

SUPPLEMENTAL MATERIAL

Table S1. Risk-adjusted Inpatient Mortality by Ejection Fraction.

Outcome = In-hospital mortality	Adjusted OR (95% CI) – overall	Adjusted OR (95% CI) – HFrEF	Adjusted OR (95% CI) – HFbEF	Adjusted OR (95% CI) – HFpEF
Midwest vs Northeast	0.64 (0.51, 0.80) p=0001	0.74 (0.61, 0.90) p=0.003	0.86 (0.69, 1.08) p=0.20	0.80 (0.67, 0.97) p=0.02
South vs Northeast	0.87 (0.70, 1.09) p=0.23	0.95 (0.77, 1.16) p=0.61	1.07 (0.84, 1.35) p=0.60	1.02 (0.83, 1.25) p=0.87
West vs Northeast	0.96 (0.78, 1.20) p=0.74	1.05 (0.87, 1.27) p=0.62	1.11 (0.86, 1.42) P=0.42	0.93 (0.75, 1.15) p=0.50

HFrEF= heart failure with reduced ejection fraction; HFbEF= heart failure with borderline ejection fraction; HFpEF= heart failure with reserved ejection fraction

Table S2. Risk-adjusted Length of Stay by Ejection Fraction.

Outcome = LOS (> 4 d vs ≤ 4 d)	Adjusted odds ratio (95% CI) – overall	Adjusted odds ratio (95% CI) – HFrEF	Adjusted odds ratio (95% CI) – HFbEF	Adjusted odds ratio (95% CI) – HFpEF
Midwest vs Northeast	0.70 (0.63, 0.78) p<0.00001	0.70 (0.63, 0.79) p<0.0001	0.69 (0.60, 0.79) p<0.0001	0.73 (0.65, 0.82) p<0.0001
South vs Northeast	0.85 (0.76, 0.95) p=0.005	0.87 (0.78, 0.98) p=0.023	0.88 (0.77, 1.00) p=0.053	0.88 (0.78, 0.99) p=0.03
West vs Northeast	0.72 (0.63, 0.82) p<0.0001	0.75 (0.65, 0.87) p=0.0002	0.69 (0.59, 0.80) p<0.0001	0.70 (0.61, 0.81) p<0.0001

HFrEF= heart failure with reduced ejection fraction; HFbEF= heart failure with borderline ejection fraction; HFpEF= heart failure with reserved ejection fraction

Table S3. Baseline SES characteristics by region in the Medicare Fee for Service Subgroup.

	Overall (N=98808)	Northeast (N=31345)	Midwest (N=25606)	South (N=31242)	West (N=10615)	MW vs. NE (%)	S vs. NE (%)	W vs. NE (%)
High School Graduate (percentage)								
Median (Q1, Q3)	88.9 (85.5,90.8)	89.7 (87.4,91.2)	90.0 (87.3,92.1)	87.3 (82.2,90.1)	86.9 (77.3,91.6)	20.44	70.21	64.59
Median Household Income								
Median (Q1, Q3)	52171 (45733,61890)	56002 (50131,68333)	50014 (44915,58226)	48900 (41618,55413)	56911 (51439,67190)	44.01	64.54	5.80

Table S4. Fee for Service Medicare Subgroup: 30 day outcomes without and with SES variables added as covariates.

	Northeast	Midwest	South	West
30-day Mortality (%)	5%	4.36%	4.57%	4.09%
30 day mortality Unadjusted HR (95% CI)	1 [reference]	0.91 (0.85, 0.99) p=0.02	0.94 (0.88, 1.01) p=0.10	0.87 (0.79, 0.97) p=0.01
*Adjusted HR (95% CI)	1 [reference]	1.08 (0.95, 1.22) p=0.23	1.11 (0.99, 1.24) p= 0.07	1.02 (0.87, 1.19) p= 0.82
**Adjusted HR (95% CI) (SES variables added)	1 [reference]	1.02 (0.91, 1.13) p=0.77	1.06 (0.95, 1.18) p= 0.29	1.02 (0.87, 1.20) p= 0.78
30-day all cause re-admission (%)	17.06%	14.55%	15.67%	13.67%
Unadjusted HR (95% CI)	1 [reference]	0.90 (0.86, 0.93) p<0.0001	0.94 (0.90, 0.98) p=0.001	0.86 (0.81, 0.91) p<0.0001
*Adjusted HR (95% CI)	1 [reference]	0.92 (0.85, 0.99) P=0.03	0.93 (0.86, 1.01) p=0.08	0.90 (0.80, 1.00) p=0.05
**Adjusted HR (95% CI) (SES variables added)	1 [reference]	0.93 (0.86, 1.00) P=0.06	0.91 (0.83, 0.99) p=0.04	0.87 (0.78, 0.97) p=0.01

*Factors for adjustment included: age, sex, race, anemia, ischemic history, CVA/TIA, diabetes, hyperlipidemia, hypertension, COPD/asthma, PVD, renal insufficiency, cigarette smoking in the past year, vital signs and laboratory studies at admission (systolic blood pressure, heart rate, sodium, BUN, LVEF) and hospital characteristics

** Socioeconomic factors (median household income and percentage of people with at least a high school diploma) at the county level added to the multivariable model.