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January 15, 2013

Ms. Courtney Avery, Administrator  
Illinois Health Facilities and Services Review Board  
525 West Jefferson Street  
Second Floor  
Springfield, Illinois 62761

**Re: Proposed Vista-Lindenhurst Hospital, Project No. 12-081**

Dear Ms. Avery:

On behalf of Kaufman, Hall & Associates, Inc., we are pleased to present this Market Assessment and Impact Study analyzing Community Health Systems, Inc.'s proposed Vista-Lindenhurst hospital in Illinois Planning Area A-09. This proposed project has been identified as Project No. 12-081 by the Illinois Health Facilities and Services Review Board.

Below is a brief background on Kaufman Hall and our experience.

Kaufman, Hall & Associates, Inc. ("Kaufman Hall") was founded in 1985, and operates a national practice with a staff of approximately 130 individuals in Chicago, Atlanta, Boston, Los Angeles, and New York. Kaufman Hall exclusively provides strategic, capital, and financial advisory services to healthcare organizations. As such, 100 percent of the time of all professional staff is devoted to healthcare.

We provide a broad range of strategic and financial advisory services to support organizational management and decision making for healthcare providers as well as assess the impact of key strategic initiatives and investments. Of particular note, we have been involved in the analysis of over 30 new hospital / replacement facilities over the past 10 years. Our services are analytically grounded to provide a solid information base to provide a clear assessment of the implications of key decisions.

Since our inception over 27 years ago, Kaufman Hall has been dedicated solely to providing consulting services exclusively to the healthcare services industry. As such, we are intimately familiar with the issues and challenges healthcare services providers are facing on a day-to-day basis. We believe our deep knowledge of hospitals and health systems makes us uniquely qualified to assess the impact of the proposed Lindenhurst facility.

Our expertise is broadly recognized by the industry. Each year, Kaufman Hall executives publish dozens of articles and present at the national and regional meetings of key industry groups including The Governance Institute, American College of Healthcare Executives, Society for Hospital Strategy and Market Development, and the Healthcare Financial Management Association on a broad array of strategy and finance topics.

Ms. Courtney Avery, Administrator  
Illinois Health Facilities and Services Review Board  
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We appreciate the opportunity to present this study and welcome any questions you may have.  
Thank you.

Sincerely,  
KAUFMAN, HALL & ASSOCIATES, INC.

Ryan S. Gish  
Senior Vice President

# Market Assessment and Impact Study

*Proposed Vista Medical Center – Lindenhurst  
CON Project Number No. 12-081*

January 15, 2013

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## Executive Summary

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Community Health Systems, Inc. (“CHS”) has submitted an application for a Certificate of Need (“CON”) permit to establish a new hospital in Lindenhurst, Illinois. The proposed hospital site is located within Illinois Hospital Planning Area A-09 (Lake County) and within Health Service Area VIII (Lake, McHenry, and Kane Counties). CHS, based in Franklin, TN, is one of the largest publicly traded operators of hospitals in the United States. It owns and operates over 130 facilities and has net operating revenues of approximately \$13.6 billion. In FY 2011, CHS generated operating income of over \$1.1 billion, equal to an operating margin of 8.3%.<sup>1</sup> CHS currently operates two hospitals in Planning Area A-09, Vista Medical Center-East and Vista Medical Center-West, in addition to an array of outpatient facilities. CHS is seeking approval to establish a 132-bed hospital consisting of 100 Medical/Surgical beds, 20 obstetrics beds, and 12 ICU beds.

Kaufman Hall was retained by Advocate Condell Medical Center to develop an independent *Market Assessment and Impact Study* to submit to the Illinois Health Facilities and Services Review Board (“Review Board”). We have assessed the overall market conditions in the proposed service area, Lake County, State of Illinois, and United States as a whole. In addition, we have assessed the utilization impact and expected volume loss that the addition of a new hospital would have on existing area hospitals.

Based upon the results of our analysis, our key findings are as follows:

- 1. There is significant under-utilization in the Medical/Surgical and Obstetrics categories of service in Planning Area A-09, relative to State standards and existing approved beds.**
- 2. Vista Medical Center-East’s total 2011 occupancy was only 36 percent.**
- 3. The service area for the proposed Vista-Lindenhurst hospital is not experiencing “Rapid Population Growth” as defined by the Review Board.**
- 4. The majority of the proposed service area population has more convenient access to existing facilities than to the proposed Vista-Lindenhurst hospital.**
- 5. The local, state, and national needs for inpatient care are declining.**
- 6. The proposed Vista-Lindenhurst hospital would likely fail to meet State utilization standards for the following: Obstetrics, Cardiac Catheterization, and Medical/Surgical categories of service as well as Section 3030 clinical service areas.**
- 7. Existing hospitals would be materially and adversely affected by the proposed Vista-Lindenhurst hospital.**

**Conclusion:** *Based upon this analysis, it is our professional opinion that there is not sufficient need for the proposed Vista-Lindenhurst hospital and that the proposed hospital would have a material adverse impact on existing hospitals in Planning Area A-09.*

## Supporting Analysis and Exhibits

The remainder of this report provides supporting analysis for our key findings and conclusion.

**1. There is significant under-utilization in the Medical/Surgical and Obstetrics categories of service in Planning Area A-09, relative to State standards and existing approved beds.**

Based upon data from the Review Board in its 2011 Hospital Profiles and Annual Bed Report, hospitals in Planning Area A-09 are operating below the state utilization standard. As shown in Exhibit 1, the 2011 average occupancy rate in Planning Area A-09 for the Medical/Surgical category of service was only 63.3 percent, with no one hospital meeting or exceeding the State occupancy standard for the Medical/Surgical category of service (85 percent).

It should be further noted that Vista Medical Center-East, a facility owned and operated by CHS, has the lowest overall Medical/Surgical occupancy of 39.0 percent.

**Exhibit 1: 2011 Medical/Surgical CON Occupancy Rate for Planning Area A-09**

Hospital	City	2011 CON Authorized Beds	2011 Average Daily Census	2011 CON Occupancy Rate
Advocate Condell Medical Center	Libertyville	214	156.9	73.3
Advocate Good Shepherd Hospital	Barrington	113	89.7	79.4
Highland Park Hospital	Highland Park	93	76.5	82.2
Midwestern Regional Medical Center	Zion	69	34.6	50.1
Northwestern Lake Forest Hospital	Lake Forest	74	59.6	80.5
Vista Medical Center-East	Waukegan	249	97.0	39.0
Vista Medical Center-West	Waukegan	---	---	---
<b>Total</b>		<b>812</b>	<b>514.3</b>	<b>63.3</b>

*Source: Illinois Health Facilities and Services Review Board 2011 Hospital Profiles and Annual Bed Report.*

In the Intensive Care category of service, hospitals in Planning Area A-09 operate at 76.7 percent average occupancy, which is above the state standard occupancy of 60 percent.

As shown in Exhibit 2, the most significant under-utilization (based on occupancy rate) in Planning Area A-09 exists in connection with the Obstetrics category of service. Again, Vista Medical Center-East has the lowest occupancy rate among hospitals in the planning area.

## Exhibit 2: 2011 Obstetrics CON Occupancy Rate for Planning Area A-09

Hospital	City	2011 CON Authorized Beds	2011 Average Daily Census	2011 CON Occupancy Rate
Advocate Condell Medical Center	Libertyville	26	17.3	66.6
Advocate Good Shepherd Hospital	Barrington	24	10.9	45.3
Highland Park Hospital	Highland Park	25	11.1	44.4
Midwestern Regional Medical Center	Zion	---	---	---
Northwestern Lake Forest Hospital	Lake Forest	23	13.4	58.4
Vista Medical Center-East	Waukegan	29	8.0	27.7
Vista Medical Center-West	Waukegan	---	---	---
<b>Total</b>		<b>127</b>	<b>60.8</b>	<b>47.8</b>

Source: Illinois Health Facilities and Services Review Board 2011 Hospital Profiles and Annual Bed Report.

*The data in Exhibits 1 and 2 support the finding that there is significant excess inpatient capacity in Planning Area A-09.*

### 2. Vista Medical Center-East's total 2011 occupancy was only 36 percent.

The data in Exhibit 3 summarize Vista Medical Center-East's 2011 utilization by category of service. The overall 2011 CON occupancy rate for the facility is only 36.1 percent with no service exceeding 75 percent occupancy for the year. Of note, Vista Medical Center-East continues to hold 35 CON Authorized Pediatric Beds although the service was not provided in 2011.

### Exhibit 3: 2011 Vista Medical Center-East Utilization by Category of Service

Service Category	2011 CON Authorized Beds	2011 Peak Beds Setup and Staffed	2011 Average Daily Census	2011 CON Occupancy Rate
Medical/Surgical	249	158	97.0	39.0
Pediatric	35	0	0.0	0.0
Intensive Care	23	23	16.4	71.3
Obstetrics	29	19	8.0	27.7
<b>Total</b>	<b>336</b>	<b>200</b>	<b>121.5</b>	<b>36.1</b>

Source: Illinois Health Facilities and Services Review Board 2011 Hospital Profiles and Annual Bed Report.

**3. The service area for the proposed Vista-Lindenhurst hospital is not experiencing “Rapid Population Growth” as defined by the Review Board.**

According to Illinois Administrative Code, Title 77, Section 1100.220 titled “Definitions”, a “Rapid Population Growth Rate” “means an average of the three most recent annual growth rates of a defined geographic area’s population that has exceeded the average of three to seven immediately preceding annual growth rates by at least 100 percent.”

For historical population estimates, we examined Claritas, Inc. population estimates by zip code, which utilize U.S. Census Bureau population estimates, and for future population projections, we utilized the service area population projections provided by CHS in proposed Vista-Lindenhurst hospital CON permit application for Project #12-081. As Exhibit 4 displays, for the proposed Vista-Lindenhurst hospital service area, *neither the average of the three most recent annual growth rates nor the implied average of projected growth rates over the next five years meets the definition of a “Rapid Population Growth Rate”.*

**Exhibit 4: Historical and Projected Population Growth For Proposed Vista-Lindenhurst Hospital Service Area**

	<u>Growth Rate</u>
Average of the Four <u>Immediately Preceding</u> Annual Growth Rates (2006-2009)	1.6%
Average of the Three <u>Immediately Preceding</u> Annual Growth Rates (2007-2009)	1.4%
Average of the Three <u>Most Recent</u> Annual Growth Rates (2010-2012)	1.1%
<b>Projected Average of the Five <u>Upcoming</u> Annual Projected Growth Rates (2013-2017)</b>	<b>0.5%</b>

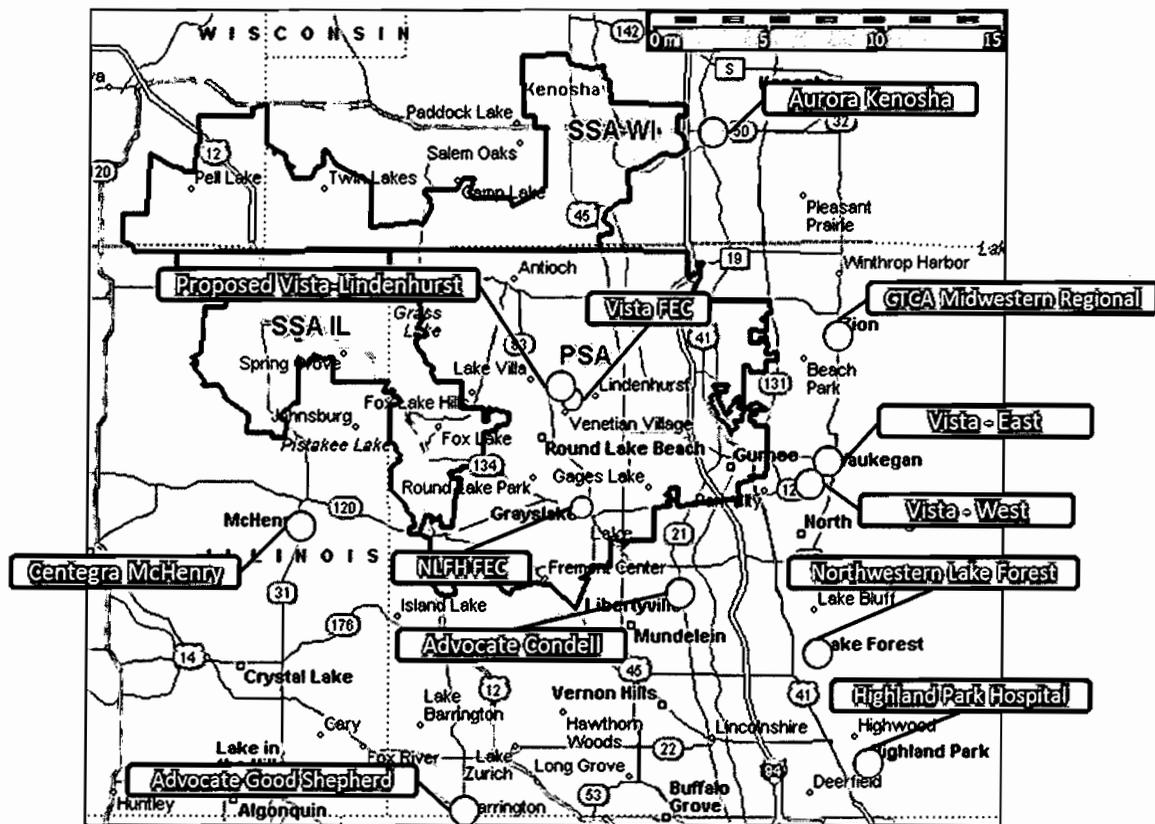
*Sources: Claritas, Inc.; CHS Vista-Lindenhurst CON Permit Application for Project No. 12-081*

In fact, the average of the three most recent years is *less than the average in the immediately preceding years*, and the data suggest population growth in the service area is slowing over time.

**4. The majority of the proposed service area population has more convenient access to existing facilities than to the proposed Vista-Lindenhurst hospital.**

As Exhibit 5 shows, the proposed service area is surrounded by nearby hospitals. Based on Normal Travel Times (as measured by MapQuest, Inc.'s location of each town's center), *10 of the 15 service area population centers are nearer or equidistant to an existing hospital than to the proposed Vista-Lindenhurst hospital site.* Exhibit 6 displays the Normal Travel Times to support this finding.

**Exhibit 5: Proposed Vista-Lindenhurst Hospital Service Area (PSA, SSA IL, SSA WI)**



Source: Service area definitions taken from CHS Vista-Lindenhurst CON Permit Application for Project No. 12-081

**Map Definitions:**

- PSA = Primary Service Area for proposed Vista-Lindenhurst hospital
- SSA IL = Secondary Service Area (Illinois zip codes) for proposed Vista-Lindenhurst hospital
- SSA WI = Secondary Service Area (Wisconsin zip codes) for proposed Vista-Lindenhurst hospital
- NLFH FEC = Northwestern Lake Forest Hospital Freestanding Emergency Center in Grayslake
- Vista FEC = Vista Freestanding Emergency Center in Lindenhurst
- CTCA = Cancer Treatment Centers of America

## Exhibit 6: Normal Travel Time Comparison, Proposed Vista-Lindenhurst Hospital Versus Nearest Existing Hospital (Travel times in minutes, MapQuest x 1.15)

Zip Code - Town Name	Service Area	Normal Travel Time to Vista - Lindenhurst	Nearest Existing Hospital	Normal Travel Time to Nearest Existing Hospital
60073 - Round Lake	PSA	16.1	Advocate Condell	24.2
<b>60030 - Grayslake</b>	<b>PSA</b>	<b>17.3</b>	<b>Advocate Condell</b>	<b>17.3</b>
<b>60031 - Gurnee</b>	<b>PSA</b>	<b>18.4</b>	<b>Vista – East</b>	<b>16.1</b>
60046 - Lake Villa	PSA	4.6	Advocate Condell	31.1
60002 - Antioch	PSA	13.8	Aurora – Kenosha	25.3
<b>60083 - Wadsworth</b>	<b>PSA</b>	<b>19.6</b>	<b>Vista – East</b>	<b>17.3</b>
60020 - Fox Lake	SSA - IL	16.1	Centegra – McHenry	19.6
60041 - Ingleside	SSA - IL	15.0	Centegra – McHenry	21.9
<b>60081 - Spring Grove</b>	<b>SSA - IL</b>	<b>27.6</b>	<b>Centegra – McHenry</b>	<b>19.6</b>
<b>60071 - Richmond</b>	<b>SSA - IL</b>	<b>34.5</b>	<b>Centegra – McHenry</b>	<b>20.7</b>
<b>60072 - Ringwood</b>	<b>SSA - IL</b>	<b>38.0</b>	<b>Centegra – McHenry</b>	<b>18.4</b>
<b>53128 - Genoa City, WI</b>	<b>SSA - WI</b>	<b>38.0</b>	<b>Aurora – Kenosha</b>	<b>27.6</b>
<b>53181 - Twin Lakes, WI</b>	<b>SSA - WI</b>	<b>38.0</b>	<b>Centegra – McHenry</b>	<b>31.1</b>
<b>53179 - Trevor, WI</b>	<b>SSA - WI</b>	<b>23.0</b>	<b>Aurora – Kenosha</b>	<b>19.6</b>
<b>53104 - Bristol, WI</b>	<b>SSA - WI</b>	<b>23.0</b>	<b>Aurora – Kenosha</b>	<b>10.4</b>

*Bold indicates Nearest Existing Hospital is as, or more, convenient than the proposed Vista-Lindenhurst hospital.  
Source: MapQuest, Inc.*

### 5. The local, state, and national needs for inpatient care are declining.

It is clear from the most recent data available that overall inpatient utilization is declining across the Planning Area A-09, Illinois, and the nation as a whole.

As shown in Exhibit 7, **total inpatient utilization for the proposed service area is declining**. The service area total admissions declined by three percent while the total inpatient days declined by one percent between 2007 and 2012 (annualized based upon six months of data).

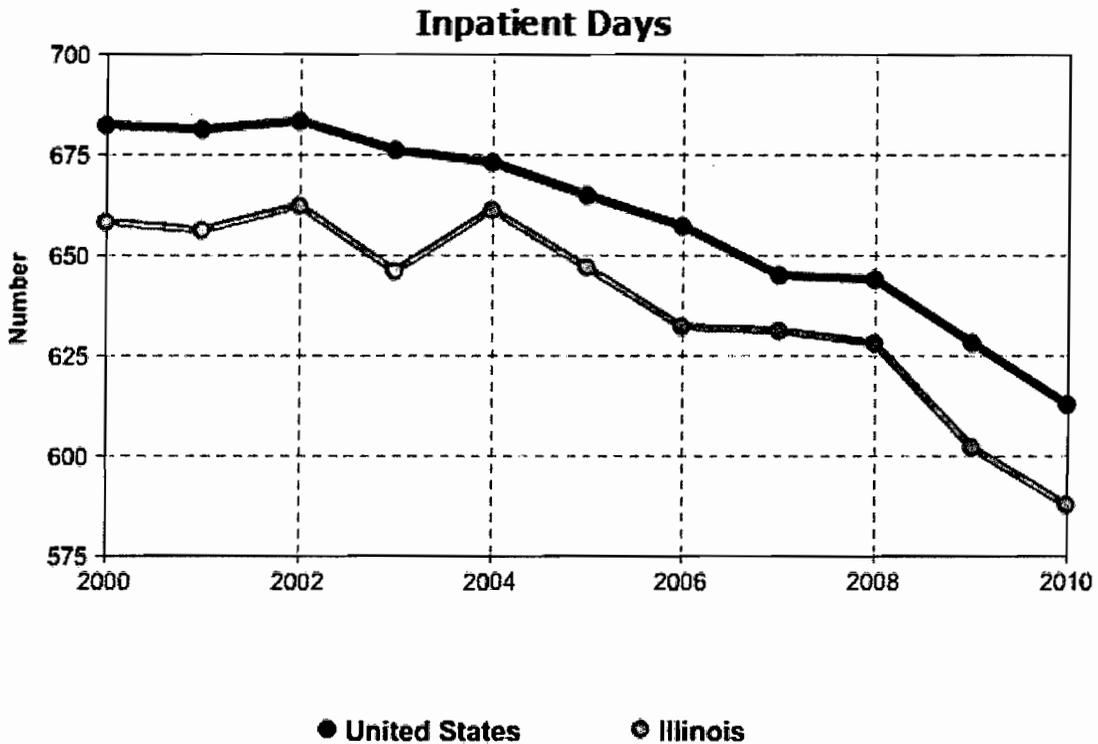
## Exhibit 7: Historical Inpatient Utilization for Illinois Service Area for Proposed Vista-Lindenhurst Hospital, Lake County, and State of Illinois

	2007		2011		2012 Annualized		2007-12 % Change	
	Admissions	Pt Days	Admissions	Pt Days	Admissions	Pt Days	Admissions	Pt Days
60046 Lake Villa/ Linden.	3,158	13,649	3,110	13,941	3,078	13,502	(3%)	(1%)
60073 Round Lake	5,655	24,347	5,483	23,648	5,350	22,900	(6%)	(6%)
60083 Wadsworth	718	3,077	791	3,572	672	3,156	(7%)	3%
60002 Antioch	2,327	10,215	2,185	9,802	2,258	10,206	(3%)	0%
60030 Grayslake	3,669	15,536	3,749	17,539	3,530	14,490	(4%)	(7%)
60031 Gurnee	3,383	13,988	3,213	14,370	3,190	13,968	(6%)	0%
<b>Primary Svc. Area</b>	<b>18,910</b>	<b>80,812</b>	<b>18,531</b>	<b>82,872</b>	<b>18,078</b>	<b>78,222</b>	<b>(5%)</b>	<b>(3%)</b>
60020 Fox Lake	1,292	5,981	1,338	6,161	1,286	6,370	0%	6%
60041 Ingleside	1,130	5,270	994	5,152	1,066	4,758	-6%	(11%)
60071 Richmond	346	1,409	344	1,433	410	1,802	16%	22%
60072 Ringwood	81	301	129	723	96	360	16%	16%
60081 Spring Grove	839	3,350	919	4,107	946	4,772	11%	30%
<b>Secondary Service Area-IL</b>	<b>3,688</b>	<b>16,311</b>	<b>3,724</b>	<b>17,576</b>	<b>3,804</b>	<b>18,062</b>	<b>3%</b>	<b>10%</b>
<b>Service Area Total</b>	<b>22,598</b>	<b>97,123</b>	<b>22,255</b>	<b>100,448</b>	<b>21,882</b>	<b>96,284</b>	<b>(3%)</b>	<b>(1%)</b>
<b>Lake County</b>	<b>71,846</b>	<b>321,333</b>	<b>68,164</b>	<b>308,756</b>	<b>67,880</b>	<b>308,968</b>	<b>(6%)</b>	<b>(4%)</b>
<b>Illinois</b>	<b>1,563,965</b>	<b>7,425,944</b>	<b>1,472,197</b>	<b>6,989,401</b>	<b>1,461,096</b>	<b>6,900,738</b>	<b>(7%)</b>	<b>(8%)</b>

Source: IllinoisCOMPdata for 2007-2012. 2012 annualized based upon six months of data.

This trend is further supported by national data sources. Exhibit 8 summarizes the total inpatient days per 1,000 population for the United States and Illinois as analyzed by The Henry Kaiser Family Foundation. Between 2000 and 2010, the total inpatient days per 1,000 population declined from 682 to 613 (10.1 percent) for the United States and from 658 to 588 (10.6 percent) for Illinois.

**Exhibit 8: Inpatient Days per 1,000 Population for the United States and Illinois**



Source: The Henry Kaiser Family Foundation; [www.statehealthfacts.org](http://www.statehealthfacts.org), 1/05/2013.

Even among the higher-utilizing Medicare population, inpatient utilization has declined in recent years. According to the Medicare Payment Advisory Commission (“MedPac”), Medicare claims data show a cumulative eight percent decrease in inpatient discharges per fee-for-service Medicare Part A beneficiary from 2004-2011.<sup>2</sup>

State-level data provide further evidence of the reality of declining inpatient utilization. According to Kaufman Hall research, among a sample of seventeen states, including Illinois, that provide publicly available 2011 inpatient utilization data, *the weighted average decline in use rates per 1,000 population from 2006-2011 was 5.7 percent. Further, the rate of decline in inpatient use rates is increasing.* In fact, all seventeen states in the sample saw declines in use rates during this period, and the Illinois use rate declined 6.3 percent. As shown in Exhibit 9, these declines were evident across all age groups.

## Exhibit 9: Weighted Average\* Change in Inpatient Use Rates

<u>Age Group</u>	<u>06-08 CAGR**</u>	<u>Chg. 08-09</u>	<u>Chg. 09-10</u>	<u>Chg. 10-11</u>	<u>Total Chg. 06-11</u>
0-17	0.0%	(0.4%)	(4.2%)	(2.8%)	<b>(6.9%)</b>
18-44	(0.6%)	(1.6%)	(2.2%)	(2.7%)	<b>(7.0%)</b>
45-64	0.0%	(0.2%)	(2.4%)	(2.5%)	<b>(4.6%)</b>
65-84	(1.9%)	(2.1%)	(2.7%)	(3.9%)	<b>(11.2%)</b>
85+	(1.8%)	(5.5%)	5.2%	(4.5%)	<b>(7.0%)</b>
<b>Total</b>	<b>(0.3%)</b>	<b>(1.4%)</b>	<b>(1.7%)</b>	<b>(2.3%)</b>	<b>(5.7%)</b>

\*Weighting based on state population as percentage of total sample size population. Discharges exclude normal newborns as defined by DRG 391 and MS-DRG 795. \*\*CAGR = Compound Annual Growth Rate

States in survey: Arizona, California, Colorado, Florida, Illinois, Iowa, Kentucky, Maryland, Minnesota, Missouri, New Jersey, Oregon, Pennsylvania, South Carolina, Vermont, Washington, Wisconsin

Source: US Census Bureau 2006-2011 Population Estimates; HCUP State Inpatient Databases, Agency for Healthcare Research and Quality (AHRQ), Pennsylvania Health Care Cost Containment Council data set used for Pennsylvania; Illinois Department of Health and Human Services data set used for Illinois. AHCA data set used for Florida

Further, many national organizations and industry leaders expect this trend to continue over the next decade. Kaufman Hall has worked closely with Milliman, a leading actuarial firm, to develop ten year inpatient use rate projections. The projections developed in 2011 and shared with the Illinois Hospital Association indicated that *inpatient use rates would decline over 20 percent from 2011-2021* across all types of U.S. healthcare markets.<sup>3</sup>

Among the key drivers of future utilization projections is the developing shift from “fee-for-service” payment models to “pay-for-performance” and other value-based delivery and payment models. There are many examples of this trend playing out in the marketplace, but two excellent examples are the UPMC Patient-Centered Medical Home model and the accountable care model formed in the Sacramento area by Hill Physicians, Dignity Health, Blue Shield of California, and the California Public Employees Retirement System (“CalPERS”).

By coordinating care more efficiently for nearly 24,000 members of the UPMC Health Plan and tracking and incentivizing physician behaviors, the UPMC Patient-Centered Medical Home model *significantly reduced admissions, readmissions, and emergency department visits* for the participating clinic sites vs. the non-participating sites. From 2009-2010, the participating sites produced a *2.8 percent decline in inpatient admissions* compared to a 1.6 percent increase at the non-participating sites. Due to the program achieving an estimated cost avoidance of nearly \$10 per member per month, UPMC is now in the process of implementing the model across their entire primary care network.<sup>4</sup>

The collaboration started in 2008 between Hill Physicians, Dignity Health, Blue Shield of California, and CalPERS focuses on improving patient outcomes, better coordinating care across the continuum, and generating significant cost savings. In 2010, the pilot program conducted with 41,000 CalPERS Blue Shield HMO members saved an estimated \$20 million and *results showed a 15 percent reduction in inpatient readmissions within 30 days along with a 15 percent reduction in inpatient days per 1,000*.<sup>5</sup>

**6. The proposed Vista-Lindenhurst hospital would likely fail to meet State utilization standards for the following: Obstetrics, Cardiac Catheterization, and Medical/Surgical categories of service as well as Section 3030 clinical service areas.**

Illinois standard as outlined in 77 Ill. Adm. Code 1100.530(c)(2), stating that Obstetrics services should operate at or above 75 percent for facilities with 11-25 beds. The proposed Vista-Lindenhurst hospital includes 20 Obstetrics beds and CHS projects that these beds will be utilized at 75 percent in Year 2 of operations.

However, given declining Obstetrics utilization in Planning Area A-09, it is unlikely the proposed Vista-Lindenhurst hospital projection of 75 percent utilization will be achieved. *Planning Area A-09 had 49 percent overall utilization of Obstetrics beds in 2011, and none of the hospitals in Planning Area A-09 operated at or above 65 percent in 2011. Further, as Exhibit 10 shows, Obstetrics days and deliveries in Planning Area A-09 have shown significant declines since 2009.*

**Exhibit 10: Obstetrics-related Volume (Planning Area A-09) by Hospital, 2009-2011**

Hospital	Deliveries			Obstetrics Inpatient Days		
	2009	2010	2011	2009	2010	2011
Advocate Condell Medical Center	2,229	2,226	2,318	6,385	6,396	6,037
Advocate Good Shepherd Hospital	1,735	1,628	1,492	4,572	4,397	3,965
Highland Park Hospital	1,348	1,324	1,276	3,899	3,763	3,418
Midwestern Regional Medical Center	---	---	---	---	---	---
Northwestern Lake Forest Hospital	1,936	1,742	1,687	5,607	4,976	4,820
Vista Medical Center East	1,828	1,537	1,288	4,067	3,512	2,873
Vista Medical Center West	---	---	---	---	---	---
<b>Total</b>	<b>9,076</b>	<b>8,457</b>	<b>8,061</b>	<b>24,530</b>	<b>23,044</b>	<b>21,113</b>

<b>Change in Obstetric Utilization:</b>	<b>11.2 Percent Decline</b>	<b>13.9 Percent Decline in</b>
<b>2009-2011</b>	<b>in Deliveries</b>	<b>Patient Days</b>

Source: IHFSRB Annual Hospital Questionnaire, 2009-2011.

In addition, the *15-44 year-old female population, which is the primary population utilizing Obstetric services, in the proposed Vista-Lindenhurst hospital service area is projected to decline 0.4 percent from 2012-2017,*<sup>6</sup> and the national birth rate reached 64/1,000 in 2010, the lowest ever recorded rate.<sup>7</sup>

Regarding Cardiac Catheterization Program need, 77 Ill. Adm. Code 1100.620(c) states that “No additional cardiac catheterization service shall be started unless each facility in the planning area offering cardiac catheterization services operates at a level of 400 procedures annually.” In 2010 and 2011, Northwestern Lake Forest Hospital, one of the hospitals in Health Service Area VIII, operated at a level of less than 400 procedures (359 in 2010 and 349 in 2011). Further, Cardiac Catheterization volumes in Health Service Area 8 declined by over 2 percent from 2009-2011 as shown in Exhibit 11.

## Exhibit 11: Cardiac Catheterizations (Health Service Area VIII) by Hospital, 2009-2011

Hospital	2009	2010	2011
Advocate Good Shepherd Hospital	1,944	1,777	1,532
Advocate Condell Medical Center	1,693	2,023	2,214
Centegra Hospital - McHenry	2,317	2,017	1,921
Centegra Hospital - Woodstock	---	---	---
Centegra Specialty Hospital - Woodstock	---	---	---
Delnor Community Hospital	516	694	426
Highland Park Hospital	1,161	1,305	1,252
Mercy Harvard Memorial Hospital	---	---	---
Midwestern Regional Medical Center	---	---	---
<b>Northwestern Lake Forest Hospital</b>	<b>416</b>	<b>359</b>	<b>349</b>
Provena Mercy Medical Center	1,701	1,459	1,416
Provena Saint Joseph Hospital	1,373	828	1,086
Rush-Copley Medical Center	1,244	1,240	1,459
Sherman Hospital	2,490	2,892	2,624
Vista Medical Center East	852	1,022	1,096
Vista Medical Center West	---	---	---
<b>Total</b>	<b>15,707</b>	<b>15,616</b>	<b>15,375</b>

<b>Change in Cardiac Catheterizations: 2009-2011</b>	<b>2.1% Decline in Caths</b>
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Source: IHFSRB Annual Hospital Questionnaire, 2009-2011.

Given the Medical/Surgical 2011 occupancy of 63.3 percent in Planning Area A-09, as shown in Exhibit 1, and the inpatient utilization declines described in the previous section, it is likely that the proposed Vista Medical Center-Lindenhurst hospital will fail to meet the State utilization standard of 85 percent.

In the Surgery category of service, the State utilization standard is 1,500 hours per suite. According to data from the Annual Hospital Questionnaire, in Planning Area A-09, the weighted average utilization rate in 2011 was 86.2 percent of the State standard. As shown in Exhibit 12, only three of the six hospitals operated at or above the State standard in 2011, and of the eight ambulatory surgery centers in Planning Area A-09, only one operated at or above the State standard in 2011. All of this indicates existing capacity and under-utilization of Surgery services in Planning Area A-09. By definition, there is not demand for additional Surgery services in Planning Area A-09.

## Exhibit 12: Surgery Utilization Compared to 1,500 Hours per Suite, 2011

### Inpatient Surgery Utilization

Hospital	Suites	Hours Per Suite	Utilization Rate	Meets State Standard?
Advocate Condell Medical Center	12	20,063	111.5%	YES
Advocate Good Shepherd Hospital	12	19,131	106.3%	YES
Highland Park Hospital	11	11,900	72.1%	NO
Midwestern Regional Medical Center	3	3,708	82.5%	NO
Northwestern Lake Forest Hospital	8	12,975	108.1%	YES
Vista Medical Center East	14	8,153	38.8%	NO
Vista Medical Center West	--	--	--	N/A
<b>Total</b>	<b>60</b>	<b>1,293</b>	<b>84.4%</b>	

### Ambulatory Surgery Utilization

Ambulatory Surgery Center	Suites	Hours Per Suite	Utilization Rate	Meets State Standard?
Algonquin Road Surgery Center, LLC	4	463	30.9%	NO
Grand Oaks Surgery Center, S.C.	1	221	14.8%	NO
Hawthorn Surgery Center	3	1,345	89.7%	NO
Lake Forest Endoscopy Center, LLC	2	1,103	73.5%	NO
Northwestern Grayslake Surgery Center	4	80	*	NO
The Lake Bluff Illinois Endoscopy ASC, LLC	2	1,672	111.4%	YES
Vernon Square Surgicenter	3	329	21.9%	NO
Vista Surgery Center	6	248	16.5%	NO
<b>Total (excludes Northwestern Grayslake)</b>	<b>21</b>	<b>673</b>	<b>44.8%</b>	

\*Northwestern Grayslake Surgery Center was licensed for operation on 6/7/2011; therefore, full year utilization information is not yet available.

Source: IHFSRB Annual Hospital Questionnaire, 2011; 77 Ill. Adm. Code 1110.1540; 77 Ill. Adm. Code 1100.APPENDIX B

In the Section 3030 Clinical Service Area, there likewise is under-utilization of services compared to State standards. Included in the category of service are Imaging modalities such as General Radiology/ Fluoroscopy, Nuclear Medicine, Mammography, Ultrasound, Angiography, PET, CT, and MRI. Exhibit 13 shows that very few of the programs meet State utilization standards across the Planning Area A-09 hospitals for each modality. In fact, of the 51 imaging programs across the seven hospitals, only 14 (or 27 percent) met State utilization standards in 2011.

## Exhibit 13: Imaging Utilization Compared to State Standards, 2011

*Does the hospital meet the State utilization standard for each modality?*

Hospital	General							
	Radiology/ Fluoroscopy	Nuclear Medicine	Mammo -graphy	Ultra- sound	Angio- graphy	PET	CT	MRI
<i>State Standard (procedures/visits)</i>	<i>8,000 GR 6,500 Fluor</i>	<i>2,000</i>	<i>5,000</i>	<i>3,100</i>	<i>1,800</i>	<i>3,600</i>	<i>7,000</i>	<i>2,500</i>
Advocate Condell Medical Center	YES	NO	NO	NO	YES	NO	YES	YES
Advocate Good Shepherd Hospital	NO	NO	NO	NO	YES	NO	NO	NO
Highland Park Hospital	YES	YES	NO	YES	NO	NO	YES	YES
Midwestern Regional Medical Center	NO	NO	NO	NO	YES	NO	YES	YES
Northwestern Lake Forest Hospital	NO	NO	YES	NO	NO	NO	NO	NO
Vista Medical Center East	NO	NO	NO	NO	NO	NO	NO	NO
Vista Medical Center West	NO	N/A	N/A	NO	N/A	N/A	NO	N/A

*Source: IHFSRB Annual Hospital Questionnaire, 2011.*

### 7. Existing hospitals would be materially and adversely affected by the proposed Vista-Lindenhurst hospital.

77 Ill. Adm. Code 1110.530(c)(3) directs the applicant to document that the proposed project will not lower utilization of existing providers below the target occupancy standard, nor will the project lower the utilization of any hospital not operating at the target occupancy standard. Per CHS's CON application, there was no attempt to quantify the impact on existing hospitals resulting from the development of the proposed Vista-Lindenhurst hospital.

Our approach to the impact analysis is based upon the requirements for the proposed Vista-Lindenhurst hospital to achieve Illinois targeted occupancy by service. Further, we have developed the following assumptions to estimate the impact on existing Illinois Hospitals:

1. Average length of stay for the proposed Vista-Lindenhurst hospital will be 4.2 days, the 2011 average for Medical/Surgical, Obstetrical/Gynecology, and Intensive Care services for all hospitals in Planning Area A-09.
2. Eighty percent of the proposed Vista-Lindenhurst hospital's admissions will originate from its proposed primary service area, 15 percent from its secondary service area, and five percent from outside the market.
3. The volume currently treated by Illinois' hospitals will be obtained in proportion to the

existing hospitals overall market share for the most recent 12 months of available data (July 2011-June 2012). Note that this data excludes normal newborns.

Note that the impact on Wisconsin Hospitals is excluded from this analysis.

Using these assumptions, we are able to calculate the total admissions for the proposed Vista-Lindenhurst hospital as follows:

Medical/Surgical: 100 beds x 85 percent occupancy = 85.0 average daily census  
 Obstetrics: 20 beds x 75 percent occupancy = 15.0 average daily census  
 Intensive Care: 12 beds x 60 percent occupancy = 7.2 average daily census

**Total Average Daily Census = 107.2**

**107.2 Average Daily Census x 365 Days / 4.2 Average Length of Stay = 9,316 admissions**

The resulting distribution of the proposed Vista-Lindenhurst hospital admissions is as follows:

PSA = 7,453  
 SSA = 1,397  
 Out of Market = 466

Based upon our analysis, Advocate Condell Medical Center will face the most significant impact on its volume from the service area, but there would be material impacts to other facilities as well. Exhibit 14 displays the results of the analysis.

**Exhibit 14: Estimated Impact on Existing Hospitals**  
*Based Upon July 2011-June 2012 COMPdata*

**Estimated Impact on Advocate Condell Medical Center**

	Without Vista-Lindenhurst		With Vista-Lindenhurst		Estimated Impact	
	Admissions	Share	Admissions	Share	Volume	%
PSA	7,585	41.5%	4,494	24.6%	(3,091)	(41%)
SSA	732	16.9%	496	11.4%	(236)	(32%)
<b>Total</b>	<b>8,317</b>	<b>36.8%</b>	<b>4,990</b>	<b>22.1%</b>	<b>(3,327)</b>	<b>(40%)</b>

**Estimated Impact on Other Planning Area A-09 Hospitals**

	Without Vista-Lindenhurst		With Vista-Lindenhurst		Estimated Impact	
	Admissions	Share	Admissions	Share	Volume	%
PSA	6,510	35.6%	3,856	21.1%	(2,654)	(41%)
SSA	880	20.3%	596	13.7%	(284)	(32%)
<b>Total</b>	<b>7,390</b>	<b>32.7%</b>	<b>4,452</b>	<b>19.7%</b>	<b>(2,938)</b>	<b>(40%)</b>

## Estimated Impact on All Other Hospitals

	Without Vista-Lindenhurst		With Vista-Lindenhurst		Estimated Impact	
	Admissions	Share	Admissions	Share	Volume	%
PSA	4,195	22.9%	2,487	13.6%	(1,708)	(41%)
SSA	<u>2,726</u>	62.8%	<u>1,849</u>	42.6%	(877)	(32%)
<b>Total</b>	<b>6,921</b>	<b>30.6%</b>	<b>4,336</b>	<b>19.2%</b>	<b>(2,585)</b>	<b>(40%)</b>

Our analysis results in the following impact on existing hospitals:

1. *Advocate Condell Medical Center will lose 40 percent of its volume from the service area, or a total of 3,327 discharges.*
2. *During the July 2011 through June 2012 time period, Advocate Condell Medical Center had a total of 17,813. The lost volume that would result from the development of the proposed Vista-Lindenhurst hospital would equal 19 percent of Advocate Condell's total admissions.*
3. *Other hospitals in Planning Area A-09 will lose 2,938 discharges, or approximately 13 percent of their collective market share in the proposed Vista-Lindenhurst service area.*
4. *Significantly, hospitals outside of Planning Area A-09 will lose 2,585 discharges, or over 11 percent of their collective market share. Centegra-McHenry will feel the greatest impact of any hospital outside of Planning Area A-09.*

## Endnotes

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1. Community Health Systems, Inc. Fiscal Year 2011 10-K; accessed 1/13/2013 at <http://www.sec.gov/edgar/searchedgar/companysearch.html>
2. “Assessing Payment Adequacy: Hospital Inpatient and Outpatient Services”, MedPac, 12/6/2012
3. Presentation to Illinois Hospital Association, Kaufman Hall analysis using data from Milliman, Inc., Kaiser State Health Facts ([www.statehealthfacts.org](http://www.statehealthfacts.org)), and American Hospital Association, 2011.
4. Health Affairs, “Results From a Patient-Centered Medical Home Pilot at UPMC Health Plan Hold Lessons for Broader Adoption of the Model, November 2012
5. Melnick, Glen, and Lois Green, “Early Lessons From a Shared Risk, Integrated Care Organization Serving a Commercial Population”, Health Affairs Blog, 5/15/2012; accessed 1/9/2013 at <http://healthaffairs.org/blog/2012/05/15/early-lessons-from-a-shared-risk-integrated-care-organization-serving-a-commercial-population/>
6. Claritas, Inc. 2012 Population Estimates
7. Livingston, Gretchen, and D’Vera Cohn, “U.S. Birth Rate Falls to a Record Low; Decline is Greatest Among Immigrants”, Pew Research Center, 11/29/2012; accessed 1/9/2013 at <http://www.pewsocialtrends.org/2012/11/29/u-s-birth-rate-falls-to-a-record-low-decline-is-greatest-among-immigrants/>

## **Appendix A: About Kaufman Hall**

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Below is a brief background on Kaufman Hall and our experience.

Kaufman, Hall & Associates, Inc. (“Kaufman Hall”) was founded in 1985, and operates a national practice with a staff of approximately 130 individuals in Chicago, Atlanta, Boston, Los Angeles, and New York. Kaufman Hall exclusively provides strategic, capital, and financial advisory services to healthcare organizations. As such, 100 percent of the time of all professional staff is devoted to healthcare.

We provide a broad range of strategic and financial advisory services to support organizational management and decision making for healthcare providers as well as assess the impact of key strategic initiatives and investments. Of particular note, we have been involved in the analysis of over 30 new hospital / replacement facilities over the past 10 years. Our services are analytically grounded to provide a solid information base to provide a clear assessment of the implications of key decisions.

Since our inception over 27 years ago, Kaufman Hall has been dedicated solely to providing consulting services exclusively to the healthcare services industry. As such, we are intimately familiar with the issues and challenges healthcare services providers are facing on a day-to-day basis. We believe our deep knowledge of hospitals and health systems makes us uniquely qualified to assess the impact of the proposed Lindenhurst facility.

Our expertise is broadly recognized by the industry. Each year, Kaufman Hall executives publish dozens of articles and present at the national and regional meetings of key industry groups including The Governance Institute, American College of Healthcare Executives, Society for Hospital Strategy and Market Development, and the Healthcare Financial Management Association on a broad array of strategy and finance topics.

## Appendix B: Kaufman Hall Staff Biographies

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### **Ryan S. Gish, Senior Vice President**

Ryan Gish is a Senior Vice President of Kaufman Hall and has over 16 years of experience in healthcare. Mr. Gish provides strategic counsel to executive leadership teams and Boards across the country, ranging from independent facilities to large health systems. His work is focused on helping organizations address the most pressing industry challenges through defining and implementing resilient strategies for the changing healthcare landscape. The result for clients is a platform for their ongoing strategic and financial success.

Mr. Gish has authored numerous articles published in healthcare professional journals, including *hfm* magazine, *BoardRoom Press*, and *Trustee*. Additionally, Mr. Gish was a contributing author for *Health Care Strategy for Uncertain Times*, published by AHA Press/Jossey Bass. Mr. Gish is a frequent presenter at national conferences of the American College of Healthcare Executives, The Governance Institute, Healthcare Financial Management Association, and the Society for Healthcare Strategy and Market Development. Additionally, he has served as guest faculty at Harvard University, Washington University in St. Louis, and University of Southern California.

Prior to joining Kaufman Hall, Mr. Gish worked for Jennings Ryan & Kolb and Baxter Healthcare Corporation.

Mr. Gish has an M.B.A. with honors from the John M. Olin School of Business at Washington University in St. Louis and received a B.S., *cum laude*, also from Washington University.

### **Daniel P. Clarin, CFA, Assistant Vice President**

Daniel Clarin is an Assistant Vice President at Kaufman Hall and a member of the firm's Strategy practice. He provides integrated strategic and financial planning advisory services for a wide range of clients, including large healthcare systems, safety-net providers, academic medical centers, and community hospitals. Mr. Clarin's responsibilities focus on market position analysis, service line planning, growth strategy development, and analysis of strategic options.

Prior to joining Kaufman Hall, Mr. Clarin worked as a Manager of Financial and Strategic Planning at Walgreens, where he was responsible for strategic business case development and line-of-business budgeting, forecasting, and financial analysis.

Mr. Clarin holds a B.A., *cum laude*, in Economics from Colgate University, and is a Chartered Financial Analyst (CFA) charter-holder, as designated by the CFA Institute.