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Finance and Policy

# Massachusetts Health Care Cost Trends

## Price Variation in Massachusetts Health Care Services

### Statistical Appendix

May 2011



DIVISION OF  
Health Care  
Finance and Policy

**Table 1.1: Hospital Price Relativity for Pneumonia (DRG 139)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Brockton Hospital	27	2.97	\$164,807	2.03	\$5,524	0.75
0-10	Sturdy Memorial Hospital	30	3.30	\$219,966	2.71	\$5,529	0.75
11-20	Northeast Health Systems	45	4.95	\$330,919	4.08	\$5,641	0.77
11-20	Caritas Norwood Hospital	34	3.74	\$222,152	2.74	\$5,881	0.80
21-25	Mount Auburn Hospital	40	4.40	\$264,648	3.27	\$6,357	0.87
26-50	Winchester Hospital	48	5.28	\$312,910	3.86	\$6,409	0.88
26-50	Caritas Good Samaritan Hospital	34	3.74	\$245,605	3.03	\$6,633	0.91
26-50	Jordan Hospital	41	4.51	\$291,292	3.59	\$6,908	0.94
26-50	Tufts Medical Center	31	3.41	\$235,398	2.90	\$7,017	0.96
26-50	Southcoast Health Systems Charlton	37	4.07	\$300,323	3.71	\$7,307	1.00
51-75	South Shore Hospital	88	9.68	\$763,144	9.42	\$7,342	1.00
51-75	Southcoast Health Systems St. Luke's	41	4.51	\$346,697	4.28	\$7,400	1.01
51-75	Beth Israel Deaconess Medical Center	85	9.35	\$919,638	11.35	\$7,998	1.09
51-75	U Mass Memorial Medical Center	75	8.25	\$716,466	8.84	\$8,011	1.09
51-75	Lahey Clinic	29	3.19	\$270,051	3.33	\$8,134	1.11
76-80	Newton Wellesley Hospital	30	3.30	\$246,040	3.04	\$8,153	1.11
81-100	North Shore Medical Center	39	4.29	\$364,910	4.50	\$8,159	1.11
81-100	Brigham & Women's Hospital	61	6.71	\$903,912	11.15	\$8,664	1.18
81-100	Cooley Dickinson Hospital	33	3.63	\$321,044	3.96	\$8,922	1.22
81-100	Massachusetts General Hospital	61	6.71	\$664,598	8.20	\$9,225	1.26

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.2: Hospital Price Relativity for Chronic Obstructive Pulmonary Disease (COPD) (DRG 140)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Brockton Hospital	31	5.77	\$188,622	3.63	\$6,160.	0.78
0-10	Metrowest Medical Center	40	7.45	\$338,219	6.51	\$6,388	0.81
11-20	Milford Regional Medical Center	30	5.59	\$209,855	4.04	\$7,386	0.94
26-50	Winchester Hospital	44	8.19	\$387,842	7.46	\$7,488	0.95
26-50	Caritas Good Samaritan Hospital	29	5.40	\$231,939	4.46	\$7,554	0.96
26-50	Northeast Health Systems	46	8.57	\$499,553	9.61	\$7,618	0.97
51-75	Jordan Hospital	41	7.64	\$424,788	8.17	\$8,144	1.03
51-75	Southcoast Health Systems Charlton	51	9.50	\$496,627	9.56	\$8,336	1.06
51-75	South Shore Hospital	69	12.85	\$687,066	13.22	\$8,480	1.08
76-80	U Mass Memorial Medical Center	62	11.55	\$684,279	13.17	\$8,638	1.10
81-100	Southcoast Health Systems St. Luke's	55	10.24	\$562,045	10.81	\$8,733	1.11
81-100	Massachusetts General Hospital	39	7.26	\$486,588	9.36	\$10,222	1.30

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.3: Hospital Price Relativity for Acute Myocardial Infarction (AMI) (DRG 190)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	South Shore Hospital	32	12.31	\$345,031	7.03	\$9,684	0.67
11-20	Baystate Medical Center	48	18.46	\$823,461	16.78	\$11,082	0.77
26-50	Lahey Clinic	32	12.31	\$653,226	13.31	\$12,465	0.86
26-50	Beth Israel Deaconess Medical Center	25	9.62	\$380,130	7.75	\$14,451	1.00
51-75	Massachusetts General Hospital	37	14.23	\$774,472	15.78	\$16,499	1.14
51-75	Tufts Medical Center	30	11.54	\$620,232	12.64	\$16,925	1.17
81-100	U Mass Memorial Medical Center	56	21.54	\$1,311,340	26.72	\$19,059	1.32

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.4: Hospital Price Relativity for Congestive Heart Failure (CHF) (DRG 194)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Boston Medical Center	37	18.97	\$334,665	12.33	\$9,129	0.79
26-50	Beth Israel Deaconess Medical Center	55	28.21	\$699,447	25.76	\$11,388	0.98
51-75	Brigham & Women's Hospital	64	32.82	\$1,068,464	39.36	\$11,869	1.02
76-80	Massachusetts General Hospital	39	20.00	\$612,282	22.55	\$12,042	1.04

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.5: Hospital Price Relativity for Appendectomy (DRG 225)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Milford Regional Medical Center	30	1.71	\$199,589	1.30	\$6,141	0.75
0-10	Lowell General Hospital	55	3.13	\$314,988	2.05	\$6,159	0.76
0-10	Lawrence General Hospital	31	1.76	\$180,769	1.18	\$6,718	0.82
11-20	Baystate Medical Center	83	4.72	\$696,660	4.54	\$7,025	0.86
11-20	Metrowest Medical Center	65	3.70	\$467,109	3.04	\$7,234	0.89
21-25	Saint Vincent Hospital	35	1.99	\$240,920	1.57	\$7,292	0.89
21-25	Emerson Hospital	92	5.23	\$619,510	4.03	\$7,511	0.92
26-50	Mount Auburn Hospital	102	5.80	\$709,537	4.62	\$7,601	0.93
26-50	Caritas Norwood Hospital	33	1.88	\$218,946	1.43	\$7,640	0.94
26-50	Northeast Health Systems	36	2.05	\$287,420	1.87	\$7,915	0.97
26-50	Winchester Hospital	115	6.54	\$894,414.	5.82	\$7,963	0.98
26-50	Faulkner Hospital	39	2.22	\$303,626	1.98	\$8,107	0.99
26-50	Caritas Good Samaritan Hospital	42	2.39	\$321,567	2.09	\$8,151	1.00
51-75	Cape Cod Hospital	50	2.84	\$390,828	2.54	\$8,199	1.01
51-75	Beth Israel Deaconess Medical Center	91	5.17	\$820,914	5.34	\$8,423	1.03
51-75	Jordan Hospital	50	2.84	\$383,941	2.50	\$8,428	1.03
51-75	Newton Wellesley Hospital	88	5.00	\$803,805	5.23	\$8,794	1.08
51-75	Southcoast Health Systems St. Luke's	39	2.22	\$354,595	2.31	\$9,129	1.12
51-75	South Shore Hospital	146	8.30	\$1,319,792	8.59	\$9,241	1.13
76-80	U Mass Memorial Medical Center	152	8.64	\$1,412,154	9.19	\$9,613	1.18
81-100	Cooley Dickinson Hospital	44	2.50	\$486,247	3.17	\$10,120	1.24
81-100	Massachusetts General Hospital	69	3.92	\$737,338	4.80	\$10,668	1.31
81-100	Brigham & Women's Hospital	69	3.92	\$722,300	4.70	\$10,779	1.32
81-100	Sturdy Memorial Hospital	37	2.10	\$454,334	2.96	\$10,898	1.34
81-100	Children's Hospital	166	9.44	\$2,018,212	13.14	\$11,889	1.46

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.6: Hospital Price Relativity for Laparoscopic Cholecystectomy (DRG 263)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Quincy Medical Center	28	4.71	\$196,640	3.26	\$7,274	0.75
0-10	Newton Wellesley Hospital	33	5.55	\$292,732	4.85	\$7,629	0.78
11-20	Lowell General Hospital	34	5.71	\$249,873	4.14	\$7,676	0.79
21-25	Metrowest Medical Center	30	5.04	\$294,034	4.87	\$8,888	0.91
26-50	Jordan Hospital	47	7.90	\$359,674	5.96	\$8,977	0.92
26-50	Mount Auburn Hospital	32	5.38	\$275,154	4.56	\$9,188	0.94
26-50	Winchester Hospital	41	6.89	\$413,887	6.86	\$9,331	0.96
51-75	South Shore Hospital	74	12.44	\$796,832	13.20	\$10,148	1.04
51-75	Beth Israel Deaconess Medical Center	57	9.58	\$640,814	10.61	\$10,375	1.07
51-75	Southcoast Health Systems Charlton	36	6.05	\$384,896	6.38	\$11,090	1.14
51-75	Sturdy Memorial Hospital	38	6.39	\$419,688	6.95	\$11,120	1.14
76-80	U Mass Memorial Medical Center	55	9.24	\$613,263	10.16	\$11,438	1.17
81-100	Brigham & Women's Hospital	36	6.05	\$465,726	7.71	\$11,678	1.20
81-100	Massachusetts General Hospital	54	9.08	\$634,171	10.50	\$12,670	1.30

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.7: Hospital Price Relativity for Hip Joint Replacement (DRG 301)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Northeast Health Systems	54	3.31	\$1,069,320	2.73	\$20,010	0.87
0-10	Mount Auburn Hospital	39	2.39	\$806,107	2.06	\$21,108	0.91
11-20	Baystate Medical Center	58	3.56	\$1,296,541	3.31	\$21,266	0.92
26-50	Newton Wellesley Hospital	204	12.52	\$4,471,347	11.43	\$22,332	0.97
26-50	North Shore Medical Center	58	3.56	\$1,332,594	3.41	\$22,385	0.97
26-50	South Shore Hospital	50	3.07	\$1,244,856	3.18	\$23,038	1.00
51-75	Lahey Clinic	59	3.62	\$1,415,169	3.62	\$23,145	1.00
51-75	U Mass Memorial Medical Center	62	3.81	\$1,537,271	3.93	\$24,083	1.04
51-75	New England Baptist Hospital	675	41.44	\$15,271,424	39.03	\$25,294	1.10
76-80	Massachusetts General Hospital	162	9.94	\$4,548,624	11.63	\$26,483	1.15
81-100	Beth Israel Deaconess Medical Center	59	3.62	\$1,500,365	3.83	\$26,707	1.16
81-100	Brigham & Women's Hospital	149	9.15	\$4,632,931	11.84	\$27,342	1.18

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.8: Hospital Price Relativity for Knee Joint Replacement (DRG 302)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Lowell General Hospital	36	1.53	\$567,450	1.10	\$14,153	0.71
0-10	Saint Vincent Hospital	31	1.31	\$526,468	1.02	\$16,046	0.81
0-10	Caritas Holy Family Hospital	30	1.27	\$525,907	1.02	\$16,771	0.85
11-20	Emerson Hospital	26	1.10	\$451,174	0.87	\$16,910	0.85
11-20	Falmouth Hospital	52	2.20	\$1,087,399	2.10	\$17,249	0.87
21-25	Winchester Hospital	52	2.20	\$996,890	1.93	\$17,830	0.90
21-25	Northeast Health Systems	91	3.86	\$1,713,230	3.32	\$17,848	0.90
26-50	Cape Cod Hospital	47	1.99	\$961,988	1.86	\$18,710	0.94
26-50	Caritas Good Samaritan Hospital	42	1.78	\$809,112	1.57	\$18,772	0.95
26-50	Jordan Hospital	33	1.40	\$638,221	1.24	\$18,788	0.95
26-50	Baystate Medical Center	118	5.00	\$2,449,222	4.74	\$19,375	0.98
26-50	Newton Wellesley Hospital	110	4.66	\$2,273,375	4.40	\$19,671	0.99
26-50	Southcoast Health Systems Charlton	44	1.87	\$974,935	1.89	\$19,820	1.00
51-75	Mount Auburn Hospital	61	2.59	\$1,244,966	2.41	\$20,352	1.03
51-75	South Shore Hospital	93	3.94	\$2,225,018	4.31	\$20,506	1.03
51-75	Lahey Clinic	73	3.09	\$1,498,039	2.90	\$21,091	1.06
51-75	North Shore Medical Center	107	4.54	\$2,316,882	4.48	\$21,317	1.08
51-75	U Mass Memorial Medical Center	78	3.31	\$1,802,337	3.49	\$21,952	1.11
51-75	Faulkner Hospital	68	2.88	\$1,573,668	3.05	\$22,239	1.12
76-80	New England Baptist Hospital	678	28.74	\$14,467,912	28.00	\$22,309	1.13
81-100	Southcoast Health Systems St. Luke's	39	1.65	\$907,558	1.76	\$23,678.	1.19
81-100	Beth Israel Deaconess Medical Center	63	2.67	\$1,555,456	3.01	\$23,821	1.20
81-100	Sturdy Memorial Hospital	30	1.27	\$762,849	1.48	\$24,127	1.22
81-100	Massachusetts General Hospital	129	5.47	\$3,252,759	6.30	\$24,913	1.26
81-100	Brigham & Women's Hospital	228	9.67	\$6,088,060	11.78	\$25,284	1.28

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.9: Hospital Price Relativity for Intervertebral disc excision and decompression (DRG 310)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Lowell General Hospital	32	3.67	\$219,021	2.43	\$6,754	0.70
0-10	Mercy Medical Center	38	4.36	\$314,774	3.49	\$7,570	0.79
11-20	Cape Cod Hospital	52	5.96	\$466,308	5.16	\$7,794	0.81
21-25	Jordan Hospital	34	3.90	\$335,604	3.72	\$8,186	0.85
26-50	Tufts Medical Center	48	5.50	\$408,019	4.52	\$8,899	0.92
26-50	Newton Wellesley Hospital	67	7.68	\$658,274	7.29	\$8,932	0.93
26-50	South Shore Hospital	61	7.00	\$600,292	6.65	\$9,629	1.00
51-75	U Mass Memorial Medical Center	52	5.96	\$512,951	5.68	\$9,653	1.00
51-75	Beth Israel Deaconess Medical Center	106	12.16	\$1,132,194	12.54	\$9,987	1.04
51-75	Lahey Clinic	112	12.84	\$1,118,663	12.39	\$10,089	1.05
76-80	New England Baptist Hospital	62	7.11	\$615,615	6.82	\$10,232	1.06
81-100	Brigham & Women's Hospital	68	7.80	\$880,143	9.75	\$10,584	1.10
81-100	Massachusetts General Hospital	140	16.06	\$1,767,559	19.58	\$11,263	1.17

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.10: Hospital Price Relativity for Knee and lower leg procedures (DRG 313)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Boston Medical Center	50	7.85	\$497,360	5.60	\$9,765	0.73
0-10	Baystate Medical Center	52	8.16	\$704,404	7.93	\$11,410	0.85
11-20	Faulkner Hospital	40	6.28	\$464,539	5.23	\$11,902	0.89
26-50	South Shore Hospital	47	7.38	\$568,042	6.39	\$11,931	0.89
26-50	Newton Wellesley Hospital	33	5.18	\$377,378	4.25	\$12,651	0.95
26-50	Brigham & Women's Hospital	87	13.66	\$1,276,600	14.37	\$13,359	1.00
51-75	Beth Israel Deaconess Medical Center	60	9.42	\$892,465	10.05	\$13,527	1.01
51-75	U Mass Memorial Medical Center	65	10.20	\$907,154	10.21	\$13,981	1.05
51-75	New England Baptist Hospital	48	7.54	\$593,225	6.68	\$14,392	1.08
81-100	Massachusetts General Hospital	109	17.11	\$1,807,378	20.35	\$14,403	1.08
81-100	Children's Hospital	46	7.22	\$794,534	8.94	\$15,732	1.18

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.11: Hospital Price Relativity for Procedures for Obesity (DRG 403)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Lowell General Hospital	135	5.96	\$1,347,799	4.45	\$10,328	0.74
0-10	Faulkner Hospital	97	4.28	\$1,184,523	3.91	\$10,455	0.75
11-20	Caritas Norwood Hospital	154	6.79	\$1,615,968	5.33	\$10,855	0.78
11-20	Boston Medical Center	78	3.44	\$874,172	2.88	\$10,884	0.78
21-25	Winchester Hospital	70	3.09	\$849,627	2.80	\$11,026	0.80
26-50	Emerson Hospital	71	3.13	\$781,258	2.58	\$12,026	0.87
26-50	Hallmark Health Systems	61	2.69	\$786,832	2.60	\$12,068	0.87
26-50	Metrowest Medical Center	70	3.09	\$926,680	3.06	\$12,605	0.91
26-50	Tufts Medical Center	198	8.73	\$2,432,300	8.02	\$13,337	0.96
26-50	Newton Wellesley Hospital	130	5.73	\$1,644,754	5.43	\$13,740	0.99
51-75	Southcoast Health Systems Tobey	279	12.31	\$3,813,899	12.58	\$13,996	1.01
51-75	U Mass Memorial Medical Center	118	5.21	\$1,681,164	5.55	\$14,449	1.04
51-75	North Shore Medical Center	92	4.06	\$1,272,597	4.20	\$14,522	1.05
51-75	Baystate Medical Center	65	2.87	\$905,883	2.99	\$14,608	1.05
51-75	Beth Israel Deaconess Medical Center	162	7.15	\$2,326,683	7.68	\$14,626	1.05
76-80	Brigham & Women's Hospital	198	8.73	\$3,008,172	9.92	\$15,883	1.15
81-100	Lahey Clinic	121	5.34	\$1,970,927	6.50	\$15,989	1.15
81-100	Massachusetts General Hospital	94	4.15	\$1,626,468	5.37	\$17,359	1.25
81-100	Caritas St. Elizabeth's Medical Center	32	1.41	\$543,313	1.79	\$17,765	1.28
81-100	Berkshire Medical Center	42	1.85	\$721,774	2.38	\$18,266	1.32

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.12: Hospital Price Relativity for Uterine and Adnexa Procedures for Non-Malignancy Except Leiomyoma (DRG 513)**

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Lowell General Hospital	41	3.41	\$259,392	2.40	\$6,103	0.72
0-10	Milford Regional Medical Center	31	2.58	\$207,672	1.92	\$6,539	0.77
11-20	Mount Auburn Hospital	37	3.08	\$260,186	2.40	\$6,896	0.81
11-20	Winchester Hospital	74	6.15	\$544,614	5.03	\$7,237	0.85
21-25	Caritas Good Samaritan Hospital	67	5.57	\$505,158	4.67	\$7,703	0.90
26-50	Northeast Health Systems	35	2.91	\$273,854	2.53	\$7,941	0.93
26-50	Hallmark Health Systems	37	3.08	\$293,754	2.71	\$8,005	0.94
26-50	Newton Wellesley Hospital	67	5.57	\$560,989	5.18	\$8,061	0.94
26-50	Baystate Medical Center	39	3.24	\$331,296	3.06	\$8,501	1.00
26-50	North Shore Medical Center	43	3.57	\$364,061	3.36	\$8,530	1.00
51-75	Southcoast Health Systems Charlton	64	5.32	\$577,884	5.34	\$8,757	1.03
51-75	Southcoast Health Systems St. Luke's	50	4.16	\$455,476	4.21	\$8,762	1.03
51-75	Sturdy Memorial Hospital	33	2.74	\$294,443	2.72	\$8,834	1.04
51-75	South Shore Hospital	75	6.23	\$733,768	6.78	\$9,078	1.06
51-75	U Mass Memorial Medical Center	129	10.72	\$1,212,084	11.20	\$9,234	1.08
76-80	Lahey Clinic	59	4.90	\$546,302	5.05	\$9,410	1.10
81-100	Beth Israel Deaconess Medical Center	44	3.66	\$409,254	3.78	\$9,536	1.12
81-100	Brigham & Women's Hospital	192	15.96	\$2,059,411	19.03	\$10,149	1.19
81-100	Massachusetts General Hospital	86	7.15	\$932,536	8.62	\$10,306	1.21

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.13: Hospital Price Relativity for Cesarean Delivery (DRG 540)** (continued on next page)

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Cambridge Health Alliance	55	0.63	\$282,632	0.38	\$4,957	0.70
0-10	Lawrence General Hospital	71	0.81	\$432,324	0.58	\$5,630	0.80
0-10	Anna Jaques Hospital	77	0.88	\$471,108	0.63	\$5,641	0.80
0-10	Sturdy Memorial Hospital	99	1.13	\$588,564	0.79	\$5,883	0.83
11-20	Lowell General Hospital	218	2.49	\$1,389,198	1.86	\$5,910	0.84
11-20	Brockton Hospital	92	1.05	\$541,347	0.73	\$5,986	0.85
11-20	Mercy Medical Center	43	0.49	\$252,660	0.34	\$6,089	0.86
11-20	Milford Regional Medical Center	160	1.83	\$1,041,277	1.39	\$6,237	0.88
21-25	Saint Vincent Hospital	114	1.30	\$750,900	1.01	\$6,343	0.90
21-25	Boston Medical Center	71	0.81	\$536,823	0.72	\$6,453	0.91
26-50	Morton Hospital	57	0.65	\$394,042	0.53	\$6,562	0.93
26-50	Caritas Holy Family Hospital	96	1.10	\$660,052	0.88	\$6,585	0.93
26-50	Emerson Hospital	200	2.29	\$1,399,510	1.87	\$6,596	0.93
26-50	Metrowest Medical Center	194	2.22	\$1,316,280	1.76	\$6,632	0.94
26-50	Mount Auburn Hospital	222	2.54	\$1,562,305	2.09	\$6,734	0.95
26-50	Falmouth Hospital	93	1.06	\$651,208	0.87	\$6,758	0.96
26-50	Winchester Hospital	379	4.33	\$2,749,784	3.68	\$6,813	0.97
26-50	Jordan Hospital	78	0.89	\$574,863	0.77	\$6,918	0.98
26-50	Health Alliance Hospitals, Inc.	61	0.70	\$426,120	0.57	\$6,967	0.99
26-50	Northeast Health Systems	284	3.25	\$2,166,768	2.90	\$7,056	1.00
51-75	Caritas Good Samaritan Hospital	113	1.29	\$874,514	1.17	\$7,262	1.03
51-75	Caritas Norwood Hospital	72	0.82	\$519,174	0.70	\$7,311	1.04
51-75	Cape Cod Hospital	107	1.22	\$739,68	0.99	\$7,315	1.04
51-75	Hallmark Health Systems	176	2.01	\$1,327,679	1.78	\$7,358	1.04
51-75	Newton Wellesley Hospital	774	8.85	\$6,269,805	8.40	\$7,412	1.05
51-75	Baystate Medical Center	264	3.02	\$2,216,990	2.97	\$7,536	1.07
51-75	Southcoast Health Systems St. Luke's	131	1.50	\$1,123,423	1.50	\$7,822	1.11
51-75	Tufts Medical Center	118	1.35	\$1,039,765	1.39	\$7,9251	1.12
51-75	Southcoast Health Systems Tobey	38	0.43	\$313,685	0.42	\$7,947	1.13

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.13: Hospital Price Relativity for Cesarean Delivery (DRG 540)** (continued from previous page)

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
51-75	U Mass Memorial Medical Center	357	4.08	\$3,247,589	4.35	\$8,195	1.16
76-80	North Shore Medical Center	182	2.08	\$1,590,961	2.13	\$8,204	1.16
76-80	Beth Israel Deaconess Medical Center	884	10.10	\$8,427,334	11.29	\$8,390	1.19
81-100	South Shore Hospital	740	8.46	\$6,524,934	8.74	\$8,610	1.22
81-100	Cooley Dickinson Hospital	95	1.09	\$894,133	1.20	\$8,649	1.23
81-100	Brigham & Women's Hospital	1,231	14.07	\$12,903,686	17.29	\$8,800	1.25
81-100	Southcoast Health Systems Charlton	135	1.54	\$1,202,726	1.61	\$8,946	1.27
81-100	Berkshire Medical Center	54	0.62	\$507,989	0.68	\$9,017	1.28
81-100	Caritas St. Elizabeth's Medical Center	131	1.50	\$1,333,158	1.79	\$9,683	1.37
81-100	Massachusetts General Hospital	483	5.52	\$5,403,585	7.24	\$10,517	1.49

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.14: Hospital Price Relativity for Vaginal Delivery (DRG 560)** (continued on next page)

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
0-10	Holyoke Hospital	53	0.31	\$196,489	0.21	\$3,430	0.76
0-10	Cambridge Health Alliance	163	0.96	\$570,3839	0.61	\$3,490	0.77
0-10	Martha's Vineyard Hospital	35	0.21	\$152,421	0.16	\$3,530	0.78
0-10	Heywood Hospital	85	0.50	\$324,560	0.34	\$3,658	0.81
0-10	Lowell General Hospital	416	2.45	\$1,721,082	1.83	\$3,770	0.83
11-20	Anna Jaques Hospital	148	0.87	\$610,751	0.65	\$3,780	0.84
11-20	Mercy Medical Center	130	0.77	\$505,705	0.54	\$3,805	0.84
11-20	Milford Regional Medical Center	220	1.29	\$936,622	0.99	\$3,821	0.84
11-20	Brockton Hospital	123	0.72	\$500,131	0.53	\$3,874	0.86
11-20	Sturdy Memorial Hospital	213	1.25	\$887,902	0.94	\$3,924	0.87
21-25	Caritas Norwood Hospital	133	0.78	\$579,302	0.61	\$4,067	0.90
21-25	Saint Vincent Hospital	378	2.22	\$1,658,324	1.76	\$4,073	0.90
26-50	Morton Hospital	116	0.68	\$490,178	0.52	\$4,077	0.90
26-50	Cape Cod Hospital	169	0.99	\$735,174	0.78	\$4,137	0.91
26-50	Boston Medical Center	133	0.78	\$634,831	0.67	\$4,285	0.95
26-50	Mount Auburn Hospital	763	4.49	\$3,479,073	3.69	\$4,298	0.95
26-50	Falmouth Hospital	106	0.62	\$482,139	0.51	\$4,381	0.97
26-50	Caritas Holy Family Hospital	122	0.72	\$576,896	0.61	\$4,392	0.97
26-50	Winchester Hospital	661	3.89	\$3,247,743	3.45	\$4,398	0.97
26-50	Jordan Hospital	176	1.04	\$811,726	0.86	\$4,425	0.98
26-50	Metrowest Medical Center	274	1.61	\$1,266,702	1.34	\$4,434	0.98
26-50	Health Alliance Hospitals, Inc.	202	1.19	\$901,356	0.96	\$4,464	0.99
26-50	Harrington Memorial Hospital	48	0.28	\$231,606	0.25	\$4,491	0.99
51-75	Lawrence General Hospital	121	0.71	\$520,289	0.55	\$4,559	1.01
51-75	Emerson Hospital	364	2.14	\$1,735,455	1.84	\$4,593	1.01
51-75	Tufts Medical Center	225	1.32	\$1,220,725	1.30	\$4,670	1.03
51-75	Baystate Medical Center	479	2.82	\$2,450,351	2.60	\$4,682	1.03
51-75	North Adams Regional Hospital	57	0.34	\$274,949	0.29	\$4,701	1.04
51-75	Hallmark Health Systems	263	1.55	\$1,240,696	1.32	\$4,747	1.05
51-75	Caritas Good Samaritan Hospital	107	0.63	\$512,294	0.54	\$4,749	1.05
51-75	Northeast Health Systems	557	3.28	\$2,974,328	3.16	\$4,924	1.09
51-75	Newton Wellesley Hospital	1,350	7.94	\$7,383,105	7.84	\$4,938	1.09
51-75	Southcoast Health Systems St. Luke's	191	1.12	\$1,019,926	1.08	\$4,987	1.10
51-75	Southcoast Health Systems Charlton	230	1.35	\$1,277,806	1.36	\$5,102	1.13
51-75	Southcoast Health Systems Tobey	135	0.79	\$757,321	0.80	\$5,135	1.13
76-80	Baystate Franklin Medical Center	114	0.67	\$590,738	0.63	\$5,274	1.17

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 1.14: Hospital Price Relativity for Vaginal delivery (DRG 560)** (continued from previous page)

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity <sup>1</sup>
76-80	North Shore Medical Center	276	1.62	\$1,583,284	1.68	\$5,371	1.19
81-100	Beth Israel Deaconess Medical Center	1,541	9.07	\$9,428,388	10.01	\$5,413	1.20
81-100	Berkshire Medical Center	112	0.66	\$658,541	0.70	\$5,580	1.23
81-100	Fairview Hospital	36	0.21	\$208,712	0.22	\$5,651	1.25
81-100	Cooley Dickinson Hospital	180	1.06	\$1,094,416	1.16	\$5,664	1.25
81-100	U Mass Memorial Medical Center	880	5.18	\$5,349,920	5.68	\$5,781	1.28
81-100	Brigham & Women's Hospital	2,488	14.64	\$16,905,746	17.94	\$5,943	1.31
81-100	South Shore Hospital	1,183	6.96	\$7,050,223	7.48	\$5,955	1.32
81-100	Massachusetts General Hospital	990	5.83	\$6,849,743	7.27	\$6,146	1.36
81-100	Caritas St. Elizabeth's Medical Center	247	1.45	\$1,627,782	1.73	\$6,185	1.37

<sup>1</sup> The price relativity is an index of the hospital's median severity-adjusted payment compared to the median hospital severity-adjusted payment of the listed hospitals.



**Table 2.1: Private Pay Prices Compared to Medicaid Rates by Hospital for Pneumonia (DRG 139)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Brockton Hospital	\$5,524	\$4,428	125%	18%	25%
Sturdy Memorial Hospital	\$5,529	\$4,254	130%	7%	14%
Northeast Health Systems	\$5,641	\$4,297	131%	10%	17%
Caritas Norwood Hospital	\$5,881	\$4,406	133%	10%	7%
Mount Auburn Hospital	\$6,357	\$4,529	140%	5%	8%
Winchester Hospital	\$6,409	\$4,438	144%	7%	8%
Caritas Good Samaritan Hospital	\$6,633	\$4,329	153%	11%	17%
Jordan Hospital	\$6,908	\$4,659	148%	5%	10%
Tufts Medical Center	\$7,017	\$4,598	153%	24%	23%
Southcoast Health Systems Charlton	\$7,307	\$4,237	172%	7%	21%
South Shore Hospital	\$7,342	\$4,431	166%	6%	6%
Southcoast Health Systems St. Luke's	\$7,401	\$4,368	169%	20%	25%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$7,998	\$4,807	166%	6%	9%
U Mass Memorial Medical Center	\$8,011	\$4,768	168%	12%	20%
Lahey Clinic	\$8,134	\$4,634	176%	1%	3%
Newton Wellesley Hospital	\$8,153	\$4,484	182%	7%	6%
North Shore Medical Center	\$8,159	\$4,354	187%	17%	18%
Brigham & Women's Hospital	\$8,664	\$4,833	179%	7%	10%
Cooley Dickinson Hospital	\$8,922	\$4,182	213%	9%	13%
Massachusetts General Hospital	\$9,225	\$4,955	186%	10%	11%
<b>Range</b>	<b>(\$5,524, \$9,225)</b>	<b>(\$4,182, \$4,955)</b>			
<b>Statewide median</b>	<b>\$7,324</b>	<b>\$4,434</b>	<b>166%</b>	<b>8%</b>	<b>12%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>-0.13</b>	<b>-0.21</b>
<b>R-squared</b>				<b>0.02</b>	<b>0.04</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.2: Private Pay Prices Compared to Medicaid Rates by Hospital for Chronic Obstructive Pulmonary Disease (COPD) (DRG 140)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Brockton Hospital	\$6,160	\$4,323	142%	13%	25%
Metrowest Medical Center	\$6,388	\$4,374	146%	8%	15%
Milford Regional Medical Center	\$7,386	\$4,394	168%	1%	10%
Winchester Hospital	\$7,488	\$4,312	174%	5%	8%
Caritas Good Samaritan Hospital	\$7,554	\$4,363	173%	9%	17%
Northeast Health Systems	\$7,618	\$4,266	179%	7%	17%
Jordan Hospital	\$8,144	\$4,465	182%	4%	10%
Southcoast Health Systems Charlton	\$8,336	\$4,306	194%	10%	21%
South Shore Hospital	\$8,480	\$4,233	200%	7%	6%
U Mass Memorial Medical Center	\$8,638	\$4,901	176%	14%	20%
Southcoast Health Systems St. Luke's	\$8,733	\$4,362	200%	14%	25%
Massachusetts General Hospital	\$10,222	\$4,817	212%	7%	11%
<b>Range</b>	<b>(\$6,160, \$10,222)</b>	<b>(\$4,233, \$4,901)</b>			
<b>Statewide median</b>	<b>\$7,881</b>	<b>\$4,362</b>	<b>177%</b>	<b>7%</b>	<b>16%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>0.07</b>	<b>-0.19</b>
<b>R-squared</b>				<b>0.00</b>	<b>0.04</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.



**Table 2.3: Private Pay Prices Compared to Medicaid Rates by Hospital for Acute Myocardial Infarction (AMI) (DRG 190)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
South Shore Hospital	\$9,684	\$5,350	181%	2%	6%
Baystate Medical Center	\$11,082	\$6,202	179%	7%	29%
Lahey Clinic	\$12,465	\$6,026	207%	1%	3%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$14,451	\$6,188	234%	4%	9%
Massachusetts General Hospital	\$16,499	\$6,918	238%	6%	11%
Tufts Medical Center	\$16,925	\$4,977	340%	6%	23%
U Mass Memorial Medical Center	\$19,059	\$5,298	360%	3%	20%
<b>Range</b>	<b>(\$9,684, \$19,059)</b>	<b>(\$4,977, \$6,918)</b>			
<b>Statewide median</b>	<b>\$14,451</b>	<b>\$6,026</b>	<b>234%</b>	<b>4%</b>	<b>11%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>0.28</b>	<b>0.26</b>
<b>R-squared</b>				<b>0.08</b>	<b>0.07</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.4: Private Pay Prices Compared to Medicaid Rates by Hospital for Congestive Heart Failure (CHF) (DRG 194)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Boston Medical Center	\$9,129	\$6,005	152%	23%	41%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$11,388	\$5,589	204%	5%	9%
Brigham & Women's Hospital	\$11,869	\$5,745	207%	7%	10%
Massachusetts General Hospital	\$12,042	\$5,720	211%	5%	11%
<b>Range</b>	<b>(\$9,129, \$12,042)</b>	<b>(\$5,589, \$6,005)</b>			
<b>Statewide median</b>	<b>\$11,628</b>	<b>\$5,733</b>	<b>205%</b>	<b>6%</b>	<b>10%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid<sup>3</sup></b>				<b>-0.97</b>	<b>-0.97</b>
<b>R-squared<sup>4</sup></b>				<b>0.94</b>	<b>0.94</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).

<sup>4</sup> The high correlation and R-squared statistic here may be explained by the very small sample size of only four hospitals in the analysis. A small sample size effectively gives outliers (in this case Boston Medical Center, which has over three times the Medicaid proportion of other hospitals in the DRG 194 analysis) a very high "weight" in the correlation calculation.



**Table 2.5: Private Pay Prices Compared to Medicaid Rates by Hospital for Appendectomy (DRG 225)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Milford Regional Medical Center	\$6,141	N/A	N/A	3%	10%
Lowell General Hospital	\$6,159	\$5,941	104%	21%	28%
Lawrence General Hospital	\$6,718	\$6,253	107%	20%	24%
Baystate Medical Center	\$7,025	\$6,324	111%	34%	29%
Metrowest Medical Center	\$7,234	\$6,114	118%	9%	15%
Saint Vincent Hospital	\$7,292	\$6,271	116%	8%	14%
Emerson Hospital	\$7,511	N/A	N/A	1%	5%
Mount Auburn Hospital	\$7,601	\$6,107	124%	1%	8%
Caritas Norwood Hospital	\$7,640	\$5,954	128%	5%	7%
Northeast Health Systems	\$7,915	\$6,111	130%	9%	17%
Winchester Hospital	\$7,963	\$5,859	136%	5%	8%
Faulkner Hospital	\$8,107	\$6,801	119%	6%	8%
Caritas Good Samaritan Hospital	\$8,151	\$5,979	136%	10%	17%
Cape Cod Hospital	\$8,199	\$6,338	129%	10%	10%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$8,424	\$6,552	129%	4%	9%
Jordan Hospital	\$8,428	\$6,245	135%	12%	10%
Newton Wellesley Hospital	\$8,794	\$6,150	143%	9%	6%
Southcoast Health Systems St. Luke's	\$9,129	\$6,044	151%	27%	25%
South Shore Hospital	\$9,241	\$5,921	156%	3%	6%
U Mass Memorial Medical Center	\$9,613	\$6,541	147%	16%	20%
Cooley Dickinson Hospital	\$10,120	\$5,616	180%	10%	13%
Massachusetts General Hospital	\$10,668	\$6,811	157%	6%	11%
Brigham & Women's Hospital	\$10,779	\$6,744	160%	7%	10%
Sturdy Memorial Hospital	\$10,898	\$6,171	177%	10%	14%
Children's Hospital	\$11,889	\$7,590	157%	8%	16%
<b>Range</b>	<b>(\$6,141, \$11,889)</b>	<b>(\$5,616, \$7,590)</b>			
<b>Statewide median</b>	<b>\$8,151</b>	<b>\$6,171</b>	<b>135%</b>	<b>9%</b>	<b>11%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>-0.15</b>	<b>-0.19</b>
<b>R-squared</b>				<b>0.02</b>	<b>0.03</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.6: Private Pay Prices Compared to Medicaid Rates by Hospital for Laparoscopic Cholecystectomy (DRG 263)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Quincy Medical Center	\$7,274	\$6,588	110%	17%	10%
Newton Wellesley Hospital	\$7,629	\$6,737	113%	7%	6%
Lowell General Hospital	\$7,676	\$6,565	117%	17%	28%
Metrowest Medical Center	\$8,888	\$6,703	133%	8%	15%
Jordan Hospital	\$8,977	\$6,880	130%	5%	10%
Mount Auburn Hospital	\$9,188	\$6,798	135%	5%	8%
Winchester Hospital	\$9,331	\$6,552	142%	5%	8%
South Shore Hospital	\$10,148	\$6,576	154%	7%	6%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$10,375	\$7,067	147%	6%	9%
Southcoast Health Systems Charlton	\$11,090	\$6,598	168%	21%	21%
Sturdy Memorial Hospital	\$11,120	\$6,575	169%	14%	14%
U Mass Memorial Medical Center	\$11,438	\$7,047	162%	18%	20%
Brigham & Women’s Hospital	\$11,678	\$7,233	161%	15%	10%
Massachusetts General Hospital	\$12,670	\$7,268	174%	10%	11%
<b>Range</b>	<b>(\$7,274, \$12,670)</b>	<b>\$6,552, \$7,268)</b>			
<b>Statewide median</b>	<b>\$9,740</b>	<b>\$6,720</b>	<b>145%</b>	<b>9%</b>	<b>10%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>0.16</b>	<b>0.01</b>
<b>R-squared</b>				<b>0.03</b>	<b>0.00</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. “N/A” means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.7: Private Pay Prices Compared to Medicaid Rates by Hospital for Hip Joint Replacement (DRG 301)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Northeast Health Systems	\$20,010	\$13,204	152%	3%	17%
Mount Auburn Hospital	\$21,108	\$13,139	161%	2%	8%
Baystate Medical Center	\$21,266	\$13,394	159%	3%	29%
Newton Wellesley Hospital	\$22,332	\$13,084	171%	0%	6%
North Shore Medical Center	\$22,385	\$13,198	170%	3%	18%
South Shore Hospital	\$23,038	\$13,180	175%	1%	6%
Lahey Clinic	\$23,145	\$13,917	166%	2%	3%
U Mass Memorial Medical Center	\$24,083	\$13,656	176%	3%	20%
New England Baptist Hospital	\$25,294	\$13,011	194%	2%	1%
Massachusetts General Hospital	\$26,483	\$13,997	189%	3%	11%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$26,707	\$13,735	194%	5%	9%
Brigham & Women's Hospital	\$27,342	\$14,192	193%	3%	10%
<b>Range</b>	<b>(\$20,010, \$27,342)</b>	<b>(\$13,011, \$14,192)</b>			
<b>Statewide median</b>	<b>\$23,091</b>	<b>\$13,299</b>	<b>173%</b>	<b>3%</b>	<b>9%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>0.36</b>	<b>-0.37</b>
<b>R-squared</b>				<b>0.13</b>	<b>0.14</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.8: Private Pay Prices Compared to Medicaid Rates by Hospital for Knee Joint Replacement (DRG 302)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Lowell General Hospital	\$14,153	\$12,420	114%	5%	28%
Saint Vincent Hospital	\$16,046	\$12,915	124%	2%	14%
Caritas Holy Family Hospital	\$16,771	\$11,861	141%	4%	23%
Emerson Hospital	\$16,910	N/A	N/A	0%	5%
Falmouth Hospital	\$17,249	\$12,972	133%	5%	10%
Winchester Hospital	\$17,830	N/A	N/A	0%	8%
Northeast Health Systems	\$17,848	\$11,990	149%	3%	17%
Cape Cod Hospital	\$18,710	\$12,258	153%	2%	10%
Caritas Good Samaritan Hospital	\$18,772	\$12,581	149%	1%	17%
Jordan Hospital	\$18,788	\$12,237	154%	1%	10%
Baystate Medical Center	\$19,375	\$12,179	159%	5%	29%
Newton Wellesley Hospital	\$19,671	\$12,751	154%	0%	6%
Southcoast Health Systems Charlton	\$19,820	\$12,008	165%	9%	21%
Mount Auburn Hospital	\$20,352	\$12,115	168%	1%	8%
South Shore Hospital	\$20,506	\$12,582	163%	1%	6%
Lahey Clinic	\$21,091	\$12,155	174%	1%	3%
North Shore Medical Center	\$21,317	\$12,008	178%	3%	18%
U Mass Memorial Medical Center	\$21,952	\$12,209	180%	6%	20%
Faulkner Hospital	\$22,239	\$12,398	179%	4%	8%
New England Baptist Hospital	\$22,309	\$11,881	188%	1%	1%
Southcoast Health Systems St. Luke's	\$23,678	\$11,556	205%	8%	25%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$23,821	\$13,145	181%	7%	9%
Sturdy Memorial Hospital	\$24,127	\$12,139	199%	4%	14%
Massachusetts General Hospital	\$24,913	\$12,821	194%	3%	11%
Brigham & Women's Hospital	\$25,284	\$12,848	197%	4%	10%
<b>Range</b>	<b>(\$14,153, \$25,284)</b>	<b>(\$11,556, \$13,145)</b>			
<b>Statewide median</b>	<b>\$19,820</b>	<b>\$12,237</b>	<b>165%</b>	<b>3%</b>	<b>10%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>0.25</b>	<b>-0.23</b>
<b>R-squared</b>				<b>0.06</b>	<b>0.05</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.9: Private Pay Prices Compared to Medicaid Rates by Hospital for Intervertebral Disc Excision and Decompression (DRG 310)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Lowell General Hospital	\$6,754	\$5,667	119%	8%	28%
Mercy Medical Center	\$7,570	\$5,650	134%	4%	22%
Cape Cod Hospital	\$7,794	\$6,087	128%	5%	10%
Jordan Hospital	\$8,186	\$5,928	138%	2%	10%
Tufts Medical Center	\$8,898	\$6,141	145%	12%	23%
Newton Wellesley Hospital	\$8,932	\$5,584	160%	4%	6%
South Shore Hospital	\$9,629	\$5,653	170%	5%	6%
U Mass Memorial Medical Center	\$9,653	\$6,356	152%	9%	20%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$9,987	\$6,517	153%	3%	9%
Lahey Clinic	\$10,089	\$5,998	168%	4%	3%
New England Baptist Hospital	\$10,232	N/A	N/A	0%	1%
Brigham & Women's Hospital	\$10,584	\$5,910	179%	5%	10%
Massachusetts General Hospital	\$11,263	\$6,497	173%	4%	11%
<b>Range</b>	<b>(\$6,754, \$11,263)</b>	<b>(\$5,584, \$6,517)</b>			
<b>Statewide median</b>	<b>\$9,629</b>	<b>\$5,963</b>	<b>153%</b>	<b>4%</b>	<b>10%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>-0.22</b>	<b>-0.61</b>
<b>R-squared</b>				<b>0.05</b>	<b>0.37</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.10: Private Pay Prices Compared to Medicaid Rates by Hospital for Knee and Lower Leg Procedures (DRG 313)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Boston Medical Center	\$9,765	\$9,107	107%	24%	41%
Baystate Medical Center	\$11,410	\$8,842	129%	18%	29%
Faulkner Hospital	\$11,902	\$8,886	134%	6%	8%
South Shore Hospital	\$11,931	\$7,965	150%	3%	6%
Newton Wellesley Hospital	\$12,651	\$8,435	150%	5%	6%
Brigham & Women's Hospital	\$13,359	\$9,138	146%	7%	10%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$13,527	\$7,853	172%	9%	9%
U Mass Memorial Medical Center	\$13,981	\$8,795	159%	13%	20%
New England Baptist Hospital	\$14,392	\$7,981	180%	1%	1%
Massachusetts General Hospital	\$14,403	\$8,671	166%	9%	11%
Children's Hospital	\$15,732	\$9,698	162%	21%	16%
<b>Range</b>	<b>(\$9,765, \$15,732)</b>	<b>(\$7,853, \$9,698)</b>			
<b>Statewide median</b>	<b>\$13,359</b>	<b>\$8,795</b>	<b>150%</b>	<b>9%</b>	<b>10%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>-0.20</b>	<b>-0.56</b>
<b>R-squared</b>				<b>0.04</b>	<b>0.31</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.11: Private Pay Prices Compared to Medicaid Rates by Hospital for Obesity (DRG 403)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Lowell General Hospital	\$10,328	\$9,273	111%	19%	28%
Faulkner Hospital	\$10,455	\$10,061	104%	2%	8%
Caritas Norwood Hospital	\$10,855	N/A	N/A	0%	7%
Boston Medical Center	\$10,884	\$10,125	108%	25%	41%
Winchester Hospital	\$11,026	\$8,925	124%	2%	8%
Emerson Hospital	\$12,026	N/A	N/A	7%	5%
Hallmark Health Systems	\$12,068	\$8,691	139%	15%	12%
Metrowest Medical Center	\$12,605	\$8,941	141%	15%	15%
Tufts Medical Center	\$13,337	\$9,493	140%	7%	23%
Newton Wellesley Hospital	\$13,740	\$9,408	146%	9%	6%
Southcoast Health Systems Tobey	\$13,992	\$9,270	151%	23%	19%
U Mass Memorial Medical Center	\$14,449	\$9,769	148%	11%	20%
North Shore Medical Center	\$14,522	\$9,231	157%	9%	18%
Baystate Medical Center	\$14,608	\$8,451	173%	17%	29%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$14,626	N/A	N/A	3%	9%
Brigham & Women's Hospital	\$15,883	\$10,031	158%	5%	10%
Lahey Clinic	\$15,989	\$9,536	168%	2%	3%
Massachusetts General Hospital	\$17,359	\$9,303	187%	9%	11%
Caritas St. Elizabeth's Medical Center	\$17,765	\$9,815	181%	10%	11%
Berkshire Medical Center	\$18,266	\$9,335	196%	17%	19%
<b>Range</b>	<b>(\$10,328, \$18,266)</b>	<b>(\$8,451, \$10,125)</b>			
<b>Statewide median</b>	<b>\$13,866</b>	<b>\$9,335</b>	<b>148%</b>	<b>9%</b>	<b>11%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>-0.01</b>	<b>-0.16</b>
<b>R-squared</b>				<b>0.00</b>	<b>0.03</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.12: Private Pay Prices Compared to Medicaid Rates by Hospital for Uterine and Adnexa Procedures for Non-Malignancy Except Leiomyoma (DRG 513)**

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Lowell General Hospital	\$6,103	\$5,427	112%	17%	28%
Milford Regional Medical Center	\$6,539	\$5,604	117%	13%	10%
Mount Auburn Hospital	\$6,896	\$5,581	124%	3%	8%
Winchester Hospital	\$7,237	\$5,353	135%	5%	8%
Caritas Good Samaritan Hospital	\$7,703	\$5,524	139%	17%	17%
Northeast Health Systems	\$7,941	\$5,352	148%	9%	17%
Hallmark Health Systems	\$8,005	\$5,523	145%	18%	12%
Newton Wellesley Hospital	\$8,061	\$5,782	139%	5%	6%
Baystate Medical Center	\$8,501	\$5,935	143%	21%	29%
North Shore Medical Center	\$8,530	\$5,552	154%	23%	18%
Southcoast Health Systems Charlton	\$8,757	\$5,454	161%	20%	21%
Southcoast Health Systems St. Luke's	\$8,762	\$5,418	162%	29%	25%
Sturdy Memorial Hospital	\$8,834	\$5,439	162%	13%	14%
South Shore Hospital	\$9,078	\$5,350	170%	2%	6%
U Mass Memorial Medical Center	\$9,234	\$6,004	154%	13%	20%
Lahey Clinic	\$9,410	\$5,687	165%	3%	3%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$9,536	\$6,159	155%	5%	9%
Brigham & Women's Hospital	\$10,149	\$6,179	164%	5%	10%
Massachusetts General Hospital	\$10,306	\$6,276	164%	5%	11%
<b>Range</b>	<b>(\$6,103, \$10,306)</b>	<b>(\$5,350, \$6,276)</b>			
<b>Statewide median</b>	<b>\$8,530</b>	<b>\$5,552</b>	<b>154%</b>	<b>13%</b>	<b>12%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>-0.18</b>	<b>-0.19</b>
<b>R-squared</b>				<b>0.03</b>	<b>0.04</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.13: Private Pay Prices Compared to Medicaid Rates by Hospital for Cesarean Delivery (DRG 540)** (continued on next page)

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Cambridge Health Alliance	\$4,957	\$6,107	81%	71%	39%
Lawrence General Hospital	\$5,629	\$6,493	87%	42%	24%
Anna Jaques Hospital	\$5,641	\$6,380	88%	23%	14%
Sturdy Memorial Hospital	\$5,883	\$6,282	94%	21%	14%
Lowell General Hospital	\$5,910	\$6,172	96%	42%	28%
Brockton Hospital	\$5,986	\$6,043	99%	57%	25%
Mercy Medical Center	\$6,089	\$5,710	107%	54%	22%
Milford Regional Medical Center	\$6,237	\$6,192	101%	24%	10%
Saint Vincent Hospital	\$6,343	\$6,328	100%	29%	14%
Boston Medical Center	\$6,453	\$7,305	88%	77%	41%
Morton Hospital	\$6,562	\$6,101	108%	46%	18%
Caritas Holy Family Hospital	\$6,585	\$6,054	109%	39%	23%
Emerson Hospital	\$6,596	\$6,078	109%	7%	5%
Metrowest Medical Center	\$6,632	\$6,186	107%	40%	15%
Mount Auburn Hospital	\$6,734	\$6,279	107%	16%	8%
Falmouth Hospital	\$6,758	\$6,317	107%	29%	10%
Winchester Hospital	\$6,813	\$6,297	108%	12%	8%
Jordan Hospital	\$6,918	\$6,390	108%	30%	10%
Health Alliance Hospitals, Inc.	\$6,967	\$6,052	115%	44%	21%
Northeast Health Systems	\$7,056	\$6,208	114%	27%	17%
Caritas Good Samaritan Hospital	\$7,262	\$6,053	120%	48%	17%
Caritas Norwood Hospital	\$7,311	\$6,271	117%	24%	7%
Cape Cod Hospital	\$7,315	\$6,352	115%	42%	10%
Hallmark Health Systems	\$7,358	\$6,252	118%	32%	12%
Newton Wellesley Hospital	\$7,412	\$6,545	113%	5%	6%
Baystate Medical Center	\$7,536	\$6,654	113%	45%	29%
Southcoast Health Systems St. Luke's	\$7,821	\$6,129	128%	56%	25%

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.



**Table 2.13: Private Pay Prices Compared to Medicaid Rates by Hospital for Cesarean Delivery (DRG 540)** (continued from previous page)

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Tufts Medical Center	\$7,925	\$6,875	115%	41%	23%
Southcoast Health Systems Tobey	\$7,947	\$6,356	125%	42%	19%
U Mass Memorial Medical Center	\$8,195	\$6,899	119%	32%	20%
North Shore Medical Center	\$8,204	\$6,302	130%	36%	18%
Beth Israel Deaconess Medical Center	\$8,390	\$6,966	120%	10%	9%
South Shore Hospital	\$8,610	\$6,351	136%	8%	6%
Cooley Dickinson Hospital	\$8,649	\$6,107	142%	21%	13%
Brigham & Women's Hospital	\$8,800	\$7,339	120%	12%	10%
Southcoast Health Systems Charlton	\$8,946	\$6,213	144%	50%	21%
Berkshire Medical Center	\$9,017	\$6,629	136%	51%	19%
Caritas St. Elizabeth's Medical Center <sup>3</sup>	\$9,683	\$6,808	142%	22%	11%
Massachusetts General Hospital	\$10,517	\$7,036	149%	18%	10%
<b>Range</b>	<b>(\$4,957, \$10,517)</b>	<b>(\$5,710, \$7,339)</b>			
<b>Statewide median</b>	<b>\$7,056</b>	<b>\$6,297</b>	<b>113%</b>	<b>32%</b>	<b>15%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>-0.30</b>	<b>-0.33</b>
<b>R-squared</b>				<b>0.09</b>	<b>0.11</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 2.14: Private Pay Prices Compared to Medicaid Rates by Hospital for Vaginal Delivery (DRG 560)** (continued on next page)

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Holyoke Hospital	\$3,429.54	\$4,013.45	85%	67%	26%
Cambridge Health Alliance	\$3,489.95	\$4,121.54	85%	71%	39%
Martha's Vineyard Hospital	\$3,529.86	\$4,140.75	85%	38%	16%
Heywood Hospital	\$3,658.02	\$4,136.31	88%	44%	19%
Lowell General Hospital	\$3,769.87	\$4,099.67	92%	50%	28%
Anna Jaques Hospital	\$3,780.17	\$4,071.57	93%	29%	14%
Mercy Medical Center	\$3,805.25	\$3,889.05	98%	59%	22%
Milford Regional Medical Center	\$3,820.94	\$4,224.72	90%	31%	10%
Brockton Hospital	\$3,874.37	\$4,083.72	95%	62%	25%
Sturdy Memorial Hospital	\$3,923.57	\$4,128.42	95%	29%	14%
Caritas Norwood Hospital	\$4,066.85	\$4,135.61	98%	23%	7%
Saint Vincent Hospital	\$4,072.94	\$4,346.12	94%	33%	14%
Morton Hospital	\$4,077.13	\$4,063.03	100%	55%	18%
Cape Cod Hospital	\$4,137.39	\$4,307.77	96%	43%	10%
Boston Medical Center	\$4,284.87	\$5,093.35	84%	80%	41%
Mount Auburn Hospital	\$4,298.14	\$4,254.54	101%	16%	8%
Falmouth Hospital	\$4,380.91	\$4,295.83	102%	36%	10%
Caritas Holy Family Hospital	\$4,391.77	\$4,023.11	109%	48%	23%
Winchester Hospital	\$4,398.14	\$4,182.13	105%	14%	8%
Jordan Hospital	\$4,425.09	\$4,279.09	103%	30%	10%
Metrowest Medical Center	\$4,433.63	\$4,203.15	105%	37%	15%
Health Alliance Hospitals, Inc.	\$4,463.84	\$4,107.69	109%	44%	21%
Harrington Memorial Hospital	\$4,491.46	\$4,238.81	106%	54%	22%
Lawrence General Hospital	\$4,558.50	\$4,442.17	103%	50%	24%
Emerson Hospital	\$4,592.82	\$4,133.10	111%	9%	5%
Tufts Medical Center	\$4,670.06	\$4,646.46	101%	46%	23%
Baystate Medical Center	\$4,682.25	\$4,517.55	104%	53%	29%
North Adams Regional Hospital	\$4,701.22	\$3,762.04	125%	54%	26%
Hallmark Health Systems	\$4,747.36	\$4,168.60	114%	30%	12%
Caritas Good Samaritan Hospital	\$4,748.81	\$4,091.52	116%	63%	17%
Northeast Health Systems	\$4,924.25	\$4,094.75	120%	33%	17%
Newton Wellesley Hospital	\$4,937.91	\$4,297.32	115%	6%	6%

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.



**Table 2.14: Private Pay Prices Compared to Medicaid Rates by Hospital for Vaginal Delivery (DRG 560)** (continued from previous page)

Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Risk Adjusted Rate <sup>1</sup>	Private Payer Price as a % of Medicaid Rate	% of DRG-Specific Discharges that were Medicaid <sup>2</sup>	% of All Discharges that were Medicaid <sup>2</sup>
Southcoast Health Systems St. Luke's	\$4,986.56	\$4,126.71	121%	64%	25%
Southcoast Health Systems Charlton	\$5,102.45	\$4,091.02	125%	57%	21%
Southcoast Health Systems Tobey	\$5,135.26	\$4,105.74	125%	41%	19%
Baystate Franklin Medical Center	\$5,273.94	\$3,868.56	136%	44%	21%
North Shore Medical Center	\$5,371.44	\$4,219.21	127%	48%	18%
Beth Israel Deaconess Medical Center <sup>3</sup>	\$5,413.42	\$4,677.07	116%	12%	9%
Berkshire Medical Center	\$5,579.67	\$4,493.83	124%	56%	19%
Fairview Hospital	\$5,651.03	\$3,978.94	142%	54%	18%
Cooley Dickinson Hospital	\$5,664.34	\$3,883.46	146%	28%	13%
U Mass Memorial Medical Center	\$5,780.77	\$4,695.92	123%	37%	20%
Brigham & Women's Hospital	\$5,942.71	\$4,931.40	121%	14%	10%
South Shore Hospital	\$5,954.61	\$4,098.25	145%	10%	6%
Massachusetts General Hospital	\$6,145.77	\$4,936.46	124%	22%	11%
Caritas St. Elizabeth's Medical Center	\$6,184.85	\$4,597.72	135%	22%	11%
<b>Range</b>	<b>(\$3,430, \$6,185)</b>	<b>(\$3,762, \$5,093)</b>			
<b>Statewide median</b>	<b>\$4,524.98</b>	<b>\$4,138.53</b>	<b>106%</b>	<b>42%</b>	<b>18%</b>
<b>Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid</b>				<b>-0.33</b>	<b>-0.29</b>
<b>R-squared</b>				<b>0.11</b>	<b>0.08</b>

<sup>1</sup> Medicaid Risk Adjusted Rate reflects prices set for Medicaid fee-for-service. "N/A" means that the Severity-Adjusted Rate could not be calculated because the hospital did not have any Medicaid fee-for-service patients in this DRG during the time period studied.

<sup>2</sup> Data for Fiscal Year 2009 (October 2008 through September 2009), including both Medicaid fee-for-service and managed care enrollees.

<sup>3</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham).



**Table 3: Summary of Massachusetts Acute Hospitals' Relative Quality<sup>1</sup> Performance**  
(continued on next page)

Hospitals	DRG Quality Relativities													
	139 <sup>2</sup>	140	190	194	225	263	301	302	310	313	403	513	540	560
Anna Jaques Hospital	1.00	0.99	0.99	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Athol Memorial Hospital	1.00	1.07	0.99	1.00	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	N/A <sup>3</sup>	N/A
Baystate Franklin Medical Center	0.99	0.98	0.98	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.01
Baystate Mary Lane Hospital	1.02	1.08	1.01	1.03	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	1.03
Baystate Medical Center	0.97	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01
Berkshire Medical Center	1.01	0.99	1.00	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94*
Beth Israel Deaconess Hospital Needham	0.98	1.01	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	N/A	N/A
Beth Israel Deaconess Medical Center	0.99	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Boston Medical Center	0.97	0.94	0.98	0.99	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.96
Brigham & Women's Hospital	1.00	1.01	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Brockton Hospital	0.98	0.94	0.98	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Cambridge Health Alliance - Cambridge Hospital	0.98	0.96	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Cambridge Health Alliance - Somerville Hospital	0.98	0.96	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	N/A	N/A
Cambridge Health Alliance - Whidden Memorial Hospital	0.98	0.96	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	N/A	N/A
Cape Cod Hospital	1.00	1.01	1.01	0.98	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.04
Caritas Carney Hospital	1.01	1.04	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	N/A	N/A
Caritas Good Samaritan Hospital	0.99	0.95	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.99
Caritas Holy Family Hospital	1.00	0.99	0.99	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Caritas Norwood Hospital	1.00	0.98	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.96
Caritas St. Elizabeth's Medical Center	0.98	1.01	0.99	1.00	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.05
Clinton Hospital	1.02	1.13*	N/A	1.04*	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	N/A	N/A
Cooley Dickinson Hospital	1.00	0.98	1.00	1.01	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Emerson Hospital	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02
Fairview Hospital	1.03*	1.12*	1.04*	1.04*	1.04*	1.04*	1.04*	1.04*	1.04*	1.04*	1.04*	1.04*	1.04*	1.04
Falmouth Hospital	1.01	0.96	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Faulkner Hospital	1.01	1.04	1.01	1.02	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	N/A	N/A
Hallmark Health Systems - Lawrence Memorial Campus	1.01	1.01	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	N/A
Hallmark Health Systems - Melrose Campus	1.01	1.01	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Hallmark Health Systems - Wakefield Campus	1.01	1.01	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	N/A	N/A

<sup>1,2,3</sup> See DRG definitions and notes on page 35



**Table 3: Summary of Massachusetts Acute Hospitals' Relative Quality<sup>1</sup> Performance**  
(continued from previous page)

Hospitals	DRG Quality Relativities													
	139 <sup>2</sup>	140	190	194	225	263	301	302	310	313	403	513	540	560
Harrington Memorial Hospital	0.98	0.99	0.99	0.96*	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.96
Health Alliance Hospitals, Inc.	1.00	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heywood Hospital	1.00	1.00	1.00	0.98	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Holyoke Hospital	0.98	0.97	0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	1.04
Jordan Hospital	0.97	0.96	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.99
Lahey Clinic	0.97	0.94	0.99	0.98	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	N/A <sup>3</sup>	N/A
Lawrence General Hospital	0.98	0.96	0.98	0.96*	0.96*	0.96*	0.96*	0.96*	0.96*	0.96*	0.96*	0.96*	0.96*	0.98
Lowell General Hospital	0.98	0.98	0.99	0.97	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.01
Marlborough Hospital	0.98	0.96	1.00	1.00	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	N/A	N/A
Martha's Vineyard Hospital	0.97	1.04	N/A	1.00	N/A	0.99								
Massachusetts General Hospital	1.00	0.99	1.00	1.02	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.96
Mercy Medical Center	0.98	0.93	0.98	0.98	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.95
Merrimack Valley Hospital	0.99	0.96	0.99	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	N/A	N/A
Metrowest Medical Center Framingham	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97
Metrowest Medical Center Leonard Morse Campus	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	N/A
Milford Regional Medical Center	1.01	1.05	1.01	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.05*
Milton Hospital	0.99	0.98	0.98	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	N/A	N/A
Morton Hospital	0.99	0.99	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Mount Auburn Hospital	1.01	1.02	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	0.98
Nantucket Cottage Hospital	1.02	1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.02
Nashoba Valley Medical Center	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	N/A	N/A
New England Baptist Hospital	1.02	1.05	N/A	1.03	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	1.03*	N/A	N/A
Newton Wellesley Hospital	1.01	1.02	1.02	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Noble Hospital	1.01	1.05	1.02	1.01	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	N/A	N/A
North Adams Regional Hospital	1.02	1.03	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
North Shore Medical Center/Salem Hospital	1.00	0.98	1.01	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
North Shore Medical Center/Union Hospital	1.00	0.98	1.01	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	N/A
Northeast Health Systems - Addison Gilbert	1.00	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	N/A
Northeast Health Systems - Beverly Hospital	1.00	0.97	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.03
Quincy Medical Center	0.97	0.92	0.98	0.98	0.96*	0.96*	0.96*	0.96*	0.96*	0.96*	0.96*	0.96*	N/A	N/A
Saint Anne's Hospital	1.01	1.02	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	N/A	N/A

<sup>1,2,3</sup> See DRG definitions and notes on page 35



**Table 3: Summary of Massachusetts Acute Hospitals’ Relative Quality<sup>1</sup> Performance**  
(continued from previous page)

Hospitals	DRG Quality Relativities													
	139 <sup>2</sup>	140	190	194	225	263	301	302	310	313	403	513	540	560
Saint Vincent Hospital	0.98	0.96	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.02
Saints Memorial Medical Center	0.99	1.02	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	N/A <sup>3</sup>	N/A
South Shore Hospital	1.00	1.00	0.99	0.97	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Southcoast Health Systems Charlton	0.98	0.98	1.00	0.97	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98
Southcoast Health Systems St. Luke's Hospital	0.98	0.98	1.00	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	1.03
Southcoast Health Systems Tobey Hospital	0.98	0.98	1.00	0.97	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	1.00
Sturdy Memorial Hospital	0.98	1.02	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Tufts Medical Center	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.06*
U Mass Memorial Medical Center - Memorial Campus	0.97	0.94	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98
U Mass Memorial Medical Center - University Campus	0.97	0.94	1.00	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	N/A	N/A
Winchester Hospital	1.00	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02
Wing Memorial Hospital	1.01	1.05	1.01	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	N/A	N/A
Minimum Score	0.97	0.92	0.98	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.97	0.94
Maximum Score	1.03	1.13	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.02	1.06

<sup>1</sup> The Quality Relativity was computed by dividing the hospital’s performance rate by the statewide average. A relativity of 1.0 is average, and higher numbers indicate better performance. A relativity of 1.10, for example, indicates that the hospital performs 10% better than average on the measure. The relativities for each quality component were then averaged together, giving an aggregate relativity indicating the weighted-average performance for each hospital for each DRG examined. This aggregate relativity can be used to gauge each hospital’s relative performance for each DRG.

<sup>2</sup> DRG Key	
139 - Pneumonia	302 - Knee joint replacement
140 - Chronic obstructive pulmonary disease (COPD)	310 - Intervertebral disc excision and decompression
190 - Acute myocardial infarction (AMI)	313 - Knee and lower leg procedures
194 - Congestive heart failure (CHF)	403 - Procedures for obesity
225 - Appendectomy	513 - Uterine and adnexa procedures for non-malignancy except leiomyoma
263 - Laparoscopic cholecystectomy	540 - Cesarean delivery
301 - Hip joint replacement	560 - Vaginal delivery

<sup>3</sup> N/A Denotes that an aggregate quality relativity for a given hospitals performance for the DRG indicated is not available. This may be due to sample sizes that are too small to derive a meaningful quality relativity, missing data or if a hospital does not provide a given service. For more information about how missing data was handled in the calculation of quality scores, please see the *Technical Appendix*.

\* Denotes a relativity score that is statistically significantly above or below the median. Statistical significance was derived from the Z-Score, or standardized score, for each hospitals’ DRG-specific aggregate quality relativity. The standardized score indicates how many standard deviations a score is above or below average. An average standardized score is zero. Positive values indicate better performance. Z-Scores greater than 1.96 indicate performance that is 2 or more standard deviations better than average, which would be considered statistically significant (p<0.05). Similarly, Z-Scores of less than -1.96 indicate significantly worse than average performance. Z-Score values can be found in Tables 4.1 through 4.6.



**Table 4.1: Process, Outcome, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Pneumonia (DRG 139) by Hospital** (continued on next page)

Hospital Name	Process		Readmissions		Mortality		Patient Experience		Aggregate	
	Adjusted Average Process Score (%)	Quality Relativity	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Anna Jaques Hospital	97.4	1.02	17.8	1.02	11.2	0.99	69.6	0.99	1.00	0.55
Athol Memorial Hospital	94.3	0.98	19.3	1.00	13.7	0.96	75.3	1.07	1.00	0.57
Baystate Franklin Medical Center	93.7	0.98	19.5	0.99	10.4	1.00	68.6	0.98	0.99	-0.46
Baystate Mary Lane Hospital	96.0	1.00	18.4	1.01	11.1	0.99	76.1	1.08	1.02	1.68
Baystate Medical Center	86.5	0.90	18.3	1.01	11.5	0.99	67.5	0.96	0.97	-1.83
Berkshire Medical Center	97.4	1.02	16.8	1.03	8.7	1.02	69.5	0.99	1.01	1.15
Beth Israel Deaconess Hospital Needham	90.2	0.94	21.1	0.97	10.2	1.00	70.6	1.01	0.98	-0.85
Beth Israel Deaconess Medical Center	92.7	0.97	21	0.98	8	1.03	68.9	0.98	0.99	-0.44
Boston Medical Center	89.5	0.94	20	0.99	8.9	1.02	66.0	0.94	0.97	-1.55
Brigham & Women's Hospital	96.3	1.01	20.4	0.98	10.3	1.00	71.1	1.01	1.00	0.37
Brockton Hospital	96.8	1.01	20.2	0.99	12.5	0.98	65.9	0.94	0.98	-1.06
Cambridge Health Alliance - Cambridge Hospital	95.5	1.00	20.4	0.98	12.6	0.98	67.3	0.96	0.98	-1.02
Cambridge Health Alliance - Somerville Hospital	95.5	1.00	20.4	0.98	12.6	0.98	67.3	0.96	0.98	-1.02
Cambridge Health Alliance - Whidden Memorial Hospital	95.5	1.00	20.4	0.98	12.6	0.98	67.3	0.96	0.98	-1.02
Cape Cod Hospital	93.0	0.97	16.7	1.03	10.6	1.00	70.9	1.01	1.00	0.43
Caritas Carney Hospital	94.5	0.99	18.2	1.01	9.3	1.01	72.9	1.04	1.01	1.05
Caritas Good Samaritan Hospital	93.9	0.98	18.8	1.00	9.8	1.01	66.8	0.95	0.99	-0.60
Caritas Holy Family Hospital	95.1	0.99	18.6	1.01	10.4	1.00	69.4	0.99	1.00	0.11
Caritas Norwood Hospital	94.7	0.99	19.9	0.99	7.3	1.04	68.6	0.98	1.00	0.17
Caritas St. Elizabeth's Medical Center	90.8	0.95	22.8	0.95	10.1	1.00	70.6	1.01	0.98	-1.07
Clinton Hospital	91.2	0.95	18.7	1.00	11.4	0.99	79.1	1.13	1.02	1.44
Cooley Dickinson Hospital	95.5	1.00	17.5	1.02	9.2	1.01	69.0	0.98	1.00	0.50
Emerson Hospital	96.2	1.00	18.7	1.00	10.6	1.00	71.5	1.02	1.01	0.70
Fairview Hospital	99.4	1.04	18.7	1.00	14.7	0.95	78.8	1.12	1.03	2.13
Falmouth Hospital	96.6	1.01	15.9	1.04	7.5	1.03	67.4	0.96	1.01	0.94
Faulkner Hospital	94.7	0.99	19.1	1.00	9.4	1.01	73.0	1.04	1.01	0.92
Hallmark Health Systems - Lawrence Memorial Campus	95.0	0.99	18.4	1.01	8.8	1.02	71.1	1.01	1.01	0.80
Hallmark Health Systems - Melrose Campus	95.0	0.99	18.4	1.01	8.8	1.02	71.1	1.01	1.01	0.80
Hallmark Health Systems - Wakefield Campus	95.0	0.99	18.4	1.01	8.8	1.02	71.1	1.01	1.01	0.80

<sup>1,2,3</sup> See notes on page 38

**Table 4.1: Process, Outcome, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Pneumonia (DRG 139) by Hospital** (continued from previous page)

Hospital Name	Process		Readmissions		Mortality		Patient Experience		Aggregate	
	Adjusted Average Process Score (%)	Quality Relativity	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Harrington Memorial Hospital	88.8	0.93	16.5	1.03	11.6	0.99	69.5	0.99	0.98	-0.69
Health Alliance Hospitals, Inc.	94.6	0.99	17.8	1.02	11.7	0.99	71.1	1.01	1.00	0.34
Heywood Hospital	93.5	0.98	18.2	1.01	9.9	1.01	70.5	1.00	1.00	0.27
Holyoke Hospital	93.2	0.97	19.2	1.00	11.6	0.99	68.0	0.97	0.98	-0.83
Jordan Hospital	94.2	0.98	21.2	0.97	12.7	0.98	67.6	0.96	0.97	-1.32
Lahey Clinic	89.4	0.93	18.6	1.01	10.3	1.00	65.8	0.94	0.97	-1.60
Lawrence General Hospital	89.7	0.94	18.9	1.00	9.1	1.02	67.4	0.96	0.98	-1.04
Lowell General Hospital	93.6	0.98	20.6	0.98	11.3	0.99	68.6	0.98	0.98	-0.84
Marlborough Hospital	97.1	1.01	21.7	0.97	11.9	0.98	67.1	0.96	0.98	-0.92
Martha's Vineyard Hospital	76.0	0.79	17	1.03	9.4	1.01	73.3	1.04	0.97	-1.66
Massachusetts General Hospital	94.7	0.99	19.1	1.00	8.8	1.02	69.8	0.99	1.00	0.31
Mercy Medical Center	95.8	1.00	19.3	1.00	10.4	1.00	65.5	0.93	0.98	-0.77
Merrimack Valley Hospital	93.4	0.98	18.4	1.01	10.1	1.00	67.5	0.96	0.99	-0.49
Metrowest Medical Center Framingham	95.3	1.00	20.6	0.98	11.4	0.99	70.5	1.00	0.99	-0.17
Metrowest Medical Center Leonard Morse Campus	95.3	1.00	20.6	0.98	11.4	0.99	70.5	1.00	0.99	-0.17
Milford Regional Medical Center	94.0	0.98	19.3	1.00	9.6	1.01	74.0	1.05	1.01	0.96
Milton Hospital	92.5	0.97	17.9	1.01	10.3	1.00	68.8	0.98	0.99	-0.30
Morton Hospital	96.1	1.00	19.8	0.99	12.4	0.98	69.3	0.99	0.99	-0.33
Mount Auburn Hospital	97.0	1.01	18.5	1.01	8.6	1.02	71.4	1.02	1.01	1.20
Nantucket Cottage Hospital	93.3	0.97	NR <sup>4</sup>	NR	NR	NR	75.5	1.08	1.02	1.84
Nashoba Valley Medical Center	96.8	1.01	20.2	0.99	10.3	1.00	71.0	1.01	1.00	0.45
New England Baptist Hospital	97.1	1.01	19	1.00	8.6	1.02	74.0	1.05	1.02	1.69
Newton Wellesley Hospital	97.5	1.02	18.9	1.00	9.2	1.01	71.6	1.02	1.01	1.16
Noble Hospital	94.1	0.98	17.9	1.01	11.8	0.99	73.6	1.05	1.01	0.79
North Adams Regional Hospital	97.1	1.01	16.7	1.03	9.9	1.01	72.4	1.03	1.02	1.55
North Shore Medical Center/Salem Hospital	93.9	0.98	18.3	1.01	9.3	1.01	68.6	0.98	1.00	0.00
North Shore Medical Center/Union Hospital	93.9	0.98	18.3	1.01	9.3	1.01	68.6	0.98	1.00	0.00
Northeast Health Systems - Addison Gilbert	95.0	0.99	18.1	1.01	10	1.01	68.3	0.97	1.00	0.01

1,2,3,4 See notes on page 38



**Table 4.1: Process, Outcome, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Pneumonia (DRG 139) by Hospital** (continued from previous page)

Hospital Name	Process		Readmissions		Mortality		Patient Experience		Aggregate		
	Adjusted Average Process Score (%)	Quality Relativity	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>	
Northeast Health Systems - Beverly Hospital	95.0	0.99	18.1	1.01	10	1.01	68.3	0.97	1.00	0.01	
Quincy Medical Center	91.7	0.96	19.1	1.00	10.6	1.00	64.4	0.92	0.97	-1.68	
Saint Anne’s Hospital	95.5	1.00	17.8	1.02	9.2	1.01	71.4	1.02	1.01	0.98	
Saint Vincent Hospital	97.2	1.02	22	0.96	13	0.97	67.6	0.96	0.98	-1.04	
Saints Memorial Medical Center	93.0	0.97	19.7	0.99	11.4	0.99	71.4	1.02	0.99	-0.18	
South Shore Hospital	95.2	0.99	19.4	1.00	10.4	1.00	70.3	1.00	1.00	0.17	
Southcoast Health Systems Charlton	90.0	0.94	19.2	1.00	10.3	1.00	68.5	0.98	0.98	-1.01	
Southcoast Health Systems St. Luke’s Hospital	90.0	0.94	19.2	1.00	10.3	1.00	68.5	0.98	0.98	-1.01	
Southcoast Health Systems Tobey Hospital	90.0	0.94	19.2	1.00	10.3	1.00	68.5	0.98	0.98	-1.01	
Sturdy Memorial Hospital	94.3	0.98	20.6	0.98	15.1	0.95	71.4	1.02	0.98	-0.78	
Tufts Medical Center	95.0	0.99	20.8	0.98	9.3	1.01	70.4	1.00	1.00	0.08	
U Mass Memorial Medical Center - Memorial Campus	89.0	0.93	19.3	1.00	10.5	1.00	66.1	0.94	0.97	-1.75	
U Mass Memorial Medical Center - University Campus	89.0	0.93	19.3	1.00	10.5	1.00	66.1	0.94	0.97	-1.75	
Winchester Hospital	90.3	0.94	18.2	1.01	9.1	1.02	71.5	1.02	1.00	0.10	
Wing Memorial Hospital	97.1	1.01	20.9	0.98	11.8	0.99	73.4	1.05	1.01	0.63	
Statewide Range	Min	76.0	0.79	15.9	0.95	7.3	0.95	64.4	0.92	0.97	
	Max	99.4	1.04	22.8	1.04	15.1	1.04	79.1	1.13	1.03	

Notes

- <sup>1</sup> The individual measures included in the quality domain composites, and further description of the weighting used in the composite methodology is available in the *Technical Appendix*. Hospital scores on the CMS-sourced measures can be accessed on the CMS HospitalCompare website.
- <sup>2</sup> The Quality Relativity was computed by dividing the hospital’s performance rate by the statewide average. A relativity of 1.0 is average, and higher numbers indicate better performance. A relativity of 1.10, for example, indicates that the hospital performs 10% better than average on the measure. The relativities for each quality component were then averaged together, giving an aggregate relativity indicating the weighted-average performance for each hospital for each DRG examined. This aggregate relativity can be used to gauge each hospital’s relative performance for each DRG.
- <sup>3</sup> The Z-Score, or standardized score, was derived from each hospitals’ aggregate relativity. The standardized score indicates how many standard deviations a score is above or below average. An average standardized score is zero. Positive values indicate better performance. Scores greater than 1.96 indicate performance that is 2 or more standard deviations better than average, which would be considered statistically significant (p<0.05). Similarly, scores less than -1.96 indicate significantly worse than average performance.
- <sup>4</sup> NR is used to denote areas of quality measurement for which data was not reported, as a result of sample sizes that were too small to get a meaningful score. For hospitals where one quality domain score is absent, the weighting in that hospital’s aggregate relativity is divided among the remaining quality domains. For further information on how missing data was handled in the calculation of quality scores, please see the *Technical Appendix*.



**Table 4.2: Patient Experience Quality Relativity<sup>1</sup> for Chronic Obstructive Pulmonary Disease (COPD) (DRG 140) by Hospital** (continued on next page)

Hospital Name	Patient Experience		
	HCAHPS Average Score (%)	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Anna Jaques Hospital	69.6	0.99	-0.19
Athol Memorial Hospital	75.3	1.07	1.66
Baystate Franklin Medical Center	68.6	0.98	-0.51
Baystate Mary Lane Hospital	76.1	1.08	1.94
Baystate Medical Center	67.5	0.96	-0.88
Berkshire Medical Center	69.5	0.99	-0.23
Beth Israel Deaconess Hospital Needham	70.6	1.01	0.14
Beth Israel Deaconess Medical Center	68.9	0.98	-0.43
Boston Medical Center	66.0	0.94	-1.37
Brigham & Women's Hospital	71.1	1.01	0.30
Brockton Hospital	65.9	0.94	-1.41
Cambridge Health Alliance - Cambridge Hospital	67.3	0.96	-0.96
Cambridge Health Alliance - Somerville Hospital	67.3	0.96	-0.96
Cambridge Health Alliance - Whidden Memorial Hospital	67.3	0.96	-0.96
Cape Cod Hospital	70.9	1.01	0.22
Caritas Carney Hospital	72.9	1.04	0.88
Caritas Good Samaritan Hospital	66.8	0.95	-1.13
Caritas Holy Family Hospital	69.4	0.99	-0.27
Caritas Norwood Hospital	68.6	0.98	-0.51
Caritas St. Elizabeth's Medical Center	70.6	1.01	0.14
Clinton Hospital	79.1	1.13	2.92
Cooley Dickinson Hospital	69.0	0.98	-0.39
Emerson Hospital	71.5	1.02	0.43
Fairview Hospital	78.8	1.12	2.80
Falmouth Hospital	67.4	0.96	-0.92
Faulkner Hospital	73.0	1.04	0.92
Hallmark Health Systems - Lawrence Memorial Campus	71.1	1.01	0.30
Hallmark Health Systems - Melrose Campus	71.1	1.01	0.30
Hallmark Health Systems - Wakefield Campus	71.1	1.01	0.30
Harrington Memorial Hospital	69.5	0.99	-0.23
Health Alliance Hospitals, Inc.	71.1	1.01	0.30
Heywood Hospital	70.5	1.00	0.10
Holyoke Hospital	68.0	0.97	-0.72
Jordan Hospital	67.6	0.96	-0.84
Lahey Clinic	65.8	0.94	-1.46
Lawrence General Hospital	67.4	0.96	-0.92
Lowell General Hospital	68.6	0.98	-0.51
Marlborough Hospital	67.1	0.96	-1.01
Martha's Vineyard Hospital	73.3	1.04	1.00
Massachusetts General Hospital	69.8	0.99	-0.15
Mercy Medical Center	65.5	0.93	-1.54

<sup>1,2,3</sup> See notes on page 40

**Table 4.2: Patient Experience Quality Relativity<sup>1</sup> for COPD (DRG 140) by Hospital**  
(continued from previous page)

Hospital Name	Patient Experience		
	HCAHPS Average Score (%)	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Merrimack Valley Hospital	67.5	0.96	-0.88
Metrowest Medical Center Framingham	70.5	1.00	0.10
Metrowest Medical Center Leonard Morse Campus	70.5	1.00	0.10
Milford Regional Medical Center	74.0	1.05	1.25
Milton Hospital	68.8	0.98	-0.47
Morton Hospital	69.3	0.99	-0.31
Mount Auburn Hospital	71.4	1.02	0.39
Nantucket Cottage Hospital	75.5	1.08	1.74
Nashoba Valley Medical Center	71.0	1.01	0.26
New England Baptist Hospital	74.0	1.05	1.25
Newton Wellesley Hospital	71.6	1.02	0.47
Noble Hospital	73.6	1.05	1.12
North Adams Regional Hospital	72.4	1.03	0.71
North Shore Medical Center/Salem Hospital	68.6	0.98	-0.51
North Shore Medical Center/Union Hospital	68.6	0.98	-0.51
Northeast Health Systems - Addison Gilbert	68.3	0.97	-0.64
Northeast Health Systems - Beverly Hospital	68.3	0.97	-0.64
Quincy Medical Center	64.4	0.92	-1.91
Saint Anne's Hospital	71.4	1.02	0.39
Saint Vincent Hospital	67.6	0.96	-0.84
Saints Memorial Medical Center	71.4	1.02	0.39
South Shore Hospital	70.3	1.00	0.02
Southcoast Health Systems Charlton	68.5	0.98	-0.56
Southcoast Health Systems St. Luke's Hospital	68.5	0.98	-0.56
Southcoast Health Systems Tobey Hospital	68.5	0.98	-0.56
Sturdy Memorial Hospital	71.4	1.02	0.39
Tufts Medical Center	70.4	1.00	0.06
U Mass Memorial Medical Center - Memorial Campus	66.1	0.94	-1.33
U Mass Memorial Medical Center - University Campus	66.1	0.94	-1.33
Winchester Hospital	71.5	1.02	0.43
Wing Memorial Hospital	73.4	1.05	1.04
Statewide Range	Min	64.4	0.92
	Max	79.1	1.13

## Note

- <sup>1</sup> The individual measures included in the quality domain composites, and further description of the weighting used in the composite methodology is available in the Technical Appendix. Hospital scores on the CMS-sourced measures can be accessed on the CMS HospitalCompare website.
- <sup>2</sup> The Quality Relativity was computed by dividing the hospital's performance rate by the statewide average. A relativity of 1.0 is average, and higher numbers indicate better performance. A relativity of 1.10, for example, indicates that the hospital performs 10% better than average on the measure. The relativities for each quality component were then averaged together, giving an aggregate relativity indicating the weighted-average performance for each hospital for each DRG examined. This aggregate relativity can be used to gauge each hospital's relative performance for each DRG.
- <sup>3</sup> The Z-Score, or standardized score, was derived from each hospitals' aggregate relativity. The standardized score indicates how many standard deviations a score is above or below average. An average standardized score is zero. Positive values indicate better performance. Scores greater than 1.96 indicate performance that is 2 or more standard deviations better than average, which would be considered statistically significant ( $p < 0.05$ ). Similarly, scores less than -1.96 indicate significantly worse than average performance.



**Table 4.3: Process, Outcome, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Acute Myocardial Infarction (AMI) (DRG 190) by Hospital** (continued on next page)

Hospital Name	Process		Readmissions		Mortality		Patient Experience		Aggregate	
	Adjusted Average Process Score (%)	Quality Relativity	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Anna Jaques Hospital	95.5	0.97	21.1	0.99	14.5	1.01	69.6	0.99	0.99	-0.74
Athol Memorial Hospital	93.8	0.94	NR <sup>4</sup>	NR	17.8	0.97	75.3	1.08	0.99	-1.04
Baystate Franklin Medical Center	92.5	0.95	19.4	1.01	16.6	0.98	68.6	0.98	0.98	-1.48
Baystate Mary Lane Hospital	97.4	1.00	20.6	1.00	17.6	0.97	76.1	1.09	1.01	1.37
Baystate Medical Center	98.9	1.00	18.9	1.02	13.1	1.02	67.5	0.96	1.00	0.35
Berkshire Medical Center	99.5	1.01	20.3	1.00	14.8	1.00	69.5	0.99	1.00	0.30
Beth Israel Deaconess Hospital Needham	100.0	1.01	21.8	0.98	16.3	0.99	70.6	1.01	1.00	-0.12
Beth Israel Deaconess Medical Center	99.6	1.01	22.5	0.97	12.6	1.03	68.9	0.98	1.00	0.03
Boston Medical Center	99.4	1.01	20.8	0.99	17.0	0.98	66.0	0.94	0.98	-1.50
Brigham & Women's Hospital	98.6	1.00	20.1	1.00	14.3	1.01	71.1	1.02	1.01	0.70
Brockton Hospital	99.1	1.01	19.5	1.01	17.7	0.97	65.9	0.94	0.98	-1.40
Cambridge Health Alliance - Cambridge Hospital	99.3	1.00	20.3	1.00	15.9	0.99	67.3	0.96	0.99	-0.80
Cambridge Health Alliance - Somerville Hospital	99.3	1.00	20.3	1.00	15.9	0.99	67.3	0.96	0.99	-0.80
Cambridge Health Alliance - Whidden Memorial Hospital	99.3	1.00	20.3	1.00	15.9	0.99	67.3	0.96	0.99	-0.80
Cape Cod Hospital	97.3	0.99	18.3	1.03	13.1	1.02	70.9	1.01	1.01	1.15
Caritas Carney Hospital	100.0	1.01	20.1	1.00	13.7	1.02	72.9	1.04	1.02	1.72
Caritas Good Samaritan Hospital	97.5	0.99	22.0	0.98	16.6	0.98	66.8	0.95	0.98	-1.81
Caritas Holy Family Hospital	96.9	0.99	20.7	1.00	17.1	0.98	69.4	0.99	0.99	-0.87
Caritas Norwood Hospital	99.8	1.01	21.8	0.98	14.0	1.01	68.6	0.98	1.00	-0.09
Caritas St. Elizabeth's Medical Center	96.5	0.98	23.3	0.96	14.2	1.01	70.6	1.01	0.99	-0.69
Clinton Hospital	100.0	1.01	NR	NR	16.1	0.99	79.1	1.13	NR	NR
Cooley Dickinson Hospital	99.1	1.00	20.2	1.00	14.2	1.01	69.0	0.99	1.00	0.13
Emerson Hospital	97.1	0.98	19.4	1.01	14.1	1.01	71.5	1.02	1.01	0.70
Fairview Hospital	100.0	1.01	19.2	1.01	15.8	0.99	78.8	1.13	1.04	3.11
Falmouth Hospital	99.5	1.00	19.4	1.01	14.0	1.01	67.4	0.96	1.00	-0.03
Faulkner Hospital	100.0	1.01	20.6	1.00	14.4	1.01	73.0	1.04	1.01	1.30
Hallmark Health Systems - Lawrence Memorial Campus	98.0	0.99	24.2	0.95	15.5	1.00	71.1	1.02	0.99	-0.76
Hallmark Health Systems - Melrose Campus	98.0	0.99	24.2	0.95	15.5	1.00	71.1	1.02	0.99	-0.76
Hallmark Health Systems - Wakefield Campus	98.0	0.99	24.2	0.95	15.5	1.00	71.1	1.02	0.99	-0.76

<sup>1,2,3,4</sup> See notes on page 43

**Table 4.3: Process, Outcome, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for AMI (DRG 190) by Hospital** (continued from previous page)

Hospital Name	Process		Readmissions		Mortality		Patient Experience		Aggregate	
	Adjusted Average Process Score (%)	Quality Relativity	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Harrington Memorial Hospital	97.4	0.99	20.6	1.00	16.3	0.99	69.5	0.99	0.99	-0.54
Health Alliance Hospitals, Inc.	98.8	1.00	18.9	1.02	12.9	1.03	71.1	1.02	1.01	1.35
Heywood Hospital	96.0	0.97	18.9	1.02	15.6	0.99	70.5	1.01	1.00	-0.03
Holyoke Hospital	97.1	0.98	18.4	1.02	16.0	0.99	68.0	0.97	0.99	-0.55
Jordan Hospital	98.2	0.99	21.0	0.99	13.5	1.02	67.6	0.97	0.99	-0.53
Lahey Clinic	98.9	1.00	19.5	1.01	13.4	1.02	65.8	0.94	0.99	-0.43
Lawrence General Hospital	97.5	0.99	20.9	0.99	16.1	0.99	67.4	0.96	0.98	-1.23
Lowell General Hospital	100.0	1.02	20.6	1.00	18.7	0.96	68.6	0.98	0.99	-0.89
Marlborough Hospital	98.8	1.00	19.2	1.01	12.4	1.03	67.1	0.96	1.00	0.25
Massachusetts General Hospital	99.3	1.00	21.5	0.99	13.1	1.02	69.8	1.00	1.00	0.36
Mercy Medical Center	99.0	1.00	19.7	1.01	15.9	0.99	65.5	0.94	0.98	-1.26
Merrimack Valley Hospital	97.6	0.99	19.8	1.01	16.4	0.99	67.5	0.96	0.99	-1.08
Metrowest Medical Center Framingham	99.3	1.01	19.5	1.01	16.0	0.99	70.5	1.01	1.00	0.53
Metrowest Medical Center Leonard Morse Campus	99.3	1.01	19.5	1.01	16.0	0.99	70.5	1.01	1.00	0.53
Milford Regional Medical Center	97.9	0.99	20.9	0.99	14.1	1.01	74.0	1.06	1.01	1.22
Milton Hospital	97.2	0.98	21.1	0.99	17.2	0.98	68.8	0.98	0.98	-1.31
Morton Hospital	98.2	0.99	20.6	1.00	14.6	1.01	69.3	0.99	1.00	-0.19
Mount Auburn Hospital	99.4	1.01	22.0	0.98	13.6	1.02	71.4	1.02	1.01	0.64
Nashoba Valley Medical Center	100.0	1.01	20.2	1.00	16.2	0.99	71.0	1.01	1.00	0.50
New England Baptist Hospital	80.0	0.81	NR <sup>4</sup>	NR	NR	NR	NR	NR	NR	NR
Newton Wellesley Hospital	100.0	1.01	19.9	1.01	13.0	1.03	71.6	1.02	1.02	1.50
Noble Hospital	100.0	1.01	20.0	1.00	15.4	1.00	73.6	1.05	1.02	1.46
North Adams Regional Hospital	100.0	1.01	21.0	0.99	14.9	1.00	72.4	1.03	1.01	0.99
North Shore Medical Center/ Salem Hospital	99.8	1.01	18.8	1.02	14.4	1.01	68.6	0.98	1.01	0.59
North Shore Medical Center/ Union Hospital	99.8	1.01	18.8	1.02	14.4	1.01	68.6	0.98	1.01	0.59
Northeast Health Systems - Addison Gilbert	99.6	1.01	20.9	0.99	17.3	0.97	68.3	0.98	0.99	-0.92
Northeast Health Systems - Beverly Hospital	99.6	1.01	20.9	0.99	17.3	0.97	68.3	0.98	0.99	-0.92
Quincy Medical Center	98.2	0.99	20.4	1.00	13.5	1.02	64.4	0.92	0.98	-1.32
Saint Anne's Hospital	98.4	0.99	21.0	0.99	16.3	0.99	71.4	1.02	1.00	-0.05
Saint Vincent Hospital	100.0	1.01	19.2	1.01	15.4	1.00	67.6	0.97	1.00	-0.09
Saints Memorial Medical Center	98.1	1.00	22.1	0.98	15.1	1.00	71.4	1.02	1.00	0.00

<sup>1,2,3,4</sup> See notes on page 43

**Table 4.3: Process, Outcome, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for AMI (DRG 190) by Hospital** (continued from previous page)

Hospital Name		Process		Readmissions		Mortality		Patient Experience		Aggregate	
		Adjusted Average Process Score (%)	Quality Relativity	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
South Shore Hospital		98.5	1.00	23.2	0.96	16.3	0.99	70.3	1.00	0.99	-0.81
Southcoast Health Systems Charlton		96.6	0.98	19.6	1.01	13.9	1.01	68.5	0.98	1.00	-0.27
Southcoast Health Systems St. Luke's Hospital		96.6	0.98	19.6	1.01	13.9	1.01	68.5	0.98	1.00	-0.27
Southcoast Health Systems Tobey Hospital		96.6	0.98	19.6	1.01	13.9	1.01	68.5	0.98	1.00	-0.27
Sturdy Memorial Hospital		99.2	1.00	19.1	1.02	16.3	0.99	71.4	1.02	1.01	0.69
Tufts Medical Center		99.3	1.01	18.9	1.02	18.8	0.96	70.4	1.01	1.00	-0.16
U Mass Memorial Medical Center - Memorial Campus		99.4	1.01	21.9	0.98	11.0	1.05	66.1	0.94	1.00	-0.24
U Mass Memorial Medical Center - University Campus		99.4	1.01	21.9	0.98	11.0	1.05	66.1	0.94	1.00	-0.24
Winchester Hospital		98.6	1.00	18.3	1.03	14.7	1.01	71.5	1.02	1.01	1.15
Wing Memorial Hospital		97.0	0.98	19.4	1.01	14.8	1.00	73.4	1.05	1.01	1.12
Statewide Range	Min	80.0	0.81	18.3	0.95	11.0	0.96	64.4	0.92	0.98	
	Max	100.0	1.02	24.2	1.03	18.8	1.05	79.1	1.13	1.04	

## Notes

- <sup>1</sup> The individual measures included in the quality domain composites, and further description of the weighting used in the composite methodology is available in the *Technical Appendix*. Hospital scores on the CMS-sourced measures can be accessed on the CMS HospitalCompare website.
- <sup>2</sup> The Quality Relativity was computed by dividing the hospital's performance rate by the statewide average. A relativity of 1.0 is average, and higher numbers indicate better performance. A relativity of 1.10, for example, indicates that the hospital performs 10% better than average on the measure. The relativities for each quality component were then averaged together, giving an aggregate relativity indicating the weighted-average performance for each hospital for each DRG examined. This aggregate relativity can be used to gauge each hospital's relative performance for each DRG.
- <sup>3</sup> The Z-Score, or standardized score, was derived from each hospitals' aggregate relativity. The standardized score indicates how many standard deviations a score is above or below average. An average standardized score is zero. Positive values indicate better performance. Scores greater than 1.96 indicate performance that is 2 or more standard deviations better than average, which would be considered statistically significant ( $p < 0.05$ ). Similarly, scores less than -1.96 indicate significantly worse than average performance.
- <sup>4</sup> NR is used to denote areas of quality measurement for which data was not reported, as a result of sample sizes that were too small to get a meaningful score. For hospitals where one quality domain score is absent, the weighting in that hospital's aggregate relativity is divided among the remaining quality domains. For further information on how missing data was handled in the calculation of quality scores, please see the *Technical Appendix*.



**Table 4.4: Process, Outcome, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for CHF (DRG 194) by Hospital** (continued on next page)

Hospital Name	Process		Readmissions		Mortality		Patient Experience		Aggregate	
	Adjusted Average Process Score (%)	Quality Relativity	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Anna Jaques Hospital	93.8	0.99	26.8	0.98	8.4	1.02	69.6	0.99	1.00	-0.29
Athol Memorial Hospital	92.3	0.98	25.8	0.99	13.0	0.97	75.3	1.07	1.00	0.08
Baystate Franklin Medical Center	96.4	1.02	21.9	1.04	12.1	0.98	68.6	0.98	1.00	0.24
Baystate Mary Lane Hospital	100.0	1.06	26.2	0.99	12.1	0.98	76.1	1.08	1.03	1.47
Baystate Medical Center	97.4	1.03	24.1	1.02	10.0	1.00	67.5	0.96	1.00	0.14
Berkshire Medical Center	100.0	1.06	22.1	1.04	11.5	0.98	69.5	0.99	1.02	1.02
Beth Israel Deaconess Hospital Needham	89.3	0.94	26.1	0.99	11.6	0.98	70.6	1.01	0.98	-1.13
Beth Israel Deaconess Medical Center	96.1	1.03	28.2	0.96	8.6	1.02	68.9	0.98	1.00	-0.25
Boston Medical Center	98.9	1.05	27.3	0.97	8.9	1.01	66.0	0.94	0.99	-0.37
Brigham & Women's Hospital	97.7	1.04	23.5	1.02	8.0	1.02	71.1	1.01	1.02	1.36
Brockton Hospital	98.6	1.04	27.5	0.97	9.0	1.01	65.9	0.94	0.99	-0.54
Cambridge Health Alliance - Cambridge Hospital	96.9	1.03	28.2	0.96	9.4	1.01	67.3	0.96	0.99	-0.71
Cambridge Health Alliance - Somerville Hospital	96.9	1.03	28.2	0.96	9.4	1.01	67.3	0.96	0.99	-0.71
Cambridge Health Alliance - Whidden Memorial Hospital	96.9	1.03	28.2	0.96	9.4	1.01	67.3	0.96	0.99	-0.71
Cape Cod Hospital	87.3	0.92	24.7	1.01	12.1	0.98	70.9	1.01	0.98	-1.18
Caritas Carney Hospital	94.3	1.00	25.8	0.99	9.0	1.01	72.9	1.04	1.01	0.55
Caritas Good Samaritan Hospital	92.3	0.98	25.2	1.00	10.0	1.00	66.8	0.95	0.98	-1.05
Caritas Holy Family Hospital	94.7	1.00	25.4	1.00	9.4	1.01	69.4	0.99	1.00	-0.11
Caritas Norwood Hospital	94.6	1.00	27.3	0.97	9.4	1.01	68.6	0.98	0.99	-0.65
Caritas St. Elizabeth's Medical Center	96.1	1.02	27.0	0.98	8.5	1.02	70.6	1.01	1.00	0.22
Clinton Hospital	97.9	1.04	25.4	1.00	10.1	1.00	79.1	1.13	1.04	2.24
Cooley Dickinson Hospital	97.5	1.04	21.3	1.05	11.9	0.98	69.0	0.98	1.01	0.67
Emerson Hospital	94.9	1.00	24.7	1.01	9.7	1.00	71.5	1.02	1.01	0.42
Fairview Hospital	97.4	1.04	24.3	1.01	11.6	0.98	78.8	1.12	1.04	2.11
Falmouth Hospital	96.7	1.02	24.0	1.02	10.2	1.00	67.4	0.96	1.00	-0.05
Faulkner Hospital	100.0	1.06	27.0	0.98	8.5	1.02	73.0	1.04	1.02	1.27
Hallmark Health Systems - Lawrence Memorial Campus	98.1	1.04	27.9	0.96	10.0	1.00	71.1	1.01	1.00	0.23
Hallmark Health Systems - Melrose Campus	98.1	1.04	27.9	0.96	10.0	1.00	71.1	1.01	1.00	0.23
Hallmark Health Systems - Wakefield Campus	98.1	1.04	27.9	0.96	10.0	1.00	71.1	1.01	1.00	0.23

<sup>1,2,3</sup> See notes on page 46

**Table 4.4: Process, Outcome, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Congestive Heart Failure (CHF) (DRG 194) by Hospital** (continued from previous page)

Hospital Name	Process		Readmissions		Mortality		Patient Experience		Aggregate	
	Adjusted Average Process Score (%)	Quality Relativity	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Harrington Memorial Hospital	80.8	0.86	24.1	1.02	11.6	0.98	69.5	0.99	0.96	-2.19
Health Alliance Hospitals, Inc.	94.7	1.01	24.6	1.01	11.2	0.99	71.1	1.01	1.00	0.17
Heywood Hospital	85.8	0.91	23.1	1.03	10.4	1.00	70.5	1.00	0.98	-0.87
Holyoke Hospital	94.1	0.99	22.9	1.03	11.8	0.98	68.0	0.97	0.99	-0.37
Jordan Hospital	90.8	0.96	27.0	0.98	10.2	1.00	67.6	0.96	0.98	-1.42
Lahey Clinic	94.1	1.00	25.6	1.00	11.2	0.99	65.8	0.94	0.98	-1.17
Lawrence General Hospital	81.9	0.87	25.3	1.00	10.0	1.00	67.4	0.96	0.96	-2.44
Lowell General Hospital	88.5	0.94	25.7	0.99	12.2	0.98	68.6	0.98	0.97	-1.62
Marlborough Hospital	95.4	1.01	23.7	1.02	9.3	1.01	67.1	0.96	1.00	-0.15
Martha's Vineyard Hospital	90.4	0.96	22.7	1.03	11.8	0.98	73.3	1.04	1.00	0.23
Massachusetts General Hospital	97.4	1.03	22.3	1.04	8.7	1.02	69.8	0.99	1.02	1.11
Mercy Medical Center	90.4	0.96	24.0	1.02	10.7	0.99	65.5	0.93	0.98	-1.42
Merrimack Valley Hospital	98.6	1.04	25.4	1.00	10.3	1.00	67.5	0.96	1.00	-0.05
Metrowest Medical Center Framingham	96.6	1.02	26.2	0.99	10.4	1.00	70.5	1.00	1.00	0.11
Metrowest Medical Center Leonard Morse Campus	96.6	1.02	26.2	0.99	10.4	1.00	70.5	1.00	1.00	0.11
Milford Regional Medical Center	96.6	1.02	26.2	0.99	9.4	1.01	74.0	1.05	1.02	0.94
Milton Hospital	97.1	1.03	26.3	0.99	10.2	1.00	68.8	0.98	1.00	-0.08
Morton Hospital	96.4	1.02	25.0	1.00	10.7	0.99	69.3	0.99	1.00	0.01
Mount Auburn Hospital	99.6	1.06	26.9	0.98	8.9	1.01	71.4	1.02	1.02	0.88
Nantucket Cottage Hospital	62.5	0.67	NR <sup>4</sup>	NR	NR	NR	75.5	1.08	NR	NR
Nashoba Valley Medical Center	94.0	1.00	26.0	0.99	10.2	1.00	71.0	1.01	1.00	-0.09
New England Baptist Hospital	100.0	1.06	25.1	1.00	9.0	1.01	74.0	1.05	1.03	1.81
Newton Wellesley Hospital	98.4	1.04	24.2	1.01	8.7	1.02	71.6	1.02	1.02	1.25
Noble Hospital	92.6	0.98	24.7	1.01	11.3	0.99	73.6	1.05	1.01	0.31
North Adams Regional Hospital	96.2	1.02	23.8	1.02	9.9	1.00	72.4	1.03	1.02	0.95
North Shore Medical Center/ Salem Hospital	98.3	1.04	23.1	1.03	8.2	1.02	68.6	0.98	1.02	0.93
North Shore Medical Center/ Union Hospital	98.3	1.04	23.1	1.03	8.2	1.02	68.6	0.98	1.02	0.93
Northeast Health Systems - Addison Gilbert	95.8	1.01	24.4	1.01	9.3	1.01	68.3	0.97	1.00	0.04
Northeast Health Systems - Beverly Hospital	95.8	1.01	24.4	1.01	9.3	1.01	68.3	0.97	1.00	0.04
Quincy Medical Center	96.5	1.02	26.2	0.99	9.0	1.01	64.4	0.92	0.98	-0.91

<sup>1,2,3,4</sup> See notes on page 46

**Table 4.4: Process, Outcome, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for CHF (DRG 194) by Hospital** (continued from previous page)

Hospital Name	Process		Readmissions		Mortality		Patient Experience		Aggregate		
	Adjusted Average Process Score (%)	Quality Relativity	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>	
Saint Anne's Hospital	90.5	0.96	24.1	1.02	8.2	1.02	71.4	1.02	1.00	0.16	
Saint Vincent Hospital	99.2	1.05	22.8	1.03	11.2	0.99	67.6	0.96	1.01	0.44	
Saints Memorial Medical Center	93.5	0.99	25.9	0.99	9.7	1.00	71.4	1.02	1.00	-0.01	
South Shore Hospital	84.2	0.89	26.1	0.99	10.1	1.00	70.3	1.00	0.97	-1.73	
Southcoast Health Systems Charlton	85.0	0.90	25.5	1.00	7.9	1.02	68.5	0.98	0.97	-1.47	
Southcoast Health Systems St. Luke's Hospital	85.0	0.90	25.5	1.00	7.9	1.02	68.5	0.98	0.97	-1.47	
Southcoast Health Systems Tobey Hospital	85.0	0.90	25.5	1.00	7.9	1.02	68.5	0.98	0.97	-1.47	
Sturdy Memorial Hospital	96.5	1.02	25.3	1.00	11.0	0.99	71.4	1.02	1.01	0.36	
Tufts Medical Center	98.1	1.04	28.1	0.96	10.3	1.00	70.4	1.00	1.00	0.04	
U Mass Memorial Medical Center - Memorial Campus	96.2	1.02	26.9	0.98	9.8	1.00	66.1	0.94	0.99	-0.85	
U Mass Memorial Medical Center - University Campus	96.2	1.02	26.9	0.98	9.8	1.00	66.1	0.94	0.99	-0.85	
Winchester Hospital	95.5	1.01	25.1	1.00	9.2	1.01	71.5	1.02	1.01	0.56	
Wing Memorial Hospital	97.3	1.03	27.1	0.98	9.2	1.01	73.4	1.05	1.02	0.84	
Statewide Range	Min	62.5	0.67	21.3	0.96	7.9	0.97	64.4	0.92	0.96	
	Max	100.0	1.06	28.2	1.05	13.0	1.02	79.1	1.13	1.04	

## Notes

- <sup>1</sup> The individual measures included in the quality domain composites, and further description of the weighting used in the composite methodology is available in the *Technical Appendix*. Hospital scores on the CMS-sourced measures can be accessed on the CMS HospitalCompare website.
- <sup>2</sup> The Quality Relativity was computed by dividing the hospital's performance rate by the statewide average. A relativity of 1.0 is average, and higher numbers indicate better performance. A relativity of 1.10, for example, indicates that the hospital performs 10% better than average on the measure. The relativities for each quality component were then averaged together, giving an aggregate relativity indicating the weighted-average performance for each hospital for each DRG examined. This aggregate relativity can be used to gauge each hospital's relative performance for each DRG.
- <sup>3</sup> The Z-Score, or standardized score, was derived from each hospitals' aggregate relativity. The standardized score indicates how many standard deviations a score is above or below average. An average standardized score is zero. Positive values indicate better performance. Scores greater than 1.96 indicate performance that is 2 or more standard deviations better than average, which would be considered statistically significant ( $p < 0.05$ ). Similarly, scores less than -1.96 indicate significantly worse than average performance.
- <sup>4</sup> NR is used to denote areas of quality measurement for which data was not reported, as a result of sample sizes that were too small to get a meaningful score. For hospitals where one quality domain score is absent, the weighting in that hospital's aggregate relativity is divided among the remaining quality domains. For further information on how missing data was handled in the calculation of quality scores, please see the *Technical Appendix*.



**Table 4.5: Process, Patient Safety, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Surgical Procedures<sup>2</sup> by Hospital** (continued on next page)

Hospital Name	Process		PSI	Patient Experience		Aggregate	
	Adjusted Average Process Score (%)	Quality Relativity	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>3</sup>	Z-Score <sup>4</sup>
Anna Jaques Hospital	95.5	0.98	1.00	69.6	0.99	0.99	-0.33
Athol Memorial Hospital	96.4	1.00	1.00	75.3	1.07	1.02	1.37
Baystate Franklin Medical Center	96.0	0.99	1.00	68.6	0.98	0.99	-0.31
Baystate Mary Lane Hospital	99.2	1.02	1.00	76.1	1.08	1.03	2.20
Baystate Medical Center	99.2	1.02	1.00	67.5	0.96	1.00	0.12
Berkshire Medical Center	98.8	1.02	0.99	69.5	0.99	1.00	0.30
Beth Israel Deaconess Hospital Needham	98.7	1.02	1.01	68.9	0.98	1.00	0.50
Beth Israel Deaconess Medical Center	97.8	1.01	1.00	70.6	1.01	1.00	0.53
Boston Medical Center	95.3	0.98	0.98	66.0	0.94	0.97	-1.65
Brigham & Women's Hospital	97.2	1.00	1.01	71.1	1.01	1.01	0.63
Brockton Hospital	98.9	1.02	0.98	65.9	0.94	0.98	-0.78
Cambridge Health Alliance - Cambridge Hospital	98.0	1.01	1.00	67.3	0.96	0.99	-0.33
Cambridge Health Alliance - Somerville Hospital	98.0	1.01	0.99	67.3	0.96	0.99	-0.42
Cambridge Health Alliance - Whidden Memorial Hospital	98.0	1.01	1.00	67.3	0.96	0.99	-0.16
Cape Cod Hospital	98.2	1.01	1.00	70.9	1.01	1.01	0.59
Caritas Carney Hospital	96.0	0.99	1.00	72.9	1.04	1.01	0.56
Caritas Good Samaritan Hospital	98.0	1.01	0.98	66.8	0.95	0.98	-1.01
Caritas Holy Family Hospital	95.5	0.98	1.00	69.4	0.99	0.99	-0.44
Caritas Norwood Hospital	96.7	1.00	1.00	68.6	0.98	0.99	-0.23
Caritas St. Elizabeth's Medical Center	97.8	1.01	1.03	70.6	1.01	1.01	1.12
Clinton Hospital	82.6	0.85	1.00	79.1	1.13	0.98	-1.23
Cooley Dickinson Hospital	97.5	1.00	0.97	69.0	0.98	0.98	-0.78
Emerson Hospital	96.3	0.99	1.02	71.5	1.02	1.01	0.80
Fairview Hospital	99.7	1.03	1.00	78.8	1.12	1.04	2.82
Falmouth Hospital	98.6	1.02	0.99	67.4	0.96	0.99	-0.40
Faulkner Hospital	98.0	1.01	1.04	73.0	1.04	1.03	2.07
Hallmark Health Systems - Lawrence Memorial Campus	96.2	0.99	1.00	71.1	1.01	1.00	0.23
Hallmark Health Systems - Melrose Campus	96.2	0.99	1.00	71.1	1.01	1.00	0.23
Hallmark Health Systems - Wakefield Campus	96.2	0.99	1.00	71.1	1.01	1.00	0.24
Harrington Memorial Hospital	91.6	0.94	1.00	69.5	0.99	0.98	-1.40
Health Alliance Hospitals, Inc.	97.7	1.01	0.98	71.1	1.01	1.00	0.10
Heywood Hospital	94.6	0.98	1.00	70.5	1.00	0.99	-0.32

<sup>1,2,3,4</sup> See DRG definitions and notes on page 49

**Table 4.5: Process, Patient Safety, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Surgical Procedures<sup>2</sup> by Hospital** (continued from previous page)

Hospital Name	Process		PSI	Patient Experience		Aggregate	
	Adjusted Average Process Score (%)	Quality Relativity	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>3</sup>	Z-Score <sup>4</sup>
Holyoke Hospital	93.8	0.97	1.00	68.0	0.97	0.98	-1.08
Jordan Hospital	97.6	1.00	0.98	67.6	0.96	0.98	-0.77
Lahey Clinic	98.5	1.01	1.00	65.8	0.94	0.99	-0.44
Lawrence General Hospital	88.0	0.91	1.00	67.4	0.96	0.96	-2.62
Lowell General Hospital	96.4	0.99	0.99	68.6	0.98	0.99	-0.50
Marlborough Hospital	95.8	0.99	1.00	67.1	0.96	0.98	-0.79
Martha's Vineyard Hospital	NR <sup>5</sup>	NR	NR	73.3	NR	NR	NR
Massachusetts General Hospital	95.7	0.98	1.00	69.8	0.99	0.99	-0.30
Mercy Medical Center	97.1	1.00	1.01	65.5	0.93	0.99	-0.69
Merrimack Valley Hospital	96.1	0.99	1.00	67.5	0.96	0.99	-0.61
Metrowest Medical Center Framingham	96.4	0.99	1.00	70.5	1.00	1.00	0.01
Metrowest Medical Center Leonard Morse Campus	96.4	1.00	1.00	70.5	1.00	1.00	0.11
Milford Regional Medical Center	96.9	1.00	1.01	74.0	1.05	1.02	1.34
Milton Hospital	94.9	0.98	1.00	68.8	0.98	0.99	-0.72
Morton Hospital	96.1	0.99	1.00	69.3	0.99	0.99	-0.22
Mount Auburn Hospital	97.3	1.00	1.01	71.4	1.02	1.01	0.83
Nantucket Cottage Hospital	NR	NR	NR	75.5	NR	NR	NR
Nashoba Valley Medical Center	96.0	0.99	1.00	71.0	1.01	1.00	0.26
New England Baptist Hospital	97.6	1.01	1.03	74.0	1.05	1.03	2.08
Newton Wellesley Hospital	97.2	1.00	0.98	71.6	1.02	1.00	0.12
Noble Hospital	98.6	1.01	1.00	73.6	1.05	1.02	1.34
North Adams Regional Hospital	98.0	1.01	1.00	72.4	1.03	1.01	0.92
North Shore Medical Center/Salem Hospital	97.6	1.00	1.01	68.6	0.98	1.00	0.10
North Shore Medical Center/Union Hospital	97.6	1.00	1.02	68.6	0.98	1.00	0.42
Northeast Health Systems - Addison Gilbert	98.3	1.01	1.00	68.3	0.97	1.00	0.07
Northeast Health Systems - Beverly Hospital	98.3	1.01	1.00	68.3	0.97	1.00	0.13
Quincy Medical Center	95.6	0.98	0.97	64.4	0.92	0.96	-2.14
Saint Anne's Hospital	98.0	1.01	1.00	71.4	1.02	1.01	0.78
Saint Vincent Hospital	98.3	1.01	1.00	67.6	0.96	1.00	-0.02
Saints Memorial Medical Center	97.4	1.00	1.01	71.4	1.02	1.01	0.85
South Shore Hospital	96.3	0.99	0.99	70.3	1.00	0.99	-0.24
Southcoast Health Systems Charlton	94.5	0.97	1.01	68.5	0.98	0.99	-0.54
Southcoast Health Systems St. Luke's Hospital	94.5	0.97	0.96	68.5	0.98	0.97	-1.77

<sup>1,2,3,4,5</sup> See DRG definitions and notes on page 49

**Table 4.5: Process, Patient Safety, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Surgical Procedures<sup>2</sup> by Hospital** (continued from previous page)

Hospital Name		Process		PSI	Patient Experience		Aggregate	
		Adjusted Average Process Score (%)	Quality Relativity	Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>3</sup>	Z-Score <sup>4</sup>
Southcoast Health Systems Tobey Hospital		94.5	0.97	1.00	68.5	0.98	0.98	-0.83
Sturdy Memorial Hospital		95.1	0.98	1.00	71.4	1.02	1.00	-0.06
Tufts Medical Center		95.7	0.98	1.00	70.4	1.00	1.00	-0.11
U Mass Memorial Medical Center - Memorial Campus		97.4	1.00	1.00	66.1	0.94	0.99	-0.66
U Mass Memorial Medical Center - University Campus		97.4	1.00	0.98	66.1	0.94	0.98	-1.14
Winchester Hospital		97.2	1.00	1.02	71.5	1.02	1.01	1.07
Wing Memorial Hospital		98.6	1.01	1.00	73.4	1.05	1.02	1.40
Statewide Range	Min	82.6	0.85	0.96	64.4	0.92	0.96	
	Max	99.7	1.03	1.04	79.1	1.13	1.04	

Notes

<sup>1</sup> The individual measures included in the quality domain composites, and further description of the weighting used in the composite methodology is available in the *Technical Appendix*. Hospital scores on the CMS-sourced measures can be accessed on the CMS HospitalCompare website.

<sup>2</sup> These scores provide quality performance information for the following surgical procedures:

DRG	Surgical Procedure
225	Appendectomy
263	Laparoscopic cholecystectomy
301	Hip joint replacement
302	Knee joint replacement
310	Intervertebral disc excision and decompression
313	Knee and lower leg procedures
403	Procedures for obesity
513	Uterine and adnexa procedures for non-malignancy except leiomyoma
540	Cesarean delivery

<sup>3</sup> The Quality Relativity was computed by dividing the hospital's performance rate by the statewide average. A relativity of 1.0 is average, and higher numbers indicate better performance. A relativity of 1.10, for example, indicates that the hospital performs 10% better than average on the measure. The relativities for each quality component were then averaged together, giving an aggregate relativity indicating the weighted-average performance for each hospital for each DRG examined. This aggregate relativity can be used to gauge each hospital's relative performance for each DRG.

<sup>4</sup> The Z-Score, or standardized score, was derived from each hospitals' aggregate relativity. The standardized score indicates how many standard deviations a score is above or below average. An average standardized score is zero. Positive values indicate better performance. Scores greater than 1.96 indicate performance that is 2 or more standard deviations better than average, which would be considered statistically significant (p<0.05). Similarly, scores less than -1.96 indicate significantly worse than average performance.

<sup>5</sup> NR is used to denote areas of quality measurement for which data was not reported, as a result of sample sizes that were too small to get a meaningful score. For hospitals where one quality domain score is absent, the weighting in that hospital's aggregate relativity is divided among the remaining quality domains. For further information on how missing data was handled in the calculation of quality scores, please see the *Technical Appendix*.



**Table 4.6: Patient Safety, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Vaginal Delivery (DRG 560) by Hospital** (continued on next page)

Hospital Name	PSI 18		PSI 19		PSI Average Quality Relativity	Patient Experience HCAHPS Average Score (%)		Aggregate	
	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity		Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>	
Anna Jaques Hospital	NR <sup>4</sup>	NR	0.02	1.00	1.00	69.6	0.99	1.00	0.00
Athol Memorial Hospital	NR	NR	NR	NR	NR	75.3	1.07	NR	NR
Baystate Franklin Medical Center	NR	NR	0.01	1.02	1.02	68.6	0.98	1.01	0.26
Baystate Mary Lane Hospital	NR	NR	0.01	1.02	1.02	76.1	1.08	1.03	1.19
Baystate Medical Center	0.12	1.03	0.01	1.01	1.02	67.5	0.96	1.01	0.22
Berkshire Medical Center	0.29	0.83	0.01	1.02	0.92	69.5	0.99	0.94	-2.12
Beth Israel Deaconess Hospital Needham	NR	NR	NR	NR	NR	68.9	1.01	NR	NR
Beth Israel Deaconess Medical Center	0.13	1.01	0.04	0.99	1.00	70.6	0.98	0.99	-0.24
Boston Medical Center	0.21	0.92	0.02	1.00	0.96	66.0	0.94	0.96	-1.57
Brigham & Women's Hospital	0.13	1.01	0.02	1.01	1.01	71.1	1.01	1.01	0.37
Brockton Hospital	NR	NR	0.03	0.99	0.99	65.9	0.94	0.98	-0.70
Cambridge Health Alliance - Cambridge Hospital	0.11	1.04	0.03	1.00	1.02	67.3	0.96	1.00	0.12
Cambridge Health Alliance - Somerville Hospital	NR	NR	NR	NR	NR	67.3	0.96	NR	NR
Cambridge Health Alliance - Whidden Memorial Hospital	NR	NR	NR	NR	NR	67.3	0.96	NR	NR
Cape Cod Hospital	0.06	1.10	0.01	1.01	1.05	70.9	1.01	1.04	1.56
Caritas Carney Hospital	NR	NR	NR	NR	NR	72.9	1.04	NR	NR
Caritas Good Samaritan Hospital	0.12	1.02	0.04	0.99	1.01	66.8	0.95	0.99	-0.29
Caritas Holy Family Hospital	NR	NR	0.02	1.00	1.00	69.4	0.99	1.00	-0.04
Caritas Norwood Hospital	0.22	0.91	0.03	0.99	0.95	68.6	0.98	0.96	-1.54
Caritas St. Elizabeth's Medical Center	0.05	1.11	0.02	1.01	1.06	70.6	1.01	1.05	1.68
Clinton Hospital	NR	NR	NR	NR	NR	79.1	1.13	NR	NR
Cooley Dickinson Hospital	NR	NR	0.05	0.98	0.98	69.0	0.98	0.98	-0.77
Emerson Hospital	0.11	1.03	0.01	1.01	1.02	71.5	1.02	1.02	0.74
Fairview Hospital	NR	NR	0.02	1.01	1.01	78.8	1.12	1.04	1.27
Falmouth Hospital	NR	NR	0.01	1.02	1.02	67.4	0.96	1.00	0.16
Faulkner Hospital	NR	NR	NR	NR	NR	73.0	1.04	NR	NR
Hallmark Health Systems - Lawrence Memorial Campus	NR	NR	NR	NR	NR	71.1	1.01	NR	NR
Hallmark Health Systems - Melrose Campus	NR	NR	0.06	0.96	0.96	71.1	1.01	0.98	-0.83
Hallmark Health Systems - Wakefield Campus	NR	NR	NR	NR	NR	71.1	1.01	NR	NR
Harrington Memorial Hospital	NR	NR	0.07	0.95	0.95	69.5	0.99	0.96	-1.30
Health Alliance Hospitals, Inc.	0.16	0.98	0.02	1.01	0.99	71.1	1.01	1.00	-0.08

<sup>1,2,3,4</sup> See notes on page 52



**Table 4.6: Patient Safety, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Vaginal Delivery (DRG 560) by Hospital** (continued from previous page)

Hospital Name	PSI 18		PSI 19		PSI Average Quality Relativity	Patient Experience HCAHPS Average Score Quality Relativity		Aggregate	
	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity		Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Heywood Hospital	0.16	0.98	0.02	1.01	0.99	70.5	1.00	1.00	-0.14
Holyoke Hospital	0.04	1.12	0.02	1.00	1.06	68.0	0.97	1.04	1.41
Jordan Hospital	NR <sup>4</sup>	NR	0.02	1.00	1.00	67.6	0.96	0.99	-0.26
Lahey Clinic	NR	NR	NR	NR	NR	65.8	0.94	NR	NR
Lawrence General Hospital	NR	NR	0.03	0.99	0.99	67.4	0.96	0.98	-0.63
Lowell General Hospital	0.10	1.05	0.03	1.00	1.02	68.6	0.98	1.01	0.42
Marlborough Hospital	NR	NR	NR	NR	NR	67.1	0.96	NR	NR
Martha's Vineyard Hospital	NR	NR	0.05	0.97	0.97	73.3	1.04	0.99	-0.42
Massachusetts General Hospital	0.22	0.91	0.03	1.00	0.96	69.8	0.99	0.96	-1.26
Mercy Medical Center	0.22	0.91	0.03	0.99	0.95	65.5	0.93	0.95	-1.95
Merrimack Valley Hospital	NR	NR	NR	NR	NR	67.5	0.96	NR	NR
Metrowest Medical Center Framingham	0.20	0.93	0.04	0.99	0.96	70.5	1.00	0.97	-1.08
Metrowest Medical Center Leonard Morse Campus	NR	NR	NR	NR	NR	70.5	1.00	NR	NR
Milford Regional Medical Center	0.06	1.10	0.01	1.01	1.05	74.0	1.05	1.05	1.98
Milton Hospital	NR	NR	NR	NR	NR	68.8	0.98	NR	NR
Morton Hospital	0.14	1.00	0.02	1.00	1.00	69.3	0.99	1.00	-0.07
Mount Auburn Hospital	0.19	0.95	0.03	0.99	0.97	71.4	1.02	0.98	-0.65
Nantucket Cottage Hospital	NR	NR	0.02	1.00	1.00	75.5	1.08	1.02	0.77
Nashoba Valley Medical Center	NR	NR	NR	NR	NR	71.0	1.01	NR	NR
New England Baptist Hospital	NR	NR	NR	NR	NR	74.0	1.05	NR	NR
Newton Wellesley Hospital	0.18	0.96	0.04	0.99	0.97	71.6	1.02	0.98	-0.58
Noble Hospital	NR	NR	NR	NR	NR	73.6	1.05	NR	NR
North Adams Regional Hospital	NR	NR	0.02	1.00	1.00	72.4	1.03	1.01	0.33
North Shore Medical Center/Salem Hospital	0.15	0.99	0.03	1.00	0.99	68.6	0.98	0.99	-0.46
North Shore Medical Center/Union Hospital	NR	NR	NR	NR	NR	68.6	0.98	NR	NR
Northeast Health Systems - Addison Gilbert	NR	NR	NR	NR	NR	68.3	0.97	NR	NR
Northeast Health Systems - Beverly Hospital	0.07	1.08	0.02	1.01	1.05	68.3	0.97	1.03	0.99
Quincy Medical Center	NR	NR	NR	NR	NR	64.4	0.92	NR	NR
Saint Anne's Hospital	NR	NR	NR	NR	NR	71.4	1.02	NR	NR
Saint Vincent Hospital	0.08	1.08	0.02	1.01	1.04	67.6	0.96	1.02	0.81
Saints Memorial Medical Center	NR	NR	NR	NR	NR	71.4	1.02	NR	NR
South Shore Hospital	0.14	1.00	0.02	1.00	1.00	70.3	1.00	1.00	0.03

<sup>1,2,3,4</sup> See notes on page 52



**Table 4.6: Patient Safety, Patient Experience, and Aggregate Quality Relativity<sup>1</sup> for Vaginal Delivery (DRG 560) by Hospital** (continued from previous page)

Hospital Name	PSI 18		PSI 19		PSI	Patient Experience		Aggregate	
	Rate (%)	Quality Relativity	Rate (%)	Quality Relativity	Average Quality Relativity	HCAHPS Average Score (%)	Quality Relativity	Quality Relativity <sup>2</sup>	Z-Score <sup>3</sup>
Southcoast Health Systems Charlton	0.18	0.96	0.03	1.00	0.98	68.5	0.98	0.98	-0.84
Southcoast Health Systems St. Luke's Hospital	0.07	1.09	0.02	1.01	1.05	68.5	0.98	1.03	1.10
Southcoast Health Systems Tobey Hospital	NR <sup>4</sup>	NR	0.02	1.01	1.01	68.5	0.98	1.00	0.01
Sturdy Memorial Hospital	0.14	1.00	0.02	1.00	1.00	71.4	1.02	1.00	0.14
Tufts Medical Center	0.02	1.15	0.01	1.02	1.08	70.4	1.00	1.06	2.23
U Mass Memorial Medical Center - Memorial Campus	0.16	0.98	0.02	1.00	0.99	66.1	0.94	0.98	-0.81
U Mass Memorial Medical Center - University Campus	NR	NR	NR	NR	NR	66.1	0.94	NR	NR
Winchester Hospital	0.09	1.06	0.03	0.99	1.02	71.5	1.02	1.02	0.83
Wing Memorial Hospital	NR	NR	NR	NR	NR	73.4	1.05	NR	NR
Statewide Range	Min	0.83	0.01	0.95	0.92	64.38	0.92	0.94	
	Max	1.15	0.07	1.02	1.08	79.13	1.13	1.06	

## Notes

- <sup>1</sup> The individual measures included in the quality domain composites, and further description of the weighting used in the composite methodology is available in the *Technical Appendix*. Hospital scores on the CMS-sourced measures can be accessed on the CMS HospitalCompare website.
- <sup>2</sup> The Quality Relativity was computed by dividing the hospital's performance rate by the statewide average. A relativity of 1.0 is average, and higher numbers indicate better performance. A relativity of 1.10, for example, indicates that the hospital performs 10% better than average on the measure. The relativities for each quality component were then averaged together, giving an aggregate relativity indicating the weighted-average performance for each hospital for each DRG examined. This aggregate relativity can be used to gauge each hospital's relative performance for each DRG.
- <sup>3</sup> The Z-Score, or standardized score, was derived from each hospitals' aggregate relativity. The standardized score indicates how many standard deviations a score is above or below average. An average standardized score is zero. Positive values indicate better performance. Scores greater than 1.96 indicate performance that is 2 or more standard deviations better than average, which would be considered statistically significant ( $p < 0.05$ ). Similarly, scores less than -1.96 indicate significantly worse than average performance.
- <sup>4</sup> NR is used to denote areas of quality measurement for which data was not reported, as a result of sample sizes that were too small to get a meaningful score. For hospitals where one quality domain score is absent, the weighting in that hospital's aggregate relativity is divided among the remaining quality domains. For further information on how missing data was handled in the calculation of quality scores, please see the *Technical Appendix*.



**Table 4.7: Individual Hospital Performance on Patient Safety Indicators for Surgical Procedures<sup>1</sup>** (continued on next page)

Hospital	PSI 4		PSI 12		PSI 15		PSI Average Quality Relativity
	Raw Rate (%)	Quality Relativity	Raw Rate (%)	Quality Relativity	Raw Rate (%)	Quality Relativity <sup>2</sup>	
Anna Jaques Hospital	NR <sup>3</sup>	NR	0.01	1.00	0.000	1.001	1.00
Athol Memorial Hospital	NR	NR	0.00	1.01	0.000	1.002	1.00
Baystate Franklin Medical Center	NR	NR	0.00	1.01	0.001	1.000	1.00
Baystate Mary Lane Hospital	NR	NR	0.00	1.01	0.002	1.000	1.00
Baystate Medical Center	0.1	1.00	0.01	1.00	0.002	1.000	1.00
Berkshire Medical Center	0.1	0.98	0.01	1.00	0.002	0.999	0.99
Beth Israel Deaconess Hospital Needham	NR	NR	0.00	1.00	0.002	1.000	1.00
Beth Israel Deaconess Medical Center	0.1	1.03	0.01	1.00	0.005	0.997	1.01
Boston Medical Center	0.2	0.95	0.01	1.00	0.003	0.999	0.98
Brigham & Women's Hospital	0.1	1.03	0.01	1.00	0.002	0.999	1.01
Brockton Hospital	0.2	0.95	0.01	1.00	0.003	0.999	0.98
Cambridge Health Alliance - Cambridge Hospital	NR	NR	0.02	0.99	0.002	1.000	1.00
Cambridge Health Alliance-Somerville Campus	NR	NR	0.02	0.98	0.000	1.002	0.99
Cambridge Health Alliance - Whidden Memorial Hospital	NR	NR	0.00	1.00	0.000	1.001	1.00
Cape Cod Hospital	0.1	0.99	0.00	1.00	0.002	1.000	1.00
Caritas Carney Hospital	NR	NR	0.00	1.00	0.004	0.998	1.00
Caritas Good Samaritan Hospital	0.2	0.93	0.01	1.00	0.001	1.001	0.98
Caritas Holy Family Hospital	0.1	0.99	0.00	1.00	0.001	1.001	1.00
Caritas Norwood Hospital	0.1	1.00	0.00	1.00	0.001	1.001	1.00
Caritas St. Elizabeth's Medical Center	0.0	1.07	0.00	1.00	0.002	0.999	1.03
Clinton Hospital	NR	NR	0.00	1.01	0.000	1.002	1.00
Cooley Dickinson Hospital	NR	NR	0.07	0.94	0.005	0.996	0.97
Emerson Hospital	0.1	1.06	0.00	1.00	0.001	1.000	1.02
Fairview Hospital	NR	NR	0.01	1.00	0.000	1.002	1.00
Falmouth Hospital	0.1	0.96	0.01	1.00	0.003	0.999	0.99
Faulkner Hospital	0.0	1.12	0.00	1.00	0.002	1.000	1.04
Hallmark Health Systems - Lawrence Memorial Campus	NR	NR	0.01	1.00	0.000	1.001	1.00
Hallmark Health Systems - Melrose Campus	0.1	1.00	0.01	1.00	0.002	1.000	1.00
Harrington Memorial Hospital	NR	NR	0.01	0.99	0.001	1.000	1.00
Health Alliance Hospitals, Inc.	0.2	0.94	0.00	1.00	0.001	1.001	0.98
Heywood Hospital	NR	NR	0.01	1.00	0.001	1.001	1.00
Holyoke Hospital	0.1	1.00	0.01	1.00	0.001	1.000	1.00
Jordan Hospital	0.2	0.94	0.00	1.00	0.001	1.000	0.98
Lahey Clinic	0.1	1.01	0.01	1.00	0.002	0.999	1.00
Lawrence General Hospital	0.1	1.01	0.00	1.00	0.001	1.001	1.00
Lowell General Hospital	0.1	0.98	0.00	1.00	0.002	0.999	0.99
Marlborough Hospital	NR	NR	0.01	1.00	0.000	1.002	1.00
Massachusetts General Hospital	0.1	1.00	0.01	1.00	0.004	0.997	1.00
Mercy Medical Center	0.1	1.02	0.01	1.00	0.002	0.999	1.01

<sup>1,2,3</sup> See notes on page 54

**Table 4.7: Individual Hospital Performance on Patient Safety Indicators for Surgical Procedures<sup>1</sup>** (continued from previous page)

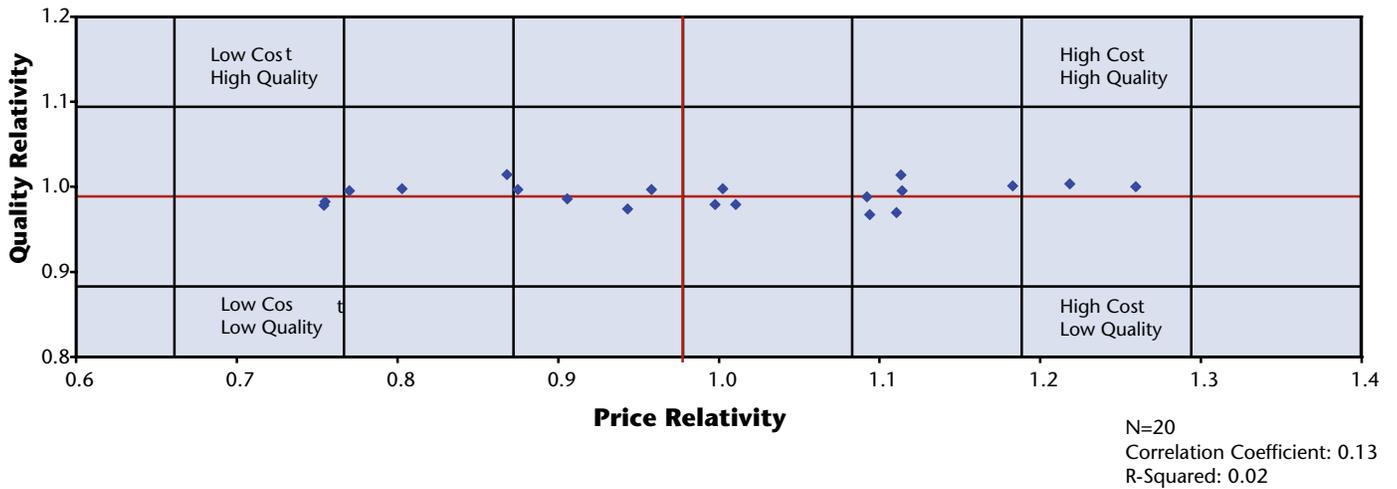
Hospital	PSI 4		PSI 12		PSI 15		PSI Average Quality Relativity	
	Raw Rate (%)	Quality Relativity	Raw Rate (%)	Quality Relativity	Raw Rate (%)	Quality Relativity <sup>2</sup>		
Merrimack Valley Hospital	NR <sup>3</sup>	NR	0.00	1.00	0.001	1.001	1.00	
Metrowest Medical Center Framingham	0.1	0.98	0.00	1.00	0.001	1.001	1.00	
Metrowest Medical Center-Leonard Morse Campus	NR	NR	0.01	1.00	0.000	1.001	1.00	
Milford Regional Medical Center	0.1	1.04	0.00	1.00	0.002	1.000	1.01	
Milton Hospital	0.1	0.99	0.00	1.00	0.001	1.001	1.00	
Morton Hospital	0.1	1.00	0.01	1.00	0.002	1.000	1.00	
Mount Auburn Hospital	0.1	1.03	0.01	1.00	0.002	1.000	1.01	
Nashoba Valley Medical Center	NR	NR	0.00	1.01	0.000	1.002	1.00	
New England Baptist Hospital	0.0	1.10	0.00	1.00	0.001	1.001	1.03	
Newton Wellesley Hospital	0.2	0.95	0.00	1.00	0.002	0.999	0.98	
Noble Hospital	NR	NR	0.01	1.00	0.002	0.999	1.00	
North Adams Regional Hospital	NR	NR	0.00	1.00	0.001	1.001	1.00	
North Shore Medical Center/Salem Hospital	0.1	1.02	0.00	1.00	0.002	0.999	1.01	
North Shore Medical Center/Union Hospital	0.1	1.06	0.01	1.00	0.001	1.001	1.02	
Northeast Health Systems-Addison Gilbert	NR	NR	0.01	1.00	0.000	1.002	1.00	
Northeast Health Systems - Beverly Hospital	0.1	1.00	0.00	1.00	0.001	1.000	1.00	
Quincy Medical Center	0.2	0.92	0.01	1.00	0.001	1.001	0.97	
Saint Anne's Hospital	NR	NR	0.01	1.00	0.000	1.001	1.00	
Saint Vincent Hospital	0.1	1.01	0.01	1.00	0.001	1.000	1.00	
Saints Memorial Medical Center	0.1	1.04	0.00	1.00	0.002	0.999	1.01	
South Shore Hospital	0.1	0.97	0.01	1.00	0.001	1.000	0.99	
Southcoast Health Systems Charlton	0.1	1.04	0.00	1.00	0.002	1.000	1.01	
Southcoast Health Systems St. Luke's Hospital	0.2	0.88	0.00	1.00	0.001	1.001	0.96	
Southcoast Health Systems Tobey Hospital	NR	NR	0.00	1.00	0.004	0.997	1.00	
Sturdy Memorial Hospital	0.1	0.99	0.00	1.00	0.003	0.998	1.00	
Tufts Medical Center	0.1	1.00	0.01	1.00	0.002	1.000	1.00	
U Mass Memorial Medical Center - University Campus	0.2	0.95	0.01	1.00	0.003	0.998	0.98	
U Mass Memorial Medical Center-Memorial Campus	0.1	1.01	0.01	1.00	0.002	0.999	1.00	
Winchester Hospital	0.1	1.07	0.00	1.00	0.005	0.997	1.02	
Wing Memorial Hospital	NR	NR	0.00	1.01	0.000	1.002	1.00	
Statewide Range	Min	0.00	0.88	0.00	0.94	0.00	1.00	0.96
	Max	0.21	1.12	0.07	1.01	0.01	1.00	1.04

Notes

- <sup>1</sup> The individual measures included in the quality domain composites, and further description of the weighting used in the composite methodology is available in the *Technical Appendix*. Hospital scores on the CMS-sourced measures can be accessed on the CMS HospitalCompare website.
- <sup>2</sup> The Quality Relativity was computed by dividing the hospital's performance rate by the statewide average. A relativity of 1.0 is average, and higher numbers indicate better performance. A relativity of 1.10, for example, indicates that the hospital performs 10% better than average on the measure. The relativities for each quality component were then averaged together, giving an aggregate relativity indicating the weighted-average performance for each hospital for each DRG examined. This aggregate relativity can be used to gauge each hospital's relative performance for each DRG.
- <sup>3</sup> NR is used to denote areas of quality measurement for which data was not reported, as a result of sample sizes that were too small to get a meaningful score. For hospitals where one quality domain score is absent, the weighting in that hospital's aggregate relativity is divided among the remaining quality domains. For further information on how missing data was handled in the calculation of quality scores, please see the *Technical Appendix*.



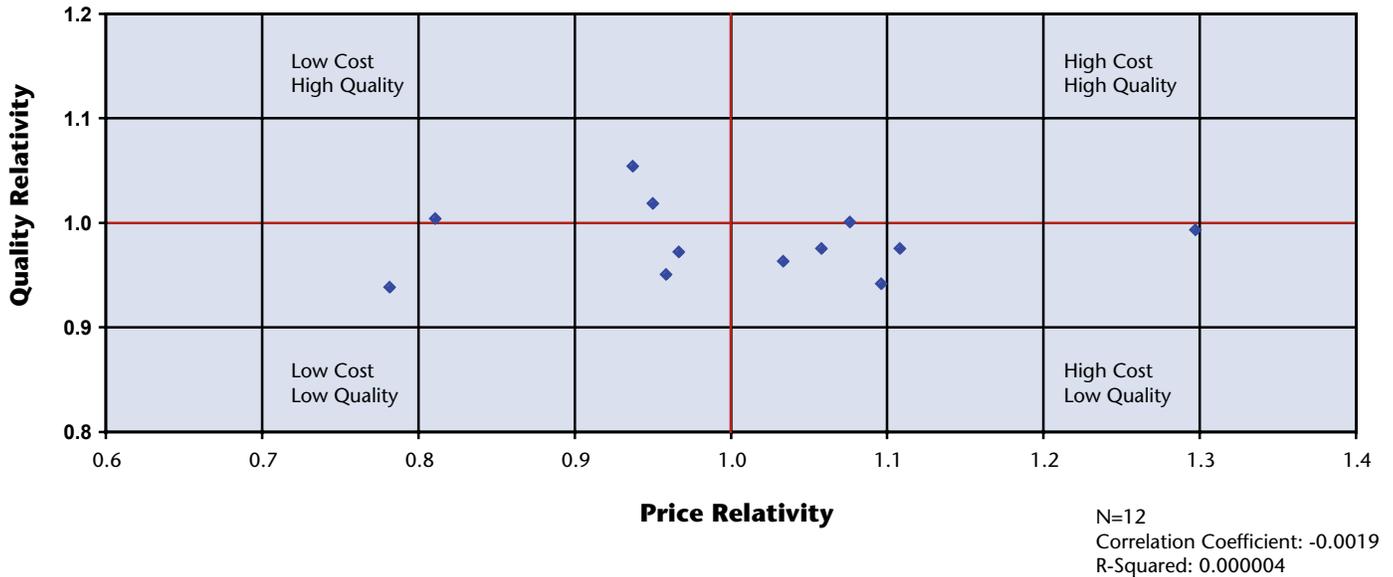
**Figure 1.1: Price vs. Quality for Pneumonia (DRG 139)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



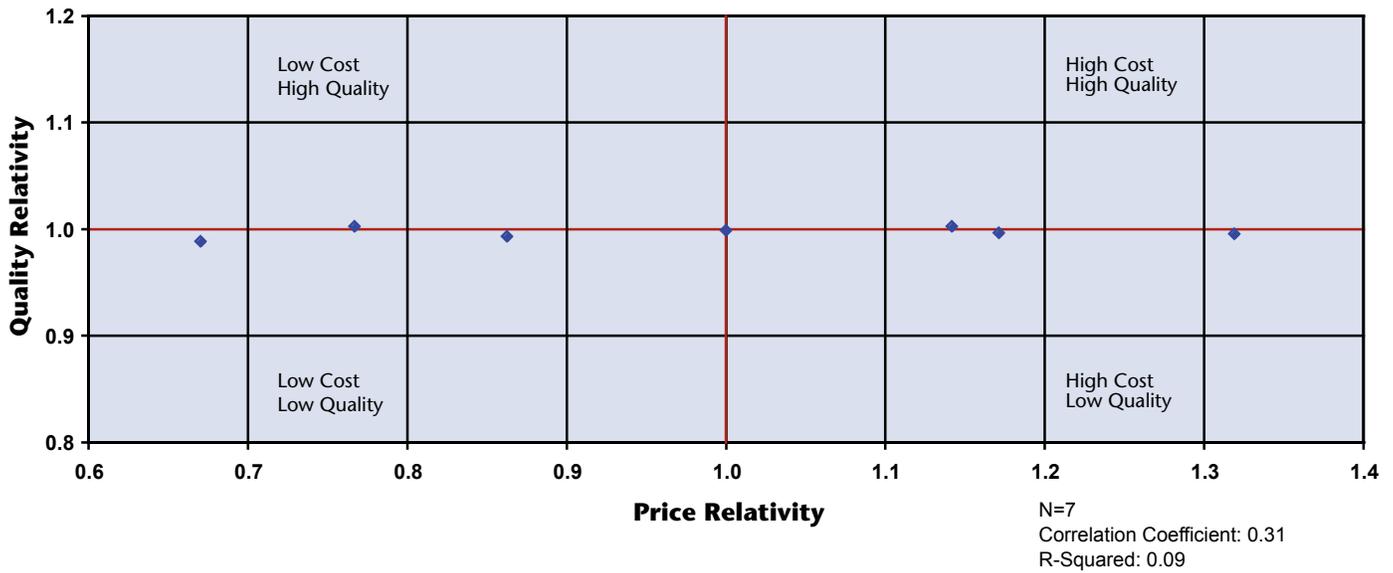
**Figure 1.2: Price vs. Quality for Chronic Obstructive Pulmonary Disease (COPD) (DRG 140)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



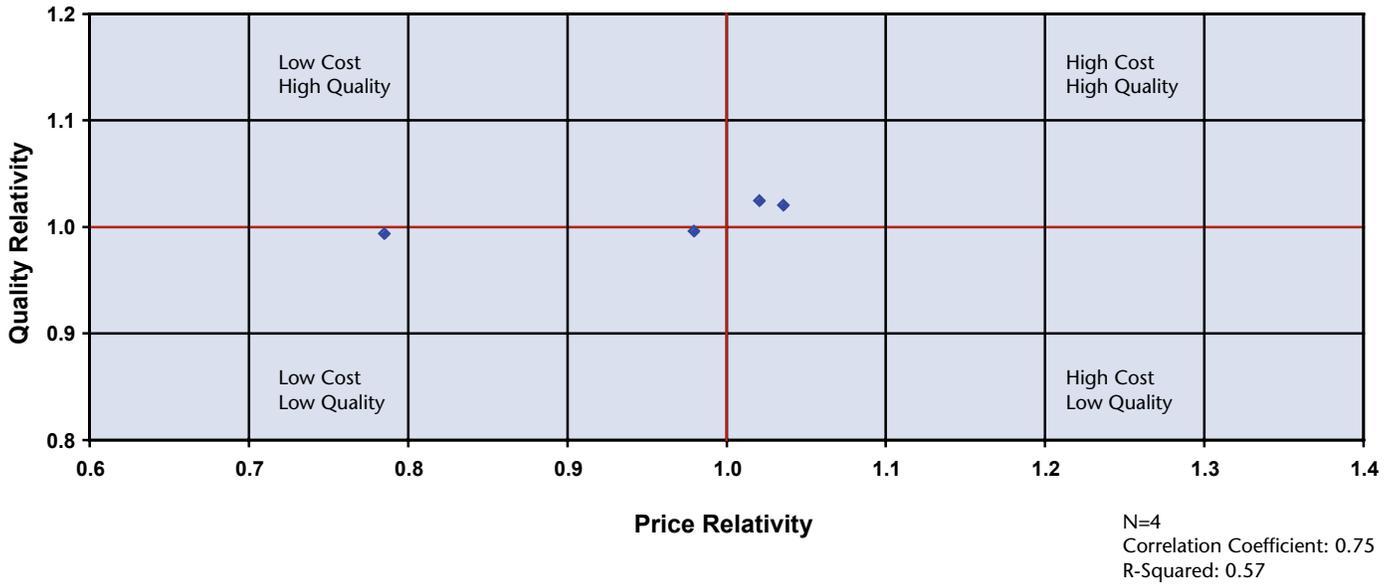
**Figure 1.3: Price vs. Quality for Acute Myocardial Infarction (AMI) (DRG 190)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



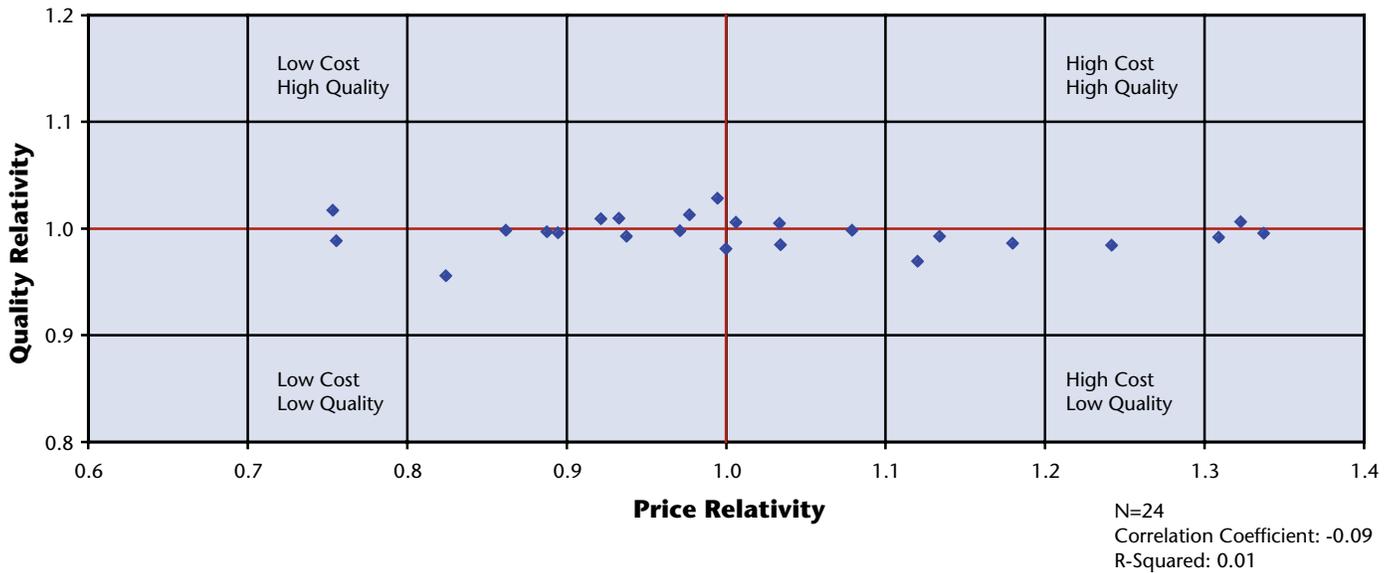
**Figure 1.4: Price vs. Quality for Congestive Heart Failure (CHF) (DRG 194)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



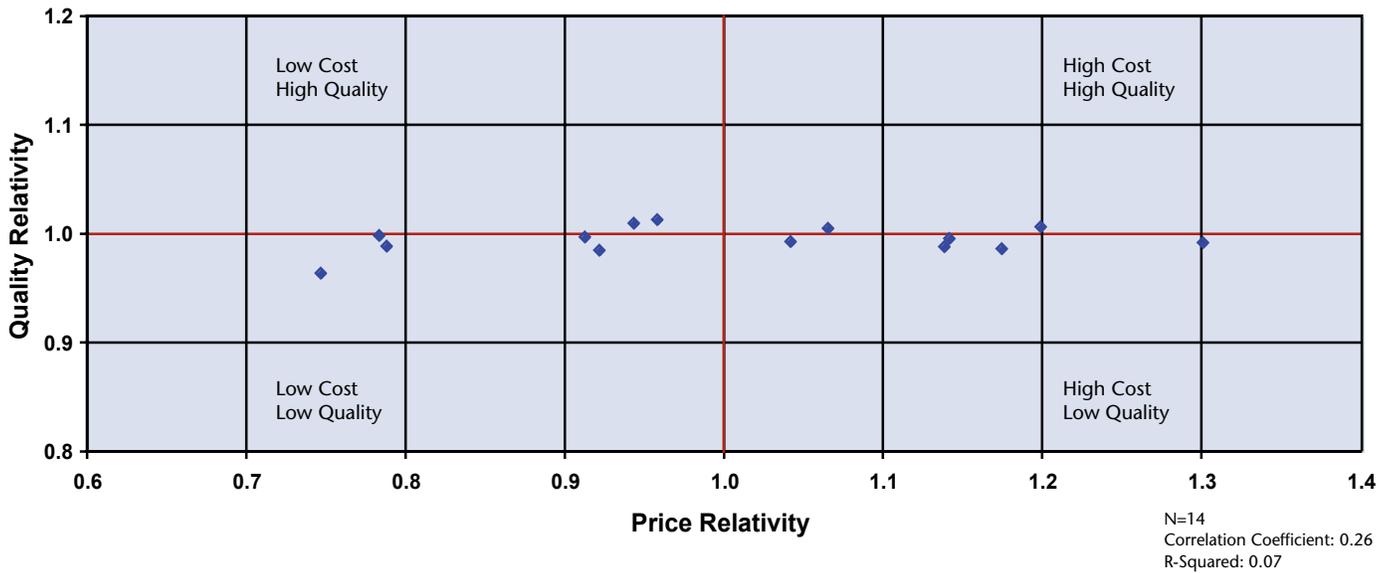
**Figure 1.5: Price vs. Quality for Appendectomy (DRG 225)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



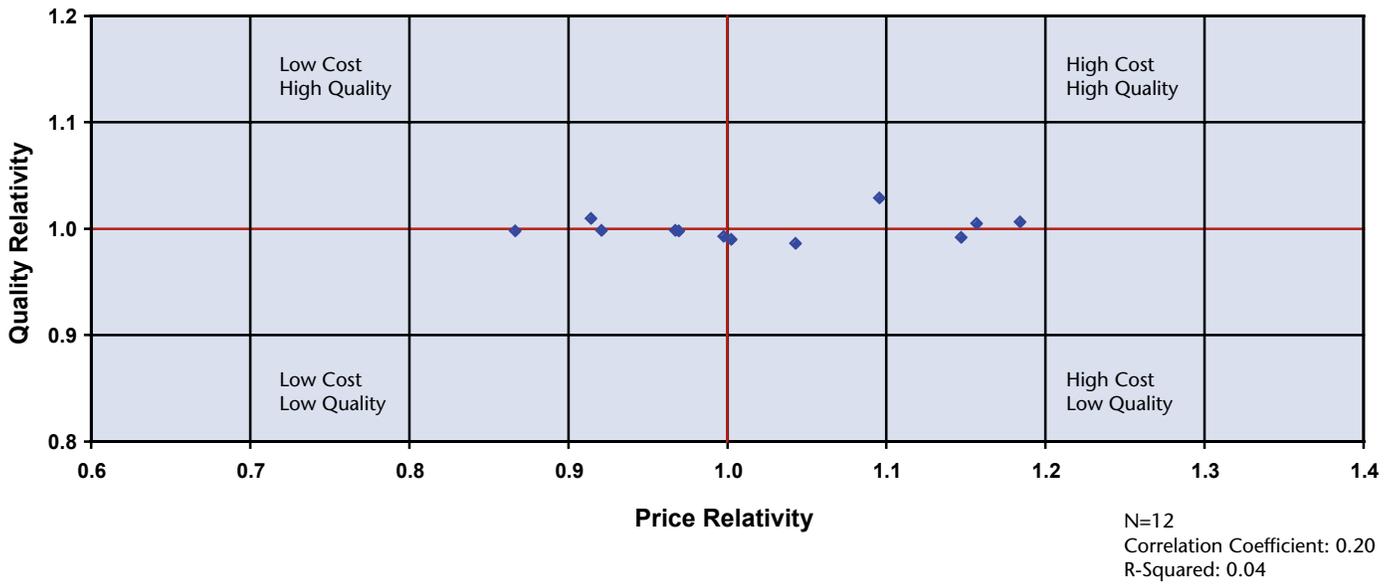
**Figure 1.6: Price vs. Quality for Laparoscopic Cholecystectomy (DRG 263)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



**Figure 1.7: Price vs. Quality for Hip Joint Replacement (DRG 301)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



**Figure 1.8: Price vs. Quality for Knee Joint Replacement (DRG 302)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



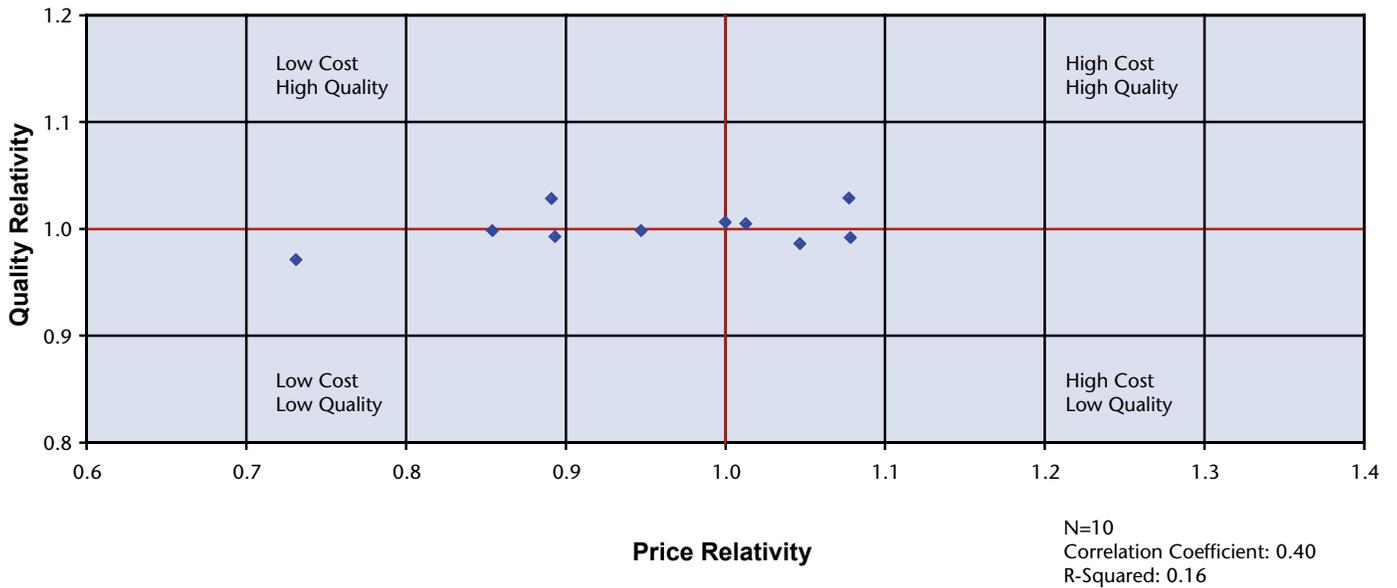
**Figure 1.9: Price vs. Quality for Intervertebral Disc Excision and Decompression (DRG 310)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



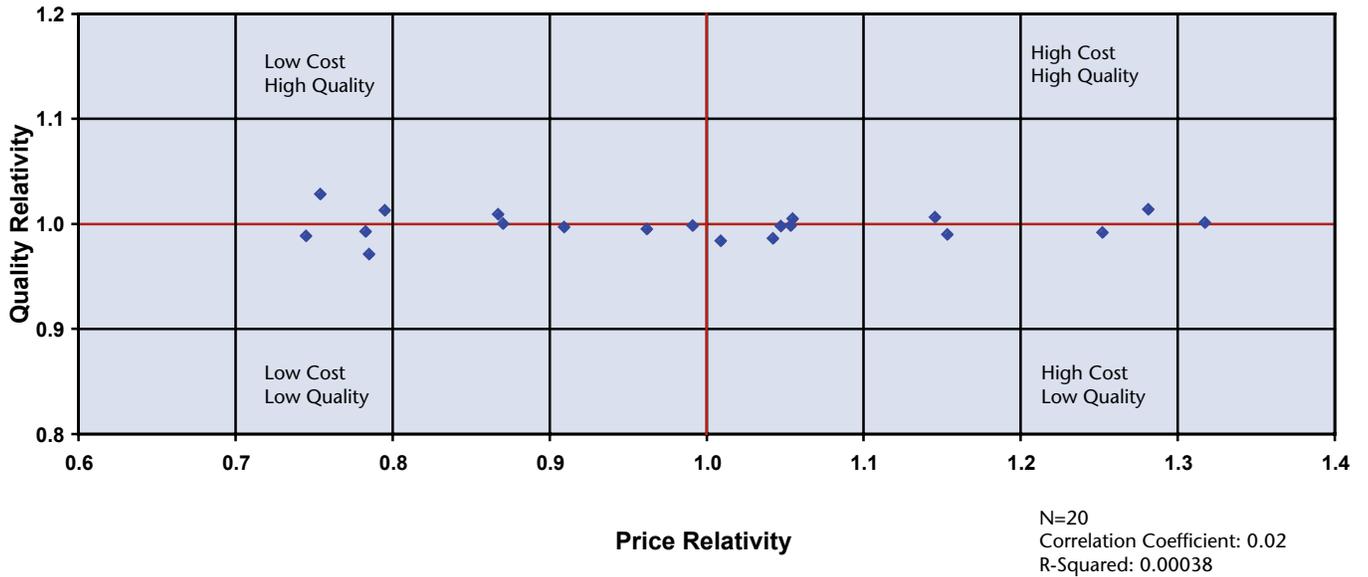
**Figure 1.10: Price vs. Quality for Knee and Lower Leg Procedures (DRG 313)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



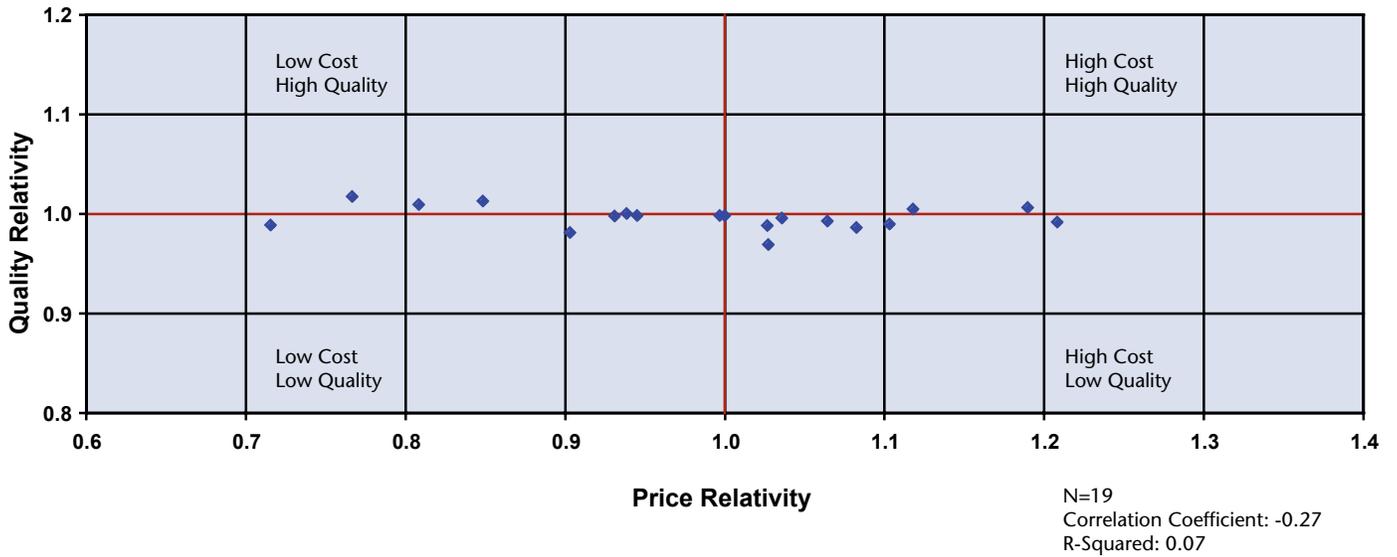
**Figure 1.11: Price vs. Quality for Procedures for Obesity (DRG 403)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



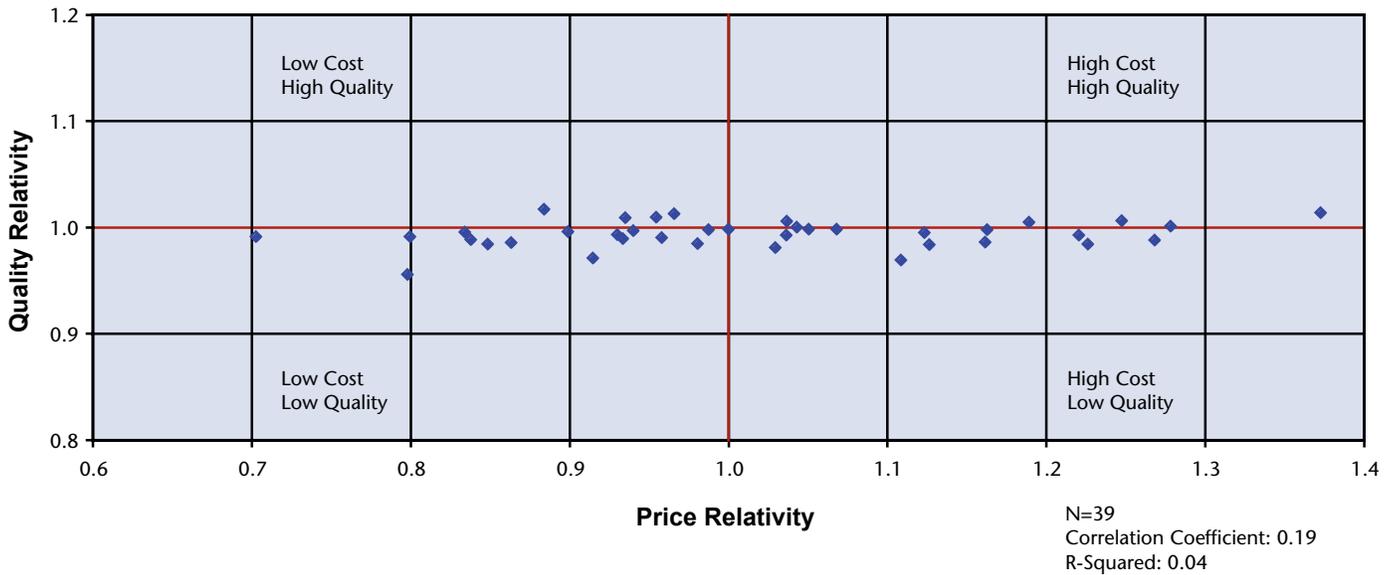
**Figure 1.12: Price vs. Quality for Uterine and Adnexa Procedures for Non-Malignancy Except Leiomyoma (DRG 513)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



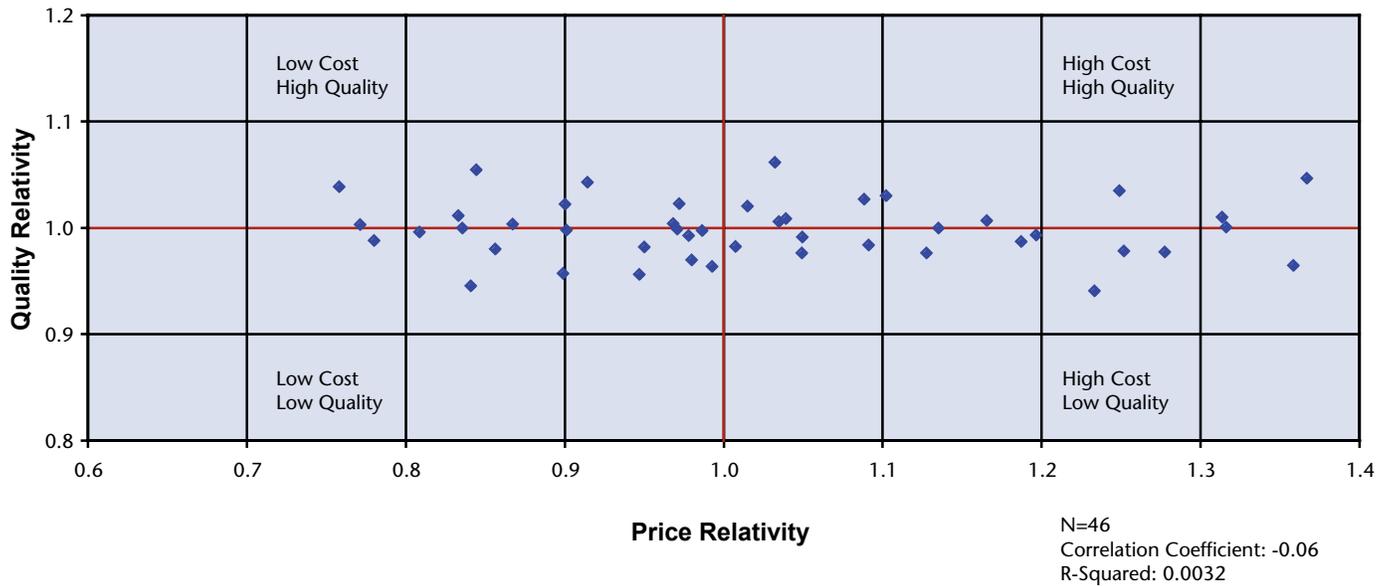
**Figure 1.13: Price vs. Quality for Cesarean Delivery (DRG 540)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



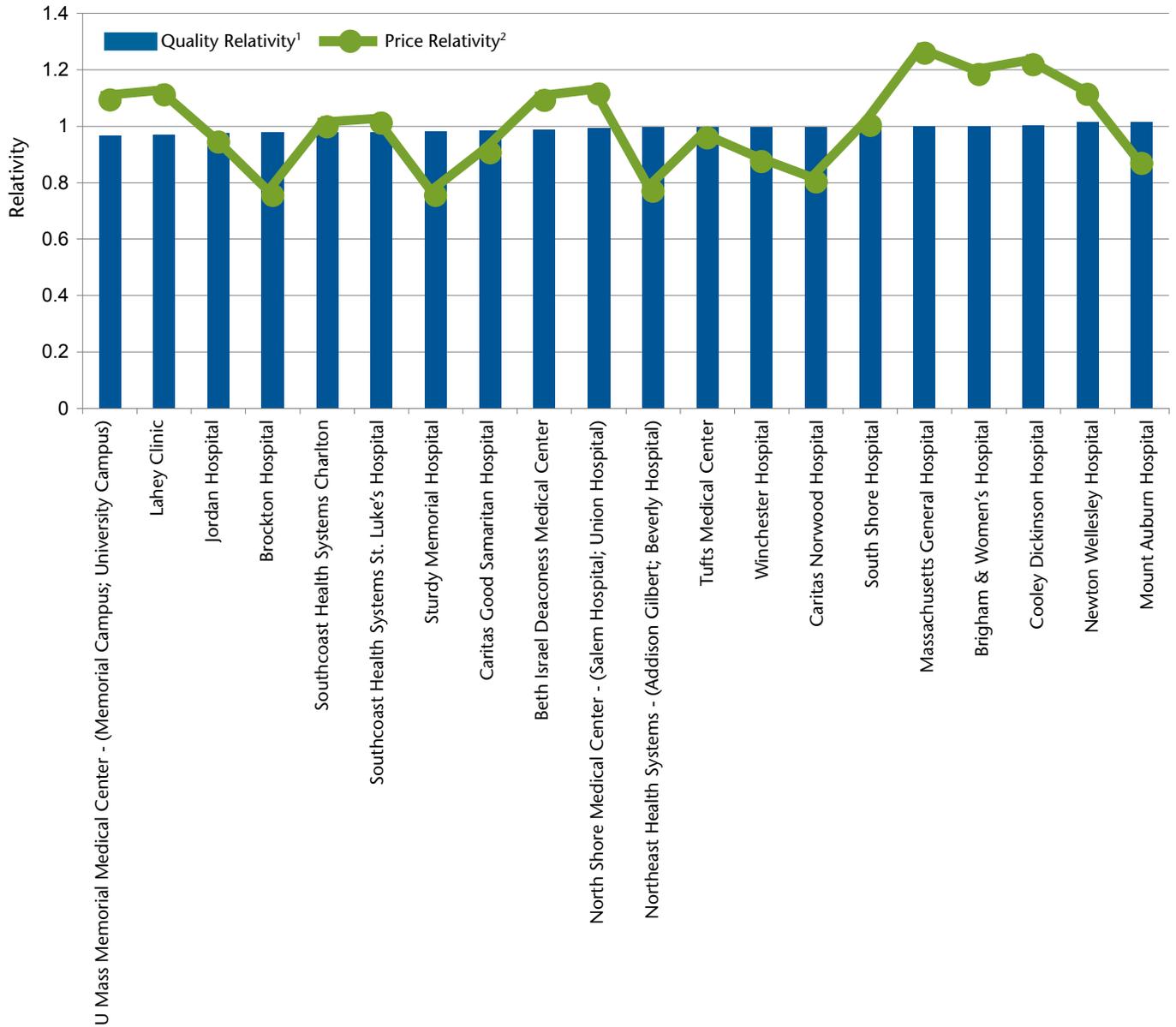
**Figure 1.14: Price vs. Quality for Vaginal Delivery (DRG 560)**



Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



Figure 2.1: Quality Relativity and Price Relativity for Pneumonia (DRG 139) by Hospital



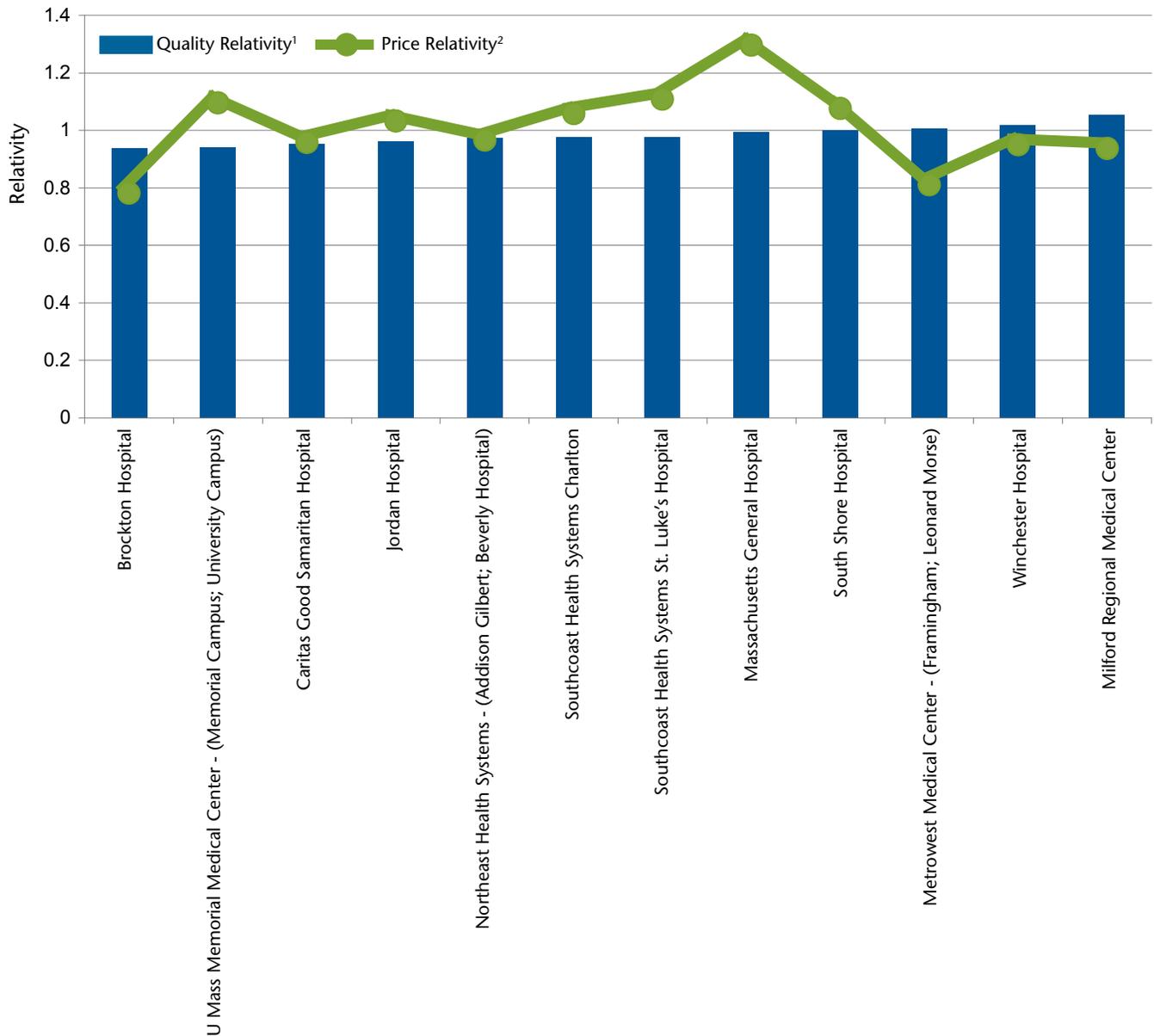
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.2: Quality Relativity and Price Relativity for Chronic Obstructive Pulmonary Disease (COPD) (DRG 140) by Hospital**



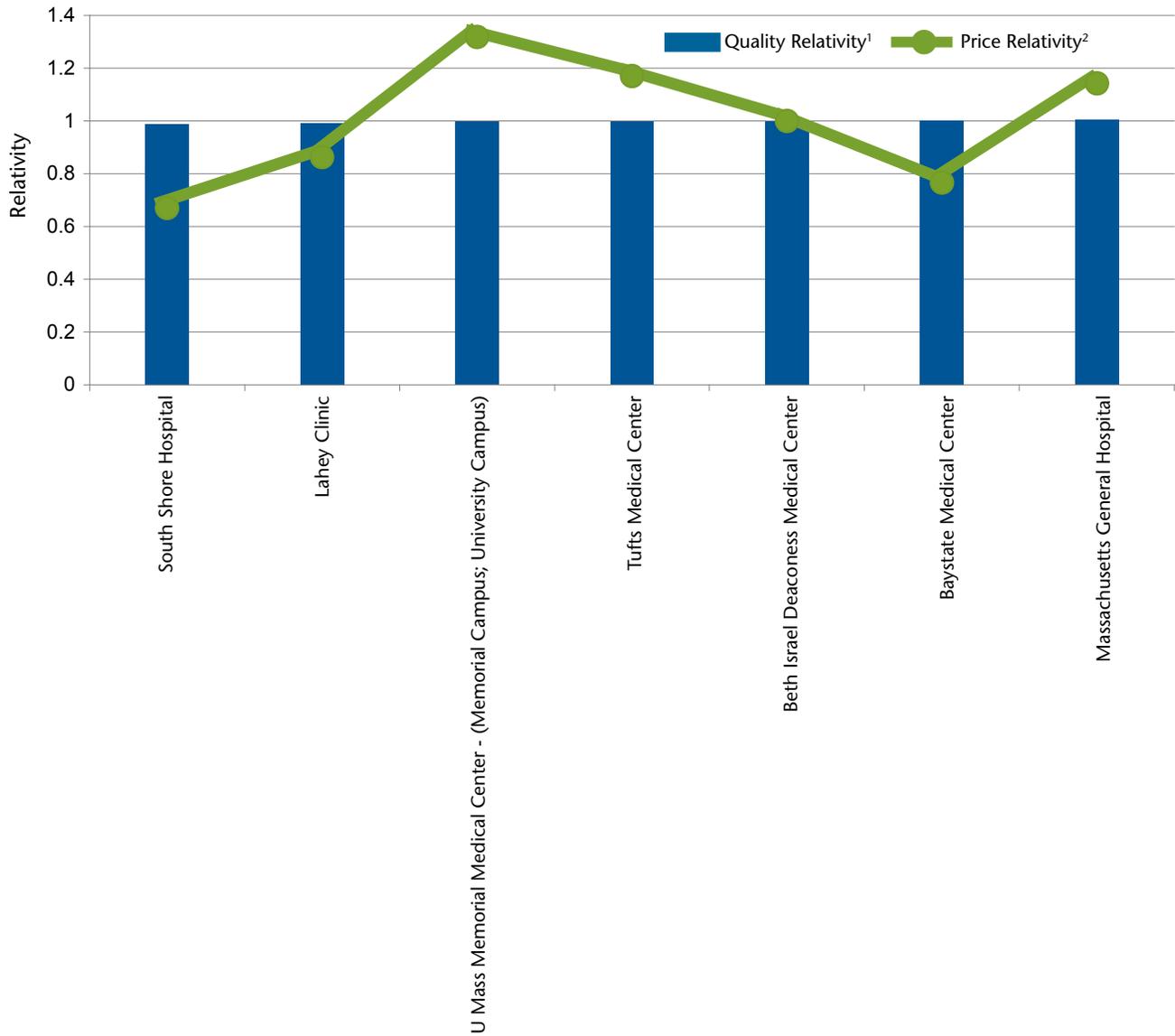
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.3: Quality Relativity and Price Relativity for Acute Myocardial Infarction (AMI) (DRG 190) by Hospital**



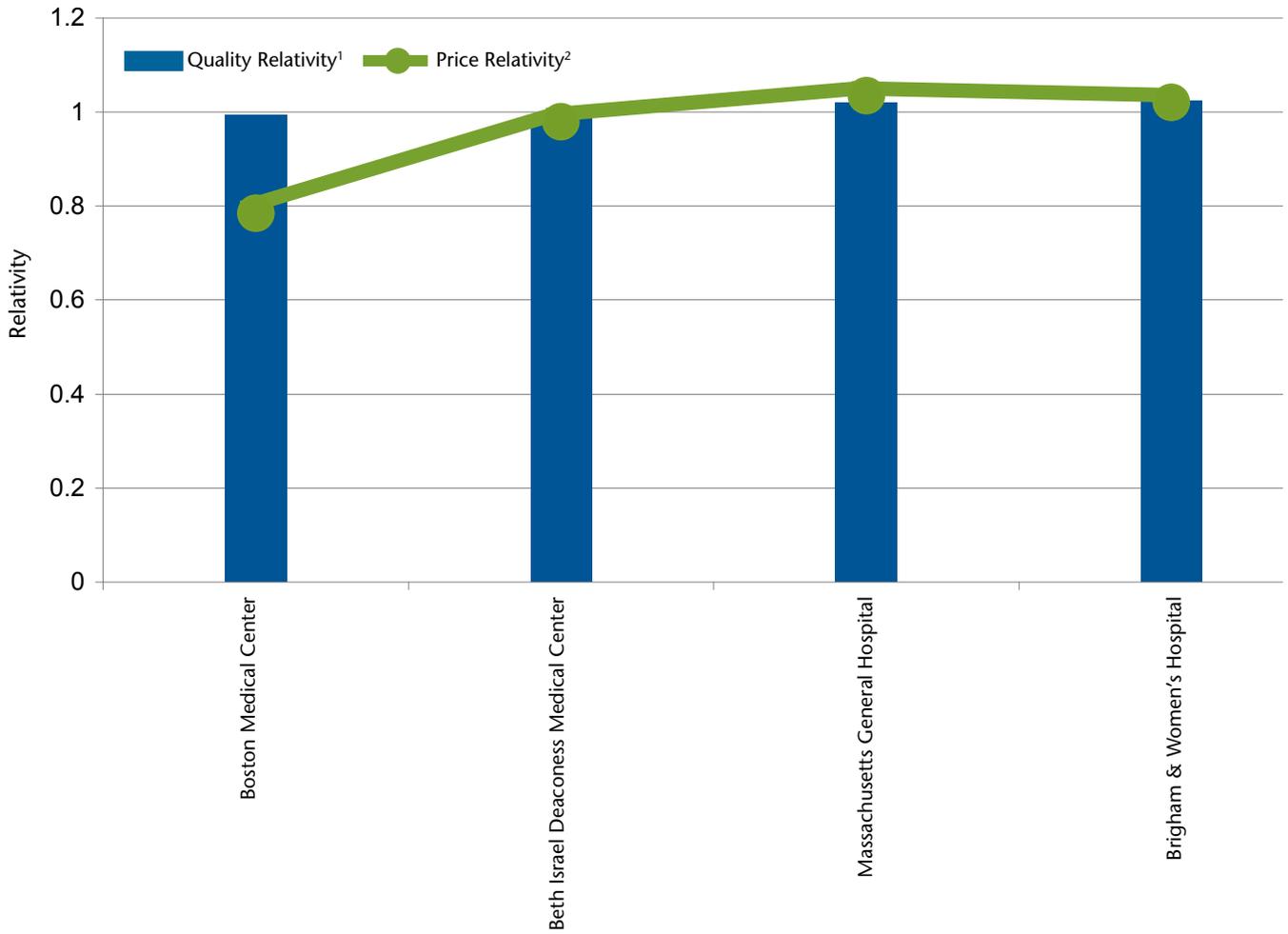
<sup>1</sup> The quality relativity is each hospital’s composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital’s severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.4: Quality Relativity and Price Relativity for Congestive Heart Failure (CHF) (DRG 194) by Hospital**



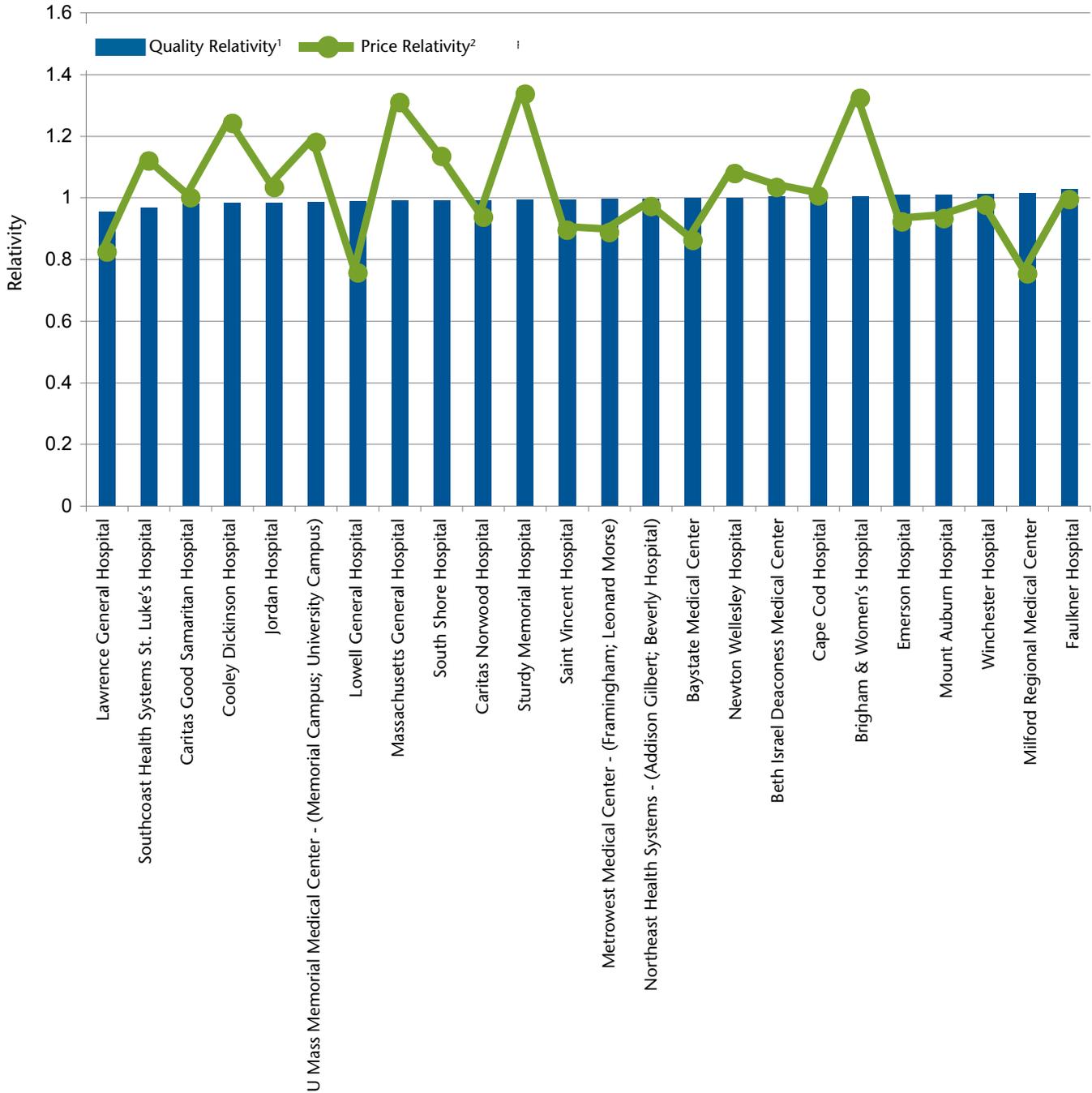
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



Figure 2.5: Quality Relativity and Price Relativity for Appendectomy (DRG 225) by Hospital



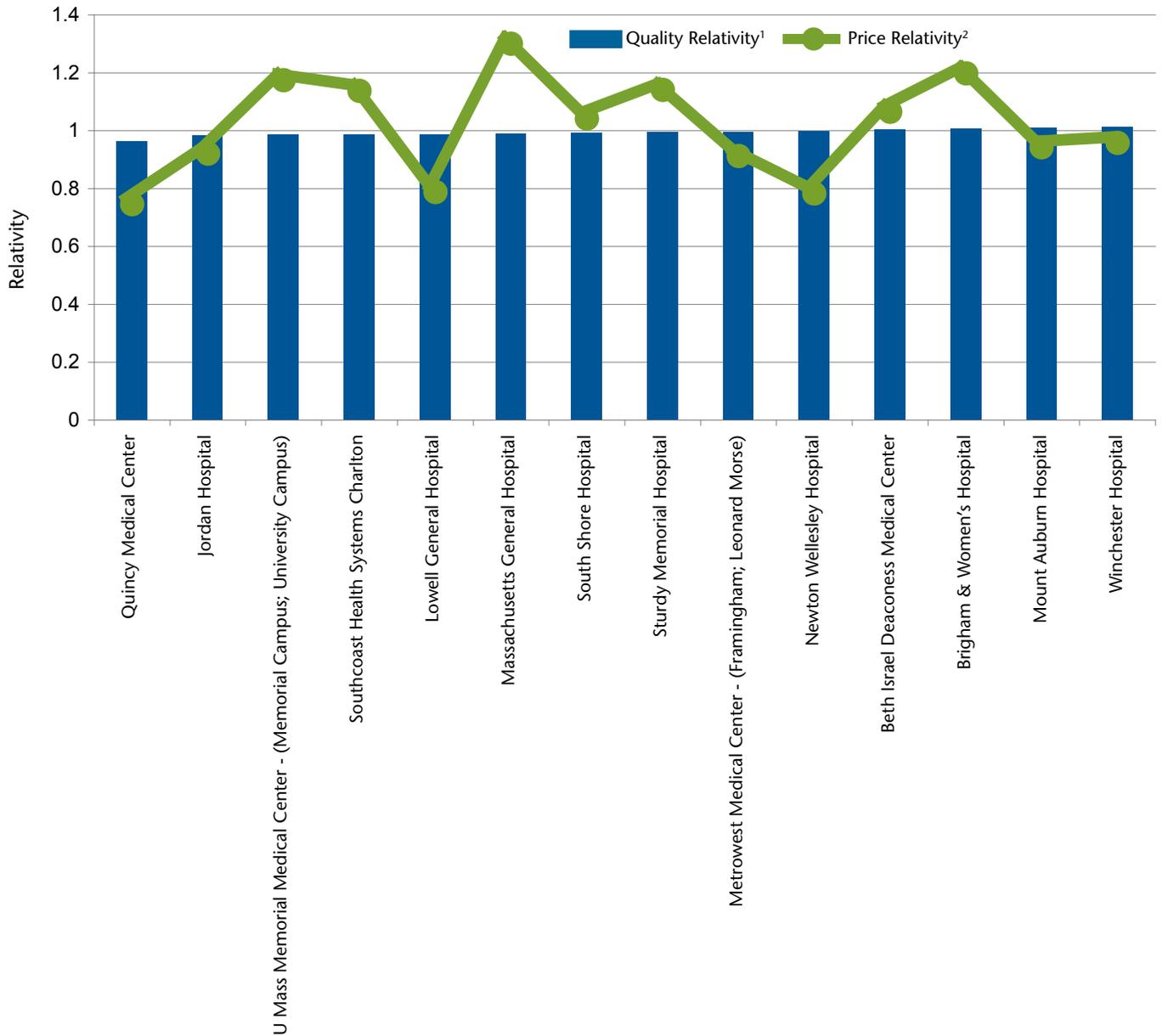
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.6: Quality Relativity and Price Relativity for Laparoscopic Cholecystectomy (DRG 263) by Hospital**



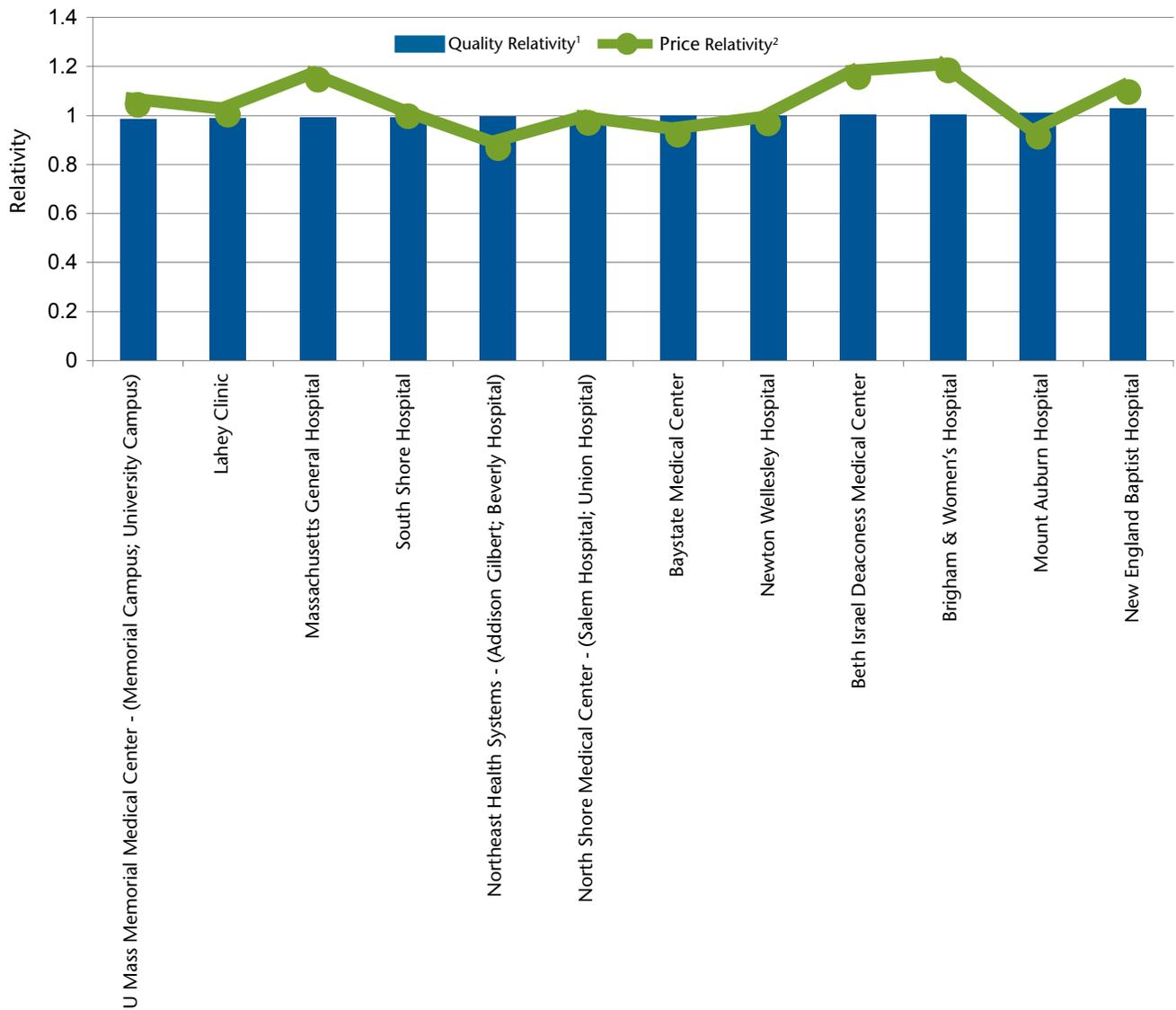
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.7: Quality Relativity and Price Relativity for Hip Joint Replacement (DRG 301) by Hospital**



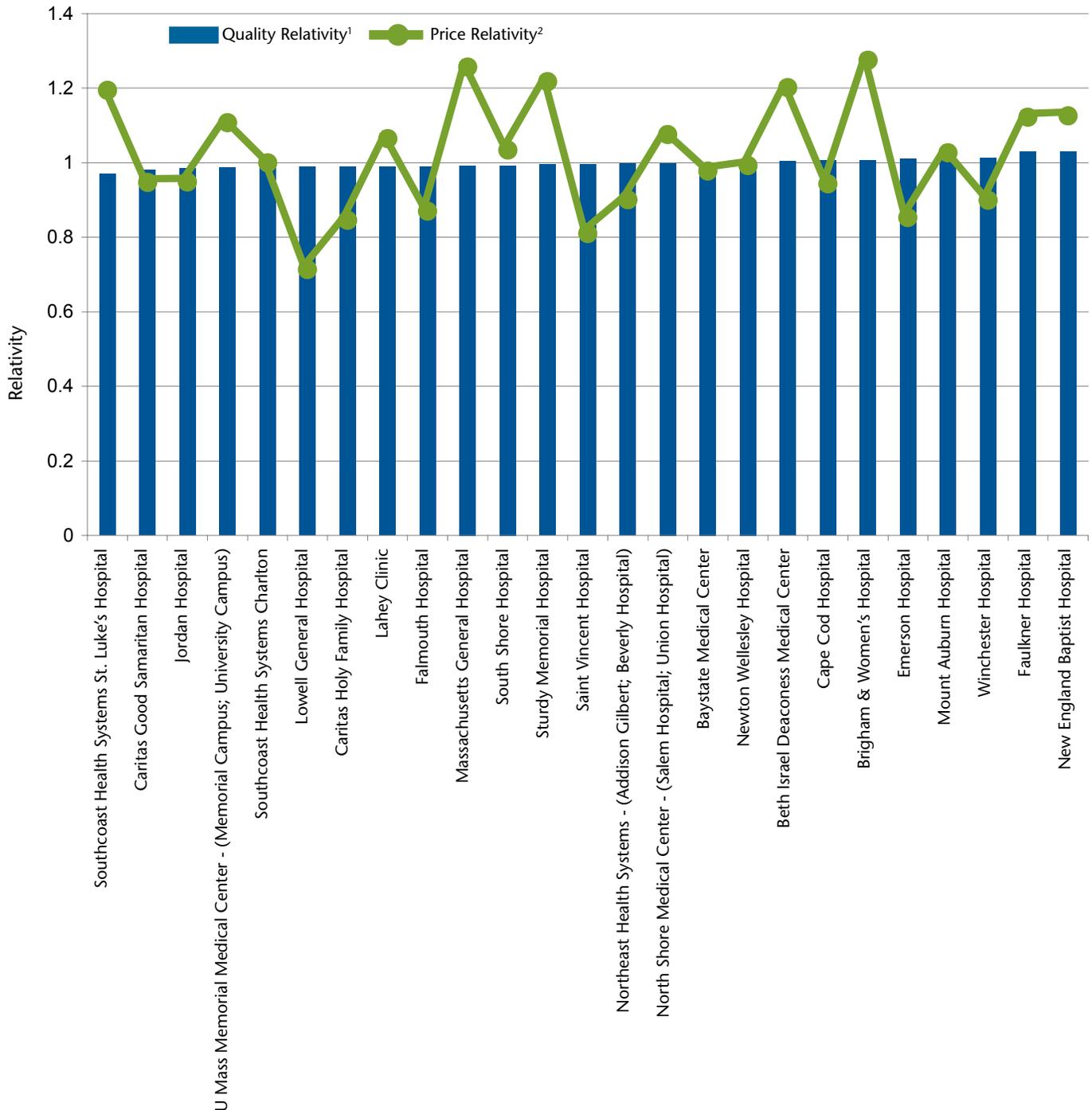
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.8: Quality Relativity and Price Relativity for Knee Joint Replacement (DRG 302) by Hospital**



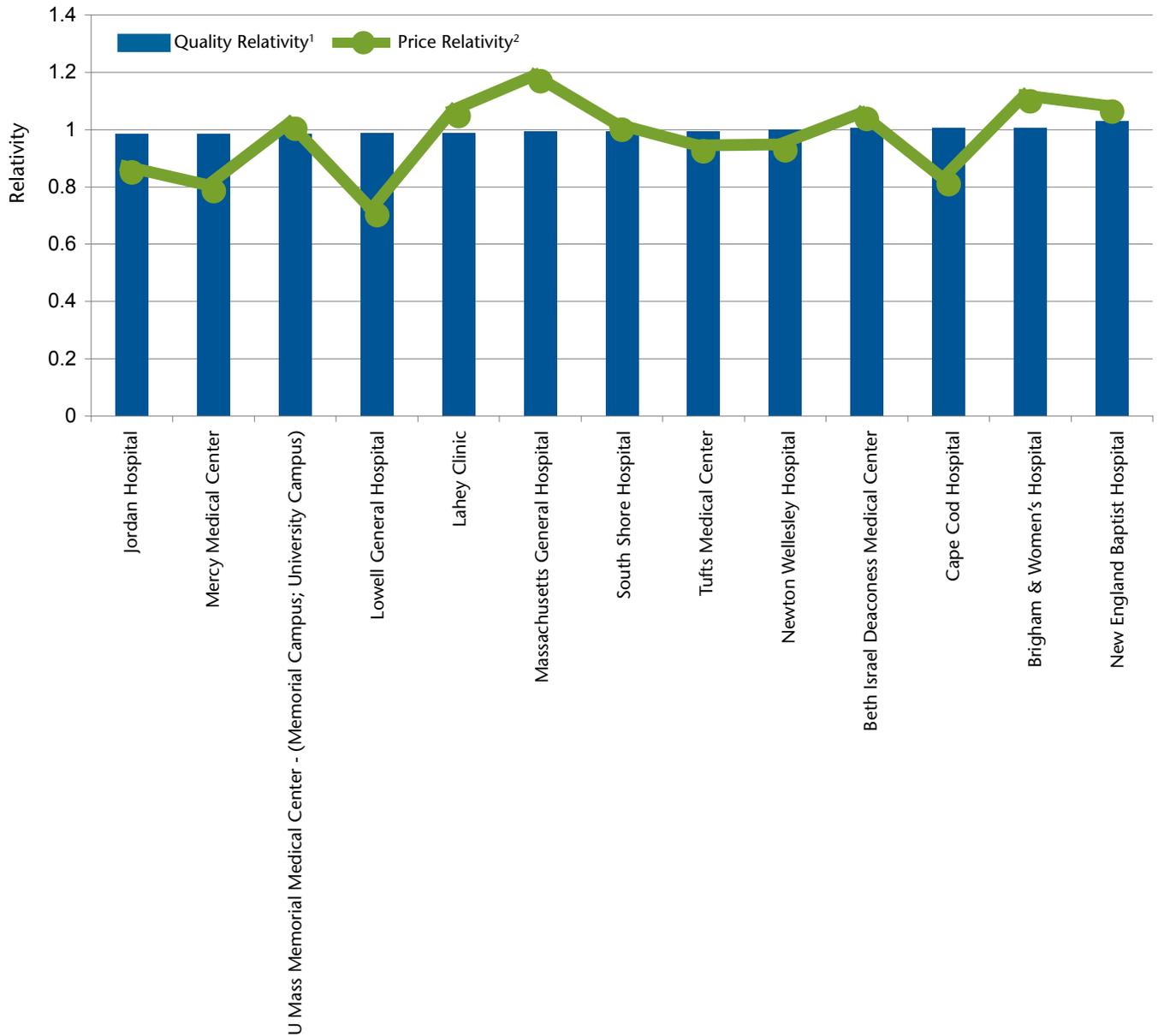
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.9: Quality Relativity and Price Relativity for Intervertebral Disc Excision and Decompression (DRG 310) by Hospital**



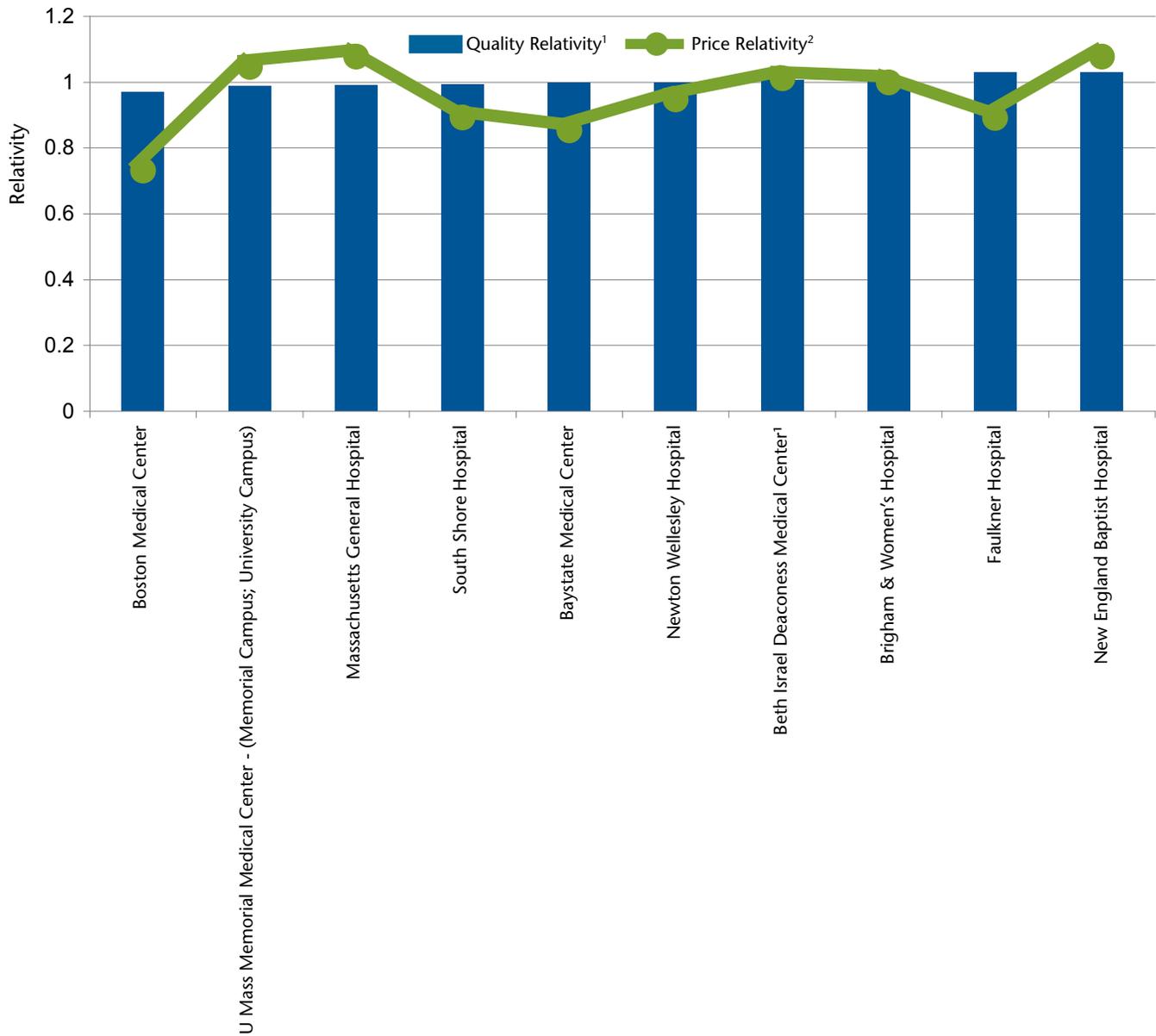
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.10: Quality Relativity and Price Relativity for Knee and Lower Leg Procedures (DRG 313) by Hospital**



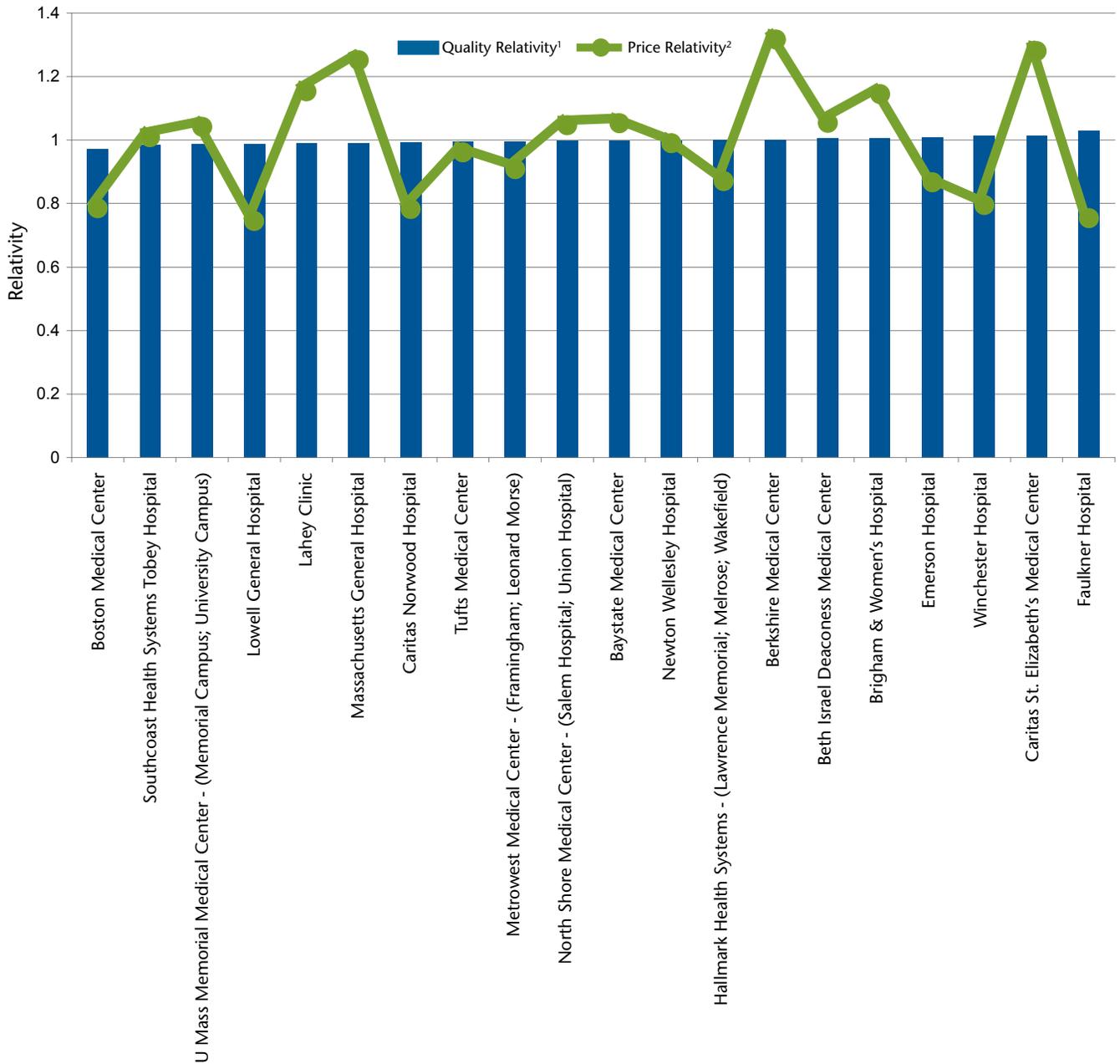
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.11: Quality Relativity and Price Relativity for Procedures for Obesity (DRG 403) by Hospital**



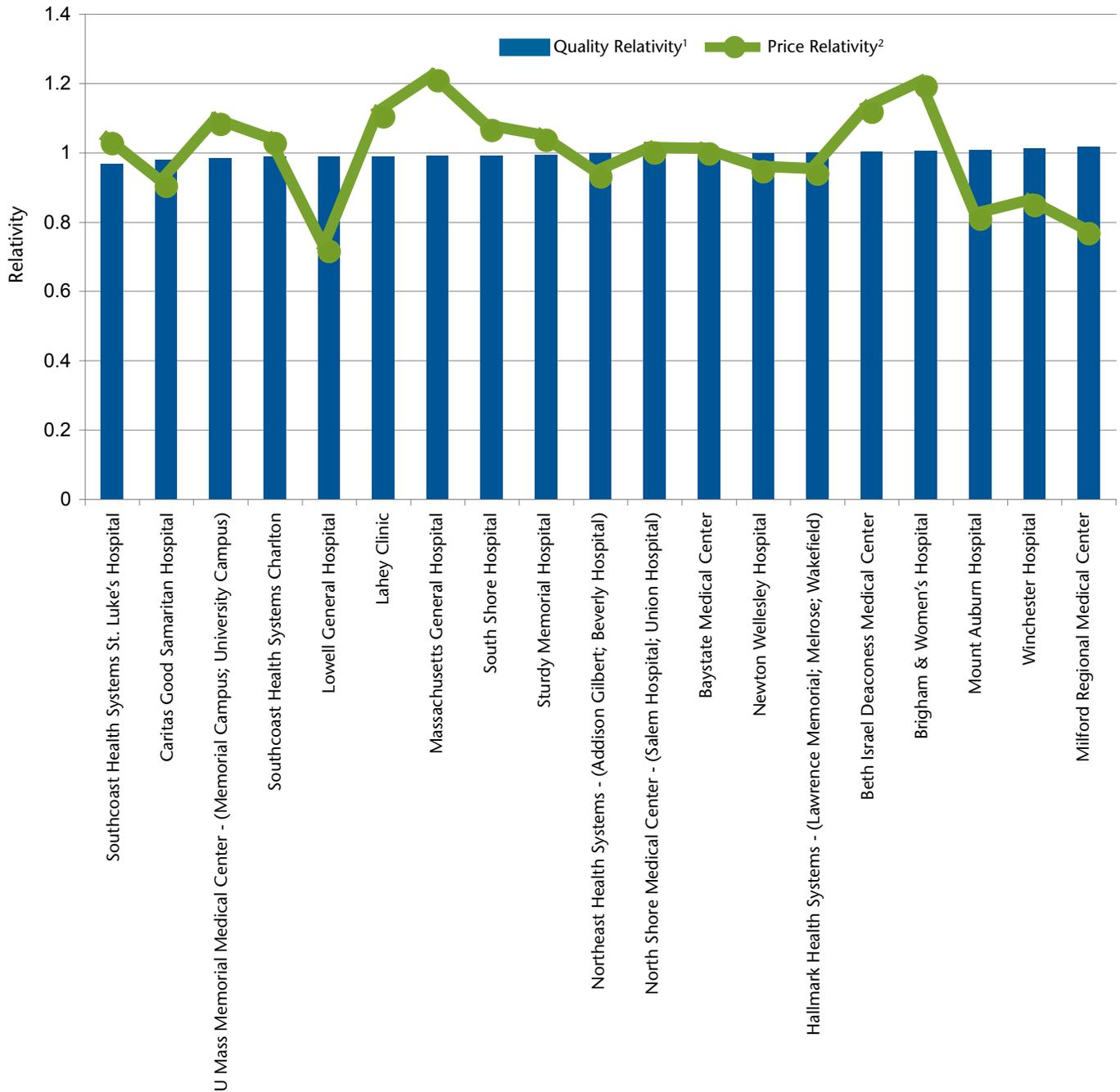
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.12: Quality Relativity and Price Relativity for Uterine and Adnexa Procedures for Non-Malignancy Except Leiomyoma (DRG 513) by Hospital**



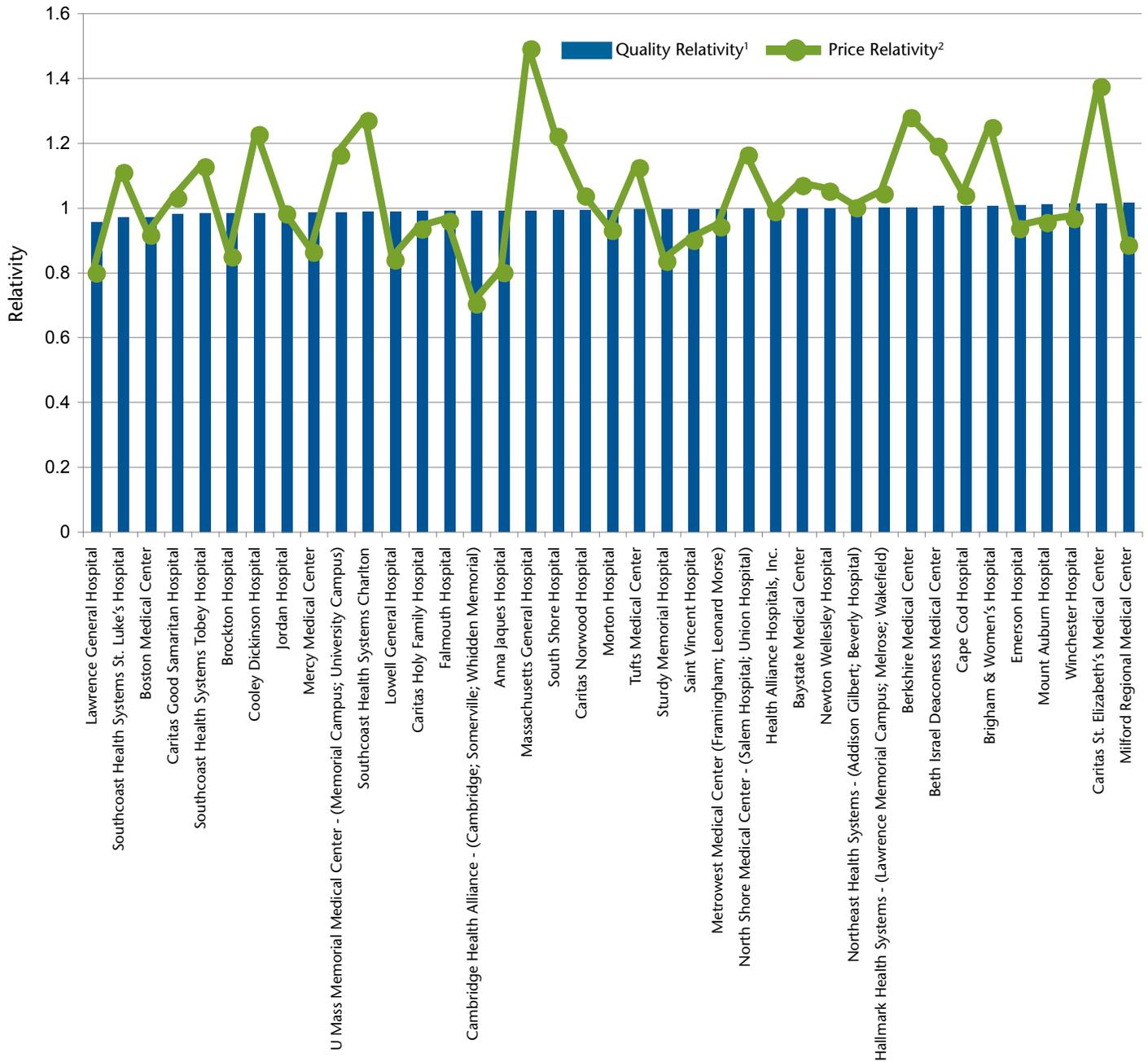
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



**Figure 2.13: Quality Relativity and Price Relativity for Cesarean Delivery (DRG 540) by Hospital**



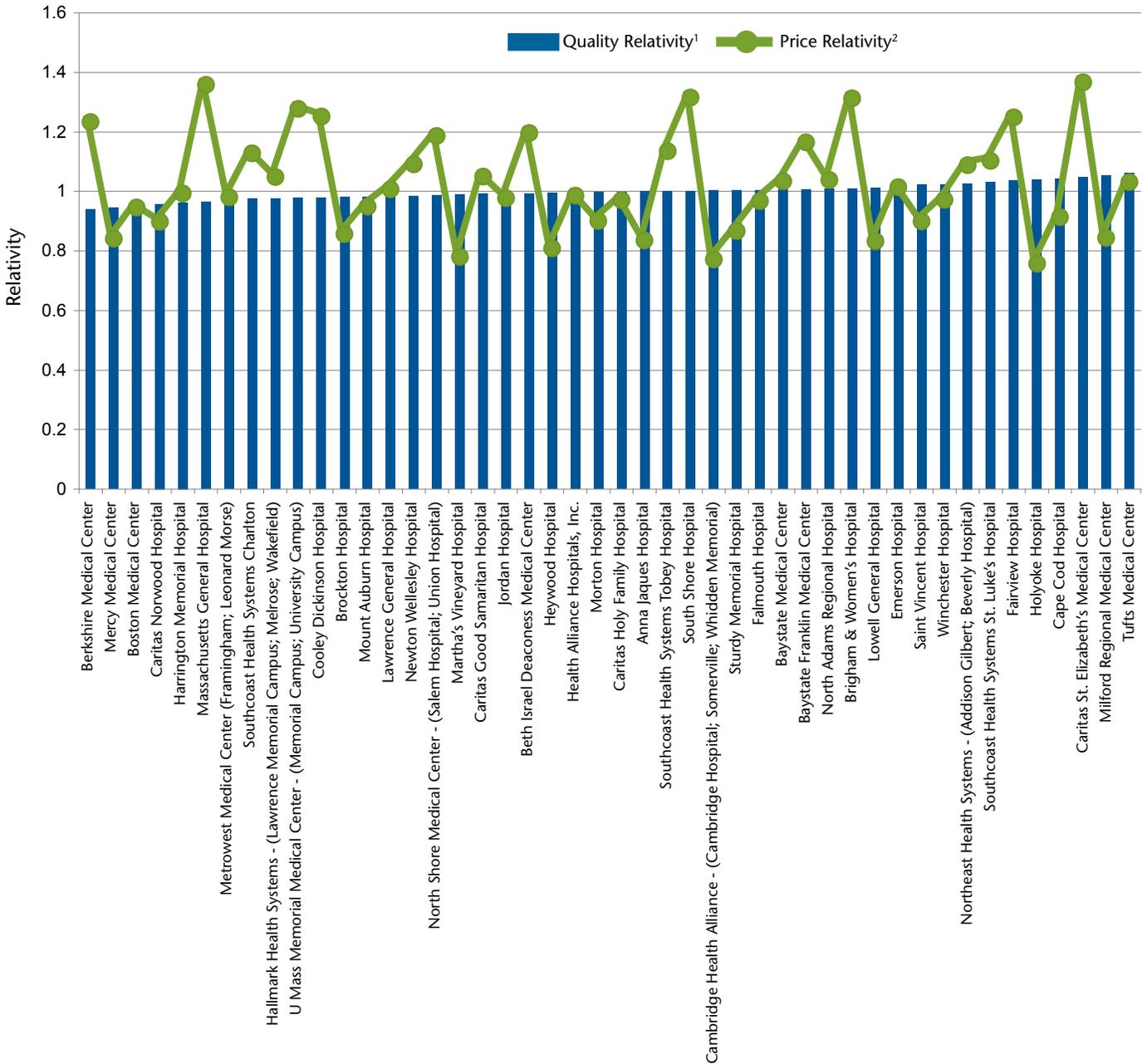
<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the *Technical Appendix* for further detail on these calculations.



Figure 2.14: Quality Relativity and Price Relativity for Vaginal Delivery (DRG 560) by Hospital



<sup>1</sup> The quality relativity is each hospital's composite quality score for the given DRG as it relates to the statewide average composite quality score.

<sup>2</sup> The price relativity is the hospital's severity adjusted median price for the given DRG as it relates to the severity adjusted price of the median hospital listed.

See the Technical Appendix for further detail on these calculations.



**Table 5.1: Price and Quality Relativity Scores for Pneumonia (DRG 139) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: Readmissions	Quality Ratio: Mortality	Quality Ratio: HCAHPS
Beth Israel Deaconess Medical Center <sup>1</sup>	\$7,998	1.09	0.99	0.97	0.98	1.03	0.98
Brigham & Women's Hospital	\$8,664	1.18	1.00	1.01	0.98	1.00	1.01
Brockton Hospital	\$5,524	0.75	0.98	1.01	0.99	0.98	0.94
Caritas Good Samaritan Hospital	\$6,633	0.91	0.99	0.98	1.00	1.01	0.95
Caritas Norwood Hospital	\$5,881	0.80	1.00	0.99	0.99	1.04	0.98
Cooley Dickinson Hospital	\$8,922	1.22	1.00	1.00	1.02	1.01	0.98
Jordan Hospital	\$6,908	0.94	0.97	0.98	0.97	0.98	0.96
Lahey Clinic	\$8,134	1.11	0.97	0.93	1.01	1.00	0.94
Massachusetts General Hospital	\$9,225	1.26	1.00	0.99	1.00	1.02	0.99
Mount Auburn Hospital	\$6,357	0.87	1.01	1.01	1.01	1.02	1.02
Newton Wellesley Hospital	\$8,153	1.11	1.01	1.02	1.00	1.01	1.02
North Shore Medical - (Center/Salem Hospital; Center/Union Hospital)	\$8,159	1.11	1.00	0.98	1.01	1.01	0.98
Northeast Health Systems - (Addison Gilbert; Beverly Hospital)	\$5,641	0.77	1.00	0.99	1.01	1.01	0.97
South Shore Hospital	\$7,342	1.00	1.00	0.99	1.00	1.00	1.00
Southcoast Health Systems Charlton	\$7,307	1.00	0.98	0.94	1.00	1.00	0.98
Southcoast Health Systems St. Luke's Hospital	\$7,401	1.01	0.98	0.94	1.00	1.00	0.98
Sturdy Memorial Hospital	\$5,529	0.75	0.98	0.98	0.98	0.95	1.02
Tufts Medical Center	\$7,017	0.96	1.00	0.99	0.98	1.01	1.00
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$8,011	1.09	0.97	0.93	1.00	1.00	0.94
Winchester Hospital	\$6,409	0.88	1.00	0.94	1.01	1.02	1.02
Number of Hospitals	20						
Statewide Range	(\$5,524, \$9,225)	(0.75, 1.26)	(0.97, 1.01)	(0.93, 1.02)	(0.97, 1.02)	(0.95, 1.04)	(0.94, 1.02)
Statewide Median	\$7,324	1.00	1.00	0.99	1.00	1.01	0.98
Correlation With Price Relativity			0.13	-0.12	0.18	0.35	0.04
R-Squared			0.02	0.02	0.03	0.13	0.00

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.2: Price and Quality Relativity Scores for Chronic Obstructive Pulmonary Disease (COPD) (DRG 140) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity <sup>1</sup>
Brockton Hospital	\$6,160	0.78	0.94
Caritas Good Samaritan Hospital	\$7,554	0.96	0.95
Jordan Hospital	\$7,554	1.03	0.96
Massachusetts General Hospital	\$8,144	1.30	0.99
Metrowest Medical Center - (Framingham; Leonard Morse)	\$10,222	0.81	1.00
Milford Regional Medical Center	\$6,388	0.94	1.05
Northeast Health Systems - (Addison Gilbert; Beverly Hospital)	\$7,618	0.97	0.97
South Shore Hospital	\$8,480	1.08	1.00
Southcoast Health Systems Charlton	\$8,336	1.06	0.98
Southcoast Health Systems St. Luke's Hospital	\$8,733	1.11	0.98
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$8,638	1.10	0.94
Winchester Hospital	\$7,488	0.95	1.02
Number Of Hospitals	12		
Statewide Range	(\$6,160, \$10,222)	(0.78, 1.3)	(0.94, 1.05)
Statewide Median	\$7,881	1.00	0.98
Correlation With Price Relativity			-0.001933
R-Squared			0.000004

<sup>1</sup> The Composite Quality Relativity for DRG 140 is based upon HCAHPS only.

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.



**Table 5.3: Price and Quality Relativity Scores for Acute Myocardial Infarction (AMI) (DRG 190) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: Readmissions	Quality Ratio: Mortality	Quality Ratio: HCAHPS
Baystate Medical Center	\$11,082	0.77	1.00	1.00	1.02	1.02	0.96
Beth Israel Deaconess Medical Center <sup>1</sup>	\$14,451	1.00	1.00	1.01	0.97	1.03	0.98
Lahey Clinic	\$12,465	0.86	0.99	1.00	1.01	1.02	0.94
Massachusetts General Hospital	\$16,499	1.14	1.00	1.00	0.99	1.02	1.00
South Shore Hospital	\$9,684	0.67	0.99	1.00	0.96	0.99	1.00
Tufts Medical Center	\$16,925	1.17	1.00	1.01	1.02	0.96	1.01
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$19,059	1.32	1.00	1.01	0.98	1.05	0.94
Number of Hospitals	7						
Statewide Range	(\$9,684, \$19,059)	(0.67, 1.32)	(0.99, 1)	(1, 1.01)	(0.96, 1.02)	(0.96, 1.05)	(0.94, 1.01)
Statewide Median	\$14,451	1.00	1.00	1.00	0.99	1.02	0.98
Correlation With Price Relativity			0.31	0.79	0.01	0.20	-0.09
R-Squared			0.09	0.62	0.00	0.04	0.01

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.4: Price and Quality Relativity Scores for Congestive Heart Failure (CHF) (DRG 194) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: Readmissions	Quality Ratio: Mortality	Quality Ratio HCAHPS
Beth Israel Deaconess Medical Center <sup>1</sup>	\$11,388	0.98	1.00	1.03	0.96	1.02	0.98
Boston Medical Center	\$9,129	0.79	0.99	1.05	0.97	1.01	0.94
Brigham & Women's Hospital	\$11,869	1.02	1.02	1.04	1.02	1.02	1.01
Massachusetts General Hospital	\$12,042	1.04	1.02	1.03	1.04	1.02	0.99
Number of Hospitals	4						
Statewide Range	(\$9,129, \$12,042)	(0.79, 1.04)	(0.99, 1.02)	(1.03, 1.05)	(0.96, 1.04)	(1.01, 1.02)	(0.94, 1.01)
Statewide Median	\$11,628	1.00	1.01	1.04	1.00	1.02	0.99
Correlation With Price Relativity			0.75	-0.73	0.63	0.61	0.94
R-Squared			0.57	0.54	0.40	0.37	0.88

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.5: Price and Quality Relativity Scores for Appendectomy (DRG 225) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Baystate Medical Center	\$7,025	0.86	1.00	1.02	1.00	0.96
Beth Israel Deaconess Medical Center <sup>1</sup>	\$8,424	1.03	1.00	1.01	1.00	1.01
Brigham & Women's Hospital	\$10,779	1.32	1.01	1.00	1.01	1.01
Cape Cod Hospital	\$8,199	1.01	1.01	1.01	1.00	1.01
Caritas Good Samaritan Hospital	\$8,151	1.00	0.98	1.01	0.98	0.95
Caritas Norwood Hospital	\$7,640	0.94	0.99	1.00	1.00	0.98
Cooley Dickinson Hospital	\$10,120	1.24	0.98	1.00	0.97	0.98
Emerson Hospital	\$7,511	0.92	1.01	0.99	1.02	1.02
Faulkner Hospital	\$8,107	0.99	1.03	1.01	1.04	1.04
Jordan Hospital	\$8,428	1.03	0.98	1.00	0.98	0.96
Lawrence General Hospital	\$6,718	0.82	0.96	0.91	1.00	0.96
Lowell General Hospital	\$6,159	0.76	0.99	0.99	0.99	0.98
Massachusetts General Hospital	\$10,668	1.31	0.99	0.98	1.00	0.99
Metrowest Medical Center - (Framingham; Leonard Morse)	\$7,234	0.89	1.00	0.99	1.00	1.00
Milford Regional Medical Center	\$6,141	0.75	1.02	1.00	1.01	1.05
Mount Auburn Hospital	\$7,601	0.93	1.01	1.00	1.01	1.02
Newton Wellesley Hospital	\$8,794	1.08	1.00	1.00	0.98	1.02
Northeast Health Systems - (Addison Gilbert; Beverly Hospital)	\$7,915	0.97	1.00	1.01	1.00	0.97
Saint Vincent Hospital	\$7,292	0.89	1.00	1.01	1.00	0.96
South Shore Hospital	\$9,241	1.13	0.99	0.99	0.99	1.00
Southcoast Health Systems St. Luke's Hospital	\$9,129	1.12	0.97	0.97	0.96	0.98
Sturdy Memorial Hospital	\$10,898	1.34	1.00	0.98	1.00	1.02
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$9,613	1.18	0.99	1.00	1.00	0.94
Winchester Hospital	\$7,963	0.98	1.01	1.00	1.02	1.02
Number of Hospitals	24					
Statewide Range	(\$6,141, \$10,898)	(0.75, 1.34)	(0.96, 1.03)	(0.91, 1.02)	(0.96, 1.04)	(0.94, 1.05)
Statewide Median	\$8,129	1.00	1.00	1.00	1.00	1.00
Correlation With Price Relativity			-0.09	0.05	-0.29	0.01
R-Squared			0.01	0.003	0.09	0.0002

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.6: Price and Quality Relativity Scores for Laparoscopic Cholecystectomy (DRG 263) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Beth Israel Deaconess Medical Center <sup>1</sup>	\$10,375	1.07	1.00	1.01	1.00	1.01
Brigham & Women's Hospital	\$11,678	1.20	1.01	1.00	1.01	1.01
Jordan Hospital	\$8,977	0.92	0.98	1.00	0.98	0.96
Lowell General Hospital	\$7,676	0.79	0.99	0.99	0.99	0.98
Massachusetts General Hospital	\$12,670	1.30	0.99	0.98	1.00	0.99
Metrowest Medical Center - (Framingham; Leonard Morse)	\$8,888	0.91	1.00	0.99	1.00	1.00
Mount Auburn Hospital	\$9,188	0.94	1.01	1.00	1.01	1.02
Newton Wellesley Hospital	\$7,629	0.78	1.00	1.00	0.98	1.02
Quincy Medical Center	\$7,274	0.75	0.96	0.98	0.97	0.92
South Shore Hospital	\$10,148	1.04	0.99	0.99	0.99	1.00
Southcoast Health Systems Charlton	\$11,090	1.14	0.99	0.97	1.01	0.98
Sturdy Memorial Hospital	\$11,120	1.14	1.00	0.98	1.00	1.02
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$11,438	1.17	0.99	1.00	1.00	0.94
Winchester Hospital	\$9,331	0.96	1.01	1.00	1.02	1.02
Number of Hospitals	14					
Statewide Range	(\$7,274, \$12,670)	(0.75, 1.3)	(0.96, 1.01)	(0.97, 1.01)	(0.97, 1.02)	(0.92, 1.02)
Statewide Median	\$9,740	1.00	0.99	1.00	1.00	1.00
Correlation With Price Relativity			0.26	-0.17	0.49	0.19
R-Squared			0.07	0.03	0.24	0.04

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.7: Price and Quality Relativity Scores for Hip Joint Replacement (DRG 301) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Baystate Medical Center	\$21,266	0.92	1.00	1.02	1.00	0.96
Beth Israel Deaconess Medical Center <sup>1</sup>	\$26,707	1.16	1.00	1.01	1.00	1.01
Brigham & Women's Hospital	\$27,342	1.18	1.01	1.00	1.01	1.01
Lahey Clinic	\$23,145	1.00	0.99	1.01	1.00	0.94
Massachusetts General Hospital	\$26,483	1.15	0.99	0.98	1.00	0.99
Mount Auburn Hospital	\$21,108	0.91	1.01	1.00	1.01	1.02
New England Baptist Hospital	\$25,294	1.10	1.03	1.01	1.03	1.05
Newton Wellesley Hospital	\$22,332	0.97	1.00	1.00	0.98	1.02
North Shore Medical- (Center/Salem Hospital; Center/Union Hospital)	\$22,385	0.97	1.00	1.00	1.01	0.98
Northeast Health Systems - (Addison Gilbert; Beverly Hospital)	\$20,010	0.87	1.00	1.01	1.00	0.97
South Shore Hospital	\$23,038	1.00	0.99	0.99	0.99	1.00
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$24,083	1.04	0.99	1.00	1.00	0.94
Number of Hospitals	12					
Statewide Range	(\$20,010, \$27,342)	(0.87, 1.18)	(0.99, 1.03)	(0.98, 1.02)	(0.98, 1.03)	(0.94, 1.05)
Statewide Median	\$23,091	1.00	1.00	1.00	1.00	1.00
Correlation With Price Relativity			0.20	-0.43	0.24	0.32
R-Squared			0.04	0.19	0.06	0.10

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.8: Price and Quality Relativity Scores Knee Joint Replacement (DRG 302) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Baystate Medical Center	\$19,375	0.98	1.00	1.02	1.00	0.96
Beth Israel Deaconess Medical Center <sup>1</sup>	\$23,821	1.20	1.00	1.01	1.00	1.01
Brigham & Women's Hospital	\$25,284	1.28	1.01	1.00	1.01	1.01
Cape Cod Hospital	\$18,710	0.94	1.01	1.01	1.00	1.01
Caritas Good Samaritan Hospital	\$18,772	0.95	0.98	1.01	0.98	0.95
Caritas Holy Family Hospital	\$16,771	0.85	0.99	0.98	1.00	0.99
Emerson Hospital	\$16,910	0.85	1.01	0.99	1.02	1.02
Falmouth Hospital	\$17,249	0.87	0.99	1.02	0.99	0.96
Faulkner Hospital	\$22,239	1.12	1.03	1.01	1.04	1.04
Jordan Hospital	\$18,788	0.95	0.98	1.00	0.98	0.96
Lahey Clinic	\$21,091	1.06	0.99	1.01	1.00	0.94
Lowell General Hospital	\$14,153	0.71	0.99	0.99	0.99	0.98
Massachusetts General Hospital	\$24,913	1.26	0.99	0.98	1.00	0.99
Mount Auburn Hospital	\$20,352	1.03	1.01	1.00	1.01	1.02
New England Baptist Hospital	\$22,309	1.13	1.03	1.01	1.03	1.05
Newton Wellesley Hospital	\$19,671	0.99	1.00	1.00	0.98	1.02
North Shore Medical - (Center/Salem Hospital; Center/Union Hospital)	\$21,317	1.08	1.00	1.00	1.01	0.98
Northeast Health Systems - (Addison Gilbert; Beverly Hospital)	\$17,848	0.90	1.00	1.01	1.00	0.97
Saint Vincent Hospital	\$16,046	0.81	1.00	1.01	1.00	0.96
South Shore Hospital	\$20,506	1.03	0.99	0.99	0.99	1.00
Southcoast Health Systems Charlton	\$19,820	1.00	0.99	0.97	1.01	0.98
Southcoast Health Systems St. Luke's Hospital	\$23,678	1.19	0.97	0.97	0.96	0.98
Sturdy Memorial Hospital	\$24,127	1.22	1.00	0.98	1.00	1.02
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$21,952	1.11	0.99	1.00	1.00	0.94
Winchester Hospital	\$17,830	0.90	1.01	1.00	1.02	1.02
Number of Hospitals	25					
Statewide Range	(\$14,153, \$25,284)	(0.71, 1.28)	(0.97, 1.03)	(0.97, 1.02)	(0.96, 1.04)	(0.94, 1.05)
Statewide Median	\$19,820	1.00	1.00	1.00	1.00	0.99
Correlation With Price Relativity			0.11	-0.22	0.07	0.27
R-Squared			0.01	0.05	0.01	0.07

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.9: Price and Quality Relativity Scores for Intervertebral Disc Excision and Decompression (DRG 310) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Beth Israel Deaconess Medical Center <sup>1</sup>	\$9,987	1.04	1.00	1.01	1.00	1.01
Brigham & Women's Hospital	\$10,584	1.10	1.01	1.00	1.01	1.01
Cape Cod Hospital	\$7,794	0.81	1.01	1.01	1.00	1.01
Jordan Hospital	\$8,186	0.85	0.98	1.00	0.98	0.96
Lahey Clinic	\$10,089	1.05	0.99	1.01	1.00	0.94
Lowell General Hospital	\$6,754	0.70	0.99	0.99	0.99	0.98
Massachusetts General Hospital	\$11,263	1.17	0.99	0.98	1.00	0.99
Mercy Medical Center	\$7,570	0.79	0.99	1.00	1.01	0.93
New England Baptist Hospital	\$10,232	1.06	1.03	1.01	1.03	1.05
Newton Wellesley Hospital	\$8,932	0.93	1.00	1.00	0.98	1.02
South Shore Hospital	\$9,629	1.00	0.99	0.99	0.99	1.00
Tufts Medical Center	\$8,898	0.92	1.00	0.98	1.00	1.00
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$9,653	1.00	0.99	1.00	1.00	0.94
Number of Hospitals	13					
Statewide Range	(\$6,754, \$11,263)	(0.7, 1.17)	(0.98, 1.03)	(0.98, 1.01)	(0.98, 1.03)	(0.93, 1.05)
Statewide Median	\$9,629	1.00	1.00	6.00	7.00	8.00
Correlation With Price Relativity			0.35	-0.02	0.34	0.29
R-Squared			0.12	0.00	0.12	0.08

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.10: Price and Quality Relativity Scores for Knee and Lower Leg Procedures (DRG 313) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Baystate Medical Center	\$11,410	0.85	1.00	1.02	1.00	0.96
Beth Israel Deaconess Medical Center <sup>1</sup>	\$13,527	1.01	1.00	1.01	1.00	1.01
Boston Medical Center	\$9,765	0.73	0.97	0.98	0.98	0.94
Brigham & Women's Hospital	\$13,359	1.00	1.01	1.00	1.01	1.01
Faulkner Hospital	\$11,902	0.89	1.03	1.01	1.04	1.04
Massachusetts General Hospital	\$14,403	1.08	0.99	0.98	1.00	0.99
New England Baptist Hospital	\$14,392	1.08	1.03	1.01	1.03	1.05
Newton Wellesley Hospital	\$12,651	0.95	1.00	1.00	0.98	1.02
South Shore Hospital	\$11,931	0.89	0.99	0.99	0.99	1.00
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$13,981	1.05	0.99	1.00	1.00	0.94
Number of Hospitals	10					
Statewide Range	(\$9,765, \$14,403)	(0.73, 1.08)	(0.97, 1.03)	(0.98, 1.02)	(0.98, 1.04)	(0.94, 1.05)
Correlation With Price Relativity			0.40	0.12	0.34	0.41
R-Squared			0.16	0.01	0.12	0.17

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.11: Price and Quality Relativity Scores for Procedures for Obesity (DRG 403) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Baystate Medical Center	\$14,608	1.05	1.00	1.02	1.00	0.96
Berkshire Medical Center	\$18,266	1.32	1.00	1.02	0.99	0.99
Beth Israel Deaconess Medical Center <sup>1</sup>	\$14,626	1.05	1.00	1.01	1.00	1.01
Boston Medical Center	\$10,884	0.78	0.97	0.98	0.98	0.94
Brigham & Women's Hospital	\$15,883	1.15	1.01	1.00	1.01	1.01
Caritas Norwood Hospital	\$10,855	0.78	0.99	1.00	1.00	0.98
Caritas St. Elizabeth's Medical Center	\$17,765	1.28	1.01	1.01	1.03	1.01
Emerson Hospital	\$12,026	0.87	1.01	0.99	1.02	1.02
Faulkner Hospital	\$10,455	0.75	1.03	1.01	1.04	1.04
Hallmark Health Systems - (Lawrence Memorial; Melrose; Wakefield)	\$12,068	0.87	1.00	0.99	1.00	1.01
Lahey Clinic	\$15,989	1.15	0.99	1.01	1.00	0.94
Lowell General Hospital	\$10,328	0.74	0.99	0.99	0.99	0.98
Massachusetts General Hospital	\$17,359	1.25	0.99	0.98	1.00	0.99
Metrowest Medical Center - (Framingham; Leonard Morse)	\$12,605	0.91	1.00	0.99	1.00	1.00
Newton Wellesley Hospital	\$13,740	0.99	1.00	1.00	0.98	1.02
North Shore Medical - (Center/Salem Hospital; Center/Union)	\$14,522	1.05	1.00	1.00	1.01	0.98
Southcoast Health Systems Tobey Hospital	\$13,992	1.01	0.98	0.97	1.00	0.98
Tufts Medical Center	\$13,337	0.96	1.00	0.98	1.00	1.00
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$14,449	1.04	0.99	1.00	1.00	0.94
Winchester Hospital	\$11,026	0.80	1.01	1.00	1.02	1.02
Number of Hospitals	20					
Statewide Range	(\$10,328, \$18,266)	(0.74, 1.32)	(0.97, 1.03)	(0.97, 1.02)	(0.98, 1.04)	(0.94, 1.04)
Statewide Median	\$13,866	1.00	1.00	1.00	1.00	1.00
Correlation With Price Relativity			0.02	0.36	-0.10	-0.13
R-Squared			0.00	0.13	0.01	0.02

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.12: Price and Quality Relativity Scores for Uterine and Adnexa Procedures for Non-Malignancy Except Leiomyoma (DRG 513) by Hospital**

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Baystate Medical Center	\$8,501	1.00	1.00	1.02	1.00	0.96
Beth Israel Deaconess Medical Center <sup>1</sup>	\$9,536	1.12	1.00	1.01	1.00	1.01
Brigham & Women's Hospital	\$10,149	1.19	1.01	1.00	1.01	1.01
Caritas Good Samaritan Hospital	\$7,703	0.90	0.98	1.01	0.98	0.95
Hallmark Health Systems - (Lawrence Memorial; Melrose; Wakefield)	\$8,005	0.94	1.00	0.99	1.00	1.01
Lahey Clinic	\$9,410	1.10	0.99	1.01	1.00	0.94
Lowell General Hospital	\$6,103	0.72	0.99	0.99	0.99	0.98
Massachusetts General Hospital	\$10,306	1.21	0.99	0.98	1.00	0.99
Milford Regional Medical Center	\$6,539	0.77	1.02	1.00	1.01	1.05
Mount Auburn Hospital	\$6,896	0.81	1.01	1.00	1.01	1.02
Newton Wellesley Hospital	\$8,061	0.94	1.00	1.00	0.98	1.02
North Shore Medical - (Center/Salem Hospital; Center/Union Hospital)	\$8,530	1.00	1.00	1.00	1.01	0.98
Northeast Health Systems - (Addison Gilbert; Beverly Hospital)	\$7,941	0.93	1.00	1.01	1.00	0.97
South Shore Hospital	\$9,078	1.06	0.99	0.99	0.99	1.00
Southcoast Health Systems Charlton	\$8,757	1.03	0.99	0.97	1.01	0.98
Southcoast Health Systems St. Luke's Hospital	\$8,762	1.03	0.97	0.97	0.96	0.98
Sturdy Memorial Hospital	\$8,834	1.04	1.00	0.98	1.00	1.02
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$9,234	1.08	0.99	1.00	1.00	0.94
Winchester Hospital	\$7,237	0.85	1.01	1.00	1.02	1.02
Number of Hospitals	19					
Statewide Range	(\$6,103.28, \$10,305.55)	(0.72, 1.21)	(0.97, 1.02)	(0.97, 1.02)	(0.96, 1.02)	(0.94, 1.05)
Statewide Median	\$8,530	1.00	1.00	1.00	1.00	0.99
Correlation With Price Relativity			-0.27	-0.09	-0.11	-0.27
R-Squared			0.07	0.01	0.01	0.07

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.13: Price and Quality Relativity Scores for Cesarean Delivery (DRG 540) by Hospital**  
(continued on next page)

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Anna Jaques Hospital	\$5,641	0.80	0.99	0.98	1.00	0.99
Baystate Medical Center	\$7,536	1.07	1.00	1.02	1.00	0.96
Berkshire Medical Center	\$9,017	1.28	1.00	1.02	0.99	0.99
Beth Israel Deaconess Medical Center <sup>1</sup>	\$8,390	1.19	1.00	1.01	1.00	1.01
Boston Medical Center	\$6,453	0.91	0.97	0.98	0.98	0.94
Brigham & Women's Hospital	\$8,800	1.25	1.01	1.00	1.01	1.01
Brockton Hospital	\$5,986	0.85	0.98	1.02	0.98	0.94
Cambridge Health Alliance - (Cambridge; Somerville; Whidden Memorial)	\$4,957	0.70	0.99	1.01	1.00	0.96
Cape Cod Hospital	\$7,315	1.04	1.01	1.01	1.00	1.01
Caritas Good Samaritan Hospital	\$7,262	1.03	0.98	1.01	0.98	0.95
Caritas Holy Family Hospital	\$6,585	0.93	0.99	0.98	1.00	0.99
Caritas Norwood Hospital	\$7,311	1.04	0.99	1.00	1.00	0.98
Caritas St. Elizabeth's Medical Center	\$9,683	1.37	1.01	1.01	1.03	1.01
Cooley Dickinson Hospital	\$8,649	1.23	0.98	1.00	0.97	0.98
Emerson Hospital	\$6,596	0.93	1.01	0.99	1.02	1.02
Falmouth Hospital	\$6,758	0.96	0.99	1.02	0.99	0.96
Hallmark Health Systems - (Lawrence Memorial Campus; Melrose; Wakefield)	\$7,358	1.04	1.00	0.99	1.00	1.01
Health Alliance Hospitals, Inc.	\$6,967	0.99	1.00	1.01	0.98	1.01
Jordan Hospital	\$6,918	0.98	0.98	1.00	0.98	0.96
Lawrence General Hospital	\$5,629	0.80	0.96	0.91	1.00	0.96
Lowell General Hospital	\$5,910	0.84	0.99	0.99	0.99	0.98
Massachusetts General Hospital	\$10,517	1.49	0.99	0.98	1.00	0.99
Mercy Medical Center	\$6,089	0.86	0.99	1.00	1.01	0.93
Metrowest Medical Center (Framingham; Leonard Morse)	\$6,632	0.94	1.00	0.99	1.00	1.00
Milford Regional Medical Center	\$6,237	0.88	1.02	1.00	1.01	1.05
Morton Hospital	\$6,562	0.93	0.99	0.99	1.00	0.99
Mount Auburn Hospital	\$6,734	0.95	1.01	1.00	1.01	1.02
Newton Wellesley Hospital	\$7,412	1.05	1.00	1.00	0.98	1.02
North Shore Medical (Center/Salem Hospital; Center/Union)	\$8,204	1.16	1.00	1.00	1.01	0.98
Northeast Health Systems - (Addison Gilbert; Beverly Hospital)	\$7,056	1.00	1.00	1.01	1.00	0.97
Saint Vincent Hospital	\$6,343	0.90	1.00	1.01	1.00	0.96

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.13: Price and Quality Relativity Scores for Cesarean Delivery (DRG 540) by Hospital**  
(continued from previous page)

Hospital	Severity-Adjusted Median Price	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
South Shore Hospital	\$8,610	1.22	0.99	0.99	0.99	1.00
Southcoast Health Systems Charlton	\$8,946	1.27	0.99	0.97	1.01	0.98
Southcoast Health Systems St. Luke's Hospital	\$7,821	1.11	0.97	0.97	0.96	0.98
Southcoast Health Systems Tobey Hospital	\$7,947	1.13	0.98	0.97	1.00	0.98
Sturdy Memorial Hospital	\$5,883	0.83	1.00	0.98	1.00	1.02
Tufts Medical Center	\$7,925	1.12	1.00	0.98	1.00	1.00
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$8,195	1.16	0.99	1.00	1.00	0.94
Winchester Hospital	\$6,813	0.97	1.01	1.00	1.02	1.02
Number of Hospitals	39					
Statewide Range	(\$4,957, \$10,517)	(0.7, 1.49)	(0.96, 1.02)	(0.91, 1.02)	(0.96, 1.03)	(0.93, 1.05)
Statewide Median	\$7,056	1.00	0.99	1.00	1.00	0.99
Correlation With Price Relativity			0.19	0.13	0.04	0.17
R-Squared			0.04	0.02	0.00	0.03

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.14: Price and Quality Relativity Scores for Vaginal Delivery (DRG 560) by Hospital**  
(continued on next page)

Hospital	Severity-Adjusted Median Price <sup>2</sup>	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Anna Jaques Hospital	\$3,780	0.84	1.00	NR <sup>1</sup>	1.00	0.99
Baystate Franklin Medical Center	\$5,274	1.17	1.01	NR	1.02	0.98
Baystate Medical Center	\$4,682	1.03	1.01	1.03	1.01	0.96
Berkshire Medical Center	\$5,580	1.23	0.94	0.83	1.02	0.99
Beth Israel Deaconess Medical Center <sup>2</sup>	\$5,413	1.20	0.99	1.01	0.99	1.01
Boston Medical Center	\$4,285	0.95	0.96	0.92	1.00	0.94
Brigham & Women's Hospital	\$5,943	1.31	1.01	1.01	1.01	1.01
Brockton Hospital	\$3,874	0.86	0.98	NR	0.99	0.94
Cambridge Health Alliance - (Cambridge Hospital; Somerville; Whidden Memorial)	\$3,490	0.77	1.00	1.04	1.00	0.96
Cape Cod Hospital	\$4,137	0.91	1.04	1.10	1.01	1.01
Caritas Good Samaritan Hospital	\$4,749	1.05	0.99	1.02	0.99	0.95
Caritas Holy Family Hospital	\$4,392	0.97	1.00	NR	1.00	0.99
Caritas Norwood Hospital	\$4,067	0.90	0.96	0.91	0.99	0.98
Caritas St. Elizabeth's Medical Center	\$6,185	1.37	1.05	1.11	1.01	1.01
Cooley Dickinson Hospital	\$5,664	1.25	0.98	NR <sup>1</sup>	0.98	0.98
Emerson Hospital	\$4,593	1.01	1.02	1.03	1.01	1.02
Fairview Hospital	\$5,651	1.25	1.04	NR	1.01	1.12
Falmouth Hospital	\$4,381	0.97	1.00	NR	1.02	0.96
Hallmark Health Systems - (Lawrence Memorial Campus; Melrose; Wakefield)	\$4,747	1.05	0.98	NR	0.96	1.01
Harrington Memorial Hospital	\$4,491	0.99	0.96	NR	0.95	0.99
Health Alliance Hospitals, Inc.	\$4,464	0.99	1.00	0.98	1.01	1.01
Heywood Hospital	\$3,658	0.81	1.00	0.98	1.01	1.00
Holyoke Hospital	\$3,430	0.76	1.04	1.12	1.00	0.97
Jordan Hospital	\$4,425	0.98	0.99	NR	1.00	0.96
Lawrence General Hospital	\$4,559	1.01	0.98	NR	0.99	0.96
Lowell General Hospital	\$3,770	0.83	1.01	1.05	1.00	0.98
Martha's Vineyard Hospital	\$3,530	0.78	0.99	NR	0.97	1.04
Massachusetts General Hospital	\$6,146	1.36	0.96	0.91	1.00	0.99
Mercy Medical Center	\$3,805	0.84	0.95	0.91	0.99	0.93

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> NR is used to denote areas of quality measurement for which data was not reported, as a result of sample sizes that were too small to get a meaningful score. For hospitals where one quality domain score is absent, the weighting in that hospital's aggregate relativity is divided among the remaining quality domains. For further information on how missing data was handled in the calculation of quality scores, please see the *Technical Appendix*.

<sup>2</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.



**Table 5.14: Price and Quality Relativity Scores for Vaginal Delivery (DRG 560) by Hospital**  
(continued from previous page)

Hospital	Severity-Adjusted Median Price <sup>2</sup>	Price Relativity	Composite Quality Relativity	Quality Ratio: Process	Quality Ratio: PSI	Quality Ratio: HCAHPS
Metrowest Medical Center (Framingham; Leonard Morse)	\$4,434	0.98	0.97	0.93	0.99	1.00
Milford Regional Medical Center	\$3,821	0.84	1.05	1.10	1.01	1.05
Morton Hospital	\$4,077	0.90	1.00	1.00	1.00	0.99
Mount Auburn Hospital	\$4,298	0.95	0.98	0.95	0.99	1.02
Newton Wellesley Hospital	\$4,938	1.09	0.98	0.96	0.99	1.02
North Adams Regional Hospital	\$4,701	1.04	1.01	NR	1.00	1.03
North Shore Medical (Center/Salem Hospital; Center/Union)	\$5,371	1.19	0.99	0.99	1.00	0.98
Northeast Health Systems - (Addison Gilbert; Beverly Hospital)	\$4,924	1.09	1.03	1.08	1.01	0.97
Saint Vincent Hospital	\$4,073	0.90	1.02	1.08	1.01	0.96
South Shore Hospital	\$5,955	1.32	1.00	1.00	1.00	1.00
Southcoast Health Systems Charlton	\$5,102	1.13	0.98	0.96	1.00	0.98
Southcoast Health Systems St. Luke's Hospital	\$4,987	1.10	1.03	1.09	1.01	0.98
Southcoast Health Systems Tobey Hospital	\$5,135	1.13	1.00	NR	1.01	0.98
Sturdy Memorial Hospital	\$3,924	0.87	1.00	1.00	1.00	1.02
Tufts Medical Center	\$4,670	1.03	1.06	1.15	1.02	1.00
U Mass Memorial Medical Center - (Memorial Campus; University Campus)	\$5,781	1.28	0.98	0.98	1.00	0.94
Winchester Hospital	\$4,398	0.97	1.02	1.06	0.99	1.02
Number of Hospitals	46					
Statewide Range	(\$3,430, \$6,185)	(0.76, 1.37)	(0.94, 1.06)	(0.83, 1.15)	(0.95, 1.02)	(0.93, 1.12)
Correlation With Price Relativity			-0.06	-0.18	0.17	0.15
R-Squared			0.0032	0.0324	0.0289	0.0225

Notes: A correlation coefficient is a measure of how well two variables match each other. Values of a correlation coefficient range from -1 to 1. R-squared is the square of the correlation coefficient, indicating the extent of the variation in one variable that is related to the variation in the other. Values for r-squared range from 0 to 1.

<sup>1</sup> NR is used to denote areas of quality measurement for which data was not reported, as a result of sample sizes that were too small to get a meaningful score. For hospitals where one quality domain score is absent, the weighting in that hospital's aggregate relativity is divided among the remaining quality domains. For further information on how missing data was handled in the calculation of quality scores, please see the *Technical Appendix*.

<sup>2</sup> Severity-Adjusted Median Price and Price Relativity figures shown here are for both Beth Israel Deaconess campuses (main campus and Needham), while all quality measurements are for the main campus only.





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