UNIVERSAL HEALTH CARE
FOUNDATION OF CONNECTICUT

State of Connecticut's Hospitals

Universal Health Care Foundation of Connecticut
December 11, 2014

State of Connecticut's Hospitals

The attached charts present selected utilization, quality and financial measures, combining data from several public sources. Taken together, they provide a useful overview of the health of Connecticut's hospitals and hospital systems.

Hospital Systems in Connecticut

The largest hospital system in the state, as measured by staffed beds, is the Yale New Haven Health System. Always the largest hospital in the state, Yale-New Haven Hospital became even bigger when they merged with the Hospital of Saint Raphael in 2012. The second largest system in the state is Hartford HealthCare, which recently expanded to include a total of five hospitals.

The formation of the Value Care Alliance (VCA) was announced at the end of September, 2014. VCA describes itself as a "collaboration" of seven hospitals. Joint efforts are focused on achieving efficiencies in purchasing and administration and developing and sharing effective approaches to patient safety and care management. The aim of this collaboration is to reap the benefits of working together while still maintaining the independence, community focus and local governance control of its member hospitals. Three of the VCA hospitals are part of the Western Connecticut Health Network. The largest hospital, Saint Vincent's Medical Center in Bridgeport, is a member of a national health system, Ascension Health.

Dallas-based Tenet Healthcare, proposed to acquire five hospitals in Connecticut, including the two hospitals that compose the Eastern Connecticut Health Network. Following regulatory decisions by the Connecticut Department of Public Health's Office of Health Care Access and the Office of the Attorney General, Tenet withdrew its Certificate of Need applications on December 11, 2014. Despite the fact that Tenet Healthcare has withdrawn its applications the five hospitals remain grouped together in the charts to reflect this very important story of the ever-changing hospital landscape in Connecticut.

Location

A map showing the locations of Connecticut's 29 acute care hospitals can be found here: *Map: Acute Care and Children's Hospitals in Connecticut*. The only cities in Connecticut that still have two hospitals are Hartford: (Hartford Hospital and Saint Francis), Bridgeport (Bridgeport Hospital and Saint Vincent's), and Waterbury

(Waterbury Hospital and Saint Mary's). Hospitals are generally clustered in urban and suburban areas of the state, many along the route 84 and route 95 corridors.

Tables & Figures

The tables list hospitals by system (or in the case of the recently withdrawn Tenet applications, by proposed system) and reflect Connecticut's hospital system structure as of mid-December, 2014. Individual hospitals are listed in order of their staffed beds, within each system category. Unaffiliated hospitals are also listed in order of staffed beds. The tables focus on data about the hospitals themselves. Not included is financial or utilization information about the many other organizations, including physician practices, nursing homes, home care agencies, laboratories, etc. that are owned and operated by each system or by individual hospital holding companies. While a few hospitals in Connecticut are part of larger systems headquartered outside of Connecticut, the tables do not reflect any outside affiliations.

Most of the tables provide a snapshot of FY 2013 data. Hospitals operate under a fiscal year from October 1-September 30, matching up with the federal budget fiscal year. Tables 4A and 4B on hospital safety scores uses more recent data, released by the Leapfrog Group in the fall of 2014. Three of the tables 2, 3, and 5, show three year trends, looking at the same measures in 2011, 2012 and 2013. Many of them use a color scale that ranges from green to yellow to orange to red to allow for comparisons between the values shown within each table.

Below is a brief description of each table and figure:

Table 1: Connecticut Hospital Staffed Beds (FY 2013)
This table shows the number of staffed beds per hospital and hospital system. Staffed beds was chosen, instead of licensed beds or available beds, to reflect actual hospital operations. This chart also includes information about when systems were formed and/or when each hospital joined an existing system.

Table 2: Hospital Discharges (FY 2011-2013)
This table shows a utilization measure, inpatient discharges, over three years as well as the percent change in discharges between fiscal years 2011 and 2013. Please note that in this table, as well as Table 3, 2011 and 2012 data from Saint Raphael Hospital are reflected in the totals for Yale-New Haven Hospital to make a more accurate comparison over time. Values are color coded with all increases depicted in this table in varying shades from dark to light green. Smaller decreases are depicted in yellow, with higher percentage decreases ranging into orange and then red.

Table 3: Hospital Emergency Room Visits (FY 2011-2013)
This table depicts an outpatient measure, emergency room visits, over the same three year period used in Table 2. Again, the percent of change between FY 2011 and 2013 is calculated and color coded.

Table 4A: Connecticut Hospital Safety Scores (Fall 2014)
The Leapfrog Group provides a respected and widely used assessment of the safety of hospitals in the United States. Of the 29 hospitals in Connecticut, 25 are rated by the Leapfrog Group. Rockville General, Connecticut Children's Medical Center, Johnson Memorial and Sharon Hospital do not have a score available. In the chart, an A grade is color-coded green, B is coded yellow, C is coded orange and D is coded red.

Table 4B: Comparison of New England States
This chart compares Connecticut hospitals' Leapfrog grades and rankings to those of the other New England states.

Table 5: Hospital Operating Margins (FY 2011-2013)
A hospital's operating margin is calculated by dividing income or loss from operations by total operating revenue. The table compares operating margins over the past three years. Please note that Yale-New Haven Hospital values are taken from that hospital *only* unlike Tables 2 and 3, which include Saint Raphael's data for 2011 and 2012). The values are color coded from green for the highest operating margins through yellow to orange to red for the most negative margins.

Table 6: Hospital Assets and Liabilities (FY 2013)
This table shows the total net assets or equity and the total liabilities from each hospital. Information for this chart comes from two different sources. Sharon Hospital did not have a clear figure for the Total Liabilities column.

Table 7: Hospital Financial Measures (FY 2013)
This table depicts several key measures of financial health and stability.

> **Long term debt to capitalization:** (Long term debt/Long term debt + equity). A lower proportion or percentage is desirable because it allows for obtaining more favorable terms (i.e., lower interest rates) when borrowing. Four hospitals did not have a clear long term debt figure, and so this data is unavailable for them (John Dempsey, Charlotte Hungerford, Johnson Memorial and Milford Hospitals). In the chart, the values are coded green

for lowest to red for highest, with gradations to indicate where the values fall on the range.

Current ratio: (Current assets/Current liabilities). High values imply a good ability to pay short term obligations and low values imply a lesser ability. In the chart, the values are coded green for highest to red for lowest, with gradations to indicate where the values fall on the range.

Days Cash on Hand: The average number of days of cash available to pay for expenses that is maintained in cash accounts. A higher number is favorable, since it indicates a greater ability to meet outstanding obligations. In the chart, the values are coded green for highest to red for lowest, with gradations to indicate where the values fall on the range.

Figure 1: Hospital Net Revenue Payer Mix (FY 2013)
This stacked bar chart shows net revenues by payer for each hospital. The categories shown are private insurance (blue), Medicare-including TriCare (gray), Medicaid (dark orange) as well as payments made by those who are uninsured (light orange).

Sources

The data for the tables came from three major sources. The bulk of the data for Tables 1, 2, 3, 5, 6, and 7 and Figure 1 comes from *The Annual Report on the Financial Status of Connecticut's Short Term Acute Care Hospitals for Fiscal Year 2013*, prepared by the State of Connecticut Department of Public Health, Office of Health Care Access (OHCA), released in September 2014 (click here to see the complete report). Information for the Total Liabilities figures in Table 6, comes from the individual hospitals' financial statements, which can be found on the OHCA website, under Health Data, Audited Financial Statements 2013 (click here to go to page). Hospital safety scores in Tables 4A and 4B are from a fall 2014 report from the Leapfrog Group (to see Hospital Safety Scores for individual hospitals in Connecticut, click here; for more information on Hospital Safety Scores, click here). We utilized a briefing paper, Financial Measures for Critical Access Hospitals, click here, to provide background information on hospital measures.

Below are the specific source citations:

Leapfrog Group. (Fall 2014). Hospital Safety Scores. The Leapfrog Group. Retrieved from:
http://www.hospitalsafetyscore.org/search?findBy=state&zip_code=&city=&state_prov=CT&hospital=&agree=agree

Office of Health Care Access. (September 2014) *Annual Report on the Financial Status of Connecticut's Short Term Acute Care Hospitals for Fiscal Year 2013.* State of Connecticut, Department of Public Health. Retrieved from: http://www.ct.gov/dph/lib/dph/ohca/hospitalfillings/2013/fsreport_fy2013_final.pdf

Office of Health Care Access. (2013). Health Data, Audited Financial Statements 2013. State of Connecticut, Department of Public Health. Retrieved from: http://www.ct.gov/dph/cwp/view.asp?a=3902&q=541550

Pink, G.H., Holmes, G.M., D'Alpe, C., Strunk, L.A., McGee, P. & Slifkin, R. (May 2005). *Flex Monitoring Team Briefing Paper No. 7: Financial Indicators for Critical Access Hospitals.* Flex Monitoring Team. Retrieved from: http://www.flexmonitoring.org/wp-content/uploads/2013/07/BriefingPaper7_FinancialIndicators.pdf

Table 1

Connecticut Hospital Staffed Beds
FY 2013

Hospitals	Staffed Beds FY 2013	Percent of Total	Year Joined System
Yale New Haven Health	**2,049**	**29.0%**	
Yale- New Haven	1,572	22.2%[1]	
Bridgeport	271	3.8%	1996
Greenwich	206	2.9%	1998
Hartford HealthCare	**1,378**	**19.5%**	
Hartford	647	9.2%	
Hospital of Central Connecticut	304	4.3%	2011
William W. Backus	201	2.8%	2013
Midstate Medical Center	139	2.0%	1991
Windham Community Memorial	87	1.2%	2009
Value Care Alliance	**1,414**	**20.0%**	2014
Western Connecticut Health Network	**457**	**6.5%**	2010
Danbury	267	3.8%	
Norwalk	168	2.4%	2014
New Milford	22	0.3%	2010
Other Value Care Alliance			
Saint Vincent's Medical Center	424	6.0%	
Lawrence & Memorial	256	3.6%	
Middlesex	189	2.7%	
Griffin	88	1.2%	
Proposed Tenet acquisitions (Application withdrawn)			
Eastern Connecticut Health Network	**218**	**3.1%**	1995
Manchester Memorial	171	2.4%	
Rockville General	47	0.7%	
Saint Mary's	182	2.6%	
Waterbury	176	2.5%	
Bristol	115	1.6%	
Saint Francis	595	8.4%	
Stamford	267	3.8%	
John Dempsey (UCONN)	184	2.6%	
Connecticut Children's Medical Center	182	2.6%	
Charlotte Hungerford	77	1.1%	
Johnson Memorial	70	1.0%	
Day Kimball	65	0.9%	
Sharon	49	0.7%	
Milford	46	0.7%	
State Total	**7,067**		

[1] Yale-New Haven Hospital merged with the Hospital of St. Raphael's in 2012.

Table 2

Hospital Discharges
FY 2011-2013

	Hospital	% Change Discharges FY 2011-2013	Discharges FY 2011	Discharges FY 2012	Discharges FY 2013
Yale New Haven Health	Yale- New Haven*	0.31%	80,252	79,102	80,503
	Bridgeport	-3.17%	19,058	18,936	18,453
	Greenwich	-7.72%	13,479	13,027	12,439
Hartford HealthCare	Hartford	2.79%	40,674	41,251	41,809
	Hospital of Central Connecticut	-12.84%	20,546	18,252	17,907
	William W. Backus	-5.03%	11,999	11,911	11,396
	Midstate Medical Center	-3.79%	10,235	10,330	9,847
	Windham Community Memorial	-12.00%	4,701	4,506	4,137
Value Care Alliance	Danbury (WCHN)	-10.60%	20,763	19,668	18,562
	Norwalk (WCHN)	-12.32%	14,878	15,003	13,045
	New Milford (WCHN)	-27.50%	2,516	2,288	1,824
	Saint Vincent's Medical Center	-8.04%	22,100	21,912	20,324
	Lawrence & Memorial	-4.43%	15,328	14,932	14,649
	Middlesex	9.43%	13,855	14,158	15,162
	Griffin	-4.24%	7,494	7,063	7,176
Proposed Tenet acquisitions (Application withdrawn)	Manchester Memorial (ECHN)	0.66%	9,281	8,831	9,342
	Rockville General (ECHN)	2.07%	2,515	2,519	2,567
	Saint Mary's	-6.42%	12,534	12,078	11,729
	Waterbury	-7.14%	12,758	12,364	11,847
	Bristol	1.80%	7,316	7,656	7,448
Other Hospitals	Saint Francis	1.65%	31,842	32,111	32,366
	Stamford	-0.46%	14,940	14,294	14,871
	John Dempsey (UCONN)	-5.55%	9,082	8,374	8,578
	Connecticut Children's Medical Center	3.53%	6,203	6,642	6,422
	Charlotte Hungerford	0.32%	6,512	6,338	6,533
	Johnson Memorial	-3.95%	3,268	3,251	3,139
	Day Kimball	-16.42%	5,182	5,097	4,331
	Sharon	6.47%	2,703	2,685	2,878
	Milford	-23.46%	4,374	3,580	3,348
	State Total		426,388	418,068	412,632
	State Average	-3.23%	14,703	14,419	14,229
	State Median	-4.34%	11,999	11,911	11,396

* *The values for 2011 and 2012 for Yale New Haven Hospital* **include** *the values for St. Raphael's Hospital*

Table 3

Hospital Emergency Room Visits
FY 2011-2013

	Hospital	% Change ER Visits FY 2011-2013	ER Visits FY 2011	ER Visits FY 2012	ER Visits FY 2013
Yale New Haven Health	Yale- New Haven*	14.55%	178,709	196,214	204,704
	Bridgeport	0.08%	76,836	79,058	76,895
	Greenwich	-1.01%	42,885	43,587	42,452
Hartford HealthCare	Hartford	5.47%	95,567	99,811	100,799
	Hospital of Central Connecticut	-1.82%	109,054	110,498	107,064
	William W. Backus	24.76%	63,198	68,102	78,844
	Midstate Medical Center	-29.68%	84,965	92,139	59,791
	Windham Community Memorial	2.81%	34,122	36,862	35,082
Value Care Alliance	Danbury (WCHN)	-0.04%	69,595	70,622	69,565
	Norwalk (WCHN)	-2.70%	49,645	49,249	48,307
	New Milford (WCHN)	-4.95%	18,780	18,416	17,850
	Saint Vincent's Medical Center	4.02%	75,523	79,772	78,557
	Lawrence & Memorial	5.55%	80,114	82,665	84,560
	Middlesex	-4.33%	95,293	93,891	91,164
	Griffin	-1.11%	40,143	40,950	39,698
Proposed Tenet acquisitions (Application withdrawn)	Manchester Memorial (ECHN)	-1.61%	47,834	46,503	47,065
	Rockville General (ECHN)	-5.01%	26,463	26,422	25,136
	Saint Mary's	1.13%	69,212	70,819	69,994
	Waterbury	-4.68%	57,022	55,944	54,356
	Bristol	-3.78%	39,860	38,029	38,353
Other Hospitals	Saint Francis	11.26%	72,869	79,201	81,072
	Stamford	5.09%	48,491	50,831	50,958
	John Dempsey (UCONN)	-4.93%	30,264	29,307	28,771
	Connecticut Children's Medical Center	4.02%	53,488	55,978	55,640
	Charlotte Hungerford	3.63%	39,535	40,878	40,972
	Johnson Memorial	0.02%	20,121	20,682	20,126
	Day Kimball	-15.75%	28,805	28,011	24,268
	Sharon	-0.19%	17,658	17,622	17,624
	Milford	-5.89%	37,444	36,452	35,240
	State Total		1,703,495	1,758,515	1,724,907
	State Average	1.26%	58,741	60,638	59,480
	State Median	-0.19%	49,645	50,831	50,958

* *The values for 2011 and 2012 for Yale New Haven Hospital* **Include** *the values for St. Raphael's Hospital*

Table 4A - Connecticut Hospital Safety Scores

	Hospital	Fall 2014 Hospital Safety Score
Yale New Haven Health	Yale-New Haven Hospital	B
	Bridgeport	B
	Greenwich	C
Hartford HealthCare	Hartford	B
	Hospital of Central Connecticut	B
	William W. Backus	A
	Midstate Medical Center	C
	Windham Community Memorial	D
Value Care Alliance	Danbury (WHCN)	B
	Norwalk (WHCN)	C
	New Milford (WHCN)	C
	Saint Vincent's Medical Center	A
	Lawrence & Memorial	C
	Middlesex	C
	Griffin	A
Proposed Tenet acquisitions (Application withdrawn)	Manchester Memorial (EHCN)	C
	Rockville General (EHCN)	No grade available
	Saint Mary's	C
	Waterbury	C
	Bristol	D
Other Hospitals	Saint Francis	A
	Stamford	C
	John Dempsey (UCONN)	B
	Connecticut Children's Medical Center	No grade available
	Charlotte Hungerford	D
	Johnson Memorial	No grade available
	Day Kimball	C
	Sharon	No grade available
	Milford	C

Table 4B - Comparison of New England States

Overall Position	State	No. of "A"s/No. of graded hospitals	Percentage of A hospitals
1	Maine	12/18	67%
2	Massachusetts	40/63	63%
15	New Hampshire	4/13	31%
25	Rhode Island	2/9	22%
31	Vermont	1/6	17%
33	Connecticut	4/25	16%

Hospital Operating Margins
FY 2011-2013

Table 5

	Hospital	Operating Margin FY 2011	Operating Margin FY 2012	Operating Margin FY 2013
Yale New Haven Health	Yale- New Haven	3.52%	5.97%	4.34%
	Bridgeport	8.16%	7.45%	7.29%
	Greenwich	3.09%	3.63%	6.42%
Hartford HealthCare	Hartford	2.12%	4.63%	-0.44%
	Hospital of Central Connecticut	6.12%	4.64%	3.37%
	William W. Backus	9.01%	8.75%	8.85%
	Midstate Medical Center	3.62%	10.06%	7.07%
	Windham Community Memorial	-4.22%	-0.55%	-10.44%
Value Care Alliance	Danbury (WCHN)	3.12%	5.13%	5.42%
	Norwalk (WCHN)	6.75%	5.52%	3.32%
	New Milford (WCHN)	-0.10%	-7.85%	-2.94%
	Saint Vincent's Medical Center	3.64%	13.87%	6.74%
	Lawrence & Memorial	6.65%	6.20%	3.07%
	Middlesex	4.90%	6.92%	4.66%
	Griffin	1.47%	-1.84%	1.63%
Proposed Tenet acquisitions (Application withdrawn)	Manchester Memorial (ECHN)	3.58%	5.48%	0.67%
	Rockville General (ECHN)	0.24%	0.91%	4.47%
	Saint Mary's	3.26%	5.41%	4.78%
	Waterbury	0.29%	4.02%	1.63%
	Bristol	0.11%	0.77%	1.02%
Other Hospitals	Saint Francis	-0.50%	1.27%	0.60%
	Stamford	7.33%	9.08%	6.46%
	John Dempsey (UCONN)	-5.80%	-2.82%	-1.26%
	Connecticut Children's Medical Center	2.62%	-0.25%	-3.91%
	Charlotte Hungerford	0.56%	0.13%	2.00%
	Johnson Memorial	-2.38%	-0.58%	-5.32%
	Day Kimball	1.75%	3.91%	0.41%
	Sharon	5.24%	5.94%	8.81%
	Milford	-6.33%	-4.19%	-12.71%
	State Median	**3.09%**	**4.63%**	**3.07%**

Hospital Assets and Liabilities
FY 2013

Table 6

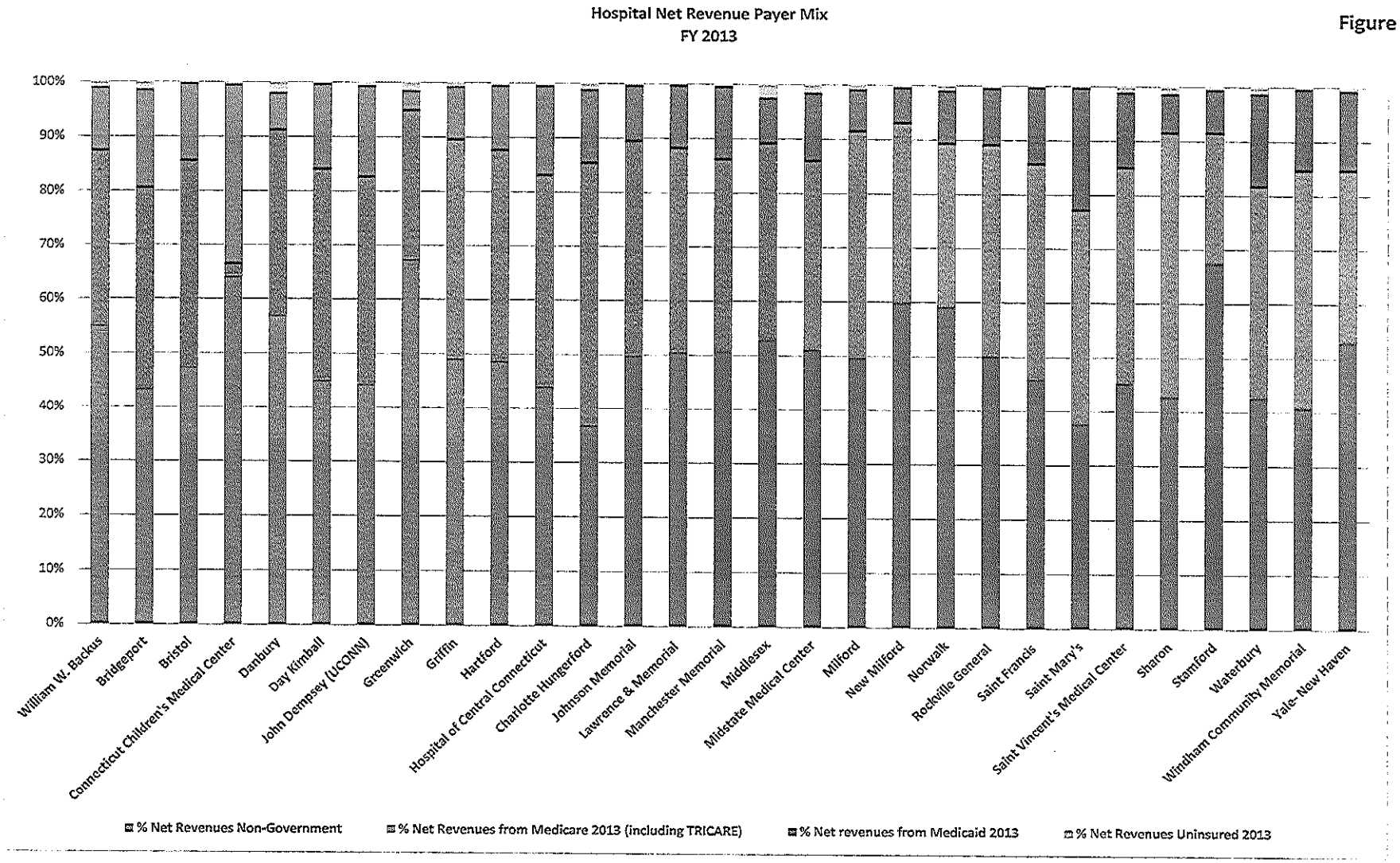
	Hospital	Total Net Assets or Equity	Total Liabilities
Yale New Haven Health	Yale- New Haven	$ 1,018,125,000	$ 1,639,422,000
	Bridgeport	$ 175,860,000	$ 264,449,000
	Greenwich	$ 377,624,000	$ 151,101,000
Hartford HealthCare	Hartford	$ 494,445,108	$ 689,076,487
	Hospital of Central Connecticut	$ 241,711,563	$ 197,410,678
	William W. Backus	$ 325,472,938	$ 151,250,808
	Midstate Medical Center	$ 133,586,026	$ 160,444,399
	Windham Community Memorial	$ (7,449,457)	$ 87,298,566
Value Care Alliance	Danbury (WCHN)	$ 486,647,111	$ 389,502,537
	Norwalk (WCHN)	$ 247,213,116	$ 297,291,196
	New Milford (WCHN)	$ 31,727,632	$ 29,542,298
	Saint Vincent's Medical Center	$ 538,420,000	$ 141,799,000
	Lawrence & Memorial	$ 199,164,500	$ 196,803,121
	Middlesex	$ 264,166,000	$ 196,145,000
	Griffin	$ (13,707,175)	$ 134,146,828
Proposed Tenet acquisitions (Application withdrawn)	Manchester Memorial (ECHN)	$ 37,731,740	$ 136,423,034
	Rockville General (ECHN)	$ 31,052,463	$ 45,491,391
	Saint Mary's	$ 49,697,000	$ 161,921,000
	Waterbury	$ 74,829,268	$ 803,796,514
	Bristol	$ 26,472,271	$ 87,460,483
Other Hospitals	Saint Francis	$ 208,956,000	$ 821,273,000
	Stamford	$ 208,376,000	$ 631,499,000
	John Dempsey (UCONN)	$ 79,674,598	$ 47,992,000
	Connecticut Children's Medical Center	$ 219,132,129	$ 186,970,696
	Charlotte Hungerford	$ 84,555,779	$ 47,894,038
	Johnson Memorial	$ 6,911,814	$ 36,602,307
	Day Kimball	$ 16,084,923	$ 83,016,987
	Sharon	$ 30,054,582	N/A
	Milford	$ 8,317,133	$ 39,769,992

Hospital Financial Measures
FY 2013

Table 7

	Hospital	Long Term Debt to Capitilization	Current Ratio	Days Cash on Hand
YaleNew Haven Health	Yale- New Haven	41.7	2.94	122
	Bridgeport	21.9	1.26	60
	Greenwich	9.1	2.7	77
Hartford HealthCare	Hartford	29.9	1.07	5
	Hospital of Central Connecticut	0.3	1.39	24
	William W. Backus	17.1	6.07	206
	Midstate Medical Center	43.6	2.41	50
	Windham Community Memorial	162.6	0.9	32
Value Care Alliance	Danbury (WCHN)	33.6	1.92	48
	Norwalk (WCHN)	33.1	1.88	94
	New Milford (WCHN)	7.2	0.83	12
	Saint Vincent's Medical Center	9.6	1.63	4
	Lawrence & Memorial	30.3	3.93	164
	Middlesex	18.5	2.06	69
	Griffin	145.4	1.06	43
Proposed Tenet acquisitions (Application withdrawn)	Manchester Memorial (ECHN)	57.4	1.19	25
	Rockville General (ECHN)	43.1	1.31	6
	Saint Mary's	28.6	1.36	48
	Waterbury	25.1	1.78	42
	Bristol	49.8	1.45	38
Other Hospitals	Saint Francis	55.3	2.04	64
	Stamford	64.2	1.78	90
	John Dempsey (UCONN)	Not available	1.39	0
	Connecticut Children's Medical Center	22.4	0.94	3
	Charlotte Hungerford	Not available	1.32	27
	Johnson Memorial	Not available	0.43	1
	Day Kimball	64.9	1.36	28
	Sharon	22.7	2.07	0
	Milford	Not available	0.89	9
	State Average	**41.5**	**1.77**	**48**
	State Median	**30.3**	**1.39**	**38**

Figure 1


Hospital Net Revenue Payer Mix
FY 2013
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
William W. Backus
Bridgeport
Bristol
Connecticut Children's Medical Center
Danbury
Day Kimball
John Dempsey (UCONN)
Greenwich
Griffin
Hartford
Hospital of Central Connecticut
Charlotte Hungerford
Johnson Memorial
Lawrence & Memorial
Manchester Memorial
Middlesex
Midstate Medical Center
Milford
New Milford
Norwalk
Rockville General
Saint Francis
Saint Mary's
Saint Vincent's Medical Center
Sharon
Stamford
Waterbury
Windham Community Memorial
Yale- New Haven
% Net Revenues Non-Government
% Net Revenues from Medicare 2013 (including TRICARE)
% Net revenues from Medicaid 2013
% Net Revenues Uninsured 2013

UNIVERSAL HEALTH CARE
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Hospital Consolidations and Conversions

A Review of the Literature

Universal Health Care Foundation of Connecticut
December 2014

HOSPITAL CONSOLIDATIONS & CONVERSIONS:
A Review of the Literature

Table of Contents

This paper is based on research conducted by Jeremy Mand, MPH

I. INTRODUCTION

From the early 1970s through the year 2000, Connecticut's system of acute care hospitals remained unusually steady relative to hospital markets in many other parts of the country. The state hospital industry during this time period could be characterized as stable, with very few closings, a limited number of mergers between individual hospitals and/or larger hospital organizations, limited affiliations between hospitals and physician groups, and a nearly non-existent market penetration of for-profit hospital entities (Sager, 2014). In fact, only Sharon Hospital underwent non-profit to for-profit conversion during this time.

More recently, however, the overall structure of Connecticut hospitals has experienced fundamental changes. Between 2009 and 2013 there were thirteen attempted and seven successful hospital consolidations and/or partnerships, a substantial increase from the four that occurred in the previous decade (Kaylin, 2014; Connecticut Hospital Association, 2013). While Sharon Hospital remains the only for-profit acute care hospital operating in Connecticut, there was the very real possibility, until Tenet Healthcare withdrew its application in mid-December 2014, that as many as five hospitals in Connecticut would have converted to for-profit status within the next year. Hospital acquisition of medical practices has also increased substantially in the last few years.

Universal Health Care Foundation of Connecticut is very concerned about the potential impact of the acceleration of hospital mergers, conversion of non-profit hospitals to for-profit entities and hospital absorption of physician practices on health care costs, quality and access. This paper provides an overview of the literature on the possible reasons for these trends, as well as their potential impact.

II. DRIVING FORCES

There is no doubt that hospital consolidation is accelerating nationally. There were 105 mergers reported in 2012 alone, up from 50 to 60 annually in the pre-ACA, pre-recession years (Dafny, 2014). While it is difficult to assign degrees of causation, the following driving forces are usually cited as the primary reasons for changes in hospital system structures.

A. Historical Context

While recent activities highlight the accelerating nature of mergers and partnerships—the number of mergers and acquisitions has doubled since 2009 (Tsai & Jha, 2014)—the trend in consolidation began much earlier. This section provides a brief overview of some of the challenges hospitals faced, beginning in the 1980s and 1990s.

Changes in medical practice contributed to less need for hospital beds, making some hospitals more vulnerable to either takeover or closure. One example is the growth of ambulatory surgery, which began in earnest in the 1980s. As less invasive surgical techniques evolved, such as laparoscopic surgery, and ambulatory surgery centers became viable competitors, surgical inpatient hospital days began to decline (Duffy & Farley, 1995).

Hospitals reacted by developing their own outpatient capabilities and facilities. With old physical plants that were focused on delivery of inpatient care, not all hospitals were able to successfully adapt. These trends continue to the present day and are an important reason why some hospitals struggle to remain financially viable.

For many hospitals, the consolidation trend began with the shift in the health insurance market during the 1990s, as the market moved away from indemnity insurance and managed care organizations (MCOs) gained market share. MCOs focused on using their bargaining power to hold down costs through developing relatively narrow provider networks. Tough contract negotiations held down reimbursement rates but promised a higher volume of patients for those chosen providers. MCOs also imposed strict utilization review and prior authorization processes aimed to reduce length of stay, reduce use of the ER and limit expensive procedures. This was the era, before the managed care backlash that occurred later in the decade, of "drive-through mastectomies" and one day maternity stays.

In response to the cost-containment strategies introduced by MCOs, hospitals began to consolidate to improve their bargaining position. "Coping with managed care was a key issue for hospital leaders. One of hospitals' main responses to the growth of managed care was consolidation. Hospitals correctly perceived that by merging with others in the same community, they would increase their leverage with health plans. The U.S. Federal Trade Commission (FTC) challenged some of these mergers as anticompetitive, but the hospitals prevailed in court in every case during this period" (Ginsburg, 2005).

Another perceived threat that led to consolidation among non-profit hospitals outside of Connecticut was the rapid growth of Columbia/HCA and other for-profit hospital companies during the 1990s. As for-profit acquisitions occurred across the country, many non-profit hospitals believed that if they did not join together to create a stronger bargaining position, their hospitals would undoubtedly be vulnerable to takeover by a for-profit chain (Ginsburg, 2005).

Following the revolt against managed care (Baker & Salisbury, 1997), health insurance companies began giving preferential reimbursement to larger hospitals

considered critical to their policy-holders while "smaller, independent hospitals, specialists and primary care providers experienced steeper cuts in reimbursement, precipitating insolvencies, fire sales, retirements and sales of private practices" (Turpin, 2014).

More recently, the financial downturn, at its worst in 2008, created difficulties for community hospitals to remain both financially solvent and independent. "The recession created an explosion of bad debt for many hospitals as people lost their jobs, with patients migrating to state Medicaid rolls or being unable to pay at all. As a result, about one-third of hospitals experienced negative operating margins in 2008" (Grauman, Harris, & Martin, 2010).

B. Revenue and Payment Reform Challenges

Moody's Investors Services first revised its non-profit hospital industry outlook to negative (from stable) in 2008. In 2012 they reported that the outlook is expected to remain negative for the foreseeable future—"hospitals are faced with an unprecedented threat to revenues...we expect revenue growth to continue to be weak and not able to keep pace with normal spending inflation (Guerin-Calvert & Maki, 2014) The Moody's Outlook for 2014 found that "several factors will slow down revenue growth, including an effective 1.3% Medicare payment reduction, as well as the reduction in disproportionate share payments that began 1 October 2013. Also contributing will be continuing declines in inpatient volumes and the ongoing shift in care toward outpatient settings, where reimbursements are lower. Moody's also expects commercial rate increases to be in 0%-5% range, far below their historical levels" (Global Credit Research, 2013).

Across the nation, there is great uncertainty among health care executives about how and how much they will be paid in an era of health reform and push-back against double digit increases in health care costs. These uncertainties have many hospital executives concluding that continued growth in revenues is unlikely. For example, Eileen Sheil, corporate communications director of the Cleveland Clinic, stated that their decision in 2013 to reduce expenses by 6 percent was simply because they believed they "are going to be reimbursed less" (Turpin, 2014). According to Barnabas Health of New Jersey CEO Barry Ostrowsky, "revenue pressure" is a key reason that his hospital is looking to expand its reach. Ostrowsky says that pressures, such as cuts in reimbursement for hospital readmissions and errors, will be alleviated through consolidation (Livio, 2013).

The Affordable Care Act (ACA) made specific changes to Medicare reimbursement policies that have meant hospitals are receiving lower Medicare payments from the

federal government (Livio, 2013). The hospital industry agreed to these reductions as part of the grand bargain struck with President Obama to finance the ACA. These reductions in Medicare payments were expected to be at least partially offset by an increase in the insured population which would require less delivery of free care by hospitals. Peter Karl, President and CEO of Eastern Connecticut Health Network, spoke about the effect of lower reimbursements. He noted that "the Affordable Care Act is designed to provide insurance to (the uninsured) and hospitals, as an industry, accepted that they would accept lower payments as more of their patients now have some form of insurance." However in Connecticut, where there is a much lower percentage of uninsured, the increase in revenue from more insured patients may not match the drop in Medicare reimbursement.

Medicare revenues were further cut back when the legislative and executive branches of the federal government could not agree on a budget and 2% across the board budget sequestration cuts were made. Medicare also changed the criteria for what constitutes an "inpatient admission," resulting in large increases in patients who are now classified as "observation status" and billed as outpatients. Observation status patients often require the same amount of care resources, yet because of their classification, hospitals receive only a fraction of what would they would have received for what previously would have been an acute care inpatient admission (Cummings, 2014).

Connecticut hospitals also absorbed reductions of over $500 million of Medicaid reimbursement in the biennial budget passed in June 2013 due to decreases in how much the state reimburses hospitals for the federal match they receive from a hospital provider tax (Staff, 2013; Phaneuf, 2013).

Finally, revenue declines for some hospitals can also be tied to actual reductions in admissions and lengths of stay as well as changes in insurance design. Changes in medical technology, as discussed in the historical context section of this paper, mean continued shifts to outpatient settings. Fewer hospital admissions may also be attributed to high deductible insurance coverage, which provides incentives for patients to avoid elective hospital admissions when they can. Furthermore, high deductibles mean patients who are hospitalized may not be able to pay the thousands of dollars they owe for their inpatient admission (California Health Care Foundation, 2012).

Aside from actual reductions in revenues, hospitals face changes in how they are paid. The Affordable Care Act is accelerating a move away from fee for service (FFS) payments and toward new payment models that provide incentives for value over volume. Accountable Care Organizations (ACOs), funded through the ACA,

are a major example of this shift. Connecticut and its hospitals have been slow to embrace ACOs. Still, hospitals are quite aware that there is movement toward changing how hospitals are paid. Payment is moving away from FFS and toward rewarding improvements in quality and patient experience and requiring enhanced ability to coordinate care both within and outside the hospital.

The Center for Medicare and Medicaid Services (CMS) has initiated two forms of ACO programs, Pioneer ACOs and Medicare Shared Savings ACOs. There are no Pioneer ACOs in the state. There are five Medicare Shared Savings ACOs in Connecticut, but only two are operated by hospitals (CMS, 2014a; CMS, 2014b). Commercial ACO arrangements are just getting underway in Connecticut (Staff, 2014; Cigna, 2013). The possible funding of a State Innovation Model Testing Grant in the state will apply a shared savings approach to Medicaid payments (State of CT, 2013). Along with Medicare and Medicaid's efforts to purchase value-based health care, commercial payers have also jumped on the bandwagon and started to change their payment methodologies (Wood, 2013). Other payment reforms that tie reimbursement to effective and efficient care may not be far behind.

C. Expense and Delivery Reform Pressures

With revenues under stress, at least for some hospitals, cuts in expenses must be considered. Mr. Karl noted that in response to reduced revenues, community hospitals in the State may have to reduce their expenses by 15 to 20 percent to remain solvent. (CT Office of the Attorney General, 2014). Yet, new reimbursement methodologies that reward improved outcomes also require increased investments. As Karl pointed out, payment reforms that are shifting risk onto providers are also incentivizing reforms to the delivery of care, further stressing the need for integrated, population-based health systems that require investments in care coordination and information technology.

According to the CT Hospital Association, the changes in reimbursement that have already occurred or are on their way requires hospitals to find new strategies to reduce cost of care by operating as efficiently as possible while improving the quality care provided. Built into the ACA, they say, are economic incentives that encourage hospitals to treat patients in the most appropriate setting (often outside of a hospital) and reimburse providers for quality rather than quantity. To achieve these goals and respond appropriately to the economic incentives, hospitals' argue that "integrated health care systems and networks enable them to better control costs, realize administrative efficiencies, and take advantages of economies of scale. Clinical and quality improvements can then be translated across a larger patient population" (Connecticut Hospital Association, 2013).

D. Access to Capital

Community hospitals that have consistently performed poorly in financial measures have not generated sufficient capital to reinvest in needed improvements. For many years, low-cost capital allowed hospitals to grow their organizations to maintain competitiveness within the marketplace, attract new physicians, and fund compliance with regulations. Today, because of numerous economic factors—including those mentioned earlier such as volume reductions, pressure on revenues and expenses—hospital boards are concerned about the "long-term viability of their institutions and…their ability to weather the (financial and regulatory) storm alone" (Grauman, Harris, & Martin, 2010). This began to change during the economic recession when reduction in capital projects was reported to be as high as 43 percent in 2009 by McGraw Hill Construction, and the American Society of Healthcare Engineering reported that 42 percent of hospital projects in 2009 were canceled or delayed because of higher cost of capital.

This capital could, in theory, be used to fund facility improvements and enhanced care management, physician alignment and coordination capabilities and IT investment. The pressure to implement these improvements is often cited as a major reason hospitals are seeking a merger partner or acquisition (Grauman, Harris, & Martin, 2010). Further, "hospitals that are struggling financially typically receive lower bond ratings and, thus, are less credit-worthy, which limits their ability to access capital. These hospitals can quickly fall into a downward spiral — without adequate access to capital, they are unable to make necessary investments for the future, and their financial health continues to plummet. Unless hospitals short-circuit the downward spiral by improving their access to capital, they will continue to fall behind and may never regain their footing" (Morrisey, Heifetz, & Singer, 2012).

There are several examples nationwide of hospital consolidation strictly for the need to access capital. For example, in New Jersey, Hackensack University Health Network said their decision to affiliate themselves with LHP Hospital Group of Texas and purchase Mountainside Hospital gave the facility access to capital that allowed for the opening of a wound care center and the creation of additional orthopedic services (Livio, 2013).

In Detroit, the potential merger of Beaumont Health System, Oakwood Healthcare Inc. and Botsford Health Care into a new $3.8 billion health corporation could give each affordable access to capital that "none of the systems could achieve on their own" (Greene, 2014). According to Jim McTevia, a health care consultant, the merger "makes sense from an access-to-capital standpoint, because the larger the institution, the greater the cash flow and the greater ability to service debt." McTevia

goes on to explain that hospitals "have to have access to capital because there is so much uncertainty in the future with an aging population and declining reimbursement" (Greene, 2014).

III. IMPACTS OF HOSPITAL CONSOLIDATION

While the impact varies from state-to-state, region-to-region, and depends greatly on a number of different variables, the general conclusion among researchers is that mergers generally cause prices to rise with negative impacts on access and quality (Dafny, 2014). This section focuses on historical research of hospital consolidation, as well as how the current environment may differ from the past.

A. Impact on Price

Supporters of consolidation argue that mergers offer the opportunity to lower costs by achieving economies of scale, allowing for shared savings through improved efficiency and subsequently lower costs. Theoretically, lower costs should translate into lower prices. However, almost all retrospective studies suggest that hospital consolidation results in concentration of market power and a rise in the price of care. In the United States, "the major findings relating to potential economies of scale as a result of mergers are disappointing. Where there is less and less competition between hospitals for patients, the cost of health care appears to rise" (Weil T. , 2010).

Dr. Leenore Dafny's work, a professor at Northwestern University, supports that consolidation strongly relates to dramatic price increases. She found that "hospitals raise prices by about 40 percent after the merger of nearby rivals and that the primary drivers of higher health care costs are prices" (Dafny, 2009) The Synthesis Project, an initiative of the Robert Wood Johnson Foundation to produce briefs and reports that synthesize research findings on perennial health policy questions, compiled five major studies published between 2007 and 2010 on hospital consolidation. The studies generally found that there is a strong positive correlation between market consolidation and price growth (Gaynor & Town, Update, 2012)

Health insurers have expressed strong skepticism about the impact of consolidation on prices. For example:

> "In 2010, Catholic Health Services of Long Island acquired 203-bed New Island Hospital in Bethpage and renamed it St. Joseph's Hospital, the same year the North Shore-Long Island Jewish Health System acquired New York City's Lenox Hill Hospital. Rate changes followed both mergers. Catholic Health Services realigned rates to match those charged at CHS's Mercy

Medical Center, while rates at Lenox Hill have increased roughly 50 percent since the North Shore-LIJ merger" (Solnik, 2013).

According to John Caby, Vice President of Provider Engagement and Network Management at Empire BlueCross BlueShield, "Predictions of lower costs wrought by greater efficiencies just don't universally pan out...bigger systems have more bargaining-table power, typically resulting in higher costs for insurers and the insured" (Solnik, 2013).

Says Robert Zirkelbach, spokesman for America's Health Insurance Plans, a Washington-based insurance trade group, "Hospital systems use their negotiating clout to demand higher prices for services that result in higher cost for consumers and employers" (Solnik, 2013).

Efforts to measure the effects on price are somewhat dependent on the type of methodology used to study consolidation impacts. There are three types of approaches to hospital price competition research: (1) structure-conduct-performance approach; (2) the event study approach; (3) the simulation approach. Each methodology has produced different results. "For example, simulation studies have produced estimated changes in price as high as 53 percent...event study approach estimates a 10-40 percent increase, while the structure-conduct-performance approach yields lower estimates of 4-5 percent (Vogt & Town, 2006).

Before drawing conclusions on correlation between merger-and-price, researchers must note the importance of understanding the context of the merger, the method of study, and acknowledge the shortcomings of any analysis in making any broad policy recommendations. According to Dr. Dafny, structural demand models (i.e. structure-conduct performance approach) provide the greatest ability to extrapolate the impact of future mergers on prices because they controls for selection bias. Their main shortcoming is the fact that "these models require extensive assumptions about consumer demand and firm objectives, do not fully incorporate rivals' reactions to actions taken by merging parties, and are computationally intensive and challenging to implement" (Dafny, Estimation and Identification of Merger Effects: An Application to Hospital Mergers, 2009).

B. Impact on Costs

While the research supports the premise that prices will rise through the acquisition of more market power, there is differing evidence on the actual potential for cost savings as a result of consolidation. According to one study, cost savings can be significant if the transaction results in reductions in fixed costs through the closing of excess facilities. In another study, researchers found that of the "two types of

mergers: consolidations in which the two merging hospitals continued to operate in two separate facilities, and those in which one facility was closed. There was no significant reduction in expenses when both facilities were maintained but when one facility was shut, amalgamation resulted in a 14% savings" (Weil T. , 2010).

In order to study the impact of mergers on cost, researchers say that outcome variables (such as overall expenses) must be compared to a control group (i.e. merging hospitals unit costs must be compared to a non-merging hospitals unit cost in a similarly situated market environment). Studying and verifying impact on cost is difficult since it is often not clear whether savings (if achieved) were realized because of the merger or whether they could have been realized anyway; in addition there are other challenges related to data validity. In discussing the challenges of assessing whether cost savings were achieved, researcher Teresa Harrison outlines the problem of studying the matter:

"The American Hospital Association (AHA) identifies a merger when hospital A and hospital B consolidate to form hospital C, and similarly denotes an acquisition if hospital A merges into hospital B. For these operational consolidations, only a single entity is reported after the merger event, providing only one set of post-merger outputs, but two sets of pre-merger outputs. Using a traditional difference-in-difference specification, the researchers must either (1) divide the post-merger output into two separate merging entities or (2) combine the pre-merger output into entity. In this case, the potential scale economies from the merger are incorporated into the estimation because the pre-merging output levels are aggregated. The economies of scale from the merger therefore cannot be explicitly identified" (Harrison, 2011).

However, while Harrison does outline these challenges, in her own study, she does provide for methodologies that can successfully judge whether economies of scale and associated cost-reductions can be achieved. According to Harrison's study, "the average potential cost savings from a merger are positive and statistically different from zero." She concludes "economies of scale can be exploited to reduce costs from their pre-merger values…with savings reaching 2 percent of pre-merger costs." Simply put, Harrison's research confirms the existence of economies of scale and thus the potential for cost savings.

She also found that those gained efficiencies have declined over time. She postulates that because actual cost savings were greater than potential cost savings in the first year after a merger and less than potential savings in the following years that hospitals' realization of initial savings were only due to changing outputs (e.g. differences in health service lines before and after; settings of care; volume of care) rather than gains in operational efficiencies. Her conclusion is that the potential for

savings as a byproduct of mergers are there, but evidence of hospitals taking advantage of those potential savings aren't – they indicate that mergers that reduced costs in the short-run are due to other factors (Harrison, 2011).

C. Impact on Quality of Care

The literature suggests that consolidations "tend to decrease rather than increase quality of care" because as market power grows "it becomes less critical for the organization to enhance its quality edge as a strategy to increase market share" (Weil T., 2010).

Judging quality of care involves looking at a wide range of process and outcome measures over a long period of time to attain verifiable statistical differences in specific health outcomes, which few have undertaken. Mutter et al. (2011), writing for the International Journal of the Economics of Business in February 2011, and citing two defining studies on the impact of consolidations on quality, concludes that the two variables are not completely independent. The first study, by Ho and Hamilton (2000), found that "hospital consolidations have no impact on inpatient mortality for AMI or stroke patients…but do increase the probability of 90-day readmission for AMI patients" indicating that the impact of consolidations vary but do have an effect on outcomes – at least on certain measures.

The other longitudinal study, by Cuellar and Gertler (2005), reported "no significant changes in [composite measures of quality] among hospitals that joined systems, relative to hospitals that did not, except that consolidating hospitals reduced the rate of potentially overused procedures by 1.2 percent among managed-care patients." Mutter et al., after completing their own study of 42 within-market consolidations in 16 states during the years of 1999 and 2000, concludes that any effect of hospital consolidations on quality appears "to be small and to vary according to the institution's role in the transaction" (Mutter & al, 2011).

Another approach is to look at the issue through the lenses of market competition, as opposed to consolidation. Many researchers have cited evidence that increased competition in health care markets results in enhanced quality of care, however it depended primarily on what the market is most sensitive to – quality or price. "If hospitals can compete on both price and quality, then when they face tougher competition they will choose to compete by whichever means is most effective. If buyers are considerably more responsive to price than quality (for example, if price is easier to measure), then enhanced competition can lead to lower prices, but also less attention to quality. On the other hand, if quality is particularly salient, then tougher competition can enhance quality" (Gaynor & Town, Update, 2012).

Generally, the most comprehensive studies showed limited differences in outcomes between consolidated and non-consolidated hospital systems but concluded that competition did in fact improve health outcomes in a number of different geographic locations and hospital settings as shown in the chart below. (Gaynor & Town, Update, 2012) Since consolidation reduces competition, this could reduce the positive impact that competition may have.

Table 4: Summary of hospital quality-competition studies with market determined prices since 2000

Author/ Year	Location of data	Time frame of analysis	Does competition increase quality?	Results
Sohn and Rathouz (2003)	California	1996	Yes	Competition reduced angioplasty mortality.
Encinosa and Bernard (2005)	Florida	1996–2000	No	Low hospital operating margin (possibly due to competition) led to more patient safety events.
Propper et al. (2004)	England	1995–98	No	Hospitals facing more competitors had higher mortality rates in a deregulated environment.
Capps (2005)	New York	1995–2000	Yes	Hospital mergers had no impact on many quality indicators, but did lead to increases in mortality for AMI and heart failure patients.
Propper et al. (2008)	England	1991–99	No	Mortality increased at hospitals with a larger number of competitors following deregulation.
Howard (2005)	US	2000–02	Yes	Demand for kidney transplants is responsive to graft failure. As demand becomes more responsive, hospitals have to compete harder to attract or retain patients.
Abraham et al. (2007)	US	1990	Yes	Quantity increases with the number of hospitals. This will happen only if quality increases or price falls. This therefore implies that an increase in the number of hospitals increases competition.
Cutler et al. (2010)	Pennsylvania	1994–95, 2000, 2002–03	Yes	Removing barriers to entry in the form of certificate of need laws led to entry and increased market shares for low mortality rate CABG surgeons.
Escarce et al. (2008)	California, New York, Wisconsin	1994–99	Yes	Mortality for patients with a variety of conditions is lower in less concentrated markets in California and New York. There are no effects in Wisconsin.
Rogowski et al. (2007)	California	1994–99	Yes	Mortality for patients with a variety of conditions is lower where hospitals have more competitors.
Romano and Balan (2011)	Chicago Primary Metropolitan Statistical Area (PMSA)	1998–99, 2001–03	Yes	A hospital merger in the Chicago suburbs had no effect on some quality indicators, and harmed some others.

Before reaching any conclusions about the evidence of the positive impact of competition as denoted in the chart above – as provided by Gaynor & Town, and noted by Mutter et al. - it should be emphasized that there have been relatively few

comprehensive studies of the correlation between hospital market concentration and quality of care provided. This lack of study has hindered anti-trust authorities' efforts to evaluate hospitals' claims of improvement in quality. "Unless and until economists and health services researchers can produce simple predictive models of the impact of competition on objectively verifiable dimensions of health care quality, courts will largely be feeling their way in the dark" as it relates to anti-trust cases (Mutter & al, 2011).

D. Impact on Access

Hospital consolidation can be seen as having a detrimental impact on access to coverage. Since mergers tend to increase hospital prices, employer-based and individual health plans raised premiums to support those increased prices. Prior to implementation of the ACA, these increases forced many individuals out of the insurance market (Weil T. , 2010). The higher the price of health insurance, the less inclined patients will be to purchase insurance. Increases in the cost of health insurance had a particularly negative impact on lower income individuals, as they are much more price-sensitive than higher income demographic groups (Town, Wholey, Feldman, Roger, & Burns, 2007).

On the other hand, according to a study published by the Center for Healthcare Economics and Policy, mergers can enhance access to care. A key benefit of consolidation has been that hospitals that might have otherwise been forced to discontinue an unprofitable service, downsizing staff, or even close would now remain open and viable because of the improved access to capital and greater revenue (Guerin-Calvert & Maki, 2014). Of course, it is too early to tell in some cases if hospitals that remain open initially will continue to remain open over time.

E. Impact on Cost and Quality: Consolidation by Vertical Integration

The above discussion has focused on consolidation by hospitals merging together-horizontal consolidation. However, a second trend that is occurring in Connecticut and across the country is vertical integration: hospitals acquiring medical practices, home health agencies, nursing homes and other health entities. Some argue that cost savings and quality improvements can be more easily realized through these transactions. Hospital ownership of other crucial services in the continuum of care can enable better management of patient and population health.

Hospital acquisition of medical practices is accelerating. When hospitals own physician practices, they have the ability to levy an additional fee, known as a facility fee, to help cover overhead costs. These often high fees are an added cost to the

system and have come under recent scrutiny both nationally and in Connecticut (Schulte, 2012).

On the other hand, Montefiore Hospital System, Bronx, NY has set a positive example of the benefits of vertical integration. They now operate the most successful Pioneer ACO, in terms of cost savings, in the country to date. Earlier this year Montefiore announced that "Data showed monthly Medicare spending per beneficiary among Montefiore ACO participants represented a savings of $104 compared to monthly spending per beneficiary among a local market comparison group." According to the Montefiore, "savings were achieved through increased patient engagement, care coordination and preventative, patient-centered care provided wherever needed – in the hospital, in doctors' offices, by phone and at home. Innovative nurse-driven interventions supported patient outcomes and experience" (Montefiore Medical Center, 2014).

Some of this success is due to improved systems of care, rather than consolidation itself. Hospitals are now trying to do work that payers used to do such as "handling actuarial work, building networks, monitoring quality, and managing utilization and claims." Stephen Rosenthal, an executive affiliated with Montefiore Hospital System, noted the differences in achievable cost savings from consolidation now compared with the late 1990s. In the late '90s he states, consolidation was simply a response to the rise of managed care - specifically the practice of cutting reimbursement rates as a blunt way to control costs. Montefiore executives, he said, thought they could do better if it were allowed to take on some risk. "Given the market constraints at the time, the payers—both government and private insurance—were so dramatically cutting rates that on a transaction basis it would be difficult to go forward and survive," he says. "If they gave us full responsibility for the patient, we theorized, overall we would save money in the system and could use the dollars saved to sustain the infrastructure" (Betbeze, 2013).

According to Rosenthal, Montefiore bears financial risk through its Integrated Provider Association (IPA). The IPA provides the infrastructure support that an integrated delivery system needs to manage a population. "(They) do all the data analytics and the contracting between insurance companies, the government, and providers, and establish network opportunities… (as well as develop) strategies so the sickest patients get truly managed care." Before choosing to adopt a more integrated delivery system that model that has hospitals and physicians working more closely together, Rosenthal states that "it's critical that (an organization) joins together in real cultural and behavioral changes with a provider population. When managing a population, you're looking holistically." He adds that the exchange of clinical data and claims data from insurance companies and the ability to proactively

identify the right individuals to apply the right interventions at the right time is a major challenge (Betbeze, 2013).

It is important to stress that while some integrated care models have been shown to be extremely effective, the jury is still out on this approach. For example, the latest data from CMS shows that less than half (11 of the surviving 23 Pioneer ACOs - originally there were 32 of them) achieved cost savings. The same announcement states that only 58 of 220 Medicare Shared Savings ACOs earned performance payments by meeting savings targets (CMS, 2014c).

The impact of vertical integration on quality appears to be more pronounced. ACO data released by CMS points to more widespread improvement in quality of care. Pioneer ACOs showed significant advances in both quality of care and patient experience measures.

Finally it is important to clarify that these improved ACO quality results do not necessarily stem from actual vertical consolidations. For example, many ACOs are run by medical groups that are not owned by hospitals. Even hospital based ACOs rely on building strong relationships with physicians through organizational structures such as the Montefiore IPA described above, and not solely through owning physician practices.

IV. DIFFERENTIATING BETWEEN FOR-PROFIT AND NON-PROFIT HOSPITAL CONSOLIDATIONS

Overall, 20 percent of community hospitals in the United States are investor-owned. These companies, many of whom are traded publicly on the New York Stock Exchange, have shown little hesitation in pursuing further acquisitions (Weil T. P., 2011). When hospital consolidations are accomplished through for-profit conversions, additional factors must be considered.

A. Similarities & Differences Between For-Profit & Non-Profit Hospitals

Is ownership status a fundamental difference that in and of itself has a positive or negative impact on hospitals' delivering accessible, quality, cost-effective care? There are many similarities between for-profit and non-profit hospitals. Very often they both treat patients with the same mix of needs, contract with the same insurers and government payers, generally operate under the same health and safety regulations and employ staff with the same training and ethical obligations (Horowitz, 2005). Recent legislation in Connecticut has begun to narrow this difference, however, by requiring all newly acquired hospital property to be taxable.

However, there are several crucial differences in how they operate. For example, for-profit hospitals are subject to state, local and federal taxation. These taxes are beneficial to the community, provided there are not tax abatements awarded. Meanwhile, government and non-profit hospitals benefit from income and property tax exemptions (Horowitz, 2005), but the IRS requires that non-profit hospitals quantify the community benefit they provide in exchange for receiving tax exempt status. Expecting that increased coverage options would mean that hospitals would deliver less charity care, the community benefit rules were changed and strengthened in the ACA. Among other requirements, non-profit hospitals must:

"Conduct a community health-needs assessment at least every three years and develop a strategy to meet those needs

"Adopt and publicize a written financial assistance policy

"Limit charges, billing and debt collection practices aimed at individuals who qualify for financial assistance" (Kresge Foundation, 2013)

As it stands now, for-profit hospitals are not subject to these rules. However it might be possible to require them as a condition of approving a conversion transaction.

Another major difference between for-profit and non-profit hospitals is the distribution of accounting profit. The former may distribute profit after taxes to shareholders, thus exporting revenues out of the state, while the latter theoretically allocates any "profits" into community benefit or free care.

In practice, however, many non-profit hospitals may be hard to distinguish from their for-profit counterparts. As University of Illinois tax law professor John Colombo recently stated, "The standard non-profit hospital doesn't act like a charity any more than Microsoft does—they also give some stuff away for free," Colombo said. "Hospitals' primary purpose is to deliver high quality health care for a fee, and they're good at that. But don't try to tell me that's charity. They price like a business. They make acquisitions like a business. They are businesses" (Cohen, 2013).

B. Drivers of Hospital Conversions

The push for hospital conversion from non-profit to for-profit entity is often not easily distinguishable from the motivations for consolidation. According to Thomas P. Weil, conversion of hospitals most frequently involves poorly positioned facilities in need of "additional capital for the replacement of plant and equipment; improved management systems to reduce the number of their non-direct patient care employees; and, an aggressive physician recruitment effort" (Weil T. P., 2011). Other researchers cite other financial and operational hardships as reasons for conversions

such as "burdensome debt service; unfunded pension liability; reduced payer reimbursement; lack of physician loyalty and inability to successfully recruit new physicians; loss of market position, unfavorable community reputation; and exclusion from managed care contracts" (Bales, Tiberio, & Tesch, 2014).

Weil argues that conversion of hospitals in the United States (as well as in England and Germany) is due to an oversupply of hospitals and hospital beds that results in many institutions becoming "poorly positioned and fiscally vulnerable." As a general rule of thumb, the least competitive institutions frequently: experience the longest average length of stay; need huge sums of cash for recapitalization of plant and equipment; project weak financial outlooks; employ an excess number of workers; always seem to be searching for additional, qualified physicians for their medical staffs; and, over the past decade generally see their market share shrinking. According to Weil, these vulnerabilities end up forcing institutions into responding in one of the following ways in order to survive: (a) allowing themselves to be acquired by another nearby health system; (b) merged as a "smaller of two" with another nearby hospital; (c) shut down; or (d) acquisition by an investor-owned hospital management corporation.

Another theory, from the buyer point of view, on why conversion of hospitals has increased in recent years, is the favorable market for debt. According to James Goody, Vice President and Portfolio Manager at Associated Bank, "the robust debt market will continue to drive mergers and acquisitions…it's really an opportunistic time to take advantage of low interest rates." The debt market, along with health care reform – which has been extremely favorable to for-profit hospital chains, has created a boost in these companies share prices. Tenet Healthcare Corp., the company that was applying to purchase several hospitals in Connecticut, but has since withdrawn their application, closed nearly 30% higher on the last day of 2013 than it had at the end of 2012 (Kutscher, 2014).

Whether or not it is good public policy to allow conversions to go through will depend largely on three questions: 1) Are the hospitals being acquired essential to the community they serve? 2) If they are financially troubled, but essential, is there another way to keep them open? 3) If they are acquired, will changes in the financial incentives for these hospitals affect access to care in the community, and if so, how?

C. The Case for Conversions

Conversion advocates say that public or non-profit ownership encourages inefficiencies or unresponsiveness to meeting population health needs. They say such

systems can be too sensitive to political influence and lack the proper incentives to produce efficient and effective care (Villa & Kane, 2012).

According to the World Health Report 2000, technical efficiency refers "to the extent that resources are being wasted – efficiency is a measure of the degree of producing the maximum number of outputs from a given amount of inputs." Examples of these inefficiencies can include: "excessive hospital length of stay, over-prescribing, over-staffing, use of branded over generic drugs, and wastage of stock" (Hsu, 2010).

The prevailing theory among those who support for-profit medicine is that under non-profit systems, physicians and hospital administrators are not incentivized to act in a cost-efficient manner. They argue that the decisions to purchase highly trained personnel and sophisticated equipment are made "without regard for their need or likely use...and that costly technologies are adopted and services added that are only marginally beneficial" (Andre & Velasquez).

There are several theories about why a for-profit system is more efficient than a non-profit or government-owned entity. It is hard, however, to confirm or substantiate these theories as there is very little literature on the matter. According to the report from the WHO cited earlier, in the United States it was "determined that non-profit hospitals were more efficient than for-profit hospitals." (Hsu, 2010) Further, in a meta-regression analysis conducted by Drs. Karen Eggleston and Yu-Chen Shen of Stanford University, they found mixed results as it relates to efficiency claims. "Efficiency studies of a single or limited number of states found for-profits have no difference or are more efficient than non-profits, while the majority of national studies found for-profits to be less efficient" (Changes in Health Care Financing & Organizations (HCFO), 2008).

Other arguments offered by proponents include the idea that "any community losses from conversions are offset by financially strengthened institutions, an increase in tax revenues, and the movement of non-profit assets to other charitable purposes...They also maintain that in some over-bedded markets where failing hospitals might be of questionable value to communities, for-profit buyers that own other hospitals in the same markets (are credited) for shutting down redundant hospitals that non-profit boards were unwilling to close" (Collins, Gray, & Hadley, 2001).

There is research that supports the claims that for-profits are better able to adapt to changes in the marketplace however. According Larry Van Horn, Executive Director of Health Affairs at Vanderbilt University, "With a history of operating with business objectives in mind, it makes sense that for-profit hospitals will be better able than non-profits to adapt to the changing hospital environment, and to reconfigure

production under a new set of constraints." Dr. Van Horn also notes that for-profits will have easier access to equity capital to improve facilities and expand their market reach (Van Horn, 2011).

Additionally, as touched on earlier, one of the understated benefits of allowing hospitals to convert their tax filing status is that those facilities no longer operating under the 501(c)(3) tax exemption would provide the state and local townships with an increase in revenues. For example, when St. Francis Hospital and Medical Center was considering a for-profit conversion, increase tax revenue for the city of Hartford was cited as a concrete benefit. "According to the city assessor, St. Francis Care owns 41 buildings in Hartford with an assessed value of $296.3 million...That would generate about $11.3 million in new property tax revenue for the city at a time when its budget has faced slim margins" (Bordonaro, 2013).

D. The Case Against Conversions

By definition, a non-profit hospital is one that exists to serve the health care needs of the community. Non-profits are expected to be mission-driven and may be deeply rooted in the culture of the community they serve. Governed by a board drawn from the community, the structure theoretically requires local accountability, in contrast to shareholder accountability. Sometimes non-profit hospitals are major "safety net" providers, and take on a substantial responsibility to serving the uninsured, Medicaid enrollees, and vulnerable populations facing a variety of barriers to health care access.

One of the major risks of conversions are the incentives inherently built into a for-profit model. For-profit hospitals and systems have a fiduciary obligation to maximize shareholders' wealth. This obligation may run counter to the provision of community benefits, such as care for the uninsured (Thorpe, Florence, & Seiber, 2000). According to a study published by Jill Horowitz in Health Affairs, for-profits are most likely to offer relatively profitable medical services and are most responsive to change in service profitability than either government-run or non-profit hospitals (Horowitz, 2005). For example, the Horowitz study found that for-profits are more likely than non-profits to offer procedures such as open-heart surgery, a relatively profitable service, and less likely to offer psychiatric emergency care, a relatively unprofitable service (Horowitz, 2005).

> "Tests of more than thirty other services yielded similar results. While for-profit hospitals were only somewhat more likely than non-profits to offer relatively profitable services, both for-profit and non-profit hospitals were considerably more likely than government hospitals to offer relatively

> profitable services. For-profits were less likely than non-profits, which in turn were less likely than government hospitals, to offer relatively unprofitable services. For-profit hospitals were more responsive than the other types were to rapid changes in service profitability." (Horowitz, 2005)

For-profits responsiveness to financial incentives are noteworthy for their magnitude and speed (Horowitz, 2005).

Understandably, these financial motivations can be critically hurtful to patient access for communities with large patient populations that require access to services deemed "unprofitable." Furthermore, for-profit conversions of hospitals that serve a high proportion of low income patients have been found to have a detrimental effect on access to care by certain subgroups of disadvantaged populations. (Bazzoli, Lee, Hsieh & Mobley, 2011)

Senator Chris Murphy (D-CT) released a paper in June outlining concerns with for-profit ownership. Major points include the fact that for-profit hospitals are more likely to pursue and offer patients more financially profitable services as discussed earlier; spending on Medicare enrollees were higher in states dominated by for-profit hospitals; non-profit hospitals tend to behave differently when sharing a marketplace with for-profit hospitals as there is a tendency for a "spillover" effect in how services are delivered; these effects include:

- The tendency of non-profits to respond by aggressively seeking revenue-increasing opportunities
- Adopt profitable services
- Discourage admissions of unprofitable patients
- Reduce resources devoted to patients they do admit (Office of Senator Chris Murphy, 2014)

This "spillover effect" is likely because non-profits attempt to balance their profitable and unprofitable service lines so that profitable procedures and services help to subsidize unprofitable ones. When a for-profit hospital enters a marketplace, and begins to dominate the market share for those services it leaves non-profits with little choice but to follow suit.

In a study conducted by the Commonwealth Fund in 2001, of eight hospital conversions, it was determined that in "six of our eight cases, sale to a for-profit owner failed as a permanent solution to the financial decline of hospitals." They were particularly unsuccessful for hospitals in over-bedded or urban markets (Collins, Gray, & Hadley, 2001).

V. FEDERAL AND STATE REGULATION

A. Federal Anti-Trust Climate

Section 1 of the Sherman Anti-Trust Act and Section 7 of the Clayton Act provide the potential legal grounds for preventing high levels of concentration of hospital markets. Consolidation can and often does lead to increased market power, which results from a rising market share, even if entities are non-profits. "Mergers have been considered illegal if they resulted in market power increases great enough to allow non-transitory increases in hospital prices" (Spang, Bazzoli, & Arnould, 2001).

The judicial tests most often used for judging the legality of a merger is a " rule-of-reason" analysis which assumes that a merger is not illegal on its face, but could be considered unnecessary and thus illegal depending on the predicted impact of the merger. The rule of reason is a legal doctrine used to interpret the Sherman Antitrust Act, one of the cornerstones of United States antitrust law. While some actions like price-fixing are considered illegal *per se,* other actions, such as possession of a monopoly, must be analyzed under the rule of reason and are only considered illegal when their effect is to unreasonably restrain trade. The test is to balance the "welfare-enhancing effects of consolidation, such as increased efficiency, with the welfare-reducing effects, such as the potential to control prices" (Spang, Bazzoli, & Arnould, 2001).

The other test most often used is the "illegal per se" test which deems a merger illegal if it is conclusively presumed that the transaction would cause "an unreasonable restrain on trade and thus anti-competitive." Such illegal acts include price fixing, geographic market division, and group boycotting. The legal test for proving a merger illegal per se is to:

1. Show the practice facially appears to be one that would always or almost always tend to restrict competition and decrease output.
2. Show that the practice is not one designed to increase economic efficiency and render markets more, rather than less, competitive
3. Carefully examine market conditions; and
4. Absent good evidence of competitiveness behavior, avoid broadening per se treatment to new or innovative business relationships (Green, Block, & Haper, 2013).

According to the FTC, the greatest antitrust concern arises with proposed mergers between direct competitors, known as horizontal mergers (Federal Trade Commission, 2014). A horizontal merger is a merger occurring between companies in the same industry, within the same space, and offering the same good or service. Section 7 of the Clayton Act prohibits mergers if "in any line of commerce or in any

activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly" (U.S. Department of Justice and the Federal Trade Commission, 2010).

According to the FTC and DOJ, most merger analysis is inherently predictive. The guidelines state that a merger is illegal if its' effect enhances market power by "(encouraging) one or more firms to raise price, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives." In evaluating how mergers' change hospital behavior, the FTC and DOJ focus on how it "affects conduct that would be most profitable for the firm" (Federal Trade Commission, 2014).

The Federal Trade Commission's "Statement of Antitrust Enforcement Policy Regarding Accountable Care Organizations Participating in Medicare Shared Savings Program" confirms that the ACA encourages physicians, hospitals, and other health care providers to integrate delivery systems and relaxed regulations regarding the antitrust review of health care organizations applying for ACO status, with the goal of allowing more ACOs to be formed as quickly as possible (Department of Justice: Antitrust Division, 2011).

However, in a New York Times article published in mid-September, 2014, Deborah Feinstein, director of the Bureau of Competition at the Federal Trade Commission argues that the ACA – while encouraging cost-containing techniques through integration – does not give hospitals the authority to bypass antitrust laws. Ms. Feinstein said "(she doesn't) think there's a contradiction between the goals of health care reform and the goals of antitrust" (Pear, 2014).

Until recently, courts had increasingly accepted cost savings as a sufficient basis for allowing a merger. However, the FTC has recently begun to aggressively prosecute mergers – "The agency is riding high with wins in three litigated hospital mergers in the last two years." They prevented mergers in Albany, Georgia; Toledo, Ohio; and Rockford, Illinois. The outcomes of these cases, according to Melinda Hatton, Senior Vice President and General Counsel of the American Hospital Association – as reported by the New York Times – is a "chilling effect" on hospital mergers (Pear, 2014).

Preventing and/or dissolving a merger can be extremely complex. "Attempts to prevent hospital mergers are simultaneously the most visible and the least successful aspect of public antitrust enforcement." While there are robust anti-trust laws to prevent horizontal mergers (Hammer & Sage, 2003), regulators, in order to undertake such a task, must devote substantial time and resources to evaluate transactions in

addition to satisfying legal standards for challenging them; economic experts must study large volumes of claims data and determine through complex statistical methodologies – the extent to which merging hospitals compete and whether price increases are likely if hospitals were to merge.

Congress passed the Hart-Scott-Rodino Act, requiring merging parties to notify agencies in advance of a merger, because of the "difficult and potentially ineffective "unscrambling of the eggs" once an anticompetitive merger has been completed (Federal Trade Commission, 2014). Given the ambiguity of the effects of such mergers, efforts to halt or block mergers by regulators are very unlikely to occur without sufficient tools to study impact and clear legal limits.

B. State Oversight of Hospital Conversions and Consolidations

The process in Connecticut for converting a non-profit hospital to a for-profit entity requires an extensive regulatory review by both the State Attorney General and the Commissioner of the Department of Public Health, through the Office of Health Care Access (OHCA). The Certificate of Need (CON) approval process for hospital conversions is governed by Connecticut law and contains standards that the Attorney General and the Commissioner of Public Health must apply in rendering a decision for each application (CT Office of the Attorney General, 2014). PA-14-168, *An Act Concerning Notice of Acquisitions, Joint Ventures, Affiliations of Group Medical Practices and Hospital Admissions, Medical Foundations and Certificates of Need* passed in the 2014 session of the Connecticut General Assembly (State of CT, 2014c), added several provisions to Certificate of Need law for the Commissioner of the Department of Public Health to consider, including:

- Whether the applicant has satisfactorily demonstrated that the proposal will not negatively impact the diversity of health care providers and patient choice in the geographic region;
- Whether the applicant has satisfactorily demonstrated that any consolidation resulting from the proposal will not adversely affect health care costs or accessibility to care.
- The affected community will be assured of continued access to *high quality and* affordable health care *after accounting for any proposed change impacting hospital staffing;* (changes in italics)

Connecticut law grants the state's Attorney General the power to deny an application as "not being in the public interest" if an application does not meet the statutory requirements for governing non-profit entities; if the applicant fails to exercise due diligence in deciding to "transfer assets, the selection of a purchaser, obtaining a fairness evaluation, or in negotiating the terms and the conditions of the transfer" it

must be denied. The application must also disclose whether there is any conflict of interest or if the non-profit hospital will not receive fair market value for its assets (CT Office of the Attorney General, 2014). The Attorney General also has oversight over the charitable assets of the organization. When a non-profit converts to a for-profit entity, its once-philanthropic assets donated to the hospital must not be liquidated into the reserves of shareholders. This has led to the formation of health conversion foundations, endowed with assets generated by the conversion and charged with funding only health-related activities for the benefit of the community (Bales, Tiberio, & Tesch, 2014).

The new law allows both the Commissioner and the Attorney General to place conditions in their approval. It also adds a new requirement to hold a hearing in the municipality where a hospital conversion is proposed.

C. State Oversight of Hospital Ownership of Group Practices

With the passage of PA-14-168, Certificate of Need approval is now required if a group practice of eight or more physicians is acquired by a hospital or other entity that is not another physician group. The law also requires that hospital-affiliated group practices, report certain information annually to the Attorney General and the Commissioner of the Department of Public Health. Also, the Attorney General must be notified 30 days in advance of any hospital acquisition of a group practice of two or more physicians.

Another law was passed in the 2014 legislative session, PA-14-145, *An Act Concerning Fees Charged for Services Provided at Hospital-Based Facilities,* to address concerns about the lack of transparency around the facility fees charged by hospital owned physician practices. The law requires that a hospital or health system notify patients that it charges a facility fee for outpatient services (State of CT, 2014a).

A provision in the budget implementer bill also addresses facility fees. It requires the Comptroller conduct a study of hospital outpatient facility fees, including looking into their "appropriateness and reasonableness" (State of CT, 2014b).

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