respiratory failure and shock (CC 84), plus ICD-10-CM codes R09.01 and R09.02	0.189	0.056	0.001	1.208
Chronic atherosclerosis or angina (CC 88-89)	0.197	0.023	0.000	1.217
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.357	0.026	0.000	1.429
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.366	0.05	0.000	1.442
Dementia or other specified brain disorders (CC 51-53)	0.193	0.044	0.000	1.213
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.133	0.022	0.000	1.142
Dialysis status (CC 134)	0.111	0.183	0.542	1.118
Major psychiatric disorders (CC 57-59)	0.161	0.048	0.001	1.174
Major complications of medical care and trauma (CC 176-177)	0.251	0.044	0.000	1.285
Male	0.104	0.022	0.000	1.11
Protein-calorie malnutrition (CC 21)	0.983	0.072	0.000	2.673
Metastatic cancer or Acute leukemia (CC 8)	0.09	0.124	0.47	1.094
Morbid obesity (CC 22)	0.311	0.046	0.000	1.365
Respiratory/heart/digestive/urinary/other neoplasms (CC 13-15)	0.022	0.027	0.418	1.022
Osteoarthritis of hip or knee (CC 42)	-0.073	0.051	0.156	0.93
Osteoporosis and other bone/cartilage disorders (CC 43)	-0.07	0.025	0.005	0.933

Other injuries (CC 174)	0.041	0.024	0.079	1.042
Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.035	0.074	0.633	1.036
Pleural effusion/pneumothorax (CC 117)	0.015	0.068	0.826	1.015
Pneumonia (CC 114-116)	0.25	0.043	0.000	1.283
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559)	0.279	0.137	0.042	1.322
Index admission with an elective THA Procedure	0.33	0.022	0.000	1.391
Renal failure (CC 135-140)	0.25	0.033	0.000	1.284
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.051	0.035	0.142	1.053
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9)	0.112	0.231	0.627	1.119
Stroke (CC 99-100)	-0.101	0.065	0.121	0.904
Trauma (CC 166-168, 170-173)	0.173	0.044	0.000	1.189
Number of Procedures (Two vs. One)	0.494	0.056	0.000	1.638
Vascular or circulatory disease (CC 106-109)	0.164	0.024	0.000	1.178
Vertebral fractures without spinal cord injury (CC 169)	0.19	0.077	0.013	1.209
Complication	2011-2012	2011-2012	2011-2012	2011-2012
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.187	0.06	0.000	0
AGE in years over 65	0.026	0.002	0.000	1.026
Bone/joint/muscle infections/necrosis (CC 39)	0.098	0.055	0.074	1.102
Other major cancers (CC 9-12)	-0.104	0.032	0.001	0.901
Cardio-respiratory failure and shock (CC 84), plus ICD-10-CM codes R09.01 and R09.02	0.155	0.056	0.005	1.168
Chronic atherosclerosis or angina (CC 88-89)	0.287	0.023	0.000	1.332
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.41	0.026	0.000	1.506
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.269	0.052	0.000	1.309
Dementia or other specified brain disorders (CC 51-53)	0.225	0.043	0.000	1.252
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.144	0.023	0.000	1.155
Dialysis status (CC 134)	0.646	0.15	0.000	1.908
Major psychiatric disorders (CC 57-59)	0.141	0.048	0.003	1.152
Major complications of medical care and trauma (CC 176-177)	0.329	0.042	0.000	1.389
Male	0.151	0.023	0.000	1.163
Protein-calorie malnutrition (CC 21)	1.104	0.066	0.000	3.016
Metastatic cancer or Acute leukemia (CC 8)	0.135	0.127	0.288	1.144
Morbid obesity (CC 22)	0.475	0.04	0.000	1.609
Respiratory/heart/digestive/urinary/other neoplasms (CC 13-15)	-0.039	0.027	0.159	0.962
Osteoarthritis of hip or knee (CC 42)	0.005	0.055	0.925	1.005
Osteoporosis and other bone/cartilage disorders (CC 43)	-0.068	0.026	0.008	0.935
Other injuries (CC 174)	0.077	0.024	0.001	1.08

Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.211	0.065	0.001	1.235
Pleural effusion/pneumothorax (CC 117)	-0.066	0.069	0.336	0.936
Pneumonia (CC 114-116)	0.236	0.043	0.000	1.266
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559)	-0.164	0.168	0.329	0.849
Index admission with an elective THA Procedure	0.329	0.022	0.000	1.39
Renal failure (CC 135-140)	0.149	0.033	0.000	1.16
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.108	0.034	0.002	1.114
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9)	0.19	0.226	0.401	1.209
Stroke (CC 99-100)	0.11	0.061	0.071	1.116
Trauma (CC 166-168, 170-173)	0.114	0.044	0.009	1.121
Number of Procedures (Two vs. One)	0.548	0.059	0.000	1.731
Vascular or circulatory disease (CC 106-109)	0.101	0.024	0.000	1.106
Vertebral fractures without spinal cord injury (CC 169)	0.178	0.079	0.023	1.195
Complication	2012-2013	2012-2013	2012-2013	2012-2013
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.248	0.061	0.000	0
AGE in years over 65	0.027	0.002	0.000	1.027
Bone/joint/muscle infections/necrosis (CC 39)	0.098	0.055	0.073	1.103
Other major cancers (CC 9-12)	-0.023	0.032	0.48	0.978
Cardio-respiratory failure and shock (CC 84), plus ICD-10-CM codes R09.01 and R09.02	0.21	0.056	0.000	1.234
Chronic atherosclerosis or angina (CC 88-89)	0.33	0.023	0.000	1.391
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.377	0.027	0.000	1.458
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.2	0.055	0.000	1.222
Dementia or other specified brain disorders (CC 51-53)	0.115	0.045	0.011	1.122
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.181	0.023	0.000	1.199
Dialysis status (CC 134)	0.261	0.165	0.115	1.298
Major psychiatric disorders (CC 57-59)	0.216	0.048	0.000	1.241
Major complications of medical care and trauma (CC 176-177)	0.308	0.043	0.000	1.361
Male	0.161	0.023	0.000	1.174
Protein-calorie malnutrition (CC 21)	1.067	0.067	0.000	2.908
Metastatic cancer or Acute leukemia (CC 8)	0.004	0.133	0.979	1.004
Morbid obesity (CC 22)	0.476	0.039	0.000	1.609
Respiratory/heart/digestive/urinary/other neoplasms (CC 13-15)	-0.099	0.028	0.000	0.906
Osteoarthritis of hip or knee (CC 42)	-0.09	0.055	0.103	0.914
Osteoporosis and other bone/cartilage disorders (CC 43)	0.081	0.026	0.002	1.084
Other injuries (CC 174)	0.1	0.024	0.000	1.106

Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.056	0.071	0.426	1.058
Pleural effusion/pneumothorax (CC 117)	-0.148	0.073	0.044	0.862
Pneumonia (CC 114-116)	0.165	0.046	0.000	1.18
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559)	-0.136	0.171	0.427	0.873
Index admission with an elective THA Procedure	0.333	0.023	0.000	1.395
Renal failure (CC 135-140)	0.154	0.033	0.000	1.166
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.145	0.034	0.000	1.156
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9)	0.105	0.221	0.634	1.111
Stroke (CC 99-100)	0.177	0.061	0.004	1.193
Trauma (CC 166-168, 170-173)	0.138	0.044	0.002	1.148
Number of Procedures (Two vs. One)	0.566	0.062	0.000	1.762
Vascular or circulatory disease (CC 106-109)	0.153	0.025	0.000	1.165
Vertebral fractures without spinal cord injury (CC 169)	0.049	0.083	0.553	1.051
Complication	2013-2014	2013-2014	2013-2014	2013-2014
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.318	0.063	0.000	0
AGE in years over 65	0.027	0.002	0.000	1.027
Bone/joint/muscle infections/necrosis (CC 39)	0.187	0.053	0.000	1.206
Other major cancers (CC 9-12)	-0.04	0.032	0.213	0.96
Cardio-respiratory failure and shock (CC 84), plus ICD-10-CM codes R09.01 and R09.02	0.12	0.055	0.028	1.128
Chronic atherosclerosis or angina (CC 88-89)	0.258	0.024	0.000	1.294
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.44	0.027	0.000	1.553
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.285	0.053	0.000	1.33
Dementia or other specified brain disorders (CC 51-53)	0.179	0.045	0.000	1.196
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.093	0.024	0.000	1.097
Dialysis status (CC 134)	0.268	0.163	0.1	1.307
Major psychiatric disorders (CC 57-59)	0.231	0.048	0.000	1.259
Major complications of medical care and trauma (CC 176-177)	0.286	0.043	0.000	1.331
Male	0.111	0.024	0.000	1.118
Protein-calorie malnutrition (CC 21)	0.928	0.071	0.000	2.53
Metastatic cancer or Acute leukemia (CC 8)	0.121	0.128	0.344	1.129
Morbid obesity (CC 22)	0.45	0.039	0.000	1.568
Respiratory/heart/digestive/urinary/other neoplasms (CC 13-15)	-0.044	0.028	0.118	0.957
Osteoarthritis of hip or knee (CC 42)	0.023	0.058	0.693	1.023
Osteoporosis and other bone/cartilage disorders (CC 43)	0	0.026	0.99	1
Other injuries (CC 174)	0.032	0.025	0.197	1.033

Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.246	0.067	0.000	1.279
Pleural effusion/pneumothorax (CC 117)	-0.13	0.072	0.071	0.878
Pneumonia (CC 114-116)	0.256	0.044	0.000	1.291
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559)	0.201	0.151	0.183	1.223
Index admission with an elective THA Procedure	0.316	0.023	0.000	1.371
Renal failure (CC 135-140)	0.243	0.032	0.000	1.275
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.111	0.035	0.001	1.117
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9)	-0.041	0.231	0.858	0.959
Stroke (CC 99-100)	0.057	0.064	0.372	1.059
Trauma (CC 166-168, 170-173)	0.279	0.043	0.000	1.322
Number of Procedures (Two vs. One)	0.427	0.067	0.000	1.533
Vascular or circulatory disease (CC 106-109)	0.151	0.025	0.000	1.163
Vertebral fractures without spinal cord injury (CC 169)	0.075	0.081	0.356	1.078
Complication	2014-2015	2014-2015	2014-2015	2014-2015
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.317	0.063	0.000	0
AGE in years over 65	0.029	0.002	0.000	1.029
Bone/joint/muscle infections/necrosis (CC 39)	0.107	0.056	0.057	1.113
Other major cancers (CC 9-12)	-0.005	0.033	0.884	0.995
Cardio-respiratory failure and shock (CC 84), plus ICD-10-CM codes R09.01 and R09.02	0.191	0.056	0.001	1.21
Chronic atherosclerosis or angina (CC 88-89)	0.266	0.025	0.000	1.304
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.395	0.029	0.000	1.484
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.302	0.055	0.000	1.353
Dementia or other specified brain disorders (CC 51-53)	0.208	0.046	0.000	1.232
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.121	0.024	0.000	1.129
Dialysis status (CC 134)	0.362	0.154	0.019	1.436
Major psychiatric disorders (CC 57-59)	0.164	0.043	0.000	1.178
Major complications of medical care and trauma (CC 176-177)	0.303	0.044	0.000	1.354
Male	0.106	0.024	0.000	1.111
Protein-calorie malnutrition (CC 21)	0.824	0.079	0.000	2.279
Metastatic cancer or Acute leukemia (CC 8)	0.146	0.133	0.27	1.158
Morbid obesity (CC 22)	0.478	0.036	0.000	1.613
Respiratory/heart/digestive/urinary/other neoplasms (CC 13-15)	-0.051	0.029	0.078	0.95
Osteoarthritis of hip or knee (CC 42)	-0.11	0.057	0.054	0.895
Osteoporosis and other bone/cartilage disorders (CC 43)	0.011	0.027	0.692	1.011
Other injuries (CC 174)	0.064	0.025	0.012	1.066

Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.105	0.092	0.255	1.111
Pleural effusion/pneumothorax (CC 117)	-0.044	0.074	0.547	0.957
Pneumonia (CC 114-116)	0.223	0.048	0.000	1.25
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559)	0.207	0.156	0.186	1.23
Index admission with an elective THA Procedure	0.381	0.023	0.000	1.463
Renal failure (CC 135-140)	0.285	0.029	0.000	1.33
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.128	0.035	0.000	1.136
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9)	-0.085	0.23	0.712	0.919
Stroke (CC 99-100)	-0.106	0.07	0.128	0.899
Trauma (CC 166-168, 170-173)	0.124	0.046	0.006	1.132
Number of Procedures (Two vs. One)	0.624	0.065	0.000	1.866
Vascular or circulatory disease (CC 106-109)	0.094	0.026	0.000	1.098
Vertebral fractures without spinal cord injury (CC 169)	0.181	0.082	0.028	1.198
Complication	2015-2016	2015-2016	2015-2016	2015-2016
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.403	0.064	0.000	0
AGE in years over 65	0.027	0.002	0.000	1.028
Bone/joint/muscle infections/necrosis (CC 39)	0.176	0.056	0.002	1.192
Other major cancers (CC 9-12)	0.004	0.034	0.913	1.004
Cardio-respiratory failure and shock (CC 84), plus ICD-10-CM codes R09.01 and R09.02	0.096	0.057	0.093	1.1
Chronic atherosclerosis or angina (CC 88-89)	0.231	0.026	0.000	1.26
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.488	0.029	0.000	1.63
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.272	0.057	0.000	1.312
Dementia or other specified brain disorders (CC 51-53)	0.216	0.047	0.000	1.241
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.132	0.025	0.000	1.141
Dialysis status (CC 134)	0.111	0.176	0.528	1.118
Major psychiatric disorders (CC 57-59)	0.153	0.044	0.000	1.166
Major complications of medical care and trauma (CC 176-177)	0.328	0.044	0.000	1.389
Male	0.122	0.025	0.000	1.13
Protein-calorie malnutrition (CC 21)	0.886	0.077	0.000	2.426
Metastatic cancer or Acute leukemia (CC 8)	-0.053	0.148	0.719	0.948
Morbid obesity (CC 22)	0.527	0.035	0.000	1.694
Respiratory/heart/digestive/urinary/other neoplasms (CC 13-15)	-0.089	0.03	0.003	0.915
Osteoarthritis of hip or knee (CC 42)	-0.094	0.059	0.112	0.91
Osteoporosis and other bone/cartilage disorders (CC 43)	-0.044	0.028	0.116	0.957
Other injuries (CC 174)	0.081	0.026	0.002	1.084

Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	-0.006	0.093	0.95	0.994
Pleural effusion/pneumothorax (CC 117)	-0.002	0.073	0.977	0.998
Pneumonia (CC 114-116)	0.193	0.048	0.000	1.213
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559)	0.354	0.161	0.028	1.424
Index admission with an elective THA Procedure	0.302	0.024	0.000	1.353
Renal failure (CC 135-140)	0.266	0.03	0.000	1.305
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.137	0.036	0.000	1.146
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9)	0.387	0.19	0.041	1.473
Stroke (CC 99-100)	0.171	0.065	0.008	1.186
Trauma (CC 166-168, 170-173)	0.149	0.046	0.001	1.161
Number of Procedures (Two vs. One)	0.52	0.071	0.000	1.683
Vascular or circulatory disease (CC 106-109)	0.12	0.027	0.000	1.128
Vertebral fractures without spinal cord injury (CC 169)	0.103	0.088	0.242	1.109
Complication	2016-2017	2016-2017	2016-2017	2016-2017
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.529	0.071	0.000	0
AGE in years over 65	0.029	0.002	0.000	1.03
Bone/joint/muscle infections/necrosis (CC 39)	0.1	0.06	0.098	1.105
Other major cancers (CC 9-12)	-0.033	0.035	0.344	0.968
Cardio-respiratory failure and shock (CC 84), plus ICD-10-CM codes R09.01 and R09.02	0.206	0.056	0.000	1.228
Chronic atherosclerosis or angina (CC 88-89)	0.282	0.026	0.000	1.326
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.468	0.03	0.000	1.597
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.247	0.06	0.000	1.28
Dementia or other specified brain disorders (CC 51-53)	0.169	0.048	0.000	1.185
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.126	0.025	0.000	1.135
Dialysis status (CC 134)	0.038	0.171	0.824	1.039
Major psychiatric disorders (CC 57-59)	0.255	0.044	0.000	1.29
Major complications of medical care and trauma (CC 176-177)	0.322	0.047	0.000	1.38
Male	0.132	0.025	0.000	1.141
Protein-calorie malnutrition (CC 21)	0.939	0.079	0.000	2.557
Metastatic cancer or Acute leukemia (CC 8)	-0.107	0.144	0.456	0.898
Morbid obesity (CC 22)	0.488	0.035	0.000	1.629
Respiratory/heart/digestive/urinary/other neoplasms (CC 13-15)	-0.009	0.03	0.755	0.991
Osteoarthritis of hip or knee (CC 42)	-0.084	0.066	0.199	0.919
Osteoporosis and other bone/cartilage disorders (CC 43)	0.033	0.028	0.245	1.034
Other injuries (CC 174)	0.109	0.027	0.000	1.116

Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.232	0.08	0.004	1.261
Pleural effusion/pneumothorax (CC 117)	-0.038	0.075	0.612	0.962
Pneumonia (CC 114-116)	0.165	0.05	0.001	1.18
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559)	0.162	0.345	0.638	1.176
Index admission with an elective THA Procedure	0.176	0.025	0.000	1.192
Renal failure (CC 135-140)	0.291	0.029	0.000	1.338
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.156	0.035	0.000	1.169
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9)	0.568	0.19	0.003	1.766
Stroke (CC 99-100)	-0.015	0.074	0.841	0.985
Trauma (CC 166-168, 170-173)	0.18	0.047	0.000	1.197
Number of Procedures (Two vs. One)	0.526	0.076	0.000	1.693
Vascular or circulatory disease (CC 106-109)	0.134	0.027	0.000	1.143
Vertebral fractures without spinal cord injury (CC 169)	0.009	0.096	0.923	1.009

Readmission	2010-2011	2010-2011	2010-2011	2010-2011
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.02567	0.031942	0	
AGE in years over 65	0.032861	0.001361	1.1E-128	1.033407
Specified arrhythmias (CC 96-97)	0.144605	0.018867	1.8E-14	1.155583
Cancer (CC 9-14)	-0.02519	0.020984	0.230026	0.975128
Cellulitis, local skin infection (CC 164)	0.098285	0.027985	0.000445	1.103277
Congestive heart failure (CC 85)	0.253979	0.024517	3.83E-25	1.289145
Chronic atherosclerosis or angina (CC 88-89)	0.207362	0.018316	1.04E-29	1.230428
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.295894	0.021062	8.12E-45	1.344327
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.152421	0.041961	0.000281	1.164651
Dementia or other specified brain disorders (CC 51-53)	0.162332	0.034308	2.23E-06	1.176251
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.147854	0.017994	2.1E-16	1.159344
Disorders of fluid/electrolyte/acid-base (CC 23-24)	0.127684	0.023026	2.94E-08	1.136194
Dialysis status (CC 134)	0.52827	0.130074	4.88E-05	1.695996
Severe hematological disorders (CC 46)	0.314898	0.074141	2.16E-05	1.37012
Hypertension (CC 95)	0.205289	0.026318	6.19E-15	1.227879
History of infection (CC 1, 3-7)	0.097779	0.020386	1.62E-06	1.102719
Major psychiatric disorders (CC 57-59)	0.178892	0.018031	3.39E-23	1.195891
Major symptoms, abnormalities (CC 178)	0.297047	0.034246	4.2E-18	1.345879
Male	0.125892	0.017404	4.72E-13	1.13416
Protein-calorie malnutrition (CC 21)	0.257575	0.07181	0.000335	1.293789
Metastatic cancer or Acute leukemia (CC 8)	0.239909	0.094164	0.010842	1.271133
Morbid obesity (CC 22)	0.287948	0.035056	2.15E-16	1.333688

Other injuries (CC 174)	0.098921	0.01803	4.1E-08	1.103979
Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.02528	0.056326	0.653562	1.025603
Pneumonia (CC 114-116)	0.104771	0.033947	0.002027	1.110457
Polyneuropathy (CC 75, 81)	0.137282	0.029393	3E-06	1.147152
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559) (CC 203)	0.074737	0.119762	0.5326	1.077601
THA Procedure	0.087798	0.018057	1.16E-06	1.091767
Renal failure (CC 135-140)	0.269335	0.02601	4.01E-25	1.309094
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.144275	0.026695	6.5E-08	1.155202
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9) (CC 202)	-0.37061	0.242079	0.125784	0.690313
Stroke (CC 99-100)	0.100884	0.047121	0.03228	1.106148
Number of Procedures (Two vs. One)	0.287476	0.049229	5.24E-09	1.333058
Vascular or circulatory disease (CC 106-109)	0.128116	0.018908	1.24E-11	1.136685
Readmission	2011-2012	2011-2012	2011-2012	2011-2012
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.05613	0.032072	0	
AGE in years over 65	0.032141	0.001371	2.2E-121	1.032663
Specified arrhythmias (CC 96-97)	0.164138	0.018981	5.29E-18	1.178377
Cancer (CC 9-14)	-0.03025	0.021077	0.15123	0.970203
Cellulitis, local skin infection (CC 164)	0.121044	0.027917	1.45E-05	1.128674
Congestive heart failure (CC 85)	0.202376	0.025151	8.55E-16	1.224308
Chronic atherosclerosis or angina (CC 88-89)	0.184754	0.018642	3.77E-23	1.202923
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.26204	0.021374	1.52E-34	1.299579
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.165835	0.042386	9.14E-05	1.180378
Dementia or other specified brain disorders (CC 51-53)	0.144955	0.03416	2.2E-05	1.155988
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.125003	0.018183	6.23E-12	1.133152
Disorders of fluid/electrolyte/acid-base (CC 23-24)	0.120478	0.023096	1.83E-07	1.128036
Dialysis status (CC 134)	0.738669	0.116235	2.09E-10	2.093148
Severe hematological disorders (CC 46)	0.227343	0.08143	0.005241	1.255261
Hypertension (CC 95)	0.230788	0.02673	5.94E-18	1.259592
History of infection (CC 1, 3-7)	0.145456	0.020315	8.08E-13	1.156567
Major psychiatric disorders (CC 57-59)	0.167825	0.018205	3.04E-20	1.182729
Major symptoms, abnormalities (CC 178)	0.207891	0.034577	1.83E-09	1.231079
Male	0.159414	0.017479	7.55E-20	1.172824
Protein-calorie malnutrition (CC 21)	0.216515	0.069713	0.001898	1.241742
Metastatic cancer or Acute leukemia (CC 8)	0.124466	0.097604	0.202235	1.132543
Morbid obesity (CC 22)	0.32722	0.032547	8.92E-24	1.387107
Other injuries (CC 174)	0.116125	0.018048	1.24E-10	1.123136
Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.156241	0.052603	0.002976	1.169108

Pneumonia (CC 114-116)	0.138864	0.034162	4.81E-05	1.148967
Polyneuropathy (CC 75, 81)	0.129211	0.02887	7.62E-06	1.13793
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559) (CC 203)	0.11948	0.121605	0.325838	1.126911
THA Procedure	0.088213	0.017994	9.47E-07	1.092221
Renal failure (CC 135-140)	0.236265	0.025815	5.61E-20	1.26651
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.133606	0.026607	5.13E-07	1.142942
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9) (CC 202)	-0.33487	0.242533	0.16737	0.715433
Stroke (CC 99-100)	0.084288	0.048118	0.07983	1.087942
Number of Procedures (Two vs. One)	0.315234	0.051688	1.07E-09	1.37058
Vascular or circulatory disease (CC 106-109)	0.085515	0.019262	9.02E-06	1.089278
Readmission	2012-2013	2012-2013	2012-2013	2012-2013
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.19053	0.033172	0	
AGE in years over 65	0.034893	0.00142	3.6E-133	1.035509
Specified arrhythmias (CC 96-97)	0.159927	0.019646	3.95E-16	1.173426
Cancer (CC 9-14)	-0.01718	0.021879	0.432329	0.982967
Cellulitis, local skin infection (CC 164)	0.123894	0.029146	2.13E-05	1.131895
Congestive heart failure (CC 85)	0.192188	0.026485	3.99E-13	1.211899
Chronic atherosclerosis or angina (CC 88-89)	0.170228	0.019445	2.06E-18	1.185575
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.288433	0.022216	1.57E-38	1.334335
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.181682	0.044091	3.78E-05	1.199233
Dementia or other specified brain disorders (CC 51-53)	0.205275	0.034873	3.95E-09	1.227862
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.144788	0.01885	1.58E-14	1.155795
Disorders of fluid/electrolyte/acid-base (CC 23-24)	0.094116	0.023942	8.46E-05	1.098687
Dialysis status (CC 134)	0.726097	0.123225	3.81E-09	2.066996
Severe hematological disorders (CC 46)	0.228878	0.101217	0.023744	1.257188
Hypertension (CC 95)	0.259289	0.02776	9.66E-21	1.296008
History of infection (CC 1, 3-7)	0.059702	0.021372	0.005214	1.06152
Major psychiatric disorders (CC 57-59)	0.157045	0.018888	9.24E-17	1.170048
Major symptoms, abnormalities (CC 178)	0.277243	0.034853	1.8E-15	1.319487
Male	0.161622	0.018075	3.85E-19	1.175416
Protein-calorie malnutrition (CC 21)	0.252956	0.070097	0.000308	1.287827
Metastatic cancer or Acute leukemia (CC 8)	0.104809	0.102169	0.30497	1.110498
Morbid obesity (CC 22)	0.276733	0.032788	3.18E-17	1.318814
Other injuries (CC 174)	0.09838	0.018754	1.56E-07	1.103382
Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.135952	0.054154	0.012058	1.145627
Pneumonia (CC 114-116)	0.18035	0.035025	2.62E-07	1.197636
Polyneuropathy (CC 75, 81)	0.117445	0.029366	6.35E-05	1.12462

Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559) (CC 203)	-0.15027	0.139139	0.280156	0.860479
THA Procedure	0.103656	0.018529	2.22E-08	1.109218
Renal failure (CC 135-140)	0.223474	0.026328	2.11E-17	1.250413
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.152318	0.027132	1.98E-08	1.164531
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9) (CC 202)	-0.1691	0.208108	0.416482	0.844427
Stroke (CC 99-100)	0.160304	0.048354	0.000916	1.173867
Number of Procedures (Two vs. One)	0.348775	0.054492	1.55E-10	1.41733
Vascular or circulatory disease (CC 106-109)	0.15477	0.019884	7.07E-15	1.16739
Readmission	2013-2014	2013-2014	2013-2014	2013-2014
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.205	0.032774	0	
AGE in years over 65	0.036128	0.001433	5.1E-140	1.036788
Specified arrhythmias (CC 96-97)	0.116506	0.019989	5.6E-09	1.123564
Cancer (CC 9-14)	-0.01847	0.022246	0.406454	0.981702
Cellulitis, local skin infection (CC 164)	0.068633	0.030414	0.024033	1.071043
Congestive heart failure (CC 85)	0.261676	0.026615	8.27E-23	1.299105
Chronic atherosclerosis or angina (CC 88-89)	0.188765	0.019864	2.06E-21	1.207757
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.315596	0.022647	3.99E-44	1.371076
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.139464	0.045299	0.002079	1.149658
Dementia or other specified brain disorders (CC 51-53)	0.20141	0.035692	1.67E-08	1.223126
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.118143	0.019266	8.68E-10	1.125405
Disorders of fluid/electrolyte/acid-base (CC 23-24)	0.127969	0.024171	1.2E-07	1.136518
Dialysis status (CC 134)	0.626471	0.118427	1.22E-07	1.870996
Severe hematological disorders (CC 46)	0.483369	0.09771	7.54E-07	1.621528
Hypertension (CC 95)	0.212334	0.027581	1.38E-14	1.236561
History of infection (CC 1, 3-7)	0.084385	0.021667	9.84E-05	1.088048
Major psychiatric disorders (CC 57-59)	0.159991	0.019147	6.52E-17	1.1735
Major symptoms, abnormalities (CC 178)	0.266121	0.035119	3.53E-14	1.304893
Male	0.115376	0.018402	3.62E-10	1.122295
Protein-calorie malnutrition (CC 21)	0.291456	0.072048	5.23E-05	1.338374
Metastatic cancer or Acute leukemia (CC 8)	0.090749	0.102501	0.375971	1.094994
Morbid obesity (CC 22)	0.28654	0.032425	9.87E-19	1.331812
Other injuries (CC 174)	0.07813	0.019162	4.55E-05	1.081264
Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.146765	0.056143	0.008946	1.158081
Pneumonia (CC 114-116)	0.107788	0.035986	0.002742	1.113811
Polyneuropathy (CC 75, 81)	0.163985	0.0291	1.75E-08	1.178197
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559) (CC 203)	0.171874	0.127967	0.179237	1.187528
THA Procedure	0.077326	0.018776	3.82E-05	1.080394

Renal failure (CC 135-140)	0.256574	0.026061	7.24E-23	1.292494
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.148656	0.02764	7.53E-08	1.160274
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9) (CC 202)	-0.13894	0.210986	0.510201	0.870281
Stroke (CC 99-100)	0.126371	0.049847	0.01124	1.134703
Number of Procedures (Two vs. One)	0.188705	0.05976	0.00159	1.207685
Vascular or circulatory disease (CC 106-109)	0.126332	0.020315	5.02E-10	1.134659
Readmission	2014-2015	2014-2015	2014-2015	2014-2015
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.28497	0.032868	0	
AGE in years over 65	0.039336	0.001458	4.9E-160	1.04012
Specified arrhythmias (CC 96-97)	0.151037	0.020173	7.06E-14	1.163039
Cancer (CC 9-14)	-0.02945	0.022574	0.1921	0.970984
Cellulitis, local skin infection (CC 164)	0.152618	0.030335	4.88E-07	1.164879
Congestive heart failure (CC 85)	0.184758	0.027465	1.74E-11	1.202927
Chronic atherosclerosis or angina (CC 88-89)	0.185914	0.020205	3.55E-20	1.204319
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.322523	0.023111	3.01E-44	1.380607
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.194374	0.045003	1.57E-05	1.21455
Dementia or other specified brain disorders (CC 51-53)	0.152747	0.036673	3.11E-05	1.16503
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.121994	0.019414	3.31E-10	1.129747
Disorders of fluid/electrolyte/acid-base (CC 23-24)	0.168657	0.02475	9.48E-12	1.183714
Dialysis status (CC 134)	0.71058	0.114734	5.9E-10	2.035171
Severe hematological disorders (CC 46)	0.338768	0.107802	0.001675	1.403218
Hypertension (CC 95)	0.153886	0.025854	2.65E-09	1.166358
History of infection (CC 1, 3-7)	0.0595	0.022059	0.00699	1.061306
Major psychiatric disorders (CC 57-59)	0.128434	0.02051	3.8E-10	1.137046
Major symptoms, abnormalities (CC 178)	0.319662	0.034662	2.93E-20	1.376662
Male	0.150985	0.018626	5.25E-16	1.162979
Protein-calorie malnutrition (CC 21)	0.039166	0.081674	0.631556	1.039943
Metastatic cancer or Acute leukemia (CC 8)	0.171152	0.107266	0.110583	1.186671
Morbid obesity (CC 22)	0.282388	0.029639	1.62E-21	1.326293
Other injuries (CC 174)	0.105827	0.019339	4.45E-08	1.11163
Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.166483	0.069595	0.01675	1.181144
Pneumonia (CC 114-116)	0.158645	0.036495	1.38E-05	1.171922
Polyneuropathy (CC 75, 81)	0.10851	0.023687	4.63E-06	1.114616
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559) (CC 203)	-0.1555	0.147746	0.292569	0.855984
THA Procedure	0.131442	0.018784	2.61E-12	1.140472
Renal failure (CC 135-140)	0.312766	0.023118	1.08E-41	1.367201
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.130422	0.027779	2.67E-06	1.139309

Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9) (CC 202)	-0.05991	0.189152	0.751438	0.941847
Stroke (CC 99-100)	0.184573	0.049015	0.000166	1.202705
Number of Procedures (Two vs. One)	0.390166	0.057961	1.68E-11	1.477226
Vascular or circulatory disease (CC 106-109)	0.118336	0.020624	9.61E-09	1.125622
Readmission	2015-2016	2015-2016	2015-2016	2015-2016
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.38136	0.03294	0	
AGE in years over 65	0.03827	0.001459	1.8E-151	1.039012
Specified arrhythmias (CC 96-97)	0.160387	0.02	1.07E-15	1.173965
Cancer (CC 9-14)	-0.02547	0.022404	0.255673	0.974855
Cellulitis, local skin infection (CC 164)	0.174708	0.03023	7.51E-09	1.190898
Congestive heart failure (CC 85)	0.239885	0.026944	5.46E-19	1.271103
Chronic atherosclerosis or angina (CC 88-89)	0.137981	0.020297	1.06E-11	1.147954
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.354636	0.022975	9.78E-54	1.425661
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.182955	0.045559	5.93E-05	1.20076
Dementia or other specified brain disorders (CC 51-53)	0.176621	0.036129	1.02E-06	1.193179
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.148168	0.019218	1.26E-14	1.159708
Disorders of fluid/electrolyte/acid-base (CC 23-24)	0.16559	0.024565	1.58E-11	1.18009
Dialysis status (CC 134)	0.551656	0.120923	5.07E-06	1.736126
Severe hematological disorders (CC 46)	0.301444	0.105252	0.004183	1.35181
Hypertension (CC 95)	0.209981	0.026021	7.08E-16	1.233654
History of infection (CC 1, 3-7)	0.041492	0.021978	0.059042	1.042365
Major psychiatric disorders (CC 57-59)	0.126621	0.020525	6.87E-10	1.134987
Major symptoms, abnormalities (CC 178)	0.303042	0.035202	7.42E-18	1.353972
Male	0.123293	0.018537	2.91E-11	1.131216
Protein-calorie malnutrition (CC 21)	0.206308	0.07512	0.006026	1.229132
Metastatic cancer or Acute leukemia (CC 8)	0.18922	0.101724	0.062867	1.208306
Morbid obesity (CC 22)	0.352258	0.028073	4.16E-36	1.422276
Other injuries (CC 174)	0.113882	0.019218	3.11E-09	1.12062
Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.14065	0.066214	0.033657	1.151022
Pneumonia (CC 114-116)	0.085147	0.036653	0.020177	1.088878
Polyneuropathy (CC 75, 81)	0.105741	0.023313	5.74E-06	1.111534
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559) (CC 203)	0.210961	0.156304	0.177119	1.234864
THA Procedure	0.117663	0.018587	2.45E-10	1.124865
Renal failure (CC 135-140)	0.291691	0.022658	6.45E-38	1.33869
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.176269	0.026858	5.28E-11	1.192759
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9) (CC 202)	0.140792	0.173828	0.417968	1.151186
Stroke (CC 99-100)	0.08446	0.050899	0.097046	1.088129

Number of Procedures (Two vs. One)	0.333455	0.060798	4.15E-08	1.395783
Vascular or circulatory disease (CC 106-109)	0.158178	0.02041	9.21E-15	1.171374
Readmission	2016-2017	2016-2017	2016-2017	2016-2017
Risk Variable	EST	S.E.	p-value	OR
Intercept	-4.37418	0.032135	0	
AGE in years over 65	0.038048	0.001457	3.4E-150	1.038781
Specified arrhythmias (CC 96-97)	0.173494	0.019739	1.51E-18	1.189453
Cancer (CC 9-14)	-0.03132	0.022323	0.160665	0.96917
Cellulitis, local skin infection (CC 164)	0.076556	0.031366	0.014657	1.079563
Congestive heart failure (CC 85)	0.227864	0.026699	1.41E-17	1.255914
Chronic atherosclerosis or angina (CC 88-89)	0.183832	0.020034	4.5E-20	1.201814
Chronic obstructive pulmonary disease (COPD) (CC 111)	0.369795	0.022832	5.63E-59	1.447438
Decubitus ulcer or Chronic skin ulcer (CC 157-161)	0.09278	0.048085	0.053668	1.09722
Dementia or other specified brain disorders (CC 51-53)	0.213238	0.035083	1.22E-09	1.237679
Diabetes mellitus (DM) or DM complications (CC 17-19, 122-123)	0.102812	0.019211	8.72E-08	1.108283
Disorders of fluid/electrolyte/acid-base (CC 23-24)	0.184293	0.024115	2.14E-14	1.202368
Dialysis status (CC 134)	0.627715	0.111636	1.88E-08	1.873326
Severe hematological disorders (CC 46)	0.569653	0.093893	1.3E-09	1.767654
Hypertension (CC 95)	0.160963	0.02498	1.17E-10	1.174642
History of infection (CC 1, 3-7)	0.093005	0.021669	1.77E-05	1.097467
Major psychiatric disorders (CC 57-59)	0.16967	0.020652	2.12E-16	1.184913
Major symptoms, abnormalities (CC 178)	0.299416	0.035071	1.38E-17	1.34907
Male	0.093546	0.018398	3.69E-07	1.098061
Protein-calorie malnutrition (CC 21)	0.30943	0.072953	2.22E-05	1.362648
Metastatic cancer or Acute leukemia (CC 8)	0.03978	0.100652	0.692679	1.040582
Morbid obesity (CC 22)	0.313006	0.027376	2.88E-30	1.36753
Other injuries (CC 174)	0.137936	0.019112	5.32E-13	1.147902
Hemiplegia, paraplegia, paralysis, functional disability (CC 70-74, 103-104, 189-190)	0.244975	0.058625	2.93E-05	1.27759
Pneumonia (CC 114-116)	0.090612	0.03722	0.014912	1.094845
Polyneuropathy (CC 75, 81)	0.079148	0.022773	0.00051	1.082364
Post traumatic osteoarthritis (ICD-9 codes 716.15, 716.16, ICD-10 codes M12.551, M12.552, M12.559) (CC 203)	0.095914	0.302847	0.751464	1.100665
THA Procedure	0.146058	0.018282	1.36E-15	1.157263
Renal failure (CC 135-140)	0.284366	0.022125	8.47E-38	1.328919
Rheumatoid arthritis and inflammatory connective tissue disease (CC 40)	0.138408	0.026203	1.28E-07	1.148444
Skeletal deformities (ICD-9 code 755.63, ICD-10 code Q65.89, Q65.9) (CC 202)	0.292335	0.165774	0.077824	1.339552
Stroke (CC 99-100)	0.120611	0.051721	0.019703	1.128186
Number of Procedures (Two vs. One)	0.247588	0.066744	0.000208	1.280932
Vascular or circulatory disease (CC 106-109)	0.119361	0.020283	3.99E-09	1.126776

