Table S1 Merger and acquisition (M&A) activity in New Jersey, 2010–2020

Completion year	Acquirer	Target(s)
2011	HUMC Holdco, LLC	Bayonne Hospital
	HUMC Holdco, LLC	Hoboken University Medical Center
2012	Inspira Health Network (merger)	South Jersey Healthcare & Underwood Memorial Hospital
	Hackensack University Health Network	Mountainside Hospital
	Hudson Holdco, LLC	Christ Hospital
	St. Luke's University Health Network	Warren Hospital
2013	Carepoint Health	Hudson Holdco, LLC
	CHE Trinity Health (merger)	Catholic Health East & Trinity Health
2014	Atlantic Health System	Chilton Memorial Hospital
	Prime Healthcare	St. Mary's Hospital (Passaic)
	Robert Wood Johnson Health System	Somerset Medical Center
2015	Hackensack University Health Network	Palisades Medical Center
2016	Atlantic Health System	Hackettstown Regional Medical Center
	Hackensack Meridian Health (merger)	Meridian Health & Hackensack University Health Network
	Hackensack Meridian Health	Raritan Bay Medical Center
	Prime Healthcare	Saint Michael's Medical Center
	RWJBarnabas Health (merger)	Barnabas Health & Robert Wood Johnson Health System
2017	Care Plus	Bergen Regional Medical Center
	Jefferson Health	Kennedy Health System
2018	Hackensack Meridian Health	JFK Health System
	Hudson Regional Hospital	Meadowlands Hospital Medical Center
	Penn Medicine Health System	Princeton HealthCare System
2019	Salem County Hospital Corp.	Memorial Hospital of Salem County
	Virtua	Lourdes Health System

Table S2 Regression results for HHI on operating margins (dependent variable), 2010–2020 (partitioned results by inflection point)

Variables	Below inflection point	Above inflection point
HHI	−0.5218** (0.2200)	1.084*** (0.3125)
Constant	0.1069*** (0.0463)	−0.5479*** (0.1654)
HMA fixed effects	Yes	Yes
Hospital fixed effects	No	No
Observations	576	213
R^2	0.0456	0.1683

**, $P<0.05$; ***, $P<0.01$. Year fixed effect included in all models. The two models are partitioned by the HHI inflection point of 0.319 from our main model, column Model [1] in *Table 3*. Standard errors in parentheses. Standard errors are level. HHI, Herfindahl-Hirschman Index; HMA, hospital market area.

Table S3 Regression results for HHI on operating margins (dependent variable), 2010-2020 (HMA and year fixed effect results)

Variables	Model [1]	Model [2]	Model [3]
HHI	−1.5580*** (0.4191)	−1.6134*** (0.4072)	−1.2274*** (0.3601)
HHI^2	2.1600*** (0.4647)	2.2216*** (0.4533)	1.5914*** (0.4017)
Number of beds		0.0001** (0.00002)	
Ownership status			
Governmental		−0.0845*** (0.0269)	
Proprietary		−0.0412*** (0.0131)	
Urban location		0.0710*** (0.0189)	
SNH status		−0.0235** (0.0095)	
Unemployment rate		−0.2035 (0.4295)	
HMA fixed effects			
Camden	0.0247 (0.0184)	0.0036 (0.0203)	
Hackensack, Ridgewood and Paterson	−0.0441 (0.0277)	−0.0616** (0.0303)	
Morristown	−0.0453 (0.0588)	−0.0591 (0.0591)	
New Brunswick	−0.0162 (0.0184)	−0.0525** (0.0234)	
Newark/Jersey City	0.0080 (0.0225)	0.0052 (0.0242)	
Toms River	0.0680 (0.0413)	0.0358 (0.0421)	
Trenton	−0.0176 (0.0407)	−0.0379 (0.0429)	
Hospital fixed effects	No	No	Yes
Year fixed effects			
2011	0.0064 (0.0196)	0.0063 (0.0191)	0.0059 (0.0167)
2012	0.0112 (0.0197)	0.0118 (0.0191)	0.0106 (0.0167)
2013	−0.0224 (0.0197)	−0.0227 (0.0199)	−0.0223 (0.0168)
2014	0.0151 (0.0199)	0.0090 (0.0232)	0.0098 (0.0170)
2015	0.0329 (0.0201)	0.0247 (0.0260)	0.0249 (0.0171)
2016	0.0341 (0.0208)	0.0269 (0.0290)	0.0293* (0.0177)
2017	0.0213 (0.0209)	0.0124 (0.0303)	0.0159 (0.0178)
2018	0.0251 (0.0224)	0.0148 (0.0331)	0.0198 (0.0191)
2019	0.0084 (0.0230)	−0.0028 (0.0352)	0.0053 (0.0196)
2020	0.0034 (0.0230)	0.0045 (0.0224)	−0.0011 (0.0196)
Constant	0.2434*** (0.0705)	0.2220** (0.0871)	0.1868*** (0.0509)
Observations	789	789	789
R^2	0.0792	0.1422	0.3917

*, $P<0.1$; **, $P<0.05$; ***, $P<0.01$. Model [2] imposes controls on hospital characteristics, including number of maintained beds, ownership status (for which the basis is non-profit ownership), a dummy variable for urban location (RUCA code of 1), time-invariant SNH status, and county-level unemployment rate. Standard errors in parentheses. Standard errors are level. HHI, Herfindahl-Hirschman Index; SNH, safety-net hospital; HMA, hospital market area; RUCA, rural-urban commuting area.

Table S4 Regression results for lagged HHI on operating margins (dependent variable), 2010–2020

Variables	Model [1]	Model [2]	Model [3]
HHI_{t-1}	−1.5626*** (0.3682)	−1.6580*** (0.3588)	−1.2709*** (0.3195)
HHI_{t-1}^2	2.1518*** (0.4455)	2.2629*** (0.4351)	1.6436*** (0.3870)
Number of beds		−0.0001** (0.00002)	
Ownership status			
Governmental		−0.0849*** (0.0269)	
Proprietary		−0.0413*** (0.0131)	
Urban location		0.0697*** (0.0189)	
SNH status		−0.0243** (0.0095)	
Unemployment rate		−0.2278 (0.4289)	
HMA fixed effects	Yes	Yes	No
Hospital fixed effects	No	No	Yes
Observations	788	788	788
R^2	0.0804	0.0804	0.3931

**, $P<0.05$; ***, $P<0.01$. Year fixed effect included in all models. Model [2] imposes controls on hospital characteristics, including number of maintained beds, ownership status (for which the basis is non-profit ownership), a dummy variable for urban location (RUCA code of 1), time-invariant SNH status, and county-level unemployment rate. Standard errors in parentheses. Standard errors are level. HHI, Herfindahl-Hirschman Index; SNH, safety-net hospital; HMA, hospital market area; RUCA, rural-urban commuting area.

Table S5 Regression results for HHI on operating margins (dependent variable), 2010–2019 (pre-pandemic period)

Variables	Model [1]	Model [2]	Model [3]
HHI_{t-1}	−1.4281*** (0.4544)	−1.4519*** (0.3598)	−1.0546*** (0.3830)
HHI_{t-1}^2	2.0219*** (0.4849)	2.0708*** (0.4720)	1.4246*** (0.4115)
Number of beds		−0.0001** (0.00003)	
Ownership status			
Governmental		−0.0709*** (0.0273)	
Proprietary		−0.0457*** (0.0137)	
Urban location		0.0702*** (0.0195)	
SNH status		−0.0232** (0.0098)	
Unemployment rate		−0.4064 (0.4940)	
HMA fixed effects	Yes	Yes	No
Hospital fixed effects	No	No	Yes
Observations	718	718	718
R^2	0.0807	0.1450	0.3930

**, $P<0.05$; ***, $P<0.01$. Year fixed effect included in all models. Model [2] imposes controls on hospital characteristics, including number of maintained beds, ownership status (for which the basis is non-profit ownership), a dummy variable for urban location (RUCA code of 1), time-invariant SNH status, and county-level unemployment rate. Standard errors in parentheses. Standard errors are level. HHI, Herfindahl-Hirschman Index; SNH, safety-net hospital; HMA, hospital market area; RUCA, rural-urban commuting area.

Table S6 Regression results for HHI on operating margins (dependent variable), 2010–2020 (partitioned results by median bed size of 232)

Variables	Below 232 beds	Above 232 beds
HHI	−1.8619** (0.7162)	−1.2131*** (0.4148)
HHI^2	2.1831*** (0.7739)	2.1727*** (0.4730)
Constant	0.2873*** (0.1209)	−0.2240*** (0.0705)
HMA fixed effects	Yes	Yes
Hospital fixed effects	No	No
Observations	394	395
R^2	0.0851	0.1689

**, $P<0.05$; ***, $P<0.01$. Year fixed effect included in all models. The two models are partitioned by the median bed size of 232 from our data. Standard errors in parentheses. Standard errors are level. HHI, Herfindahl-Hirschman Index; HMA, hospital market area.

Table S7 Regression results for HHI on inpatient revenue per patient day, 2010–2020

Variables	Model [1]	Model [2]	Model [3]
HHI	−10.2349 (18.5763)	−9.4640 (17.6447)	−8.5713 (0.3601)
HHI^2	12.7986 (20.5956)	12.4501 (19.6388)	10.7000 (9.8906)
Number of beds		0.0052*** (0.0011)	
Ownership status			
Governmental		−2.3425** (1.1648)	
Proprietary		2.2896*** (0.5672)	
Urban location		−2.6839*** (0.8190)	
SNH status		0.4705 (0.4121)	
Unemployment rate		−26.4741 (18.6100)	
HMA fixed effects	Yes	Yes	No
Hospital fixed effects	No	No	Yes
Observations	789	789	789
R^2	0.2663	0.3469	0.8505

**, $P<0.05$; ***, $P<0.01$. Year fixed effect included in all models. Model [2] imposes controls on hospital characteristics, including number of maintained beds, ownership status (for which the basis is non-profit ownership), a dummy variable for urban location (RUCA code of 1), time-invariant SNH status, and county-level unemployment rate. Standard errors in parentheses. Standard errors are level. HHI, Herfindahl-Hirschman Index; SNH, safety-net hospital; HMA, hospital market area; RUCA, rural-urban commuting area.

Table S8 Regression results for HHI on inpatient revenue per discharge (dependent variable), 2010-2020

Variables	Model [1]	Model [2]	Model [3]
HHI	−80.3498 (98.8945)	−79.6023 (96.3396)	−62.9333 (53.3670)
HHI^2	85.6624 (109.6445)	89.5528 (107.2274)	60.3551 (59.5328)
Number of beds		−0.0153*** (0.0059)	
Ownership status			
Governmental		−1.7628 (6.3596)	
Proprietary		9.2497*** (3.0968)	
Urban location		−9.7034** (4.4716)	
SNH status		9.4955*** (2.2501)	
Unemployment rate		−212.3850** (101.6104)	
HMA fixed effects	Yes	Yes	No
Hospital fixed effects	No	No	Yes
Observations	789	789	789
R^2	0.3213	0.3645	0.8232

**, P<0.05; ***, P<0.01. Year fixed effect included in all models. Model [2] imposes controls on hospital characteristics, including number of maintained beds, ownership status (for which the basis is non-profit ownership), a dummy variable for urban location (RUCA code of 1), time-invariant SNH status, and county-level unemployment rate. Standard errors in parentheses. Standard errors are level. HHI, Herfindahl-Hirschman Index; SNH, safety-net hospital; HMA, hospital market area; RUCA, rural-urban commuting area.