Supplemental Appendix for "Patient Outcomes and Accreditation in U.S. Hospitals: An Observational Study"

Lam MB, Figueroa JF, Feyman Y, Reimold KE, Orav EJ, Jha AK

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Appendix Table 9. 30-Day Risk-Adjusted^a Mortality and 30-Day Risk-Adjusted^a Readmission Rates in 2015 for Hospitals Accredited by TJC vs. non-TJC in 2014

Appendix Table 1. Common medical and surgical procedures and their associated diagnosis-related group (DRG) codes

Condition	Code	Code Description				
Medical Condition		•				
	280	ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W MCC				
	281	ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W CC				
A outo Myogardial	247	PERC CARDIOVASC PROC W DRUG-ELUTING STENT W/O MCC				
Acute Myocardial Infarction	282	ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W/O CC/MCC				
	246	PERC CARDIOVASC PROC W DRUG-ELUTING STENT W MCC OR 4+ VESSELS/STENTS				
	249	PERC CARDIOVASC PROC W NON-DRUG-ELUTING STENT W/O MCC				
	283	ACUTE MYOCARDIAL INFARCTION, EXPIRED W MCC				
	292	HEART FAILURE & SHOCK W CC				
Heart Failure	291	HEART FAILURE & SHOCK W MCC				
	293	HEART FAILURE & SHOCK W/O CC/MCC				
	194	SIMPLE PNEUMONIA & PLEURISY W CC				
Pneumonia	193	SIMPLE PNEUMONIA & PLEURISY W MCC				
	195	SIMPLE PNEUMONIA & PLEURISY W/O CC/MCC				
Chanin	190	CHRONIC OBSTRUCTIVE PULMONARY DISEASE W MCC				
Chronic Obstructive	191	CHRONIC OBSTRUCTIVE PULMONARY DISEASE W CC				
Pulmonary Disease	192	CHRONIC OBSTRUCTIVE PULMONARY DISEASE W/O CC/MCC				
	65	INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W CC				
Stroke	64	INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W MCC				
	66	INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W/O CC/MCC				
Sepsis	871	SEPTICEMIA OR SEVERE SEPSIS W/O MV 96+ HOURS W MCC				
Sepsis	872	SEPTICEMIA OR SEVERE SEPSIS W/O MV 96+ HOURS W/O MCC				
	392	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W/O MCC				
Esophageal/Gastric Disease	391	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W MCC				
Disease	372	MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W CC				
	371	MAJOR GASTROINTESTINAL DISORDERS &				

		DEDITONE AL INEECTIONS WINCO					
	270	PERITONEAL INFECTIONS W MCC					
Gastrointestinal	378	G.I. HEMORRHAGE W CC					
Bleeding	377	G.I. HEMORRHAGE W MCC					
	379	G.I. HEMORRHAGE W/O CC/MCC					
Urinary Tract	690	KIDNEY & URINARY TRACT INFECTIONS W/O MCC					
Infection	689	KIDNEY & URINARY TRACT INFECTIONS W MCC					
	641	NUTRITIONAL & MISC METABOLIC DISORDERS W/O					
Metabolic Disease		MCC					
	640	NUTRITIONAL & MISC METABOLIC DISORDERS W MCC					
	310	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS					
	310	W/O CC/MCC					
	309	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS					
	307	W CC					
Arrhythmia	308	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS					
	308	W MCC					
	243	PERMANENT CARDIAC PACEMAKER IMPLANT W CC					
	244	PERMANENT CARDIAC PACEMAKER IMPLANT W/O					
	244	CC/MCC					
	313	CHEST PAIN					
Chest Pain	0						
	287	CIRCULATORY DISORDERS EXCEPT					
Renal Failure	683	RENAL FAILURE W CC					
Keliai Fallule	682	RENAL FAILURE W MCC					
Respiratory	177	RESPIRATORY INFECTIONS & INFLAMMATIONS W MCC					
Disease	178	RESPIRATORY INFECTIONS & INFLAMMATIONS W CC					
	481	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W					
	401	CC					
	470	MAJOR JOINT REPLACEMENT OR REATTACHMENT OF					
Hip Fracture	470	LOWER EXTREMITY W/O MCC					
The Practure	482	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W/O					
	402	CC/MCC					
	480	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W					
	700	MCC					
Surgical Procedure							
	236	CORONARY BYPASS W/O CARDIAC CATH W/O MCC					
Coronary Artery	234	CORONARY BYPASS W CARDIAC CATH W/O MCC					
Bypass Grafting	233	CORONARY BYPASS W CARDIAC CATH W MCC					
	235	CORONARY BYPASS W/O CARDIAC CATH W MCC					
Open Abdominal 23		MAJOR CARDIOVASC PROCEDURES W/O MCC					
Aortic Aneurysm	237	MAJOR CARDIOVASC PROCEDURES W MCC OR					
Repair 231		THORACIC AORTIC ANEURYSM REPAIR					
Endovascular							
Abdominal Aortic	238	MAJOR CARDIOVASC PROCEDURES W/O MCC					
Aneurysm Repair							
Colectomy	330	MAJOR SMALL & LARGE BOWEL PROCEDURES W CC					

	329	MAJOR SMALL & LARGE BOWEL PROCEDURES W MCC
	331	MAJOR SMALL & LARGE BOWEL PROCEDURES W/O
	331	CC/MCC
Dulmanan	164	MAJOR CHEST PROCEDURES W CC
Pulmonary Lobectomy	165	MAJOR CHEST PROCEDURES W/O CC/MCC
Lobectomy	163	MAJOR CHEST PROCEDURES W MCC
Hin Donlagement	470	MAJOR JOINT REPLACEMENT OR REATTACHMENT OF
Hip Replacement	470	LOWER EXTREMITY W/O MCC

Appendix Table 2. Number of Hospitalizations by Accreditation Status

	TJC	Non-TJC	State Survey
Medical	3,018,718	414,470	161,267
Acute myocardial infarction	215,961	29,751	5,548
Heart failure	365,684	49,816	20,497
Pneumonia	272,137	39,807	30,564
Chronic obstructive pulmonary disease	246,561	34,967	19,639
Stroke	11,173	1,349	105
Sepsis	459,785	62,435	15,977
Esophageal/gastric disease	348,724	47,353	16,819
Gastrointestinal bleeding	175,993	23,458	6,782
Urinary tract infection	191,069	25,775	15,508
Metabolic disease	134,191	17,916	10,394
Arrhythmia	229,690	32,301	9,097
Chest pain	136,837	18,564	3,405
Renal failure	200,289	27,393	5,678
Respiratory disease	88,708	11,121	3,816
Hip fracture	104,146	14,120	2,969
Surgical	549,135	78,467	20,627
Coronary artery bypass grafting	44,099	6,542	685
Open abdominal aortic aneurysm repair	15,008	1,952	154
Endovascular abdominal aortic aneurysm repair	26,830	3,716	453
Colectomy	88,231	11,541	2,488
Pulmonary lobectomy	29,837	3,303	284
Hip replacement	345,130	51,413	16,563

Appendix Table 3. Characteristics of Patient and Hospitals by Accreditation Status (row percent)

percent)	TJC	l ,	Non-T	JC	State St	urvey
Hospitalizations, No.	3,567,853		492,937		181,894	
	Hospit	tal Chara	acteristics			
Hospitals, No.	2,847	7	490)	1,06	53
Size, No., %						
Small (1-99 beds)	975	44%	241	11%	987	45%
Medium (100-399 beds)	1,469	84%	206	12%	72	4%
Large (400+ beds)	403	90%	43	10%	4	1%
Ownership, No., %						
For-Profit	629	79%	79	10%	93	12%
Non-For-Profit	1,859	70%	281	11%	507	19%
Government, Federal	359	38%	130	14%	463	49%
Teaching Status , No., %						
Major	216	92%	18	8%	0	0%
Minor	779	82%	105	11%	67	7%
Non-Teaching	1852	58%	367	11%	996	31%
Region, No., %						
Northeast	420	76%	53	10%	83	15%
Midwest	725	54%	169	13%	441	33%
South	1,155	70%	164	10%	323	20%
West	547	63%	104	12%	216	25%
Urban, No., %						
Rural	294	28%	79	8%	664	64%
Urban	2553	76%	411	12%	399	12%
Critical Access	342	28%	106	9%	785	64%
Hospital, No., %						
Intensive Care Unit,	2,078	78%	303	11%	293	11%
No., %	D. 41	4.01	.4•4 •			
A (CD)			cteristics	2.1)	77.1.(1	11.7)
Age, mean (SD), y	75.6 (12	2.3)	75.5 (1	2.1)	77.1 (1	11./)
Race/ethnicity, No., %	2 961 169	920/	404.060	120/	162 402	5 0/
White	2,861,168		404,960	12%	162,492	5%
Black	403,020	87%	51,357	11%	10,101	2%
Hispanic Other	191,234	87%	22,572	10%	4,871	2%
	112,431 2,042,140	86%	14,048	11%	4,430	3%
Women, No., %	2,042,140	84%	281,696	12%	107,576	4%
Medicaid eligible, No., %	950,660	84%	125,250	11%	54,709	5%
Comorbidity, No., %						
CHF	365,684	84%	49,816	11%	20,497	5%
Diabetes Mellitus	949,412	84%	135,054	12%	47,544	4%
Renal Failure	783,212	85%	107,742	12%	29,544	3%
Liver Disease	78,080	87%	9,827	11%	2,187	2%
Depression	402,927	85%	53,691	11%	19,223	4%
Debression	402,921	05%	33,091	1170	19,223	470

Appendix Table 4. 30-Day Risk-Adjusted Mortality and 30-Day Risk-Adjusted Readmission Rates by Condition for Hospitals Accredited by Accrediting Organizations (AO) vs. Reviewed by State Survey Agencies

	AO-Accredited % [95% CI]	State Survey % [95% CI]	Difference % [95% CI]	p-value
		30-Day Morta		
Medical	10.2% [10.11% - 10.24%]	10.6% [10.2% - 10.9%]	-0.4% [-0.8%0.1%]	0.03
Acute myocardial infarction	10.4% [10.2% - 10.5%]	11.7% [10.2% - 13.1%]	-1.3% [-2.7% - 0.2%]	0.09
Heart failure	10.9% [10.8% - 11.0%]	10.9% [10.2% - 11.6%]	0.03% [-0.7% - 0.8%]	0.94
Pneumonia	9.3% [9.2% - 9.4%]	9.6% [9.0% - 10.2%]	-0.3% [-0.9% - 0.3%]	0.32
Chronic obstructive pulmonary disease	4.2% [4.1% - 4.3%]	4.5% [4.1% - 5.0%]	-0.3% [-0.8% - 0.1%]	0.16
Stroke	19.2% [18.6% - 19.7%]	15.3% [4.9% - 25.8%]	3.8% [-6.7% - 14.4%]	0.48
Sepsis	22.6% [22.4% - 22.8%]	22.5% [21.5% - 23.6%]	0.03% [-1.1% - 1.1%]	0.95
Esophageal/gastric disease	9.2% [9.1% - 9.3%]	9.2% [8.5% - 9.8%]	0.05% [-0.6% - 0.7%]	0.88
Gastrointestinal bleeding	6.7% [6.6% - 6.8%]	7.0% [6.1% - 7.8%]	-0.3% [-1.1% - 0.5%]	0.50
Urinary tract infection	5.6% [5.5% - 5.7%]	5.9% [5.3% - 6.5%]	-0.3% [-0.9% - 0.3%]	0.36
Metabolic disease	8.9% [8.8% - 9.1%]	8.9% [8.1% - 9.7%]	0.3% [-0.8% - 0.9%]	0.95
Arrhythmia	4.8% [4.7% - 4.9%]	4.9% [4.2% - 5.5%]	-0.1% [-0.7% - 0.5%]	0.75
Chest pain	2.4% [2.3% - 2.5%]	2.9% [2.2% - 3.6%]	-0.5% [-1.2% - 0.2%]	0.18
Renal failure	11.8% [11.7% -11.9%]	13.9% [12.4% - 15.4%]	-2.1% [-3.6%0.6%]	0.008
Respiratory disease	22.0% [21.7% - 22.3%]	22.2% [20.4% - 24.0%]	-0.2% [-2.1% - 1.7%]	0.83
Hip fracture	1.7% [1.69% - 1.78%]	1.9% [1.6% - 2.2%]	-0.2% [-0.5% - 0.1%]	0.27
Surgical	2.4% [2.33% - 2.42%]	2.4% [2.1% - 2.7%]	0.001% [-0.3% - 0.3%]	0.99
Coronary artery bypass grafting	2.3% [2.2% - 2.4%]	3.7% [1.9% - 5.5%]	-1.4% [-3.2% - 0.4%]	0.13
Open abdominal aortic aneurysm repair	23.8% [23.2% - 24.5%]	28.8% [19.1% - 38.4%]	-4.9% [-14.7% - 4.8%]	0.32
Endovascular abdominal aortic aneurysm repair	2.7% [2.5% - 2.9%]	4.1% [2.0% - 6.3%]	-1.5% [-3.6% - 0.7%]	0.18
Colectomy	5.8% [5.7% - 6.0%]	5.7% [4.5% - 6.9%]	0.1% [-1.1% - 1.3%]	0.88
Pulmonary lobectomy	4.4% [4.2% - 4.6%]	3.9% [0.4% - 7.4%]	0.4% [-3.1% - 4.0%]	0.80

Hip replacement	0.5%	0.6%	-0.04%	0.62
	[0.50% - 0.55%]	[0.4% - 0.7%]	[-0.2% - 0.1%]	0.02
		30-Day Readmis		T
Medical	22.4%	23.2%	-0.9%	< 0.001
	[22.3% - 22.5%]	[22.8% - 23.7%]	[-1.3%0.4%]	
Acute myocardial infarction	24.6%	23.9%	0.6%	0.57
	[24.2% - 24.9%] 26.2%	[21.8% - 26.1%] 27.1%	[-1.5% - 2.8%] - 0.9%	
Heart failure	[26.0% - 26.4%]	[26.3% - 28.0%]	[-1.8%0.02%]	0.05
D :	19.4%	20.5%	-1.1%	0.000
Pneumonia	[19.3% - 19.6%]	[19.8% - 21.3%]	[-1.9%0.3%]	0.008
Chronic obstructive	22.0%	21.8%	0.2%	0.61
pulmonary disease	[21.8% - 22.2%]	[20.9% - 22.6%]	[-0.7% - 1.1%]	0.01
Stroke	36.2%	41.8%	-5.6%	0.14
	[35.5% - 37.0%]	[34.4% - 49.2%]	[-13.1% - 1.9%]	
Sepsis	21.7% [21.5% - 21.9%]	23.0% [21.9% - 24.1%]	-1.3% [-2.4%0.2%]	0.02
	23.5%	24.3%	-0.9%	
Esophageal/gastric disease	[23.3% - 23.6%]	[23.4% - 25.3%]	[-1.8% - 0.1%]	0.07
Ct:t111:	20.1%	23.5%	-3.4%	₂ 0,001
Gastrointestinal bleeding	[19.9% - 20.3%]	[22.1% - 24.9%]	[-4.8% - 2.0%]	< 0.001
Urinary tract infection	19.8%	20.2%	-0.4%	0.36
Crimary tract infection	[19.6% - 20.0%]	[19.3% - 21.1%]	[-1.4% - 0.5%]	0.50
Metabolic disease	23.1%	23.8%	-0.7%	0.25
	[22.9% - 23.3%] 19.4%	[22.7% - 25.0%] 20.5%	[-2.0% - 0.5%] -1.1%	
Arrhythmia	[19.2% - 19.6%]	[19.2% - 21.9%]	[-2.5% - 0.2%]	0.10
	20.8%	22.4%	-1.6%	0.11
Chest pain	[20.6% - 21.1%]	[20.5% - 24.2%]	[-3.4% - 0.3%]	0.11
Renal failure	25.1%	26.0%	-0.9%	0.30
Kenai fanule	[24.9% - 25.3%]	[24.3% - 27.8%]	[-2.7% - 0.8%]	0.30
Respiratory disease	23.9%	23.9%	-0.03%	0.98
	[23.6% - 24.2%]	[22.1% - 25.7%]	[-1.9% - 1.8%]	
Hip fracture	17.3% [16.9% - 17.7%]	16.4% [14.6% - 18.1%]	0.9% [-0.8% - 2.7%]	0.29
	15.9%	15.6%	0.2%	
Surgical	[15.6% - 16.1%]	[14.2% - 17.0%]	[-1.2% - 1.6%]	0.75
Coronary artery bypass	22.7%	27.2%	-4.5%	0.26
grafting	[22.2% - 23.2%]	[19.4% - 35.0%]	[-12.4% - 3.4%]	0.26
Open abdominal aortic	29.4%	36.0%	-6.6%	0.16
aneurysm repair	[28.8% - 30.0%]	[26.8% - 45.2%]	[-15.9% - 2.7%]	0.10
Endovascular abdominal	15.5%	17.0%	-1.4%	0.59
aortic aneurysm repair	[15.2% - 15.9%] 19.5%	[11.9% - 22.1%] 19.3%	[-6.6% - 3.7%] 0.2%	
Colectomy	[19.2% - 19.8%]	[17.4% - 21.2%]	[-1.7% - 2.2%]	0.83
D. 1.1	15.6%	26.1%	-10.5%	0.001
Pulmonary lobectomy	[15.2% - 16.0%]	[20.9% - 31.4%]	[-15.8%5.3%]	< 0.001
Hin replacement	13.9%	13.1%	0.8%	0.32
Hip replacement	[13.6% - 14.3%]	[11.4% - 14.7%]	[-0.8% - 2.5%]	0.32

Note: Adjusted for patient and hospital characteristics and HRR fixed effects.

Appendix Table 5. 30-Day Risk-Adjusted Mortality and 30-Day Risk-Adjusted Readmission Rates by Condition for Hospitals Accredited by TJC vs. non-TJC

	TJC	Non-TJC	Difference	p-
	% [95% CI]	% [95% CI]	% [95% CI]	value
		30-Day Mortali	ity	
Medical	10.1%	10.3%	-0.2%	0.18
Wicuicai	[10.07% - 10.21%]	[10.1% - 10.5%]	[-0.4% - 0.1%]	0.10
Acute myocardial infarction	10.4%	10.3%	0.1%	0.69
	[10.3% - 10.6%]	[9.9% - 10.8%]	[-0.4% - 0.6%]	
Heart failure	10.9%	11.0%	-0.1%	0.56
	[10.8% - 11.0%] 9.2%	[10.7% - 11.3%] 9.7%	[-0.5% - 0.2%] - 0.4%	
Pneumonia	[9.1% - 9.4%]	[9.4% - 10.0%]	[-0.8%0.1%]	0.02
Chronic obstructive	4.2%	4.3%	-0.1%	
pulmonary disease	[4.1% - 4.3%]	[4.1% - 4.5%]	[-0.4% - 0.1%]	0.32
•	19.3%	17.9%	1.4%	
Stroke	[18.7% - 19.9%]	[15.8% - 20.1%]	[-1.0% - 3.7%]	0.25
	22.6%	22.6%	-0.1%	
Sepsis	[22.4% - 22.8%]	[22.1% - 23.1%]	[-0.6% - 0.5%]	0.84
	9.2%	9.3%	-0.1%	
Esophageal/gastric disease	[9.1% - 9.3%]	[9.1% - 9.6%]	[-0.4% - 0.2%]	0.36
	6.6%	7.0%	-0.4%	
Gastrointestinal bleeding	[6.5% - 6.7%]	[6.7% - 7.4%]	[-0.8%0.1%]	0.02
	5.7%	5.6%	0.1%	
Urinary tract infection	[5.6% - 5.8%]	[5.3% - 5.9%]	[-0.2% - 0.4%]	0.59
	8.9%	9.0%	-0.1%	
Metabolic disease	[8.7% - 9.1%]	[8.6% - 9.4%]	[-0.6% - 0.3%]	0.54
	4.8%	4.7%	0.1%	
Arrhythmia	[4.7% - 4.9%]	[4.5% - 5.0%]	[-0.2% - 0.4%]	0.62
	2.4%	2.4%	-0.1%	
Chest pain	[2.3% - 2.5%]	[2.2% - 2.7%]	[-0.4% - 0.2%]	0.65
	11.7%	12.4%	-0.6%	
Renal failure	[11.6% -11.9%]	[11.9% - 12.8%]	[-1.1%0.2%]	0.010
	21.9%	22.6%	-0.6%	
Respiratory disease	[21.6% - 22.2%]	[21.7% - 23.4%]	[-1.6% - 0.3%]	0.17
	1.7%	1.7%	0.002%	
Hip fracture	[1.69% - 1.79%]	[1.6% - 1.9%]	[-0.1% - 0.1%]	0.97
	2.4%	2.4%	0.01%	
Surgical	[2.35% - 2.45%]	[2.2% - 2.5%]	[-0.2% - 0.2%]	0.92
Coronary artery bypass	2.3%	2.7%	-0.4%	
grafting	[2.1% - 2.4%]	[2.1% - 3.2%]	[-1.0% - 0.2%]	0.22
Open abdominal aortic	23.9%	23.7%	0.2%	
aneurysm repair	[23.2% - 24.6%]	[21.6% - 25.8%]	[-2.2% - 2.6%]	0.87
Endovascular abdominal	2.8%	2.1%	0.8%	
aortic aneurysm repair	[2.6% - 3.0%]	[1.5% - 2.6%]	[0.1% - 1.4%]	0.02
· ·	5.9%	5.6%	0.2%	6.1-
Colectomy	[5.7% - 6.0%]	[5.2% - 6.1%]	[-0.3% - 0.7%]	0.42
	4.4%	4.4%	-0.03%	6.0-
Pulmonary lobectomy	[4.1% - 4.6%]	[3.6% - 5.2%]	[-0.9% - 0.8%]	0.95
Hip replacement	0.5%	0.5%	0.02%	0.69

	[0.51% - 0.56%]	[0.45% - 0.59%]	[-0.1% - 0.1%]	
		30-Day Readmiss	ions	
N. 1. 1	22.4%	22.4%	-0.1%	0.72
Medical	[22.3% - 22.5%]	[22.1% - 22.8%]	[-0.5% - 0.3%]	0.73
A . 1: 1: C .:	24.6%	24.5%	0.02%	0.07
Acute myocardial infarction	[24.1% - 25.0%]	[23.5% - 25.5%]	[-1.1% - 1.1%]	0.97
Heart failure	26.2%	26.6%	-0.4%	0.09
Heart failure	[26.0% - 26.4%]	[26.2% - 27.1%]	[-1.0% - 0.1%]	0.09
Pneumonia	19.4%	20.1%	-0.7%	0.008
Pileumoma	[19.2% - 19.6%]	[19.6% - 20.5%]	[-1.2%0.2%]	0.008
Chronic obstructive	22.0%	21.8%	0.2%	0.36
pulmonary disease	[21.8% - 22.2%]	[21.3% - 22.2%]	[-0.3% - 0.8%]	0.50
Stroke	35.9%	38.5%	-2.6%	0.13
Broke	[35.0% - 36.8%]	[35.5% - 41.5%]	[-5.9% - 0.7%]	0.13
Sepsis	21.7%	22.0%	-0.4%	0.15
Берыз	[21.5% - 21.9%]	[21.6% - 22.5%]	[-0.9% - 0.1%]	0.15
Esophageal/gastric disease	23.4%	23.8%	-0.4%	0.11
	[23.2% - 23.6%]	[23.4% - 24.2%]	[-0.9% - 0.1%]	0.11
Gastrointestinal bleeding	20.2%	20.3%	-0.1%	0.73
	[20.0% - 20.4%]	[19.8% - 20.9%]	[-0.7% - 0.5%]	0.76
Urinary tract infection	19.9%	19.7%	0.1%	0.67
,	[19.6% - 20.1%]	[19.2% - 20.2%]	[-0.5% - 0.7%]	
Metabolic disease	23.0%	23.8%	-0.7%	0.03
	[22.8% - 23.3%]	[23.2% - 24.3%]	[-1.4%0.1%]	
Arrhythmia	19.4%	19.7%	-0.4%	0.20
	[19.2% - 19.6%]	[19.2% - 20.3%]	[-1.0% - 0.2%]	
Chest pain	20.8%	21.0%	- 0.2%	0.70
	[20.5% - 21.1%] 25.1%	[20.2% - 21.7%] 25.2%	[-1.0% - 0.7%] - 0.03%	
Renal failure	[24.9% - 25.4%]	[24.6% - 25.8%]	[-0.7% - 0.6%]	0.92
	24.0%	23.5%	0.5%	
Respiratory disease	[23.7% - 24.3%]	[22.8% - 24.3%]	[-0.4% - 1.3%]	0.28
	17.4%	17.0%	0.4%	
Hip fracture	[16.9% - 17.8%]	[16.0% - 17.9%]	[-0.6% - 1.4%]	0.44
	16.0%	15.8%	0.1%	
Surgical	[15.7% - 16.2%]	[15.0% - 16.7%]	[-0.8% - 1.0%]	0.78
Coronary artery bypass	22.8%	22.9%	-0.2%	0.00
grafting	[22.2% - 23.3%]	[21.1% - 24.8%]	[-2.2% - 1.9%]	0.88
Open abdominal aortic	29.5%	29.1%	0.5%	0.69
aneurysm repair	[28.8% - 30.2%]	[27.0% - 31.1%]	[-1.8% - 2.8%]	0.68
Endovascular abdominal	15.5%	16.1%	-0.7%	0.39
aortic aneurysm repair	[15.0% - 15.9%]	[14.8% - 17.5%]	[-2.2% - 0.9%]	0.39
Colectomy	19.5%	19.6%	-0.1%	0.90
Colocioniy	[19.2% - 19.8%]	[18.8% - 20.4%]	[-1.0% - 0.8%]	0.30
Pulmonary lobectomy	15.7%	15.4%	0.3%	0.71
1 difficility 100cctollity	[15.3% - 16.2%]	[14.1% - 16.8%]	[-1.3% - 1.9%]	0.71
Hip replacement	14.0%	13.6%	0.3%	0.53
The replacement	[13.6% - 14.4%]	[12.8% - 14.5%]	[-0.7% - 1.3%]	0.55

Note: Adjusted for patient and hospital characteristics and HRR fixed effects.

Appendix Table 6. 30-Day Risk-Adjusted^a Mortality and 30-Day Risk-Adjusted^a Readmission Rates for Hospitals Accredited by an Accrediting Organization (AO) vs. Reviewed by a State Survey Agency (2015 Medicare data)

	AO % [95% CI]	State Survey % [95% CI]	Difference % [95% CI]	p-value ^b	
	70 [9370 CI]	30-Day Mor			
Medical	10.3% [10.2% - 10.4%]	10.6% [10.3% - 10.9%]	-0.3% [-0.7% - 0.04%]	0.08	
Surgical	2.14% [2.09% - 2.18%]	2.07% [1.8% - 2.4%]	0.07% [-0.2% - 0.4%]	0.67	
	30-Day Readmissions				
Medical	22.3% [22.2% - 22.4%]	22.9% [22.4% - 23.4%]	-0.6% [-1.1%0.1%]	0.02	
Surgical	14.9% [14.7% - 15.2%]	14.3% [13.0% - 15.6%]	0.7% [-0.6% - 2.0%]	0.30	

^aAdjusted for patient and hospital characteristics and HRR fixed effects. ^bA p-value less than 0.0125 was considered significant.

Appendix Table 7. 30-Day Risk-Adjusted^a Mortality and 30-Day Risk-Adjusted^a Readmission Rates for Hospitals Accredited by TJC vs. non-TJC (2015 Medicare data)

	TJC % [95% CI]	Non-TJC % [95% CI]	Difference % [95% CI]	p-value ^b		
		30-Day Mor	tality			
Medical	10.3% [10.2% - 10.4%]	10.2% [10.0% - 10.5%]	0.04% [-0.2% - 0.3%]	0.75		
Surgical	2.15% [2.10% - 2.20%]	2.2% [2.0% - 2.3%]	-0.03% [-0.2% - 0.1%]	0.72		
	30-Day Readmissions					
Medical	22.3% [22.1% - 22.4%]	22.4% [22.0% - 22.8%]	-0.1% [-0.5% - 0.3%]	0.51		
Surgical	15.0% [14.7% - 15.3%]	15.1% [14.3% - 15.9%]	-0.1% [-0.9% - 0.7%]	0.82		

^aAdjusted for patient and hospital characteristics and HRR fixed effects.
^bA p-value less than 0.0125 was considered significant.

Appendix Table 8. 30-Day Risk-Adjusted^a Mortality and 30-Day Risk-Adjusted^a Readmission Rates for Hospitals Accredited by an Accrediting Organization (AO) vs. Reviewed by a State Survey Agency (2015 Medicare data for 2014 accreditation)

	AO % [95% CI]	State Survey % [95% CI]	Difference % [95% CI]	p-value ^b		
		30-Day Mor	tality			
Medical	10.3% [10.17-10.45%]	10.8% [10.40-11.20%]	-0.49% [-0.960.02%]	0.04		
Surgical	2.0% [1.90-2.07%]	2.1% [1.70-2.47%]	-0.10% [-0.54-0.34%]	0.66		
		30-Day Readmissions				
Medical	21.9% [21.67-22.16%]	22.8% [22.13-23.43%]	-0.87% [-1.610.13%]	0.02		
Surgical	13.7% [13.24-14.13%]	13.1% [11.38-14.77%]	0.61% [-1.27-2.49%]	0.52		

^aAdjusted for patient and hospital characteristics and HRR fixed effects.

^bA p-value less than 0.0125 was considered significant.

Appendix Table 9. 30-Day Risk-Adjusted^a Mortality and 30-Day Risk-Adjusted^a Readmission Rates for Hospitals Accredited by TJC vs. non-TJC (2015 Medicare data for 2014 accreditation)

	TJC	Non-TJC	Difference	p-value ^b
	% [95% CI]	% [95% CI]	% [95% CI]	p-varue
	30-Day Mortality			
Medical	10.3%	11.1%	-0.80%	0.03
	[10.15-10.39%]	[10.40-11.74%]	[-1.500.10%]	
Surgical	2.1%	2.8%	-0.70%	0.001
	[1.99-2.12%]	[2.36-3.14%]	[-1.110.28%]	
	30-Day Readmissions			
Medical	21.9%	22.8%	-0.96%	0.17
	[21.66-22.11%]	[21.50-24.17%]	[-2.33-0.42%]	
Surgical	13.9%	15.0%	-1.13%	0.25
	[13.48-14.28%]	[13.16-16.86%]	[-3.08-0.81%]	

^aAdjusted for patient and hospital characteristics and HRR fixed effects.

^bA p-value less than 0.0125 was considered significant.