

#### 5.4.4 Risk/Case-Mix Adjustment Modeling and/or Stratification Results CBE ID 5110, Standardized Readmission Ratio (SRR) for dialysis facilities

Please see section 5.4.6 for a list of the final set of risk factors used in the model.

##### Final Model Results

Covariate	Est Coef	P-value	Odds Ratio
Female	0.027	0.0031	1.027
Age -14 (if age < 14, else 0)	0.018	0.4287	1.019
Age -60 (if age < 60, else 0)	-0.009	0.0000	N/A*
Age -60 (if age >= 60, else 0)	0.001	0.2596	N/A*
Diabetes as Cause of ESRD	-0.038	0.0267	N/A*
Diabetes * ((Age < 60) - 60)	-0.002	0.1198	N/A*
Diabetes * ((Age >= 60) - 60)	0.001	0.3078	N/A*
Underweight	0.107	0.0000	1.113
Overweight	-0.053	0.0000	0.948
Obese	-0.094	0.0000	0.910
Duration of ESRD (1-2 years)	0.164	0.0000	1.178
Duration of ESRD (2-3 years)	0.174	0.0000	1.190
Duration of ESRD (3-5 years)	0.151	0.0000	1.163
Duration of ESRD (5+ years)	0.109	0.0000	1.115
Medicare Advantage during month of index discharge start date	-0.093	0.0000	0.911
1-90 days spent in Nursing Home	0.088	0.0000	1.092

Covariate	Est Coef	P- value	Odds Ratio
> 90 days spent in Nursing Home	0.010	0.5435	1.010
Immunizations and screening for infectious disease	0.038	0.0003	1.038
Acute myocardial infarction	0.107	0.0000	1.113
Coronary atherosclerosis and other heart disease	0.064	0.0000	1.067
Nonspecific chest pain	0.148	0.0000	1.160
Cardiac dysrhythmias	0.080	0.0000	1.083
Cardiac arrest and ventricular fibrillation	-0.062	0.0147	0.940
Congestive heart failure; nonhypertensive	0.091	0.0000	1.095
Other circulatory disease	0.067	0.0000	1.069
Phlebitis; thrombophlebitis and thromboembolism	0.059	0.0000	1.060
Hemorrhoids	0.050	0.0043	1.052
Other diseases of veins and lymphatics	0.063	0.0000	1.065
Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	0.044	0.0000	1.045
Chronic obstructive pulmonary disease and bronchiectasis	0.120	0.0000	1.128
Pleurisy; pneumothorax; pulmonary collapse	0.106	0.0000	1.112
Respiratory failure; insufficiency; arrest (adult)	0.122	0.0000	1.130
Other lower respiratory disease	0.094	0.0000	1.099
Other upper respiratory disease	0.026	0.1501	1.026
Intestinal infection	0.095	0.0000	1.100

Covariate	Est Coef	P-value	Odds Ratio
Esophageal disorders	0.026	0.0057	1.026
Gastritis and duodenitis	0.082	0.0000	1.086
Other disorders of stomach and duodenum	0.174	0.0000	1.190
Other liver diseases	0.137	0.0000	1.147
Pancreatic disorders (not diabetes)	0.048	0.0107	1.049
Gastrointestinal hemorrhage	0.137	0.0000	1.147
Noninfectious gastroenteritis	0.085	0.0000	1.088
Other gastrointestinal disorders	0.088	0.0000	1.092
Chronic kidney disease	0.019	0.9342	1.020
Urinary tract infections	0.060	0.0000	1.062
Skin and subcutaneous tissue infections	0.046	0.0002	1.047
Other inflammatory condition of skin	0.111	0.0000	1.118
Chronic ulcer of skin	0.092	0.0000	1.097
Infective arthritis and osteomyelitis (except that caused by tuberculosis or sexually transmitted disease)	-0.062	0.0001	0.940
Complication of device; implant or graft	0.019	0.0420	1.019
Other injuries and conditions due to external causes	0.080	0.0000	1.083
Abdominal pain	0.144	0.0000	1.155
Allergic reactions	0.064	0.0000	1.066
Administrative/social admission	0.146	0.0000	1.157

Covariate	Est Coef	P-value	Odds Ratio
Residual codes; unclassified	0.046	0.0000	1.047
Secondary malignancies	0.266	0.0000	1.305
Diabetes mellitus with complications	0.050	0.0000	1.051
Other endocrine disorders	0.098	0.0000	1.103
Nutritional deficiencies	0.114	0.0000	1.121
Fluid and electrolyte disorders	0.124	0.0000	1.132
Deficiency and other anemia	0.062	0.0030	1.064
Hepatitis	0.110	0.0000	1.117
Other hematologic conditions	0.104	0.0000	1.110
Anxiety disorders	0.103	0.0000	1.108
Schizophrenia and other psychotic disorders	0.147	0.0000	1.158
Alcohol-related disorders	0.167	0.0000	1.182
Substance-related disorders	0.150	0.0000	1.161
Other nervous system disorders	0.137	0.0000	1.147
Heart valve disorders	0.052	0.0000	1.053
Peri-; endo-; and myocarditis; cardiomyopathy (except that caused by tuberculosis or sexually transmitted disease)	0.021	0.0484	1.021
Discharge with high-risk condition	0.433	0.0000	1.543
Length of Hospitalization, 2nd quartile	0.082	0.0000	1.086
Length of Hospitalization, 3rd quartile	0.155	0.0000	1.168

Covariate	Est Coef	P-value	Odds Ratio
Length of Hospitalization, 4th quartile	0.289	0.0000	1.336

\*Odds ratios are not shown for interaction terms or main effects of variables that have interaction terms.

The table below shows the parameter estimates for patient and area level SDS/SES variables tested based on a model that included these variables along with the original covariates.

Covariate	Estimate	P-value	Odds Ratio
Race: Black	-0.059	<.0001	0.94
Race: AAPI	-0.103	<.0001	0.90
Race: Native American	-0.059	0.112	0.94
Race: Other	-0.124	0.171	0.88
Hispanic Ethnicity	-0.088	<.0001	0.92
Dual Eligibility	0.339	<.0001	N/A*
Dual Eligibility*Female	-0.007	0.731	N/A*
ADI National Rank of Patient's ZIP Code of Residence	-0.001	0.064	1.00

\*Odds ratios are not shown for interaction terms or main effects of variables that have interaction terms. See below for interpretation.

The Dual Eligibility (DE) main effect can be interpreted as the effect of DE for males. The OR=1.40 meaning that males with dual eligibility have 40% higher odds of hospitalization than those without dual eligibility, all else equal. The interaction between Dual Eligibility and Female is negative but not statistically significant. This means that the difference in hospitalization risk for DE females compared to non-DE females is not quite as large as the difference for DE males compared to non-DE males, but the difference is not significant. To calculate the OR for DE females compared to non-DE females, we sum the dual eligibility and dual eligibility by female interaction terms before exponentiating to get an OR of 1.39.