

SUPPLEMENTAL MATERIAL

Appendix

Comparison of Ischemic Stroke Outcomes and, Patient and Hospital Characteristics by Race/Ethnicity and Socioeconomic Status

Table A1. Comparison Included and Excluded Observations
(N=155,539 discharges for Acute Ischemic Stroke in all non-federal hospitals in AZ, CA, FL, MA, NJ, NY, PA and TX, 2007)

	Included	Excluded
# admissions	147,780	7759
Female%	53.7	42.8
Age (%)		
18-64	29.4	41.2
65-74	20.7	20.5
75-84	29.8	23.9
85+	20.2	14.4
Race/ethnicity (%)		
Whites	66.7	62.9
Blacks	13.9	17.4
Hispanics	11.5	14.1
Other	8.0	5.6
Comorbidity (%)		
Atrial fibrillation	23.2	18.1
Hypertension	77.6	75.9
Diabetes	34.2	32.3
Coronary Heart Disease	27.5	23.8
Congestive Heart Failure	13.7	12.3
Charlson Score		
0	47.8	47.5
1	14.6	13.8
2	24.1	25.0
3+	13.4	13.7
Inpatient Mortality (%)	5.5	4.6
LOS, Median	4	4

Table A2. Inpatient Mortality Risk Factors: Regression Estimates

	Model 1 Adjusted for Patient Characteristics			Model 2 Adjusted for Patient & Hospital Characteristics		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
		Low	High		Low	High
Age: 18-64	1.0	Reference		1.0	Reference	
65-74	1.26***	1.17	1.37	1.27***	1.18	1.38
75-84	1.54***	1.44	1.66	1.56***	1.45	1.68
85+	2.18***	2.02	2.35	2.21***	2.05	2.38
Female	1.02	0.97	1.07	1.03	0.98	1.08
Comorbidity						
Diabetes	0.97	0.93	1.03	0.97	0.92	1.03
Hypertension	0.63***	0.6	0.66	0.63***	0.6	0.66
Congestive Heart Failure	1.80***	1.7	1.9	1.79***	1.7	1.9
Coronary Heart Disease	1.17***	1.11	1.23	1.17***	1.11	1.23
Atrial fibrillation	1.81***	1.72	1.9	1.81***	1.72	1.9
Charlson Score						
0	1.0	Reference		1.0	Reference	
1	1.21***	1.13	1.31	1.22***	1.13	1.31
2	1.48***	1.39	1.57	1.47***	1.39	1.56
3+	2.15***	2.02	2.29	2.15***	2.02	2.3
State						
Arizona	0.43***	0.35	0.53	0.43***	0.34	0.54
California	1.0	Reference		1.0	Reference	
Florida	0.66***	0.58	0.74	0.68***	0.6	0.77
Massachusetts	1.07	0.91	1.26	1.07	0.9	1.27
New Jersey	0.88	0.75	1.02	0.9	0.77	1.05
New York	1.29***	1.15	1.44	1.24***	1.1	1.4
Pennsylvania	0.75***	0.66	0.85	0.78***	0.68	0.88
Texas	0.84**	0.75	0.94	0.85**	0.76	0.96
ICU Beds						
<= 14				1.0	Reference	
15 to 36				0.93	0.86	1.01
>= 37				0.95	0.85	1.06
Nursing staff (# patients/nurse)						
<= 2				1.0	Reference	
2.01 to 3.00				0.96	0.87	1.04
3.01 to 4.00				0.95	0.85	1.06
> 4.00				0.99	0.86	1.13
Ownership						
Non Profit				1.0	Reference	
For Profit				0.91	0.82	1.02
Government, non-Federal				1.20**	1.07	1.36
Teaching hospital, %				1.12	0.99	1.26
Safety Net hospital, %				1.14**	1.05	1.24
Constant	0.03***	0.03	0.04	0.03***	0.03	0.03
C-statistic	0.74			0.74		

Note: *, ** and *** denote $p < 0.05$, $p < 0.01$ and $p < 0.001$ respectively

Table A3. Risk Factors for Length of Stay > 4 days: Regression Estimates

	Model 1 Adjust for Patient Characteristics			Model 2 Adjust for Patient & Hospital Characteristics		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
		Low	High		Low	High
Age						
18-64	Reference			Reference		
65-74	0.95**	0.92	0.99	0.96**	0.93	0.99
75-84	1.07***	1.04	1.1	1.07***	1.04	1.11
85+	1.04*	1	1.07	1.04*	1	1.08
Female	1.08***	1.05	1.1	1.08***	1.05	1.1
Comorbidity						
Diabetes	1.18***	1.16	1.21	1.18***	1.16	1.21
Hypertension	0.95***	0.92	0.97	0.95***	0.92	0.97
Congestive Heart Failure	1.56***	1.5	1.61	1.56***	1.5	1.61
Coronary Heart Disease	0.99	0.96	1.01	0.98	0.96	1.01
Atrial fibrillation	1.71***	1.66	1.76	1.71***	1.66	1.76
Charlson Score						
0	Reference			Reference		
1	1.40***	1.35	1.45	1.40***	1.35	1.45
2	1.98***	1.93	2.04	1.98***	1.93	2.03
3+	2.66***	2.56	2.75	2.66***	2.56	2.75
State						
Arizona	0.93	0.78	1.1	0.93*	0.87	0.98
California	Reference			Reference		
Florida	1.38***	1.24	1.53	1.39***	1.34	1.44
Massachusetts	0.97	0.83	1.14	1.09**	1.03	1.15
New Jersey	2.26***	1.95	2.62	2.14***	2.04	2.24
New York	2.86***	2.56	3.18	2.66***	2.55	2.76
Pennsylvania	1.47***	1.31	1.65	1.47***	1.41	1.53
Texas	1.32***	1.19	1.46	1.41***	1.36	1.46
Ownership, %						
Non Profit	Reference			Reference		
For Profit				1.17***	1.07	1.29
Government, non-Federal				1.03	0.92	1.16
Bed size (# inpatient beds)						
<= 199	Reference			Reference		
200 to 499				1.08	0.99	1.18
>= 500				1.26**	1.07	1.48
ICU Beds						
<= 14	Reference			Reference		
15 to 36				1.06	0.97	1.16
>= 37				1.15*	1.01	1.31
Nursing staff (# patients/nurse)						
<= 2	Reference			Reference		
2.01 to 3.00				1.07	0.99	1.16
3.01 to 4.00				1.16**	1.05	1.28

> 4.00				1.22**	1.08	1.39
Emergency department admissions/day						
<= 80				Reference		
81 to 175				1	0.92	1.09
>= 176				0.95	0.84	1.08
Teaching hospital, %				1.1	0.97	1.26
Safety Net hospital, %				1.01	0.94	1.1
Constant	0.33***	0.31	0.36	0.25***	0.21	0.3

Note: *, ** and *** denote $p < 0.05$, $p < 0.01$ and $p < 0.001$ respectively

Table A4. Unadjusted and Adjusted Inpatient Mortality Rates by Race, Ethnicity and Socioeconomic Status

Population Cohort	Race/Ethnicity or SES Stratum	N	Observed Inpatient Mortality, %	Relative Inpatient Mortality Rates								
				Unadjusted			Adjusted for Patient Characteristics			Adjusted for Patient and Hospital Characteristics		
				Odds Ratio	95% CI Low High		Odds Ratio	95% CI Low High		Odds Ratio	95% CI Low High	
Comparisons by Race & Ethnicity												
All	White	98,512	5.8	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	20,579	4.4	0.75	0.70	0.80	1.02	0.94	1.1	0.96	0.89	1.04
	Hisp	16,927	4.5	0.76	0.70	0.82	0.98	0.91	1.07	0.97	0.89	1.06
Low Income	White	19,297	6.0	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	10,455	4.8	0.78	0.70	0.87	1.04	0.92	1.18	1.03	0.90	1.17
	Hisp	7,394	4.9	0.80	0.71	0.91	1.05	0.91	1.2	1.04	0.91	1.20
Medium Income	White	27,063	5.8	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	4,427	4.0	0.67	0.57	0.79	0.88	0.74	1.05	0.87	0.73	1.03
	Hisp	4,142	3.8	0.64	0.54	0.76	0.8	0.67	0.96	0.80	0.67	0.96
High Income	White	52,152	5.8	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	5,697	4.2	0.71	0.62	0.81	0.95	0.82	1.1	0.93	0.81	1.08
	Hisp	5,391	4.4	0.76	0.66	0.87	0.99	0.86	1.15	0.99	0.85	1.14
Comparisons by Socioeconomic Status												
All	Low Income	40,233	5.5	0.99	0.93	1.04	1.08	1.02	1.15	1.06	1.00	1.13
	Med Income	38,579	5.4	0.97	0.92	1.02	1.00	0.94	1.06	0.99	0.93	1.06
	High Income	68,968	5.6	1.00	Reference		1.00	Reference		1.00	Reference	
Whites	Low Income	19,297	6.0	1.04	0.97	1.11	1.07	0.99	1.16	1.05	0.97	1.14
	Med Income	27,063	5.8	1.01	0.95	1.08	1.05	0.98	1.12	1.04	0.97	1.12
	High Income	52,152	5.8	1.00	Reference		1.00	Reference		1.00	Reference	
Blacks	Low Income	10,455	4.8	1.15	0.98	1.35	1.17	0.99	1.38	1.15	0.97	1.36
	Med Income	4,427	4.0	0.96	0.79	1.17	0.97	0.79	1.19	0.96	0.78	1.18
	High Income	5,697	4.2	1.00	Reference		1.00	Reference		1.00	Reference	
Hispanics	Low Income	7,394	4.9	1.10	0.93	1.30	1.12	0.93	1.34	1.11	0.92	1.33
	Med Income	4,142	3.8	0.86	0.70	1.06	0.85	0.69	1.05	0.84	0.68	1.04
	High Income	5,391	4.4	1.00	Reference		1.00	Reference		1.00	Reference	

Notes: Adjusted mortality rates obtained by hierarchical logistic regression of inpatient mortality on patient factors (age, sex and comorbidities) and hospital characteristics (nursing staff, ICU beds, teaching status and safety net hospital indicator) – as in Table A2

above. In addition indicators of cohorts compared (race/ethnicity or SES) were included. Separate regression models were estimated for each population stratum examined. Indicator for state was included in all regressions.

Table A5. Unadjusted and Adjusted Rate of Longer (>4 days) Length of Stay by Race/Ethnicity and Socioeconomic Status

Population Cohort	Race/Ethnicity or SES Stratum	N	Observed Rate of Longer Stays, %	Relative Rates of Longer Stays								
				Unadjusted			Adjusted for Patient Characteristics			Adjusted for Patient and Hospital Characteristics		
				Odds Ratio	95% CI Low High		Odds Ratio	Odds Ratio Low High	95% CI	Odds Ratio Low High		
Comparisons by Race & Ethnicity												
All	White	98,512	46.6	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	20,579	55.2	1.41	1.37	1.46	1.36	1.31	1.41	1.35	1.30	1.40
	Hisp	16,927	48.5	1.08	1.04	1.11	1.19	1.14	1.24	1.18	1.13	1.23
Low Income	White	19,297	48.1	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	10,455	56.1	1.38	1.31	1.45	1.33	1.25	1.42	1.32	1.24	1.40
	Hisp	7,394	52.0	1.17	1.11	1.23	1.24	1.16	1.33	1.23	1.14	1.32
Medium Income	White	27,063	46.2	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	4,427	54.1	1.37	1.29	1.46	1.37	1.27	1.47	1.35	1.25	1.45
	Hisp	4,142	45.1	0.96	0.90	1.02	1.12	1.03	1.21	1.11	1.03	1.20
High Income	White	52,152	46.2	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	5,697	54.4	1.39	1.31	1.46	1.35	1.27	1.44	1.34	1.26	1.43
	Hisp	5,391	46.1	1.00	0.94	1.05	1.16	1.09	1.24	1.16	1.08	1.24
Comparisons by Socioeconomic Status												
All	Low Income	40,233	51.2	1.18	1.16	1.21	1.15	1.12	1.19	1.15	1.11	1.19
	Med Income	38,579	47.4	1.02	0.99	1.04	1.05	1.02	1.08	1.05	1.02	1.09
	High Income	68,968	47.0	1.00	Reference		1.00	Reference		1.00	Reference	
Whites	Low Income	19,297	48.1	1.08	1.04	1.11	1.07	1.03	1.12	1.08	1.03	1.12
	Med Income	27,063	46.2	1.00	0.97	1.03	1.02	0.98	1.06	1.02	0.98	1.06
	High Income	52,152	46.2	1.00	Reference		1.00	Reference		1.00	Reference	
Blacks	Low Income	10,455	56.1	1.07	1.00	1.14	1.05	0.97	1.14	1.05	0.97	1.13
	Med Income	4,427	54.1	0.99	0.91	1.07	1.00	0.91	1.10	1.00	0.91	1.10
	High Income	5,697	54.4	1.00	Reference		1.00	Reference		1.00	Reference	
Hispanics	Low Income	7,394	52.0	1.27	1.18	1.36	1.18	1.08	1.29	1.16	1.06	1.27
	Med Income	4,142	45.1	0.96	0.89	1.04	1.02	0.93	1.12	1.01	0.92	1.11
	High Income	5,391	46.1	1.00	Reference		1.00	Reference		1.00	Reference	

Notes: Adjusted mortality rates obtained by hierarchical logistic regression of inpatient mortality on patient factors (age, sex and comorbidities) and hospital characteristics (nursing staff, ICU beds, teaching status and safety net hospital indicator) – as in Table A2

above. In addition indicators of cohorts compared (race/ethnicity or SES) were included. Separate regression models were estimated for each population stratum examined. Indicator for state was included in all regressions.

Table A6. Unadjusted and Adjusted Inpatient Mortality Rates By State & Race/Ethnicity

State	Race & Ethnicity	N	Observed Inpatient Mortality, %	Unadjusted			Adjusted for Patient Characteristics			Adjusted for Patient and Hospital Characteristics		
				Odds Ratio	95% CI		Odds Ratio	Odds Ratio		95% CI	Odds Ratio	
					Low	High		Low	High		Low	High
AZ	White	4,605	2.6	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	193	2.1	0.78	0.29	2.15	0.85	0.30	2.39	0.79	0.27	2.34
	Hispanic	775	3.1	1.18	0.76	1.85	1.36	0.85	2.20	1.35	0.84	2.16
CA	White	18,615	6.9	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	3,234	4.4	0.62	0.52	0.75	0.84	0.69	1.02	0.82	0.68	0.99
	Hispanic	5,965	4.8	0.68	0.59	0.77	0.92	0.79	1.06	0.89	0.77	1.02
FL	White	17,184	4.3	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	4,217	3.8	0.88	0.74	1.05	1.11	0.91	1.34	1.07	0.88	1.29
	Hispanic	2,387	3.7	0.87	0.69	1.08	0.98	0.76	1.25	1.02	0.81	1.29
MA	White	6,383	7.7	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	471	5.5	0.7	0.47	1.05	1.00	0.65	1.56	0.91	0.59	1.40
	Hispanic	307	3.3	0.4	0.21	0.76	0.66	0.34	1.28	0.67	0.35	1.28
NJ	White	7,041	6.2	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	1,882	3.6	0.56	0.43	0.72	0.79	0.59	1.06	0.72	0.53	0.97
	Hispanic	831	3.6	0.56	0.39	0.82	0.74	0.49	1.10	0.65	0.43	0.98
NY	White	16,265	7.8	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	4,592	5.6	0.7	0.61	0.8	0.95	0.80	1.11	0.98	0.84	1.14
	Hispanic	2,172	4.9	0.6	0.49	0.74	0.80	0.64	1.01	0.8	0.64	0.99
PA	White	16,079	5.0	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	2,523	3.8	0.76	0.61	0.94	1.10	0.86	1.40	0.98	0.77	1.25
	Hispanic	387	4.4	0.88	0.54	1.44	1.33	0.79	2.23	1.17	0.71	1.92
TX	White	12,340	4.9	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	3,467	4.5	0.92	0.77	1.10	1.09	0.90	1.32	1.1	0.91	1.33
	Hispanic	4,103	4.8	0.98	0.83	1.16	1.25	1.03	1.50	1.25	1.04	1.50

Notes: 1) Adjusted mortality rates obtained by hierarchical logistic regression of inpatient mortality on patient factors (age, sex and comorbidities) and hospital characteristics (nursing staff, ICU beds, teaching status and safety net hospital indicator). Indicator for state was included in both regressions.

Table A7. Unadjusted and Adjusted Inpatient Mortality Rates By State & Socioeconomic Status

State	Income	N	Observed Inpatient Mortality, %	Unadjusted			Adjusted for Patient Characteristics			Adjusted for Patient and Hospital Characteristics		
				Odds Ratio	95% CI		Odds Ratio	Odds Ratio		95% CI	Odds Ratio	
					Low	High		Low	High		Low	High
AZ	Low	1,360	2.8	1.11	0.75	1.64	1.25	1.07	1.46	1.00	0.65	1.55
	Medium	1,487	3.2	1.28	0.89	1.85	0.99	0.85	1.14	1.07	0.71	1.61
	High	3,040	2.5	1.00	Reference	1.00	Reference	1.00	Reference	1.00	Reference	Reference
CA	Low	8,492	5.8	0.89	0.79	0.99	1.12	1.04	1.21	1.01	0.90	1.14
	Medium	8,086	5.8	0.89	0.80	1.00	1.09	1.02	1.17	0.98	0.87	1.10
	High	15,449	6.5	1.00	Reference	1.00	Reference	1.00	Reference	1.00	Reference	Reference
FL	Low	7,044	4.4	1.10	0.95	1.28	1.19	1.1	1.28	1.10	0.94	1.29
	Medium	6,882	4.1	1.02	0.87	1.19	1.04	0.97	1.12	1.03	0.88	1.21
	High	10,721	4.0	1.00	Reference	1.00	Reference	1.00	Reference	1.00	Reference	Reference
MA	Low	2,053	7.2	0.89	0.72	1.09	1.08	0.94	1.23	0.95	0.76	1.20
	Medium	1,978	6.5	0.79	0.64	0.98	1.04	0.92	1.18	0.80	0.63	1.00
	High	3,524	8.1	1.00	Reference	1.00	Reference	1.00	Reference	1.00	Reference	Reference
NJ	Low	3,126	4.8	0.81	0.66	0.99	1.32	1.17	1.5	0.88	0.69	1.13
	Medium	2,798	5.6	0.94	0.77	1.15	1.02	0.91	1.14	1.01	0.81	1.26
	High	4,485	5.9	1.00	Reference	1.00	Reference	1.00	Reference	1.00	Reference	Reference
NY	Low	6,909	6.6	0.87	0.78	0.98	1.08	1	1.17	0.94	0.83	1.07
	Medium	6,623	7.1	0.94	0.84	1.06	0.99	0.92	1.08	0.93	0.82	1.05
	High	12,809	7.5	1.00	Reference	1.00	Reference	1.00	Reference	1.00	Reference	Reference
PA	Low	5,518	5.2	1.13	0.97	1.32	1.15	1.06	1.26	1.29	1.09	1.52
	Medium	5,105	5.0	1.09	0.93	1.28	1.08	0.99	1.18	1.18	1.00	1.39
	High	9,240	4.6	1.00	Reference	1.00	Reference	1.00	Reference	1.00	Reference	Reference
TX	Low	5,731	5.9	1.43	1.23	1.65	1.21	1.12	1.32	1.42	1.21	1.66
	Medium	5,620	5.0	1.19	1.02	1.39	1.09	1.01	1.18	1.13	0.97	1.33
	High	9,700	4.2	1.00	Reference	1.00	Reference	1.00	Reference	1.00	Reference	Reference

Note: 1) Adjusted mortality rates obtained by logistic regression of inpatient mortality on patient factors (age, sex and comorbidities) and hospital characteristics (bed size, ICU beds, nursing staff, average daily ED volume, teaching status and safety net hospital indicator). Indicator for state was included in both regressions.

Table A8. Inpatient Mortality Risk Factors: Adding Use of Mechanical Ventilation

	Model 1			Model 2		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
		Low	High		Low	High
Age						
18-64	1.0	Reference		1.0	Reference	
65-74	1.38***	1.27	1.51	1.38***	1.26	1.51
75-84	1.97***	1.82	2.13	1.96***	1.81	2.12
85+	3.40***	3.13	3.69	3.38***	3.11	3.67
Female	1.09**	1.03	1.15	1.09**	1.03	1.15
Use of mechanical ventilation	28.92***	27.07	30.9	29.18***	27.31	31.18
Comorbidity						
Diabetes	0.97	0.92	1.03	0.97	0.92	1.03
Hypertension	0.70***	0.66	0.74	0.70***	0.66	0.74
Congestive Heart Failure	1.55***	1.46	1.65	1.55***	1.46	1.65
Coronary Heart Disease	1.23***	1.16	1.3	1.23***	1.16	1.3
Atrial fibrillation	1.62***	1.54	1.72	1.63***	1.54	1.72
Charlson Score						
0	1.0	Reference		1.0	Reference	
1	1.15***	1.06	1.25	1.15***	1.06	1.24
2	1.35***	1.27	1.44	1.35***	1.27	1.44
3+	1.94***	1.81	2.08	1.95***	1.81	2.09
State						
Arizona	0.41***	0.32	0.53	0.43***	0.33	0.55
California	1.0	Reference		1.0	Reference	
Florida	0.62***	0.55	0.71	0.66***	0.57	0.75
Massachusetts	1.1	0.92	1.32	1.14	0.94	1.38
New Jersey	0.83*	0.7	0.99	0.88	0.74	1.04
New York	1.17*	1.03	1.32	1.15*	1.01	1.31
Pennsylvania	0.82**	0.72	0.95	0.85*	0.74	0.98
Texas	0.89	0.78	1.01	0.93	0.81	1.05
ICU Beds						
<= 14				1.0	Reference	
15 to 36				0.86**	0.78	0.94
>= 37				0.83**	0.73	0.94
Nursing staff (# patients/nurse)						
<= 2				1.0	Reference	
2.01 to 3.00				0.97	0.88	1.07
3.01 to 4.00				0.96	0.85	1.08
> 4.00				1.05	0.9	1.22
Ownership						
Non Profit				1.0	Reference	
For Profit				0.88*	0.78	1
Government, non-Federal				1.20**	1.05	1.38
Teaching hospital, %				0.9	0.78	1.02
Safety Net hospital, %				1.03	0.94	1.13
Constant	0.02***	0.01	0.02	0.02***	0.02	0.02
C-statistic	0.85			0.85		

Note: *, ** and *** denote p<0.05, p<0.01 and p<0.001 respectively

**Table A9. Unadjusted and Adjusted Inpatient Mortality Rates by Race, Ethnicity and Socioeconomic Status:
Adding Use of Mechanical Ventilation**

Population Cohort	Race/Ethnicity or SES Stratum	N	Observed Inpatient Mortality, %	Relative Inpatient Mortality Rates								
				Unadjusted			Adjusted for Patient Characteristics			Adjusted for Patient and Hospital Characteristics		
				Odds Ratio	95% Conf. Int	Low High	Odds Ratio	95% Conf. Int	Low High	Odds Ratio	95% Conf. Int	Low High
Comparisons by Race & Ethnicity												
All	White	98,512	5.8	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	20,579	4.4	0.75	0.70	0.80	0.83	0.76	0.91	0.84	0.77	0.92
	Hisp	16,927	4.5	0.76	0.70	0.82	0.90	0.82	0.99	0.91	0.82	1.00
Low Income	White	19,297	6.0	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	10,455	4.8	0.78	0.70	0.87	0.83	0.72	0.96	0.86	0.75	1.00
	Hisp	7,394	4.9	0.80	0.71	0.91	0.91	0.78	1.06	0.95	0.81	1.12
Medium Income	White	27,063	5.8	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	4,427	4.0	0.67	0.57	0.79	0.73	0.6	0.88	0.74	0.61	0.89
	Hisp	4,142	3.8	0.64	0.54	0.76	0.72	0.59	0.89	0.73	0.6	0.89
High Income	White	52,152	5.8	1.00	Reference		1.00	Reference		1.00	Reference	
	Black	5,697	4.2	0.71	0.62	0.81	0.83	0.71	0.98	0.83	0.71	0.98
	Hisp	5,391	4.4	0.76	0.66	0.87	0.93	0.79	1.09	0.93	0.8	1.09
Comparisons by Socioeconomic Status												
All	Low Income	40,233	5.5	0.99	0.93	1.04	1.04	0.97	1.12	1.04	0.97	1.11
	Med Income	38,579	5.4	0.97	0.92	1.02	1.00	0.93	1.07	0.99	0.92	1.06
	High Income	68,968	5.6	1.00	Reference		1.00	Reference		1.00	Reference	
Whites	Low Income	19,297	6.0	1.04	0.97	1.11	1.07	0.98	1.17	1.05	0.96	1.15
	Med Income	27,063	5.8	1.01	0.95	1.08	1.07	0.99	1.15	1.05	0.98	1.14
	High Income	52,152	5.8	1.00	Reference		1.00	Reference		1.00	Reference	
Blacks	Low Income	10,455	4.8	1.15	0.98	1.35	1.09	0.9	1.32	1.11	0.92	1.36
	Med Income	4,427	4.0	0.96	0.79	1.17	0.91	0.72	1.15	0.91	0.72	1.16
	High Income	5,697	4.2	1.00	Reference		1.00	Reference		1.00	Reference	
Hispanics	Low Income	7,394	4.9	1.10	0.93	1.30	1.08	0.88	1.33	1.13	0.92	1.39
	Med Income	4,142	3.8	0.86	0.70	1.06	0.83	0.66	1.06	0.84	0.66	1.06
	High Income	5,391	4.4	1.00	Reference		1.00	Reference		1.00	Reference	

Notes: Adjusted mortality rates obtained by hierarchical logistic regression of inpatient mortality on patient factors (age, sex and comorbidities) and hospital characteristics (nursing staff, ICU beds, teaching status and safety net hospital indicator). In addition indicators of cohorts compared (race/ethnicity or SES) were included. Separate regression models were estimated for each population stratum examined. Indicator for state was included in all regressions.