

Data Supplement 4**MISSINGNESS SENSITIVITY ANALYSIS****QUALITY INDICATORS**

SI = Single Imputation with Dummies

CCA = Complete Case Analysis

MI = Multiple Imputation

	AMI Readmission					
	SI		CCA		MI	
	AOR		AOR		AOR	
	(SE)		(SE)		(SE)	
<u>HOSPITAL CHARACTERISTICS</u>						
ED Specific						
Percent ABEM Certified	0.59	**	0.54	**	0.6	**
	-0.04		-0.04		-0.05	
Percent US Trained	0.91		0.9		0.91	
	-0.06		-0.06		-0.06	
EM Residency	1.03		1.03		1.02	
	-0.14		-0.14		-0.13	
Chest Pain Acuity	0.22	**	0.21	**	0.22	**
	-0.01		-0.01		-0.01	
Chest Pain Volume (2)	0.66	**	0.64	**	1.45	**
	-0.05		-0.05		-0.15	
Chest Pain Volume (3)	0.6	**	0.54	**	1.01	
	-0.05		-0.05		-0.09	
Chest Pain Volume (4)	0.64	**	0.58	**	0.9	
	-0.07		-0.06		-0.07	
Chest Pain Volume (5)	9.81	**	10.35	**	1	
	-3.43		-3.64		(omit)	
Average Years in Practice	0.93		0.94		0.94	
	-0.05		-0.06		-0.06	
Percent Men	0.98		0.97		1	
	-0.06		-0.06		-0.06	
Hospital-Wide						
Cardiac Catheterization Hospital	0.84		0.84		0.8	**
	-0.08		-0.07		-0.07	
Cardiac Intensive Care Unit Hospital	1.05		0.89		1.09	
	-0.08		-0.06		-0.07	
Level of Technology (1)	0.81	**	0.89		0.84	**
	-0.06		-0.07		-0.06	
Level of Technology (2)	0.81		0.88		0.81	
	-0.08		-0.08		-0.07	
Level of Technology (3)	0.89		0.95		0.84	
	-0.13		-0.13		-0.11	
Level of Technology (4)	1.07		1.18		1.05	

	-0.22		-0.24		-0.2	
Level of Technology (5)	0.94		1.05		0.91	
	-0.28		-0.31		-0.26	
Medium Bed Size	0.49	**	0.54	**	0.57	**
	-0.04		-0.04		-0.04	
Large Bed Size	0.44	**	0.49	**	0.51	**
	-0.04		-0.04		-0.04	
Med School Affiliation	0.65	**	0.73	**	0.91	
	-0.06		-0.07		-0.07	
Med School and Residency Affiliation	0.71	**	0.76	**	0.83	
	-0.07		-0.07		-0.07	
Micropolitan Area	1.5	**	1.24	**	1.44	**
	-0.13		-0.1		-0.12	
Small Town	2.26	**	1.82	**	2.2	**
	-0.22		-0.16		-0.23	
Rural	2.8	**	2.26	**	2.82	**
	-0.38		-0.29		-0.4	
Private Hospital	0.9		0.9		0.93	
	-0.08		-0.08		-0.08	
Public Hospital	1.34	**	1.39	**	1.4	**
	-0.1		-0.11		-0.11	
Trauma Hospital	0.9		0.93		0.87	
	-0.06		-0.06		-0.05	
<u>PATIENT CHARACTERISTICS</u>						
Demographics						
70-74 (Women)	0.87		0.88		0.87	
	-0.08		-0.08		-0.08	
75-79 (Women)	0.85		0.86		0.86	
	-0.07		-0.07		-0.07	
80-84 (Women)	0.68	**	0.69	**	0.68	**
	-0.06		-0.06		-0.06	
85-89 (Women)	0.62	**	0.63	**	0.62	**
	-0.05		-0.06		-0.05	
90-94 (Women)	0.56	**	0.56	**	0.56	**
	-0.05		-0.05		-0.05	
95-99 (Women)	0.41	**	0.41	**	0.41	**
	-0.06		-0.06		-0.06	
> 99 (Women)	0.33	**	0.25	**	0.27	**
	-0.11		-0.08		-0.09	
70-74 (Men)	1.05		1.05		0.92	
	-0.12		-0.12		-0.07	
75-79 (Men)	1.19		1.2		1.02	

	-0.13		-0.13		-0.07	
80-84 (Men)	1.32		1.32		0.9	
	-0.15		-0.15		-0.07	
85-89 (Men)	1.36	**	1.36	**	0.85	
	-0.16		-0.16		-0.07	
90-94 (Men)	1.3		1.3		0.72	**
	-0.18		-0.19		-0.08	
95-99 (Men)	1.35		1.34		0.54	**
	-0.34		-0.34		-0.11	
> 99 (Men)	1.47		1.93		0.27	
	-1.02		-1.31		-0.15	
Male	0.83		0.83		0.83	
	-0.07		-0.07		-0.07	
African American	1.26	**	1.23	**	1.26	**
	-0.08		-0.08		-0.08	
Other Race	0.91		0.89		0.94	
	-0.18		-0.18		-0.19	
Asian	1.05		0.99		1.08	
	-0.2		-0.19		-0.2	
Hispanic	1.18		1.14		1.18	
	-0.14		-0.13		-0.14	
Native American	1.45		1.45		1.45	
	-0.31		-0.31		-0.31	
Socioeconomic Level	0.97		0.95		0.98	
	-0.05		-0.05		-0.05	
Comorbidities						
Congestive Heart Failure	0.59	**	0.59	**	0.59	**
	-0.02		-0.02		-0.02	
Cardiac Arrhythmias	0.92		0.93		0.92	
	-0.04		-0.04		-0.04	
Valvular Heart Disease	1.09		1.09		1.1	
	-0.1		-0.1		-0.1	
Pulm. Circulatory Disorder	1.12		1.12		1.13	**
	-0.05		-0.05		-0.05	
Peripheral Vascular Disorder	0.55	**	0.55	**	0.55	**
	-0.02		-0.02		-0.02	
Hypertension	0.82		0.83		0.83	
	-0.08		-0.08		-0.08	
Paralysis	0.62	**	0.63	**	0.62	**
	-0.04		-0.04		-0.04	
Other Neurologic Disorder	0.85	**	0.86	**	0.85	**
	-0.03		-0.03		-0.03	
Chronic Pulmonary Disease	0.87	**	0.87	**	0.87	**

	-0.03		-0.03		-0.03	
Diabetes, Uncomplicated	1.3	**	1.3	**	1.3	**
	-0.08		-0.08		-0.08	
Diabetes, Complicated	0.82	**	0.81	**	0.81	**
	-0.04		-0.04		-0.04	
Hypothyroidism	0.96		0.96		0.96	
	-0.05		-0.05		-0.05	
Renal Failure	1.06		1.06		1.07	
	-0.2		-0.2		-0.21	
Liver Disease	0.98		0.97		0.97	
	-0.1		-0.1		-0.1	
Peptic Ulcer Disease	0		0		0	
	0		0		0	
AIDS	0.82		0.83		0.82	
	-0.17		-0.17		-0.17	
Lymphoma	1.2		1.18		1.19	
	-0.29		-0.29		-0.29	
Metastatic Cancer	0.82	**	0.82	**	0.82	**
	-0.04		-0.04		-0.04	
Solid Tumor without Metastases	0.99		0.99		0.99	
	-0.1		-0.1		-0.1	
Arthritis/Collagen Vascular Disease	0.96		0.96		0.97	
	-0.06		-0.06		-0.06	
Coagulopathy	0.96		0.96		0.96	
	-0.07		-0.07		-0.07	
Obesity	0.86		0.85		0.86	
	-0.09		-0.09		-0.09	
Weight Loss	0.83	**	0.83	**	0.83	**
	-0.03		-0.03		-0.03	
Fluid, Electrolyte Disorder	1		<i>omit</i>		<i>omit</i>	
	<i>omit</i>					
Blood Loss Anemia	1.07		1.08		1.07	
	-0.07		-0.07		-0.07	
Deficiency Anemia	0.84		0.84		0.84	
	-0.11		-0.11		-0.11	
Alcohol Abuse	2.01	**	1.98	**	2	**
	-0.43		-0.42		-0.43	
Drug Abuse	1.02		1.02		1.02	
	-0.1		-0.1		-0.1	
Psychosis	1.05		1.05		1.04	
	-0.07		-0.07		-0.07	

REGIONAL CHARACTERISTICS

Mid Atlantic	0.46	**	1.09	0.73	**
	-0.07		-0.13	-0.08	
South Atlantic	0.68		1.61	1.08	**
	-0.1		-0.17	-0.1	
East North Central	0.96		2.2	1.45	**
	-0.14		-0.24	-0.14	
East South Central	0.86		2.06	1.4	**
	-0.15		-0.27	-0.16	
West North Central	1.25		2.86	1.94	**
	-0.2		-0.36	-0.21	
West South Central	0.64	**	1.48	1.06	**
	-0.1		-0.18	-0.11	
Mountain	0.44	**	1.05	0.72	
	-0.09		-0.18	-0.12	
Pacific	1.03		2.43	1.63	**
	-0.21		-0.42	-0.26	
Associated Areas	0.34	**	1.18	1.41	
	-0.09		-0.28	-0.33	
<u>TEMPORAL CHARACTERISTICS</u>					
Weekday					
Monday	0.96		0.96	1.04	
	-0.06		-0.06	-0.06	
Tuesday	0.93		0.93	0.97	
	-0.06		-0.06	-0.06	
Wednesday	1		1	1.04	
	-0.06		-0.06	-0.06	
Thursday	1		1	1.04	
	-0.06		-0.06	-0.06	
Friday	0.95		0.95	1	
	-0.06		-0.06	-0.06	
Saturday	1.03		1.03	1.07	
	-0.06		-0.06	-0.06	
Season					
Spring	1		1.01	1.03	
	-0.04		-0.04	-0.05	
Summer	1.08		1.08	1.04	
	-0.05		-0.05	-0.05	
Fall	0.97		0.97	1.12	
	-0.04		-0.04	-0.05	
Intercept	0.43	**	0.21	0.15	**
	-0.09		-0.03	-0.02	

** = Statistically Significant, $p < 0.01$