YALE-NEW HAVEN HOSPITAL

January 26, 2012

Kimberly Martone, Director of Operations
Office of Health Care Access
410 Capital Avenue, MS #13HCA
P O Box 340308
Hartford, CT 06106

RE: Certificate of Need Application
Yale-New Haven Hospital
Addition of 70 Inpatient Beds to Hospital Bed License
Certificate of Need Application

Dear Director Martone,

Enclosed please find the original, four (4) hard copies and an electronic copy on CD of the Certificate of Need (CON) application for the addition of 70 inpatient beds to Yale-New Haven Hospital bed license.

A notice to the public regarding the CON application was published in July 2011 in the New Haven Register pursuant to Section 19a-638 of the Connecticut General Statues. Copies of the legal notices are enclosed for your information.

Thank you for your consideration.

Sincerely,

Richard D'Aquila
Executive Vice President, YNHHS
Executive Vice President and COO, Yale-New Haven Hospital

Enclosures

cc: William Aseltyne, Esq.
Kyle L. Ballou, Esq.

20 York Street
New Haven, CT 06504

Yale-New Haven Hospital
Addition of 70 Inpatient Beds
to Hospital Bed License

Certificate of Need Application

January 26, 2012

Application Checklist

Instructions:

1. **Please check each box below, as appropriate; and**
2. **The completed checklist *must* be submitted as the first page of the CON application.**

☒ **Attached is the CON application filing fee in the form of a certified, cashier or business check made out to the "Treasurer State of Connecticut" in the amount of $500.**

For OHCA Use Only: 31746

Docket No.: 12-31746-CON **Check No.:** 1482633
OHCA Verified by: SZ **Date:** 1/27/12

☒ **Attached is evidence demonstrating that public notice has been published in a suitable newspaper that relates to the location of the proposal, 3 days in a row, at least 20 days prior to the submission of the CON application to OHCA. (*OHCA requests that the Applicant fax a courtesy copy to OHCA (860) 428-7053, at the time of the publication)***

☒ **Attached is a paginated hard copy of the CON application including a completed affidavit, signed and notarized by the appropriate individuals.**

☒ **Attached are completed Financial Attachments I and II.**

☒ **Submission includes one (1) original and four (4) hard copies with each set placed in 3-ring binders.**

Note: A CON application may be filed with OHCA electronically through email, if the total number of pages submitted is 50 pages or less. In this case, the CON Application must be emailed to the following email addresses: steven.lazarus@ct.gov and leslie.greer@ct.gov.

Important: For CON applications(less than 50 pages) filed electronically through email, the singed affidavit and the check in the amount of $500 must be delivered to OHCA in hardcopy.

☒ **The following have been submitted on a CD**

1. **A scanned copy of each submission in its entirety, including all attachments in Adobe (.pdf) format.**
2. **An electronic copy of the documents in MS Word and MS Excel as appropriate.**

OFFICE OF HEALTH CARE ACCESS

REQUEST FOR NEW CERTIFICATE OF NEED

FILING FEE FORM

APPLICANT: Yale-New Haven Hospital PROJECT TITLE: Addition of 70 Inpatient Beds to Hospital Bed License DATE: September 1, 2011	FOR OHCA USE ONLY:	DATE	INITIAL
	1. Check logged (Front desk)		
	2. Check rec'd (Clerical/Cert.)		
	3. Check correct (Superv.)		
	4. Check logged (Clerical/Cert).)		

NEW CERTIFICATE OF NEED APPLICATION	
TOTAL FEE DUE:	**$500.00**

ATTACH HERE CERTIFIED OR CASHIER'S CHECK ONLY (Payable to: Treasurer, State of Connecticut)

07-14-3774B 06-2005

Bank of America

Cashier's Check

No. 1482633

Notice to Purchaser: In the event this check is lost, misplaced or stolen, a sworn statement and 90-day waiting period will be required prior to replacement. This check should be negotiated within 90 days.

Date DECEMBER 29, 2011

30-1/1140
NTX

Banking Center YALE NEW HAVEN HOSPITAL

0021178 00002 0001482633

YNHH BEDS INCREASE

Remitter (Purchased By)

$ **500.00**

Pay **FIVE HUNDRED DOLLARS AND 00 CENTS**

To The Order Of **TREASURER, STATE OF CONNECTICUT**
****

Authorized Signature

P ...f America, N.A.
...tonio, Texas

VOID AFTER 90 DAYS

07-14-3774B 06-2005

⑈1482633⑈ ⑆114000191⑆ 00164100554 5⑈

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THE ORIGINAL DOCUMENT HAS REFLECTIVE WATERMARK ON THE BACK

YALE-NEW HAVEN HOSPITAL
Addition of 70 Inpatient Beds to Hospital Bed License

Certificate of Need Application

TABLE OF CONTENTS

PUBLIC NOTICE

The New Haven Register

AFFIDAVIT OF PUBLICATION

New Haven Register

STATE OF CONNECTICUT

County of New Haven

I, Judith Yaskolsky of New Haven

Connecticut, being duly sworn, do depose and say that I am a Classified Legal Rep

of the New Haven Register, and that on the following date 7/2, 3, 4, 2012 to wit:

there was published in the regular daily edition of the said newspaper an advertisement,

PUBLIC NOTICE

Pursuant to section 19a-638 of Connecticut General Statutes, Yale-New Haven Hospital will submit the following Certificate of Need application:

Applicant(s):
Yale-New Haven Hospital (YNHH)
Address: 20 York Street
Town: New Haven
Proposal:
Yale-New Haven Hospital — 70-Bed Increase to Hospital License
Estimated Total Project Cost/
Expenditure: $950,000

and th eto annexed were clipped from each of the above-named issues of said newspaper.

Subsc 6th day of July 20 12 before me.

Mary Federici Notary Public

My Commission Expires 10/31/2012

FILING FEE

AFFIDAVIT

AFFIDAVIT

Applicant: **Yale-New Haven Hospital**

Project Title: **Addition of 70 Inpatient Beds to Hospital Bed License**

I, **James Staten, Chief Financial Officer** of **Yale New Haven Hospital** being duly sworn, depose and state that **Yale-New Haven Hospital's** information submitted in this Certificate of Need Application is accurate and correct to the best of my knowledge.

James Staten
Signature

1/25/12
Date

Subscribed and sworn to before me on 1/25/12

Jacalyn D. Gonzalez

Notary Public/Commissioner of Superior Court

My commission expires: 3/31/16

My Commission Expires 03/31/2016

CON Application

State of Connecticut
Office of Health Care Access
Certificate of Need Application

Instructions: Please complete all sections of the Certificate of Need ("CON") application. If any section or question is not relevant to your project, a response of "Not Applicable" may be deemed an acceptable answer. If there is more than one applicant, identify the name and all contact information for each applicant. OHCA will assign a Docket Number to the CON application once the application is received by OHCA.

Docket Number: TBD

Applicant: Yale-New Haven Hospital

Contact Person: Jean Ahn

Contact Person's Title: System Director, Planning & Business Development

Contact Person's Address: Yale-New Haven Hospital, Planning & Business Development, 20 York Street (Howe 3), New Haven, CT 06504

Contact Person's Phone Number: 203-688-2609

Contact Person's Fax Number: 203-688-5013

Contact Person's Email Address: jean.ahn@ynhh.org

Project Town: New Haven

Project Name: Addition of 70 Inpatient Beds to Hospital Bed License

Statute Reference: Section 19a-638, C.G.S.

Estimated Total Capital Expenditure: **$1,438,919**

1. Project Description: Increase in Licensed Bed Capacity

a. Please provide a narrative detailing the proposal, which chronicles the history of the service earmarked for an increase in licensed beds and provides a rationale for the proposed licensed bed increase.

Yale-New Haven Hospital (YNHH) proposes to increase its licensed bed count by 70 beds in order to provide much needed capacity for its campus. This proposal is an interim step to a longer term plan to develop additional inpatient capacity at YNHH in order to meet current inpatient demand as well as anticipated increases in demand. The bed need analysis performed demonstrated that based on FY 2011 inpatient volumes, YNHH required 65 additional beds. This analysis is described in greater detail in response to question 2 (d). Although future bed need will require more than 70 beds, 70 are being requested at this time, in part because that is the number of beds that can be added within YNHH's existing physical space and at minimal cost. YNHH is proposing to establish these 70 beds on three "retired" patient care units in its East Pavilion. Although not ideal, the East Pavilion offers the only available space for a temporary location of inpatient beds. These beds will have to be phased in over the current fiscal year (2012) and FY 2013 in order to be able to recruit staff and equip the East Pavilion units. In addition, one East Pavilion unit is temporarily occupied by the Emergency Department while renovations are completed (projected to be complete in December 2012).

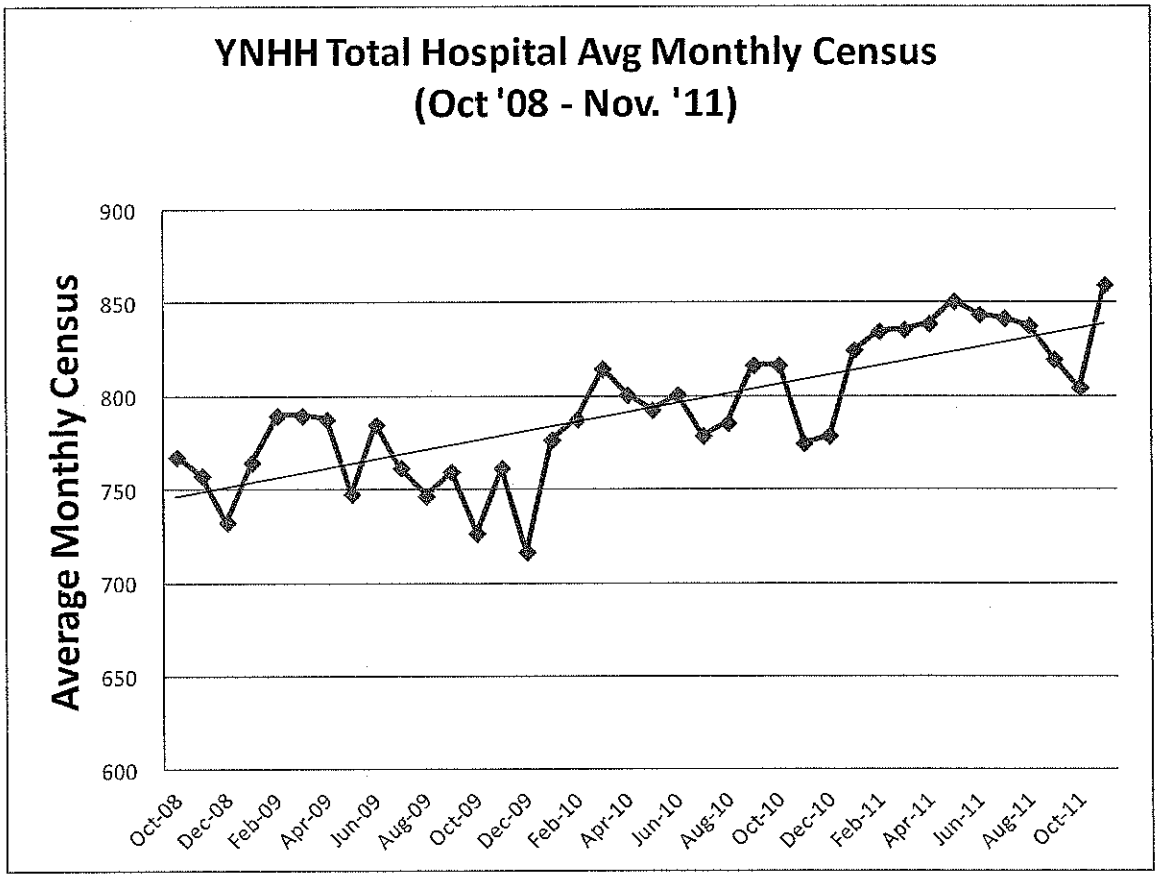
As the Office of Health Care Access (OHCA) may be aware, YNHH and the Saint Raphael Healthcare System (SRHS), including the Hospital of Saint Raphael (HSR) have signed a definitive agreement for YNHH to acquire the assets of SRHS/HSR. YNHH and SRHS/HSR intend to submit a Certificate of Need Application in February 2012 for OHCA approval of this critically important proposal. If approved, the acquisition of HSR will provide YNHH with additional inpatient capacity at HSR's facilities on Chapel Street. If for regulatory approval reasons the transaction does not go forward, YNHH will have to proceed with plans to construct an additional bed tower to meet its inpatient needs. During the interim period pending regulatory review and implementation of the transaction with HSR, and regardless of whether any transaction with HSR is consummated, YNHH has an <u>immediate need</u> for additional beds and is therefore submitting this CON application for 70 additional beds.

YNHH's current Department of Public Health (DPH) license includes 874 general hospital beds and 92 bassinets for a total of 966 beds/bassinets. On December 5, 2011 YNHH received approval from OHCA to increase its license by 42 beds in connection with the integration of pediatric services at Bridgeport Hospital under the license of YNHH's Yale-New Haven

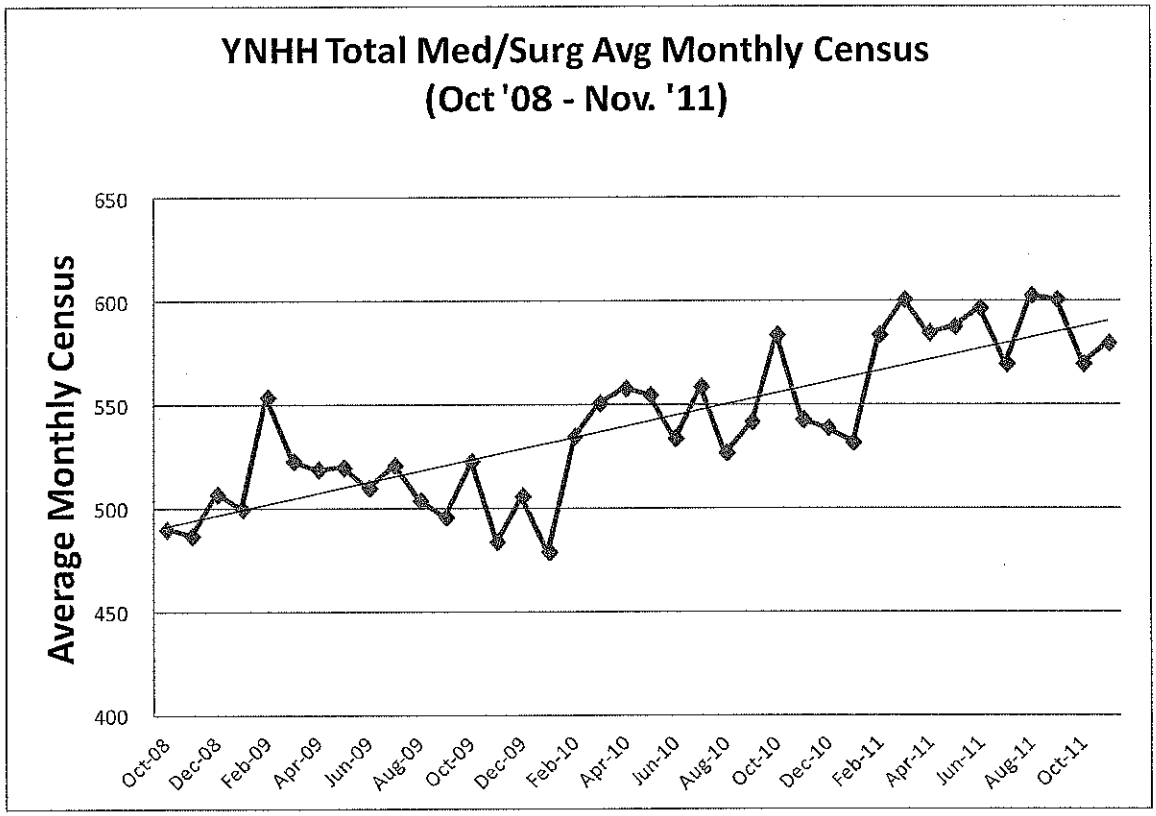
Children's Hospital (DN: 11-31714-CON). Consistent with OHCA's approval of such integration, the additional 42 beds (which consist of 22 pediatric beds and 20 neonatal ICU bassinets) will remain on the Bridgeport campus and be dedicated to pediatric patients. These additional beds, therefore, are not available to assist in alleviating YNHH's general medical/surgical capacity issues in New Haven.

Prior to DN: 11-31714-CON, YNHH had received approval for an increase of licensed beds for its New Haven campus in 2005 in connection with the construction of its North Pavilion (known more commonly as the Smilow Cancer Hospital at Yale-New Haven) (DN: 04-30410-CON). At that time, OHCA approved an increase of 22 beds, while acknowledging that YNHH's projections established that additional beds would be needed by 2011. Since the opening of the Smilow Cancer Hospital, continuous patient demand, particularly in medicine and surgery, has confirmed the need for additional beds to ensure the provision of safe, high quality, efficient patient care.

YNHH has been experiencing steady growth in its inpatient census. As evidenced by the average monthly census trend summarized in the two graphs below, the average monthly census has steadily increased between FY 2009 and November 2011.



Source: YNHH Department of Financial Planning



Source: YNHH Department of Financial Planning

Table I-a below demonstrates the steady increase in the average monthly census (based on discharge data) at YNHH from 766 in FY 2009 to 780 in FY 2010, and to 825 for FY 2011. This represents a 7.7% increase in average census between FY 2009 and FY 2011.

Table I-a. Average Total YNHH Avg. Monthly Census (Based on Discharge Data)

TOTAL										
Average YNHH Monthly Census										
FY 2009		? from FY 2008		FY 2010		? from FY 2009		FY 2011		? from FY 2010
October 2008	768	6.0		October 2009	727	-41.0		October 2010	817	90.0
November 2008	758	21.5		November 2009	762	4.0		November 2010	775	13.0
December 2008	733	21.7		December 2009	717	-16.0		December 2010	779	62.0
January 2009	765	-18.5		January 2010	777	12.0		January 2011	825	48.0
February 2009	790	29.0		February 2010	788	-2.5		February 2011	835	47.5
March 2009	790	8.0		March 2010	815	25.0		March 2011	836	21.0
April 2009	788	16.4		April 2010	801	13.0		April 2011	839	38.0
May 2009	748	11.3		May 2010	793	45.0		May 2011	851	58.0
June 2009	785	60.1		June 2010	801	16.0		June 2011	844	43.0
July 2009	762	34.7		July 2010	779	17.0		July 2011	842	63.0
August 2009	747	7.0		August 2010	786	39.0		August 2011	838	52.0
September 2009	760	37.2		September 2010	817	57.0		September 2011	820	3.0
Total Average	766	19.5		Total Average	780	14.0		Total Average	825	44.9

Medical and surgical areas have experienced the most significant growth. Table I-b summarizes the average monthly census (based on discharge data) in medical and surgical areas which increased from 511 in FY 2009 to 577 in FY 2011, a 13.1% increase.

Table I-b. Average Med-Surg YNHH Avg. Monthly Census (Based on Discharge Data)

Med/Surg Only								
Average YNHH Monthly Census								
FY 2009		? from FY 2008	FY 2010		? from FY 2009	FY 2011		? from FY 2010
October 2008	490	-8.0	October 2009	523	32.5	October 2010	584	58.3
November 2008	487	5.9	November 2009	484	-2.9	November 2010	543	56.1
December 2008	507	57.9	December 2009	506	-0.9	December 2010	539	30.3
January 2009	500	-15.7	January 2010	479	-21.0	January 2011	532	49.5
February 2009	554	20.2	February 2010	535	-18.9	February 2011	584	45.9
March 2009	523	61.8	March 2010	551	28.0	March 2011	601	47.3
April 2009	519	-37.2	April 2010	558	39.1	April 2011	585	24.0
May 2009	520	30.4	May 2010	555	34.6	May 2011	588	30.3
June 2009	510	-8.4	June 2010	534	24.7	June 2011	597	60.1
July 2009	521	25.9	July 2010	559	38.1	July 2011	570	8.3
August 2009	504	4.6	August 2010	527	23.2	August 2011	603	72.6
September 2009	496	62.2	September 2010	542	45.8	September 2011	601	55.5
Total Average	511	16.6	Total Average	529	18.5	Total Average	577	44.8

Source: YNHH Department of Financial Planning

Inpatient projections included in DN: 04-30410-CON were considered conservative and it was anticipated that YNHH would likely need to request approval for additional beds at a future date. The projections in DN: 04-30410-CON indicated that in FY 2011, a total of 977 beds would be needed. Actual patient days exceeded projections by 15,851 days, establishing a need for more than 1,000 beds in order to maintain an acceptable occupancy level of 80%. A more detailed description of projected and actual volumes is included in Section 2a, Clear Public Need.

A key point that was stressed in DN: 04-30410 and that remains relevant today is that 80% occupancy is generally acknowledged as an optimal level for efficient operation of inpatient services, effective patient flow, and allows a hospital to best incorporate urgent admissions and acute transfers from other institutions. YNHH has been operating above 80% occupancy and volume/census trends during the past few months have exceeded 85% average monthly occupancy. Occupancy levels in medical/surgical areas ranged between 87% and 90% depending on whether the calculation is based on midnight census data (concurrent days) or based on discharge data. As an initial step to address insufficient inpatient capacity, YNHH is requesting an increase of 70 licensed beds in order to better meet increased patient demand in a safe and efficient manner.

b. Provide in table format the current and proposed number of (1) licensed, (2) staffed and (3) available beds for each unit/location involved in this proposal.

Table II. Current and Proposed Beds at YNHH New Haven Campus

Bed Type	Current (FY 2011)				Proposed			
	Adult Med-Surg	Other*	Bassinets	Total	Adult Med-Surg	Other*	Bassinets	Total
Licensed	640	234	92	966	710	234	92	1,036
Available/ Staffed	640	234	92	966	710	234	92	1,036

Source: YNHH Department of Financial Planning
**Note: "Other" includes OB, Pediatrics and Psychiatry*

c. Provide letters that have been received in support of the proposal.

Please see Attachment I.

2. Clear Public Need

a. Explain why there is a clear public need for the proposal. Provide evidence that demonstrates this need.

Need for this proposal is based on the following factors, which will be discussed in further detail:

- **Historical and projected inpatient volume growth clearly demonstrates the need for the immediate creation of additional bed capacity. Growth in the Hospital's average daily census has resulted in high occupancy levels which limit YNHH's ability to efficiently and effectively meet inpatient demand. This is most significant in medical-surgical areas.**
- **Program development, physician recruitments and significant growth of the Y Access Line, all contribute to greatly increased inpatient bed demand. The Y Access Line facilitates the direct admission and inter-facility transfer of acutely ill patients from physician offices, smaller community hospitals, and other healthcare facilities to YNHH.**
- **YNHH has implemented a significant number of performance improvement initiatives focused on throughput and safe patient flow. However, despite these initiatives and improvements, it is clear that the current bed complement cannot adequately meet current and future demand.**
- **Demographic trends and projections indicate a continued increase in demand for YNHH inpatient services, particularly among the elderly population.**

<u>Average Daily Midnight Census Growth</u>

As a hospital offering highly specialized services, often not available at other area hospitals, YNHH does not deny admission to any patient requiring care at the institution. There are significant daily fluctuations in the number of patients requiring an inpatient bed. Managing bed utilization is most difficult in medical/surgical areas. Although overall medical/surgical average occupancy was between 87% and 90% in FY 2011, there were many

days when occupancy approached 100% which then required a number of contingency strategies to be initiated.
Some of the most common contingency strategies are outlined below:

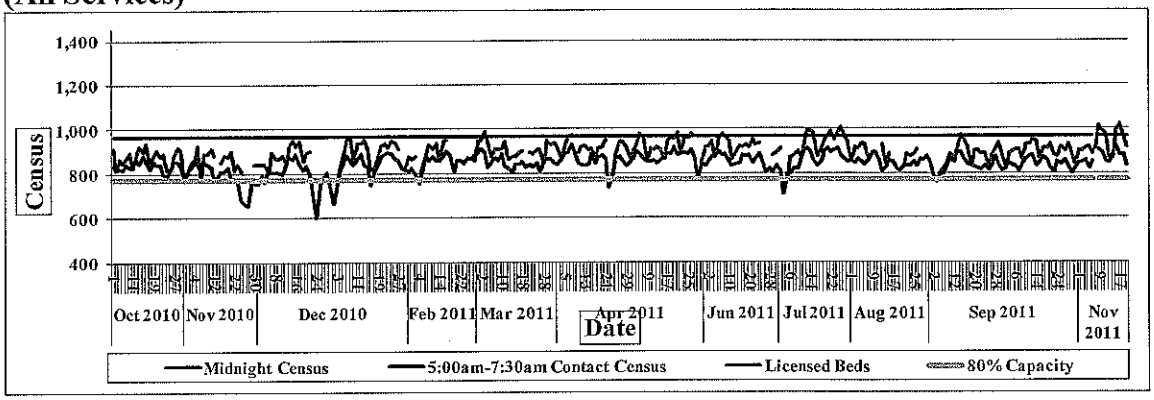
- **There are 16 overflow areas/beds that have been identified throughout the medical/surgical areas and include single rooms converted to doubles, double rooms converted to triples and other areas (e.g. solarium and other clinical support rooms) used as patient rooms. At a minimum, these overflow spaces were required on 523 occasions in FY 2011 when the midnight census (including observation patients) exceeded the number of beds on each nursing unit. The bed utilization staff move patients as necessary to ensure the safest and most appropriate care for patients, cohorting those with shared diagnoses or communicable diseases and placing the patients as close as possible to the area in which the main clinical teams are located. All such patients are provided with portable gasses (if needed) and call bells and when placed in hallways, privacy screens are set up. Nonetheless, the situation is not optimal and leads to lower patient satisfaction. On average, at midnight, there are generally 1-2 patients each day in an overflow area/bed and 5-6 patients waiting in the Emergency Department for an inpatient bed. During the day when contact census (definition below) is at its peak, it is not unusual for there to be 5-6 patients in overflow areas/beds.**
- **Due to the lack of general medical/surgical beds, transfers out of an ICU to a regular bed can be delayed, thus impacting ICU bed availability. Due to the extensive growth (more than 900 incremental patients) of Y Access patients who are significantly clinically compromised, ICU bed need is also increasing and YNHH's ability to place patients in the appropriate type of bed is much more challenging with such high occupancy levels.**

The true number of patients that flow in and out of YNHH each day is not captured by the midnight census, but better reflected in the contact census which impacts the availability and flexibility of inpatient beds throughout the hospital. The contact census, which is a measure of the number of patients occupying a bed each day, is tracked continuously and generally documented and reported between 5:00am and 7:30am each day. However, it should be noted that the contact census can increase by 20-40 additional patients per day at its peak.

Graph III below shows both the overall YNHH midnight census and the contact census for FY 2011 and the first 2 months of FY 2012, plotted against the number of total licensed beds and the number of beds that would be filled at the optimum occupancy level of 80%. The blue line represents the midnight census and the red line represents the contact census. The graph clearly shows that the ADC (based on midnight census) exceeded 80% on the

majority of days and the contact census frequently approached and in some cases exceeded 100% occupancy.

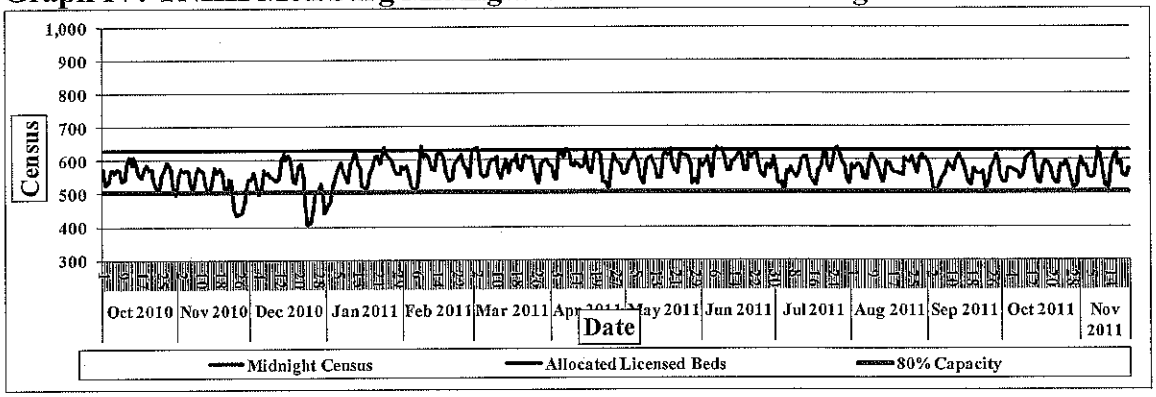
Graph III: YNHH FY 2011 -2012ytd Midnight Census and Contact Census (All Services)



Source: YNHH Decision Support Department

Medical/surgical beds represent 65% of the YNHH inpatient beds, and as Graph IV below shows, the midnight census has been consistently above 80% occupancy and frequently approached 100% occupancy during the past 14 months. These occupancy levels cannot be sustained and additional bed capacity is required to meet the demand for these services.

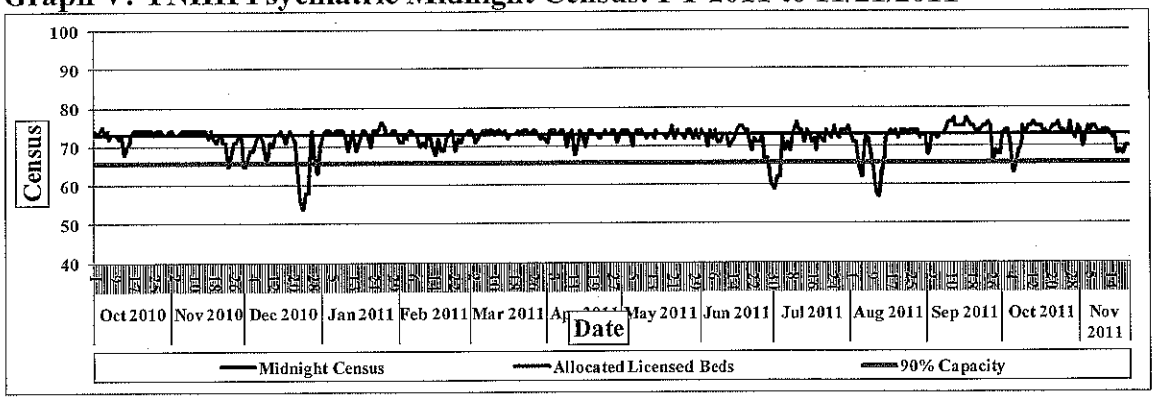
Graph IV: YNHH Med/Surg Midnight Census: FY 2011 through 11/21/2011



Source: YNHH Decision Support Department

As Graph V shows, YNHH psychiatry average midnight census is consistently close to 100% occupancy and these beds are fully utilized. YNHH plans to address the need for additional psychiatric beds through its acquisition of HSR.

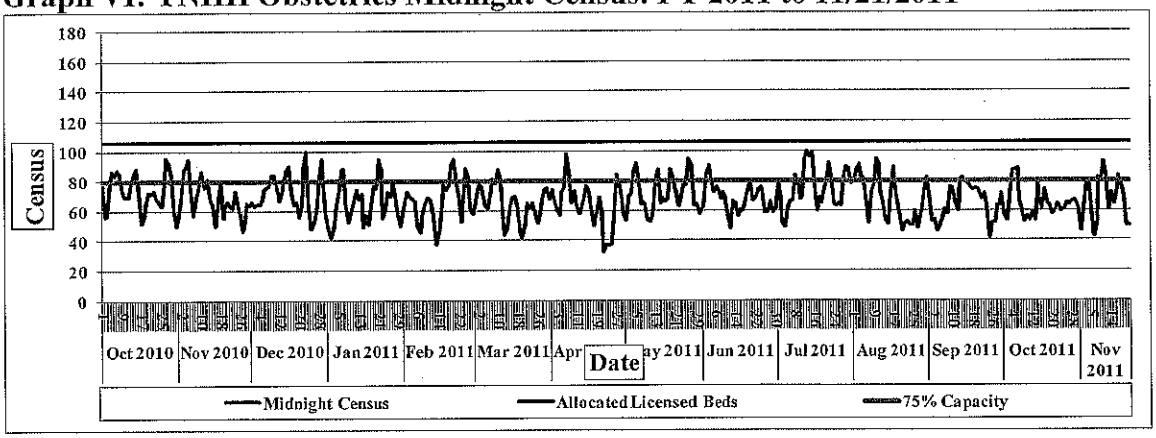
Graph V: YNHH Psychiatric Midnight Census: FY 2011 to 11/21/2011



Source: YNHH Department of Financial Planning

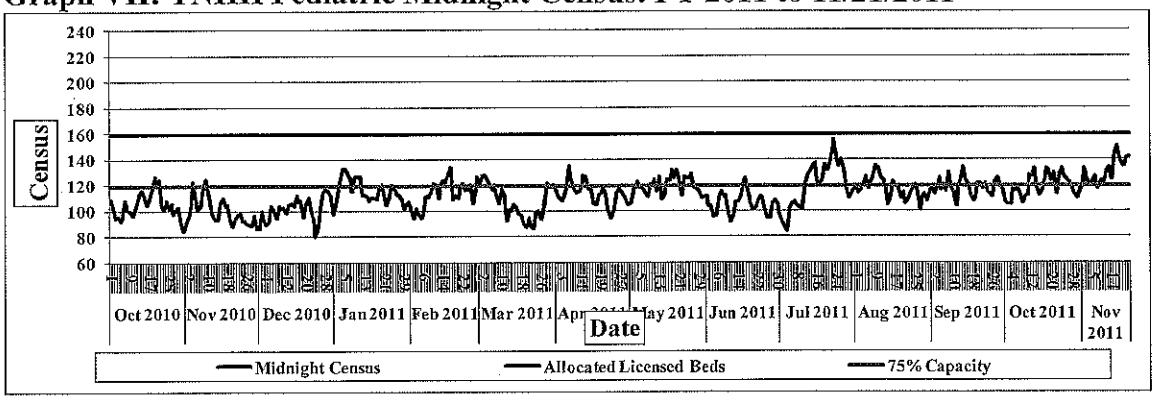
Pediatrics and obstetrics are two departments that experience significant fluctuations in occupancy from day to day as shown below in Graphs VI and VII. Because of the large and frequent fluctuations in census, these areas must maintain a lower average occupancy level in order to accommodate the spikes in census. This practice is consistent throughout the hospital industry. In fact, according to a recent national survey of children's hospitals by the National Association of Children's Hospitals and Related Institutions ("NACHRI"), average occupancy ranged between 70% and 73%. Therefore, 75% is indicated as the target occupancy level in Graphs VI and VII below.

Graph VI: YNHH Obstetrics Midnight Census: FY 2011 to 11/21/2011



Source: YNHH Decision Support Department

Graph VII: YNHH Pediatric Midnight Census: FY 2011 to 11/21/2011



Source: YNHH Decision Support Department

Historical and Projected Volume Growth

Inpatient volumes at YNHH have exceeded past projections. Prior to and since the opening of Smilow Cancer Hospital in the fall of 2009, YNHH has significantly exceeded volume projections. The three tables below (Tables III-a through III-c) depict by major service the projections previously submitted as part of the original Smilow Cancer Hospital CON (DN: 04-30410-CON) for inpatient volume, associated average length of stay (ALOS), and ADC. Following each set of original projections are data outlining the actual volume, ALOS, and ADC, followed by the difference between the projected and actual data. These tables demonstrate how significantly volumes have outpaced previous projections and support that YNHH took a conservative approach to projecting volume.

Throughout this CON application, patient days presented do not include observation patient days, however, in FY 2011 there were 3,278 patient days associated with observation. These patients predominantly reside in beds classified as outpatient and therefore are not part of the licensed inpatient beds.

Between Fiscal Years 2005 and 2011, actual discharges exceeded projections by a range of 1.3% in FY 2005 to almost 7% in FY 2011, while length of stay was lower each year than projected following FY 2005.

Table III-a. Clinical Service Inpatient Volume Smilow Cancer Hospital CON to Actual

Clinical Service Inpatient Volume									
	Cancer Hospital CON Projections (DN 04-30410-CON)							Growth Rate	
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cum.	Avg Ann.
Med/Surg.	29,298	30,108	30,503	31,551	32,699	33,339	34,093	16.4%	2.7%
Pediatrics	6,645	6,797	7,402	7,230	7,519	7,910	8,082	21.6%	3.6%
OB	9,466	9,660	9,553	9,314	9,040	8,987	8,798	-7.1%	-1.2%
Psych	2,591	2,646	2,688	2,703	2,752	2,797	2,827	9.1%	1.5%
Total	**48,000**	**49,211**	**50,146**	**50,798**	**52,010**	**53,033**	**53,800**	**12.1%**	**2.0%**
	Actual							Growth Rate	
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cum.	Avg Ann.
Med/Surg.	30,172	31,396	32,856	34,088	36,432	38,998	39,608	31.3%	5.2%
Pediatrics	6,507	6,770	6,832	6,506	6,221	6,349	6,702	3.0%	0.5%
OB	9,485	9,604	9,200	8,892	8,763	8,439	8,539	-10.0%	-1.7%
Psych	2,451	2,592	2,543	2,535	2,815	2,813	2,602	6.2%	1.0%
Total	**48,615**	**50,362**	**51,431**	**52,021**	**54,231**	**56,599**	**57,451**	**18.2%**	**3.0%**
	Difference from Original Projections							Growth Rate	
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cum.	Avg Ann.
Med/Surg.	874	1,288	2,353	2,537	3,733	5,659	5,515	14.9%	2.5%
Pediatrics	-138	-27	-570	-724	-1,298	-1,561	-1,380	-18.6%	-3.1%
OB	19	-56	-353	-422	-277	-548	-259	-2.9%	-0.5%
Psych	-140	-54	-145	-168	63	16	-225	-2.9%	-0.5%
Total	**615**	**1,151**	**1,285**	**1,223**	**2,221**	**3,566**	**3,651**	**6.1%**	**1.0%**

Source: YNHH Department of Financial Planning

Note: Statistics from Smilow Cancer Hospital CON have been grouped into four service areas as noted above.

Table III-b. ALOS Smilow Cancer Hospital CON to Actual

ALOS									
	Cancer Hospital CON Projections (DN 04-30410-CON)							Growth Rate	
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cum.	Avg Ann.
Med/Surg.	5.52	5.52	5.56	5.50	5.52	5.52	5.50	-0.4%	-0.1%
Pediatrics	6.22	6.16	5.80	5.87	5.69	5.59	5.54	-10.9%	-1.8%
OB	2.76	2.80	2.87	2.92	2.86	2.90	2.94	6.4%	1.1%
Psych	9.74	9.69	9.66	9.63	9.61	9.59	9.57	-1.7%	-0.3%
Total	5.30	5.30	5.30	5.30	5.30	5.30	5.30	0.0%	0.0%
	Actual							Growth Rate	
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cum.	Avg Ann.
Med/Surg.	5.44	5.29	5.16	5.31	5.12	4.95	5.32	-2.3%	-0.4%
Pediatrics	6.53	6.53	6.21	5.96	6.62	6.55	5.74	-12.1%	-2.0%
OB	2.89	2.81	2.84	2.94	2.93	2.90	2.87	-0.6%	-0.1%
Psych	9.93	9.73	10.32	10.59	9.37	9.12	10.45	5.2%	0.9%
Total	5.32	5.21	5.14	5.24	5.16	5.03	5.24	-1.5%	-0.2%
	Difference from Original Projections							Growth Rate	
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cum.	Avg Ann.
Med/Surg.	-0.07	-0.23	-0.39	-0.19	-0.41	-0.57	-0.18	-1.9%	-0.3%
Pediatrics	0.31	0.37	0.41	0.09	0.93	0.96	0.20	-1.2%	-0.2%
OB	0.13	0.01	-0.03	0.01	0.06	0.00	-0.07	-7.0%	-1.2%
Psych	0.20	0.04	0.66	0.96	-0.23	-0.47	0.88	6.9%	1.2%
Total	0.02	-0.09	-0.16	-0.06	-0.14	-0.27	-0.06	-1.5%	-0.2%

Source: YNHH Department of Financial Planning

Note: Statistics from Smilow Cancer Hospital CON have been grouped into four service areas as noted above.

Table III-c. Patient Days Smilow Cancer Hospital CON to Actual

Patient Days									
	Cancer Hospital CON Projections (DN 04-30410-CON)							Growth Rate	
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cum.	Avg Ann.
Med/Surg.	161,699	166,245	169,486	173,508	180,584	184,020	187,419	15.9%	2.7%
Pediatrics	41,329	41,850	42,924	42,455	42,746	44,212	44,804	8.4%	1.4%
OB	26,146	27,083	27,401	27,242	25,884	26,020	25,850	-1.1%	-0.2%
Psych	25,225	25,640	25,961	26,025	26,437	26,823	27,065	7.3%	1.2%
Total	254,399	260,818	265,772	269,230	275,651	281,075	285,138	12.1%	2.0%
	Actual							Growth Rate	
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cum.	Avg Ann.
Med/Surg.	164,272	166,166	169,698	181,074	186,399	193,015	210,786	28.3%	4.7%
Pediatrics	42,518	44,218	42,413	38,800	41,166	41,562	38,493	-9.5%	-1.6%
OB	27,398	27,024	26,100	26,119	25,649	24,459	24,508	-10.5%	-1.8%
Psych	24,346	25,225	26,237	26,853	26,389	25,665	27,202	11.7%	2.0%
Total	258,534	262,633	264,448	272,846	279,603	284,701	300,989	16.4%	2.7%
	Difference from Original Projections							Growth Rate	
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cum.	Avg Ann.
Med/Surg.	2,573	-79	212	7,566	5,815	8,995	23,367	12.4%	2.1%
Pediatrics	1,189	2,368	-511	-3,655	-1,580	-2,650	-6,311	-17.9%	-3.0%
OB	1,252	-59	-1,301	-1,123	-235	-1,561	-1,342	-9.4%	-1.6%
Psych	-879	-415	276	828	-48	-1,158	137	4.4%	0.7%
Total	4,135	1,815	-1,324	3,616	3,952	3,626	15,851	4.3%	0.7%

Source: YNHH Department of Financial Planning
Note: Statistics from Smilow Cancer Hospital CON have been grouped into four service areas as noted above.

Medical and surgical areas have experienced the most significant growth and have the highest occupancy levels. Table IV below summarizes medical and surgical inpatient statistics from DN: 04-30410-CON and actual volumes experienced between 2005 and 2011. Since FY 2005, medical-surgical occupancy, based on discharge data, has increased from 86.4% in FY 2005 to 90.3% in FY 2011. Although not included in Table IV below, occupancy levels have continued to increase in FY 2012 reaching 91% in November 2011.

Table IV. YNHH Med-Surg ADC and Occupancy Smilow Cancer Hospital CON to Actual

Total Med/Surg. Only							
Projected Inpatient Volume from the Cancer Hospital CON							
	Fiscal Year						
	2005	2006	2007	2008	2009	2010	2011
Total Med/Surg. Patient Days	161,699	166,245	169,486	173,508	180,584	184,020	187,419
Average Length of Stay	5.52	5.52	5.56	5.50	5.52	5.52	5.50
Average Daily Census	443	455	464	475	495	504	513
Total Patient Discharges	29,298	30,108	30,503	31,551	32,699	33,339	34,093
Available Beds	521	532	558	562	584	635	640
Occupancy**	85.0%	85.6%	83.2%	84.6%	84.7%	79.4%	80.2%

Total Med/Surg. Only							
Actual Inpatient Volume from FY 2005 through FY 2011							
	Fiscal Year						
	2005	2006	2007	2008	2009	2010	2011
Total Med/Surg. Patient Days	164,272	166,166	169,698	181,074	186,399	193,015	210,786
Average Length of Stay	5.44	5.29	5.16	5.31	5.12	4.95	5.32
Average Daily Census	450	455	465	496	511	529	577
Difference from original projections	**7**	**0**	**1**	**21**	**16**	**25**	**64**
Total Patient Discharges	30,172	31,396	32,856	34,088	36,432	38,998	39,608
Difference from original projections	**874**	**1,288**	**2,353**	**2,537**	**3,733**	**5,659**	**5,515**
Available Beds	521	532	558	562	584	635	640
Occupancy	86.4%	85.6%	83.3%	88.3%	87.4%	83.3%	90.2%

Source: YNHH Department of Financial Planning

YNHH analyzed whether beds could be reallocated from non medical-surgical areas and found this was not possible as described below:

- **As shown previously in the census graphs, obstetrics census fluctuates significantly and occupancy levels must remain lower to be able to address wide swings in demand. YNHH is one of a few high risk obstetrical providers in the state offering care for mothers with complicated deliveries and a Level III neonatal intensive care unit for premature or acutely ill newborns. Therefore, given the demand, the number of beds allocated to obstetrics must be maintained.**
- **As shown previously in the census graphs, psychiatry bed occupancy levels average approximately 100%.**
- **Occupancy levels for the YNHH Children's Hospital are maintained at lower levels than adult medical-surgical areas in order to be available for peak census, which occurs in the fall and winter months, as well as YNHH's status as one of only two pediatric hospitals in Connecticut and the resulting need to ensure sufficient capacity to accommodate transfer of pediatric patients from other hospitals via the Y Access Line. Pediatric transfers via the Y Access Line have increased significantly as further discussed below.**

As a result of these factors, the only way to adequately accommodate the ongoing high and increasing demand for YNHH's medical-surgical inpatient services is by adding beds.

Physician Recruitments

Over the past several years, YNHH has recruited numerous clinical physician leaders whose specialized capabilities, expertise, and advanced skills have expanded the clinical services available at the Hospital. Although not an exhaustive list, Table V below is a listing of some of the major recent and planned physician recruitments by service, which includes several key leadership positions. Many of the recently recruited physicians are national experts in their specialties and are expected to attract patients above and beyond the level of organic volume growth experienced at YNHH in recent years.

Table V. Recent and Planned Physician Recruitments

Department/Division	Recent Physician Recruitments (FY 2009, 2010, 2011)	Planned Physician Recruitments (FY 2012-2015)
Surgery	1 GI Surgeon 2 Breast Surgeons 2 ENTs 2 Plastic Surgeons 1 Urologist	1 Plastic Surgeon* 5 Urologists
Orthopedics	3 Orthopedic Surgeons	1 Orthopedic Surgeon*
Neurosciences	1 Gen'l Neurology 2 MS 1 Neuromuscular 1 Pedi Neurosurgery 1 Gen'l Neurosurgery 3 Epilepsy 1 Neurovascular 1 Neuro-oncologist*	2 Epilepsy* 2 Pedi Epilepsy 1 Neuro-Degenerative* 1 Stroke* 1 Neurointerventionalist 1 Neuro-ophthalmologist 1 Movement Disorders
Internal Medicine	2 Thoracic Intervention(* for 1) 1 GI 3 Infectious Disease	

Heart & Vascular	**1 VAD* 1 Pedi Card Chief 1 Peripheral Vascular* 1 Heart Failure 1 CV Medicine 1 Noninvasive Surg* 1 Thoracic Surgery 1 Electrophysiology* 1 Interventional Radiology**	**1 Vascular* 1 Heart Failure* 1 Pedi CT Surgery Chief***
OB/GYN	**2 OB/GYNs**	
Pediatrics	**1 Emergency Med 1 Nephrologist 3 Neonatologists 1 Pedi Surgery 1 Hematology 1 GI 1 Neurology**	
Oncology	**2 Thoracic* 2 Breast* 2 GI* 1 Hematology***	**2 Urology-Oncology***
Ophthalmology	**1 Ophthalmologist**	

*** indicates incremental discharges projected**

<u>Y Access Line</u>

In addition to the significant number of physician recruitments, YNHH volume has increased due to the new 24/7 Y Access Line which facilitates the direct admission and inter-facility transfer of acutely ill patients from physician offices, smaller community hospitals, and other healthcare facilities to YNHH for tertiary levels of care. The program, which opened in August 2010, addresses the need for patients to be admitted or transferred in an efficient and timely manner and provides referring physicians with ongoing access and communication regarding their patients' conditions.

Inpatient cases transferred to YNHH totaled 2,996 the year before the Y Access Line was initiated and increased to 3,990 during the first year of its operation. This represents a 33% increase in volume and in the first two months of the second year of operation, volumes have increased 46% as compared to the same time period in the previous year. Clinical areas which have experienced the largest increases in transfers include pediatrics, medicine, surgery and neurosciences. These data are summarized in Table VI below.

Table VI. Y Access Line to YNHH by Service Line

Service	Quarter 1			
	FY10	FY11	VAR	%
Medicine	118	169	51	**43%**
Surgery	68	83	15	**22%**
Cardiac	303	279	-24	**-8%**
OB-Gyn	32	47	15	**47%**
Neurosciences	55	83	28	**51%**
Orthopedics	13	17	4	**31%**
Pediatrics	121	119	-2	**-2%**
Others	**10**	**13**	**3**	**30%**
TOTAL:	**720**	**810**	**90**	**13%**

Service	Quarter 2			
	FY10	FY11	VAR	%
Medicine	136	183	47	**35%**
Surgery	70	81	11	**16%**
Cardiac	327	328	1	**0.3%**
OB-Gyn	26	22	-4	**-15%**
Neurosciences	82	137	55	**67%**
Orthopedics	20	15	-5	**-25%**
Pediatrics	110	197	87	**79%**
Others	9	31	22	**244%**
TOTAL:	**780**	**994**	**214**	**27%**

Service	Quarter 3			
	FY10	FY11	VAR	%
Medicine	135	154	19	**14%**
Surgery	77	119	42	**55%**
Cardiac	314	345	31	**10%**
OB-Gyn	36	12	-24	**-67%**
Neurosciences	65	122	57	**88%**
Orthopedics	21	22	1	**5%**
Pediatrics	108	227	119	**110%**
Others	12	35	23	**192%**
TOTAL:	**768**	**1,036**	**268**	**35%**

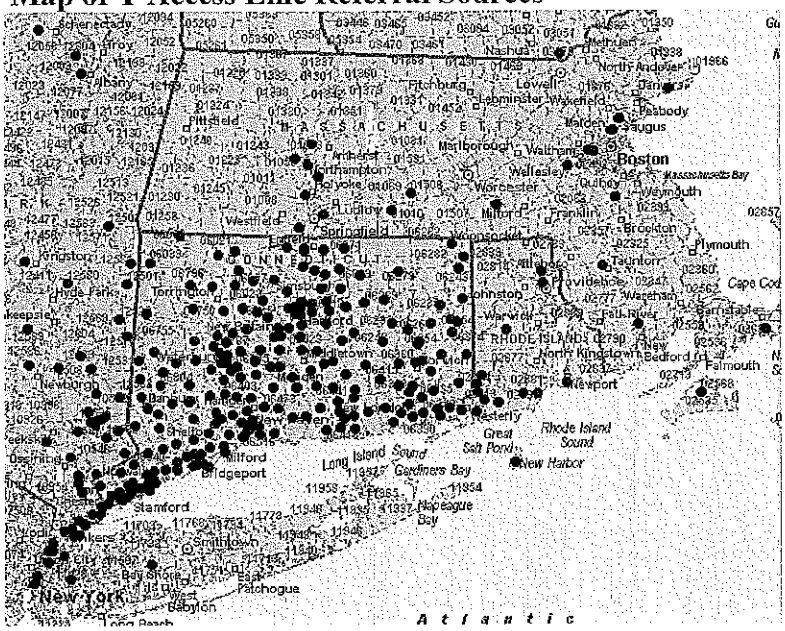
Service	Quarter 4			
	FY10	FY11	VAR	%
Medicine	133	195	62	**47%**
Surgery	76	193	117	**154%**
Cardiac	295	320	25	**8%**
OB-Gyn	40	29	-11	**-28%**
Neurosciences	64	120	56	**88%**
Orthopedics	20	24	4	**20%**
Pediatrics	92	216	124	**135%**
Others	8	53	45	**563%**
TOTAL:	**728**	**1,150**	**422**	**58%**

Source: YNHH Y Access Line

Most patients referred through the Y Access Line are high acuity and unable to be treated elsewhere for a variety of reasons. High acuity patients generally require longer hospital stays, creating even greater demand for beds to accommodate both increasing volumes and higher acuity. To date, the patient transfers received through the Y Access Line have had an ALOS of 10.81 days; more than double that of the 5.24 ALOS for all YNHH inpatients in FY 2011. It should be noted that the ALOS in FY 2011 was lower than the 5.3 days projected in DN: 04-30410-CON (Smilow Cancer Hospital CON). Although YNHH aggressively manages length of stay, patients referred through the Y Access Line present significant challenges to reducing length of stay due to their high acuity and complicated medical conditions. As this volume continues to grow, continued length of stay reductions will be challenging.

The Y Access Line also demonstrates YNHH's status as a destination medical center. In the first full year of the Y Access Line implementation, YNHH has received referrals from 45 different Connecticut health care facilities outside the Yale-New Haven Delivery Network, 53 U.S. hospitals in 13 states outside of Connecticut and 7 hospitals outside the continental U.S. including Puerto Rico and 4 foreign countries. In addition, YNHH is receiving a larger number of patients from all areas of Connecticut and bordering states. The map below illustrates the regional geographic distribution of Y Access Line cases transferred to YNHH.

Map of Y Access Line Referral Sources



Source: YNHH Y Access Line

Performance Improvements

Faced with explosive volume growth, overcrowding and limited space and staff resources, YNHH embarked on an extensive performance improvement effort. While YNHH has worked on safe patient flow throughout the previous decade, a renewed and significant effort began in 2008, with the assistance of Carpedia International. This effort sought to improve clinical, operational and financial outcomes by embracing five key components of demand capacity management: the ability to communicate across functional units in a hospital; intradepartmental collaboration; the ability to standardize "best" practices; empowerment of staff; and creation of institution memory. Eight areas were identified for the initial focus and included: environmental services. central transport, diagnostic radiology transport, patient services, physicians, bed assignment, the adult emergency department and the heart and vascular center. The Executive Vice President and Chief Operating Officer (COO) of YNHH served as the Executive Sponsor of this initiative, called Safe Patient Flow. The Department of Operations Support, a Lean/Six Sigma trained internal consultation group, provided expertise in performance improvement methodologies, change management as well as project oversight and data analytics. This initiative involved the development of complex process maps which reflected how patients moved throughout YNHH, how staff documented and performed their daily tasks and how physicians provided care. These process maps were displayed so employees and physicians were engaged and could verify/clarify these processes. Method changes were then developed based on areas of opportunity identified in the process maps and were validated through hours of independent observation. Method changes were prioritized and piloted to verify their efficacy prior to full implementation. The

implementation of these changes occurred with the assistance of YNHH Department of Operations Support to coach, train and support staff through the transition.

In order to create alignment and execute operational changes across all levels of YNHH, this initiative involved four key operational groups. A Steering Committee, chaired by YNHH's COO and Vice President of Performance Management consisted of senior leaders from key departments and services lines and oversaw the initiative. The Steering Committee met on a weekly basis and utilized an Executive Throughput Score Card which compared area performance against previous time frames, year-to-date and targets. A copy of the Executive Throughput Scorecard FY 2012 is included as Attachment II and demonstrates the significant improvements made in productivity and patient throughput as well as the extent to which these metrics are tracked and monitored on a regular basis. A Vice President Update group for each of the eight departments met weekly where information was communicated about daily operating reports, variances, behavioral audits and corrective action plans via area specific scorecards. Frontline managers oversaw daily meetings called "Daily Huddles" where operating results with key staff members were reviewed and discussed. Lastly, Variance Action meetings which were chaired by operations councils occurred as needed to review variances and evaluate correction action plans.

Technology played a key role in this initiative. New visual controls were implemented to aid physicians and other providers with identifying patients ready for discharge and ensure bed turnover and availability for newly admitted patients. Each inpatient unit had an LCD monitor which provided color coded information about a patient's discharge readiness and when beds would be vacated, cleaned and ready for the next patient. YNHH utilized bed management dashboard technology (formerly Eclipsys, now Allscripts) to optimize the placement of patients on nursing units based on clinical needs and physician preferences and centralize the hospital's bed management process. The system was optimized with text pagers to proactively alert staff with updates on bed availability. Navicare was used in perioperative services to display the flow of patients in the OR and PACU. All of these tools continue to be utilized.

The initiative also led to the development of a new role in transport and environmental services. A "monitor watcher" role was developed in both departments to dispatch transporters and environmental services to priority areas to expedite patient flow.

The results of this initiative have been significant and have improved length of stay, throughput, efficiency and safe patient flow. The following listing highlights those specific areas where significant improvements were achieved:

- **Improved the number of discharges by 11 am each day;**
- **Decreased the time involved with bed turnover;**

  - **In Environmental Services, method changes included the establishment of a dedicated discharge team as well as standardization of procedure, tools and equipment. This resulted in a 23% decrease in bed turnover time from 80 to 65 minutes;**
- **Reduced the amount of time a bed remains idle;**
- **Reduced the transition time for patients being transferred between a med/surg unit and intensive care units;**
- **Improved patient transport time;**
  - **In Patient Transport, removed zones, consolidated the department and reduced batches of requests resulting in improved transport times, despite the addition of nearly 500,000 square feet due to the opening of the Smilow Cancer Hospital.**
- **Despite increasing ED volume, increased ED throughput;**
- **Improved the accuracy of ED admission requests; and**
- **Improved Recovery Room throughput.**

This initiative has resulted in a culture change throughout YNHH. There is improved mutual accountability, better communication and a team mentality that has become the way the organization functions on a daily basis. The strategies and efforts that began with the Safe Patient Flow initiative are now part of the day-to-day work of YNHH staff and physicians and work is coordinated across departments. The steering group ensures that all decisions impacting safe patient flow maximize performance across the hospital. No area or department is permitted to optimize its performance at the expense of another. These efforts have received national recognition. YNHH presented at two national conferences, one sponsored by the American Hospital Association (AHA) in the Spring of 2010 and the second sponsored by University HealthSystem Consortium (UHC) in 2011. In addition, YNHH was asked to participate in a poster presentation at the Institute for Healthcare Improvement (IHI) in December of 2011. A copy of the UHC presentation has been included as Attachment III.

Yet, despite all of these tremendous improvements in throughput and safe patient flow enhancements, YNHH continues to experience inpatient capacity constraints as have been described throughout this CON application. As a result, the institution has reached the point where additional beds are the only solution to meet the increasing current and projected inpatient volume.

<u>Demographic Trends and Projections</u>

In the original Smilow Cancer Hospital CON (DN: 04-30410-CON), it was noted that the Census Bureau projected that the U.S. population would increase 16% between 2000 and 2030. However, between 1998 and 2008, the U.S. population ages 65 and over increased by approximately the same amount: 15% (Source: "National Center for Health Statistics Data Brief", U.S. Department of Health and Human Services, August 2010). By 2011, the first cohort of the American

Baby Boom generation - those born between 1946 and 1966 - reached age 65. By 2030, this older adult population will swell to more than 70 million and account for one in every five Americans. Many older people, especially the "oldest old," have multiple chronic diseases (for example, diabetes, hypertension and heart failure) as well as geriatric syndromes (for example, falls, cognitive decline and disability) that require high levels of expert health care (Source: Boult, et al, *Health Affairs,* 29:5, 2010, p. 811).

Projected Connecticut demographics also reflect this trend: the majority of the population growth in the next five years is projected to occur in the older age cohorts that will require the most medical care and consume a substantial portion of health care resources. Claritas projects a 21.6% increase in the Connecticut ages 65 to 74 cohort alone in the next five years. The population in YNHH's historical core service area is projected to increase slightly between 2010 and 2015, but the 65+ age cohort is expected to increase by nearly 11,000 individuals, an 11% increase. YNHH's geriatric (65+) inpatient discharges increased 33% between FY 2004 and FY 2011 and are projected to continue to increase. This significant increase in the over-65 population in the state, in addition to the actual increase in geriatric volumes experienced at YNHH, further underscores the need for YNHH to be prepared to treat all patients, including the growing number of elderly with significant comorbidities.

b. Provide the following regarding the proposal's location:

i. The rationale for choosing the proposed service location;

As described in detail above, inpatient growth on the main YNHH campus has far exceeded projections and dictates an immediate need for the proposed 70-bed increase as the first phase of necessary longer term facility planning. This increase is required regardless of YNHH's ability to complete the HSR transaction. In light of YNHH's current bed shortfall and the expected growth of patient demand described in response to items 2.a above and items 2.b.iii, 2.c.i, 2.c.ii, 3.d and 3.e below, YNHH requires the additional 70 beds that are the subject of this CON application in the short term, and projects a need for additional beds over the longer term to satisfy future patient demand.

ii. The service area towns and the basis for their selection;

As mentioned, many YNHH tertiary and quaternary services are regional or national referral services, and will increasingly serve patients from within and outside Connecticut. As a destination medical center that draws patients for its specialized care that few organizations in the region can offer, YNHH's service area for many tertiary and quaternary services is more far-reaching than is depicted by its historical core service area towns of Ansonia, Bethany, Branford, Cheshire, Clinton, Deep

River, Derby, East Haven, Essex, Guilford, Hamden, Killingworth, Madison, Meriden, Milford, New Haven, North Branford, North Haven, Old Saybrook, Orange, Oxford, Seymour, Wallingford, Westbrook, West Haven and Woodbridge. This is evidenced by the increasing referrals via the Y Access Line that come from hospitals and physicians across the state.

iii. The population to be served, including specific evidence such as incidence, prevalence, or other demographic data that demonstrates need;

The population in the state of Connecticut is increasing slightly. However, the older age cohorts, which utilize a larger portion of inpatient and outpatient services, are increasing at a higher rate.

Table VII depicts the projected population increase in YNHH's historical core service area between 2010 and 2015, driven by growth in the over-45 age cohorts, particularly the 65+ cohort which is projected to increase by nearly 11,000 individuals, or 11%. The 65+ cohort is also expected to increase over 12% in the rest of the State of Connecticut. These residents are also served by YNHH.

Table VII. Total Historical Core Service Area Population

Historical Core Service Area

Age Group	2010	2015	2010-2015 Growth
00-17	157,688	153,828	(3,860)
18-44	249,334	240,558	(8,776)
45-64	192,789	198,657	5,868
65+	99,136	109,989	10,853
Total	**698,947**	**703,032**	**4,085**

Total Growth	0.6%
65+ Growth	10.9%

State Excluding Historical Core Service Area

Age Group	2010	2015	2010-2015 Growth
00-17	654,977	633,527	(21,450)
18-44	969,593	933,008	(36,585)
45-64	793,842	821,476	27,634
65+	394,671	443,186	48,515
Total	**2,813,083**	**2,831,197**	**18,114**
Grand Total	**3,512,030**	**3,534,229**	**22,199**

Grand Total Growth	0.6%
65+ Grand Total Growth	12.0%

Source: Claritas

As stated above, YNHH is increasingly a destination medical center of choice, drawing patients both regionally and nationally. In addition to its nationally distinguished medical staff, YNHH has many specialized and novel services that are not offered at the same level of expertise elsewhere in the state or region, or in many cases are not offered at all. Some of the Hospital's distinctive clinical services include:

- **Cardiac services:**
  - **Heart valve program**
  - **Implantable ventricular assist devices (VADs)**
  - **Percutaneous aortic valve replacement (investigational)**
  - **Less-invasive (mini-sternotomy) aortic valve replacement**
  - **Percutaneous pulmonic valve replacement (investigational)**
  - **Less-invasive (mini-thoracotomy) mitral valve replacement/repair**
  - **Valve-sparing aortic root replacement**
- **Connecticut's only bi-plane hybrid MRI Operating Room**
- **Neuro-interventional Center:**

- **Neurological Intensive Care Unit staffed specifically with neurointensivists**
- **Intracranial aneurysms-GDC therapy**
- **Arteriovenous malformations (AVMs)**
- **Dural arteriovenous fistula (DAVFs)**
- **Pre-operative tumor embolization**
- **Emergency stroke therapy**
- **Carotid artery angioplasty & stenting**
- **Vertebroplasty**
- **Hemangioma treatment**

- **Connecticut's only liver transplant program**
- **Level I trauma center**
- **Cancer treatment:**
  - **Molecular profiling for cancer**
  - **Bone marrow & stem cell transplants**
  - **Rare and complex cancer treatment (recognized by United/Optum Health as a Center of Excellence for a dozen tumor sites)**

As Table VIII demonstrates, YNHH inpatient volume from outside its historical core service area (defined in 2.b.ii.) has increased significantly since FY 2007 (27% from Connecticut and 15% from outside the state), further underscoring YNHH's position as a destination medical center of choice that provides highly specialized, high quality care.

Table VIII. YNHH Discharges by Geographic Area

YNHH Discharges by Geographic Area							
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2007-FY 2011	
						#	%
Historical Core SA	39,089	38,829	40,556	42,055	42,164	3,075	7.9%
State Excluding Hist Core SA	10,948	11,683	12,335	13,115	13,950	3,002	27.4%
Outside of State	1,427	1,623	1,529	1,592	1,636	209	14.6%
YNHH Total	51,464	52,135	54,420	56,762	57,750	6,286	12.2%

Source: CHIME

iv. How and where the proposed patient population is currently being served;

The proposed patient population is currently being served by YNHH, as evidenced by the Hospital's high census and occupancy rate.

v. All existing providers (name, address, services provided) of the expanded service in the towns listed above and in nearby towns;

Although other hospitals in the area – including Milford, HSR, Griffin, and MidState - provide inpatient acute care beds, in many cases, YNHH provides higher acuity or specialized tertiary and quaternary services. As a result, patients cannot obtain similar levels of care at most area hospitals.

vi. Describe existing referral patterns in the area to be served by the proposal; and

YNHH is a nationally ranked hospital in several specialties as well as an academic medical center. As a result, physicians (both faculty and community) refer patients to YNHH both from within and outside the historical core service area; in addition, patients from outside the state and historical core service area increasingly seek out YNHH for its highly specialized care and nationally recognized physicians. There are strong existing referral patterns between YNHH physicians and community-based physicians. In addition, the Y Access Line has both expanded and created new physician referral relationships in cases where patients cannot obtain the necessary services or level of care at other hospitals.

vii. The effect of the proposal on existing providers, explaining how current referral patterns will be affected by the proposal.

Given that the majority of patients seek care at YNHH or physicians refer patients to YNHH for its specialized tertiary and quaternary services, minimal effect is expected on other existing providers. The application does not assume a change in the availability of existing hospitals or physician-hospital referral patterns.

c. Provide the following regarding the proposed increase in licensed beds:

i. Explain the specific rationale for the increase in beds at each unit/location, including:

(1) The calculation or other methods by which the proposed increases were determined, clearly identifying all underlying assumptions used;
(2) The patient population that will be served; and
(3) The benefits of each proposed increase.

Projected volumes were developed utilizing the assumptions and methodology as described in response to question 3(c).

For the short-term, YNHH has identified space previously used as inpatient units that exists in three closed units in its East Pavilion. This space in the East Pavilion can accommodate 70 additional beds and will be used for medical/surgical patients. This space will not require any additional construction/renovation to add the 70 additional beds, except for wiring and installation of a nurse call system and some minor repairs. A total of 28 beds will become operational in FY 2012 and the remaining 42 will be operational in FY 2013. Due to the lead time required to hire staff as well as prepare the units in the East Pavilion, all 70 beds cannot

be immediately opened. In addition, the emergency department is temporarily utilizing one unit in the East Pavilion while the ED renovation is completed. All remaining beds are planned to be operational by January 1, 2013.

Table IX-a and Table IX-b demonstrate how the addition of 70 licensed beds will reduce occupancy levels slightly for the next two fiscal years, but are clearly not a long term solution.

Table IX-a: Actual & Projected Bed Demand with Addition of 70 Licensed Beds

Total							
Actual & Projected Bed Demand with Addition of 70 Licensed Beds							
Fiscal Year	Licensed Bed Increase	Licensed Beds	Available Bed Increase	Available Beds	Actual/ Projected Patient Days	Actual/ Projected ADC	% Occupancy
2008		944		889	272,846	748	84.1%
2009		944		906	279,603	766	84.6%
2010		966		959	284,701	780	81.3%
2011		966		966	300,989	825	85.4%
2012	+70	1,036	+28	994	304,504	834	83.9%
2013		1,036	+42	1,036	310,229	850	82.0%
2014		1,036		1,036	316,108	866	83.6%
2015		1,036		1,036	322,151	883	85.2%

Source: *YNHH Department of Financial Planning*

Table IX-b: Actual & Projected Med-Surg Only Bed Demand with Addition of 70 Licensed Beds

Total Med/Surg. Only							
Actual & Projected Bed Demand with Addition of 70 Licensed Beds							
Fiscal Year	Licensed Bed Increase	Licensed Beds	Available Bed Increase	Available Beds	Actual/ Projected Patient Days	Actual/ Projected ADC	% Occupancy
2008		562		562	181,074	496	88.3%
2009		580		584	186,399	511	87.4%
2010		608		635	193,015	529	83.3%
2011		640		640	210,786	577	90.2%
2012	+70	710	+28	668	211,660	580	86.8%
2013		710	+42	710	215,722	591	83.2%
2014		710		710	219,897	602	84.9%
2015		710		710	224,186	614	86.5%

Source: *YNHH Department of Financial Planning*

Growing inpatient bed demand is further challenged by numerous complicating factors such as the existence of double and triple rooms; the need for patient isolation and contact precautions for infections such as MRSA, VRE, and C. Difficile; the lack of post-acute, rehabilitation, and long-term care facilities to which patients can be transferred; the declining number of inpatient psychiatric facilities; significant seasonal fluctuations; and routine renovations and construction. The existing bed complement makes it increasingly difficult to serve all of the patients who seek and come

to YNHH for their care.

By providing short-term relief, YNHH will be able to accommodate the patients who seek the expert care that it offers as a tertiary/quaternary referral center.

ii. For the last three complete FYs, the current FY-to-date, and the first three full years of the proposal, provide the following (by service as relevant to the proposal):
(1) Occupancy rate;
(2) Average daily census;
(3) Variability in census including peak census; and
(4) Patient days.

Please see Tables X-a through X-e below for these proposed metrics in total and by clinical service. Please note these tables include data based on discharge statistics.

Table X-a Proposed with Bed Increase: Med-Surg Only

	Proposed with Bed Increase							
Total Med/Surg	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Occupancy Rate	88%	87%	83%	90%	87%	83%	85%	87%
Average Daily Census	496	511	529	577	580	591	602	614
Variability in Census:								
High*	549	552	611	614	626	639	652	665
Low*	367	388	359	390	398	406	414	422
Patient Days	181,074	186,399	193,015	210,786	211,660	215,722	219,897	224,186

Source: YNHH Department of Financial Planning

Table X-b Proposed with Bed Increase: Obstetrics Only

	Proposed with Bed Increase							
Obstetrics	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Occupancy Rate	75%	73%	70%	70%	73%	74%	75%	76%
Average Daily Census	72	70	67	67	70	71	72	73
Patient Days	26,119	25,649	24,459	24,508	25,413	25,834	26,264	26,708

Source: YNHH Department of Financial Planning

Table X-c Proposed with Bed Increase: Pediatrics Only

Proposed with Bed Increase								
Pediatrics	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Occupancy Rate	67%	74%	73%	67%	70%	72%	73%	75%
Average Daily Census	106	113	114	105	110	112	115	117
Patient Days	38,800	41,166	41,562	38,493	40,167	41,000	41,850	42,724

Source: YNHH Department of Financial Planning

Table X-d Proposed with Bed Increase: Psych Only

Proposed with Bed Increase								
Psych	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Occupancy Rate	101%	99%	96%	102%	102%	102%	102%	102%
Average Daily Census	74	72	70	75	75	75	75	75
Patient Days	26,853	26,389	25,665	27,202	27,202	27,202	27,202	27,202

Source: YNHH Department of Financial Planning

Table X-e Proposed with Bed Increase: Total

Proposed with Bed Increase								
Total	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Occupancy Rate	84%	85%	81%	83%	88%	82%	84%	85%
Average Daily Census	748	766	780	825	834	850	866	883
Patient Days	272,846	279,603	284,701	300,989	304,504	310,229	316,108	322,151

Source: YNHH Department of Financial Planning

d. Provide a copy of any articles, studies, or reports that support the statements made in this application justifying need for the proposal, along with a brief explanation regarding the relevance of the selected articles.

YNHH retained Helicon Consulting, Inc. to conduct a Bed Capacity and Stacking Study. Helicon Consulting, Inc. prepared its analysis using concurrent patient days and midnight census data. Therefore there are slight differences in patient day and occupancy statistics between the tables included in this CON application and those included in the Helicon Consulting, Inc.'s report.

Some key highlights from Helicon Consulting's findings are noted below:

- **In FY 2011, YNHH required 65 additional beds:**
  - **Adult medical-surgical occupancy was 87% and these areas required 61 additional beds.**
  - **Medical-surgical occupancy exceeded 90% on 142 days or 39% of the time and exceeded 95% on 31 days or 8% of the time.**
  - **Newborn Special Care requires an additional 11 bassinets based on FY 2011 patient days.**
- **By FY 2014, YNHH will require 113 additional beds:**

- **Adult medical-surgical areas will require 98 additional beds by FY 2014 at 80% utilization.**

- **High patient volume frequently results in the use of triple occupancy and overflow spaces.**
- **Although 70 additional beds will be extremely helpful to YNHH, they are insufficient to address the current and projected bed demand.**
- **Safe patient flow and performance improvement efforts have steadily and significantly enhanced bed utilization.**

Helicon Consulting, Inc.'s Executive Summary of the bed utilization data analysis has been included in Attachment IV.

The Health Care Advisory Board writes in "Ten Implications for Future Inpatient Care" (pages 149-151 of Attachment V), that "given the uncertain nature of patient demand and the resulting unevenness in inpatient admissions, a hospital running at average occupancy rate of just 80 percent throughout the year will find itself, on numerous days, overwhelmed by patient volume." The projection methodology is consistent with the Agreed Settlement for DN: 04-30410-CON, wherein OHCA affirmed the industry standard of an overall 80% occupancy rate as the optimum level for safe and efficient care, as researched and set forth by YNHH in the CON.

OHCA's Acute Care Hospital Bed Need presentation (Attachment VI), offers bed need models from three states: North Carolina, South Carolina, and Alabama. Each of these states utilizes occupancy rates equal to or less than 80% for bed planning. Specifically, North Carolina uses a target occupancy rate of 75.2% for hospitals with an ADC greater than 200. Alabama utilizes target occupancy rates of 75% for obstetrics and psychiatry, 65% for pediatrics and 80% for medical/surgical services. South Carolina utilizes a target occupancy rate of 75% for hospitals with 350+ beds. The proposed occupancy levels provided by YNHH in this CON are consistent with these three states as presented by OHCA.

e. Explain why the proposal will not result in an unnecessary duplication of existing or approved health care services.

YNHH is a destination medical center, consistently ranked as among the best hospitals in the country, that offers numerous high quality tertiary and quaternary services that cannot easily be obtained elsewhere, including services such as Bi-plane MRI OR, implantable permanent ventricular assist devices (VADs), molecular profiling for cancer, neuro-interventional center, the state's only liver transplant program, Telestroke, Level I trauma center, and the Y Access Line for physician referral of patients who cannot be cared for or who do not have access to comparable services elsewhere. The creation of additional capacity represented by this proposal would therefore

serve patients who specifically seek care at YNHH and that in most cases cannot be provided at a local community hospital.

3. **Actual & Projected Volume**

a. For each service involved in this proposal, provide volumes for the most recently completed fiscal year ("FY") by town.

See Attachment VII for a town-by-town detail.

b. Complete the following table for the past three FYs and current fiscal year ("CFY"), for each service involved in this proposal.

Table XI: YNHH Actual Discharges

Question 3. (b.)				
Actual Service Volumes (YNHH)				
	Actual Volume (Last 3 Completed FYs)			Current Fiscal Year
	FY2008*	FY2009*	FY2010*	FY2011*
Med/Surg.	34,088	36,432	38,998	39,608
Pediatrics	6,506	6,221	6,349	6,702
OB	8,892	8,763	8,439	8,539
Psych	2,535	2,815	2,813	2,602
Total	52,021	54,231	56,599	57,451

Source: YNHH Department of Financial Planning, based on discharge MD service
**Note: Fiscal year is October 1st thru September 30th*

c. Explain any increases and/or decreases in volume seen in the table above.

The increases in volume seen in Table XI above have resulted from increased demand for both specialized and routine services at YNHH as well as the expertise of YNHH's physicians and surgeons. The Hospital's performance improvement initiatives have enabled YNHH to accommodate greater capacity but cannot accommodate all current and future volume growth. Obstetrics discharges are assumed to have decreased in response to poor economic conditions. According to the Pew Research Center's report *In a Down Economy, Fewer Births* (2011), a decline in fertility rates began in 2008 which was closely linked to the downturn of the economy. The report also cites other studies which have shown a link between fertility declines and economic declines. A copy of the report has been included in Attachment VIII.

d. Complete the following table for the first three **full** fiscal years ("FY") of the proposed service increase (if the first year is a partial year, include that as well).

Table XII: YNHH (New Haven Campus) Projected Discharges

Projected Service Volumes				
	Projected Volume (First 3 Full Operational FYs)**			
Service ***	FY 2012	FY 2013	FY 2014	FY 2015
Med/Surg.	40,961	42,211	43,498	44,821
Pediatrics	6,978	7,197	7,421	7,652
OB	8,701	8,920	9,146	9,378
Psych	2,602	2,602	2,602	2,602
Total	**59,242**	**60,930**	**62,667**	**64,453**

Source: YNHH Department of Financial Planning, based on discharge MD service
**Note: Fiscal year is October 1st thru September 30th*

e. Provide a detailed explanation of all assumptions used in the derivation/ calculation of the projected volume.

In order to arrive at the projected discharge volume, the Hospital analyzed inpatient growth over a five to ten year period. In addition, an in-depth analysis was conducted in each clinical service to determine potential growth, and review demographic trends as well as recent and future physician recruitments. The projected volumes are regularly reviewed against actual growth to refine the projections. Patient days were adjusted following the completion of FY 2011 to adjust for the increase experienced in length of stay.

The results of this process are summarized below.

Projected Discharges:

- **Med/Surg: Average annual growth between FY 2008 and FY 2011 was 5%. Projected annual growth between FY 2012 and FY 2015 is conservatively estimated at 3%.**
- **Pediatrics: Average annual growth between FY 2008 and FY 2011 was 1%; however growth between FY 2010 and FY 2011 was 6%. This increase is, in large part, related to pediatric transfers to YNHH via the Y-Access Line. Projected annual growth between FY 2012 and FY 2015 is estimated at 3% based on expected continued growth in the Y-Access Line.**
- **Obstetrics: Average annual percent change between FY 2008 and FY 2011 was -1.3%, however discharges increased 1% between FY 2010 and FY 2011. This average small decline is believed to be a result of the general condition of the economy and the corresponding decrease in births. Projected annual growth between FY 2012 and FY 2015 is estimated at 3% based on expected improvements in the economy and an anticipated small increase in births.**

- **Psychiatry: Average annual percent change between FY 2008 and FY 2011 was 1.2%. Due to 100% occupancy, discharges are projected to remain flat.**

Projected Patient Days: Projected ALOS was multiplied by projected discharges to identify projected patient days

- **Med/Surg: ALOS is projected to decline as shown below.**
  - **FY 2012 – 5.2 days (was 5.3 days in FY 2011)**
  - **FY 2013 – 5.1 days**
  - **FY 2014 – 5.1 days**
  - **FY 2015 – 5.1 days**
- **Pediatrics:**
  - **FY 2012 – 5.8 days (was 5.7 days in FY 2011)**
  - **FY 2013 – 5.7 days**
  - **FY 2014 – 5.6 days**
  - **FY 2015 – 5.6 days**
- **Obstetrics:**
  - **FY 2012 – 2.9 days (was 2.9 days in FY 2011)**
  - **FY 2013 – 2.9 days**
  - **FY 2014 – 2.9 days**
  - **FY 2015 – 2.8 days**
- **Psychiatry:**
  - **FY 2012 – 10.5 days (was 10.5 days in FY 2011)**
  - **FY 2013 – 10.5 days**
  - **FY 2014 – 10.5 days**
  - **FY 2015 – 10.5 days**

To act as an independent validation of the YNHH discharge projection method, the Hospital also developed a population-based discharge projection model, which incorporated population projections, historical use rate and market share trends. The results closely approximate the projections developed internally and as described above. This additional model supports the internally developed projections. Table XIII below shows the comparison of the internal projections and the population-based model (please see Attachment IX for full methodology).

Table XIII: Population-Based Volume Projections Compared to Internal Projections

Comparison of YNHH Internal Projections and Population Based Model	Projected Discharges Year 1 FY 2012	Projected Discharges Year 2 FY 2013	Projected Discharges Year 3 FY 2014	Projected Discharges Year 4 FY 2015
Population Based Model*	59,064	60,765	62,529	64,359
CON Projections	59,242	60,930	62,667	64,453
% Difference (CON Proj less Use Rate)	0.3%	0.3%	0.2%	0.1%
* Population based model utilized historical trends between FY 2009 and 2011 and assumed average trend continues between 2012 and 2015.				

4. Quality Measures

a. Submit a list of all key professional, administrative, clinical, and direct service personnel related to the proposal. Attach a copy of their Curriculum Vitae.

See **Attachment X.**

b. Explain how the proposal contributes to the quality of health care delivery in the region.

As a regional and increasingly national medical center that draws patients for numerous tertiary and quaternary services, it is critical that YNHH has the capacity to serve all of the patients who seek or are referred for specialty care that is often not available elsewhere. The additional beds will (1) help ensure that patients do not have extended wait times in the ED, the Post-Anesthesia Care Unit (PACU) or the designated overflow areas as they wait for beds in patient rooms to become available, (2) reduce the number of instances in which lack of available beds causes a patient to be placed in a clinical unit other than the unit best suited to that patient's condition, (3) reduce the number of occasions in which two or three patients are placed in patient rooms that are better suited to one or two patients respectively, and (4) ensure rapid transfer to YNHH for critically ill patients from other hospitals.

As one of only two Level I Trauma Centers in the state, it is essential to health care delivery in the region that YNHH has the bed capacity to effectively operate and treat its trauma patients. The YNHH Trauma Department relies on an 80% or lower bed occupancy level to accept transfers because the department will not decline a transfer from a lower level trauma center based on bed availability. When bed occupancy is too high to accommodate new trauma patients or assign them to the appropriate beds, they are triaged and prioritized to accommodate the critical patients by temporarily moving the most stable patients to rooms with beds that are not

fully appropriate for that patient's condition. In order to do this, there must be acute bed availability and flexibility.

c. Identify the Standard of Practice Guidelines that will be utilized in relation to the proposal. Attach copies of relevant sections and briefly describe how the Applicant proposes to meet each of the guidelines.

Not Applicable.

5. Organizational and Financial Information

a. Identify the Applicant's ownership type(s) (e.g. Corporation, PC, LLC, etc.).

The Applicant is a Corporation.

b. Does the Applicant have non-profit status?
☒ Yes (Provide documentation) ☐ No

See **Attachment XI.**

c. Provide a copy of the State of Connecticut, Department of Public Health license(s) currently held by the Applicant.

See **Attachment XII.**

d. Financial Statements

i. If the Applicant is a Connecticut hospital: Pursuant to Section 19a-644, C.G.S., each hospital licensed by the Department of Public Health is required to file with OHCA copies of the hospital's audited financial statements. If the hospital has filed its most recently completed fiscal year audited financial statements, the hospital may reference that filing for this proposal.

See most recently completed fiscal year audited financial statements on file.

ii. If the Applicant is not a Connecticut hospital (other health care facilities): Audited financial statements for the most recently completed fiscal year. If audited financial statements do not exist, in lieu of audited financial statements, provide other financial documentation (e.g. unaudited balance sheet, statement of operations, tax return, or other set of books.)

Not applicable.

e. Submit a final version of all capital expenditures/costs as follows:

Table XIX. Proposed Capital Expenditures/Costs

Medical Equipment Purchase	**$964,949**
Imaging Equipment Purchase	
Non-Medical Equipment Purchase	**$268,545**
Land/Building Purchase *	
Construction/Renovation **	**$125,000**
Other Non-Construction (Specify)	**$80,425**
Total Capital Expenditure (TCE)	**$1,438,919**
Medical Equipment Lease (Fair Market Value) ***	
Imaging Equipment Lease (Fair Market Value) ***	
Non-Medical Equipment Lease (Fair Market Value) ***	
Fair Market Value of Space ***	
Total Capital Cost (TCC)	**$1,438,919**
Total Project Cost (TCE + TCC)	**$1,438,919**
Capitalized Financing Costs (Informational Purpose Only)	
Total Capital Expenditure with Cap. Fin. Costs	$

Source: YNHH Department of Financial Planning

* If the proposal involves a land/building purchase, attach a real estate property appraisal including the amount; the useful life of the building; and a schedule of depreciation.

** If the proposal involves construction/renovations, attach a description of the proposed building work, including the gross square feet; existing and proposed floor plans; commencement date for the construction/ renovation; completion date of the construction/renovation; and commencement of operations date.

*** If the proposal involves a capital or operating equipment lease and/or purchase, attach a vendor quote or invoice; schedule of depreciation; useful life of the equipment; and anticipated residual value at the end of the lease or loan term.

f. List all funding or financing sources for the proposal and the dollar amount of each. Provide applicable details such as interest rate; term; monthly payment; pledges and funds received to date; letter of interest or approval from a lending institution.

The source of funding for this project will be 20% operating funds and 80% funded depreciation, which will be funded by YNHH through the use of operating funds. The Hospital does not intend to borrow any dollars to fund this project.

g. Demonstrate how this proposal will affect the financial strength of the state's health care system.

This proposal will positively affect the financial strength of the state's health care system. Timely access to inpatient resources at YNHH is critically important to the prompt diagnosis, treatment and recovery for patients. The proposed additional 70 beds will enhance YNHH's ability to operate efficiently and effectively. This proposal will also help facilitate timely Y-Access Line transfers. Anticipated outcomes include reduced patient wait times, increased access to needed care and avoidance of possible adverse and costly outcomes if care is not accessed or available in a timely fashion, which

would negatively impact the financial strength of the overall health care system.

6. Patient Population Mix: Current and Projected

a. Provide the current and projected patient population mix (based on the number of patients, not based on revenue) with the CON proposal for the proposed service increase.

Table XX. Inpatient Population Payer Mix: FY 2011 – FY 2015

Inpatient Population Mix							
Payor	2009	2010	2011	2012	2013	2014	2015
Medicare*	30%	31%	31%	31%	31%	32%	32%
Medicaid*	25%	27%	28%	28%	28%	29%	30%
Total Government	56%	58%	59%	59%	59%	60%	62%
Commercial Insurers*	41%	39%	38%	38%	38%	37%	36%
Uninsured	4%	3%	3%	3%	3%	3%	3%
Total Non-Government	44%	42%	41%	41%	41%	40%	38%
Total Payor Mix	100%	100%	100%	100%	100%	100%	100%

Source: YNHH Department of Financial Planning
Note: Table reflects inpatient population only
* Includes managed care activity.
** New programs may leave the "current" column blank.
*** Fill in years. Ensure the period covered by this table corresponds to the period covered in the projections provided.

b. Provide the basis for/assumptions used to project the patient population mix.

The projected payer mix includes a small increase in government payers to account for the aging of the population and anticipation of larger numbers of Medicaid recipients under health care reform.

7. Financial Attachments I & II

a. Provide a summary of revenue, expense, and volume statistics, without the CON project, incremental to the CON project, and with the CON project. **Complete Financial Attachment I.** (Note that the actual results for the fiscal year reported in the first column must agree with the Applicant's audited financial statements.) The projections must include the first three full fiscal years of the project.

See **Attachment XIII.**

b. Provide a three year projection of incremental revenue, expense, and volume statistics attributable to the proposal by payer. **Complete Financial Attachment II.** The projections must include the first three full fiscal years of the project.

See **Attachment XIV.**

c. Provide the assumptions utilized in developing **both Financial Attachments I and II** (e.g., full-time equivalents, volume statistics, other expenses, revenue and expense % increases, project commencement of operation date, etc.).

See **Attachment XV.**

d. Provide documentation or the basis to support the proposed rates for each of the FYs as reported in Financial Attachment II. Provide a copy of the rate schedule for the proposed service(s) earmarked for licensed bed increase.

YNHH will be using its current rate schedule for these additional beds. The beds in question will be considered part of the Medical Surgical cluster which are charged at $4,278 per day.

e. Explain any projected incremental losses from operations contained in the financial projections that result from the implementation of the proposed licensed bed increase.

There is a small incremental loss in FY 2013 based on opening 42 beds while the volume has been conservatively estimated. The loss is basically offset by the incremental gains in FY '12, '14 and '15.

f. Describe how this proposal is cost effective.

This proposal addresses significant and current inpatient capacity issues with minimal capital expense. The capital associated with this project is primarily for medical and non-medical equipment needed to establish additional inpatient areas (70 beds) to offer a short term solution to exceedingly high occupancy levels. It is a cost-effective short term solution.

ATTACHMENT I

Letters of Support

Yale SCHOOL OF MEDICINE

Department of Internal Medicine

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October 3, 2011, 2011

Ms. Kimberly Martone
Director of Operations
Office of Health Care Access
410 Capital Avenue, MS #13HCA
P O Box 340308
Hartford, CT 06106

RE: Certificate of Need Application
Yale-New Haven Hospital
Addition of 70 Inpatient Beds to Hospital Bed License
Certificate of Need Application

Dear Ms. Martone,

I am writing this letter in support of the Yale-New Haven Hospital's (YNHH's) Certificate of Need application to increase its bed license by 70 inpatient beds.

Over the last several years the inpatient medicine service at YNHH has experienced significant growth and, therefore, significant bed constraints as inpatient volumes have far exceeded projections. YNHH provides a number of programs and services that are not available elsewhere and are coordinated through the Y-Access Transfer Center (1-888-964-4233), a Clinician-Staffed, 24/7/365 physician referral line. As a nationally ranked destination hospital (ranked in 12 specialties, including Diabetes/Endocrinology ranked #8 in the country, Geriatrics ranked #10 in the country, Pulmonology ranked #22 in the nation, and Gastroenterology ranked #29), that provides unique, highly specialized services by nationally recognized experts, YNHH requires expanded capacity in order to continue to meet patient demand and provide the highest level of safety, clinical quality and efficiency.

Thank you for your consideration. I respectfully request that Yale-New Haven Hospital be granted its request for an increase of 70 licensed beds so that the my fellow physicians and I will be able to continue to provide the best, most efficient care.

Sincerely,

Jack A. Elias, M.D.

JAE:kb

YALE SCHOOL OF MEDICINE
DEPARTMENT OF SURGERY
YALE-NEW HAVEN HOSPITAL

ROBERT UDELSMAN, MD, MBA, FACS, FACE
William H. Carmalt Professor of Surgery and Oncology

Chairman, Department of Surgery
Yale University School of Medicine

Surgeon-in-Chief
Yale-New Haven Hospital

September 29, 2011

Kimberly Martone, Director of Operations
Office of Health Care Access
410 Capital Avenue, MS #13HCA
P O Box 340308
Hartford, CT 06106

RE: Certificate of Need Application
Yale-New Haven Hospital
Addition of 70 Inpatient Beds to Hospital Bed License

Dear Director Martone,

I am writing this letter in support of the Yale-New Haven Hospital's (Y NHH's) Certificate of Need application to increase its bed license by 70 inpatient beds.

The Surgery services at YNHH have experienced significant growth in the past couple years. YNHH provides a number of treatments and technologies that are not offered by any other Connecticut hospitals, including the only liver transplant program in the state, the only hybrid MR/OR in the state, and one of only two Level I trauma centers. As a nationally ranked destination hospital (ranked in 12 specialties, including Endocrinology; Cancer; Heart & Heart Surgery; Neurology & Neurosurgery; Ear, Nose & Throat; and Urology), that provides unique highly specialized services by nationally recognized experts, Yale-New Haven Hospital requires expanded capacity in order to continue to meet patient demand and provide the highest level of safety, clinical quality, and efficiency.

I respectfully request that Yale-New Haven Hospital be granted its application for an increase of 70 licensed beds so that the Hospital in general, my fellow surgeons, and I will be able to continue to provide the best, most efficient care. Thank you for your consideration.

Sincerely yours,

Robert Udelsman, MD, MBA, FACS, FACE

RU:df

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Telephone: 203 785-2697 · Fax: 203 737-2116 · Email: robert.udelsman@yale.edu

Yale CANCER CENTER
A Comprehensive Cancer Center Designated by the National Cancer Institute

SMILOW CANCER HOSPITAL AT YALE-NEW HAVEN

Thomas J. Lynch, Jr., MD
Director, Yale Cancer Center
Physician-in-Chief
Smilow Cancer Hospital at Yale-New Haven
Richard and Jonathan Sackler Professor of Internal Medicine

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November 18, 2011

Kimberly Martone, Director of Operations
Office of Health Care Access
410 Capital Avenue, MS #13HCA
P O Box 340308
Hartford, CT 06106

RE: Certificate of Need Application
Yale-New Haven Hospital
Addition of 70 Inpatient Beds to Hospital Bed License
Certificate of Need Application

Dear Director Martone,

I am writing this letter in support of the Yale-New Haven Hospital (YNHH) Certificate of Need application to increase its bed license by 70 inpatient beds.

Over the last several years Oncology services at YNHH has experienced significant growth in volume, creating significant bed constraints as inpatient volumes have far exceeded projections. YNHH provides a number of treatments and technologies that are not offered by any other Connecticut hospitals, such as bone marrow transplants, molecular profiling for cancer and state of the art treatment for many rare or complicated cancer types. As a nationally ranked destination hospital (ranked in 12 specialties, including Cancer ranked #24 in the country) that provides unique, highly specialized services by nationally recognized experts, YNHH requires expanded capacity in order to meet patient demand and provide the highest level of safety, clinical quality and efficiency.

Thank you for your consideration. I respectfully request that Yale-New Haven Hospital be granted its request for an increase of 70 licensed beds so that my fellow physicians and I will be able to continue to provide the best, most efficient care.

Sincerely,

Tom Lynch

Thomas J. Lynch, Jr., M.D.
Director, Yale Cancer Center
Physician-in-Chief, Smilow Cancer Hospital at Yale-New Haven
Richard and Jonathan Sackler Professor of Internal Medicine

YALE UNIVERSITY

THE SCHOOL OF MEDICINE

November 22, 2011

Kimberly Martone, Director of Operations
Office of Health Care Access
410 Capital Avenue, MS #13HCA
P O Box 340308
Hartford, CT 06106

RE: Certificate of Need Application
Yale-New Haven Hospital
Addition of 70 Inpatient Beds to Hospital Bed License
Certificate of Need Application

Dear Director Martone,

I am writing this letter in support of the Yale-New Haven Hospital (YNHH) Certificate of Need application to increase its bed license by 70 inpatient beds.

Over the last several years Neurology and Neurosurgery services at YNHH has experienced significant growth in volume, creating significant bed constraints as inpatient volumes have far exceeded projections. YNHH provides a number of treatments and technologies that are not offered by any other Connecticut hospitals, such as Guglielmi detachable coil (GDC) therapy for intracranial aneurysms, carotid artery angioplasty & stenting and other neuro-interventional procedures, and is the only hospital in the state with a Neurological Intensive Care Unit staffed specifically with neurointensivists. As a nationally ranked destination hospital (ranked in 12 specialties, including Neurology and Neurosurgery ranked #39 in the country) that provides unique, highly specialized services by nationally recognized experts, YNHH requires expanded capacity in order to meet patient demand and provide the highest level of safety, clinical quality and efficiency.

Thank you for your consideration. I respectfully request that Yale-New Haven Hospital be granted its request for an increase of 70 licensed beds so that my fellow physicians and I will be able to continue to provide the best, most efficient care.

Sincerely,

David Hafler, MD
Chair, Department of Neurology

David Greer, MD
Vice-Chair, Department of Neurology

Dennis Spencer, MD
Chair, Department of Neurosurgery

Yale Orthopaedics and Rehabilitation

A PRACTICE OF THE YALE MEDICAL GROUP

Gary E. Friedlaender MD
Wayne O. Southwick Professor of
Orthopaedics and Rehabilitation
Professor, Yale Cancer Center
Chair, Orthopaedics and Rehabilitation

Yale Physicians Building
800 Howard Avenue
P.O. Box 208071
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06520-8071
(203) 737-5656 appointments
(203) 737-5660 phone
(203) 737-1102 fax
gary.friedlaender@yale.edu

November1, 2011

Kimberly Martone, Director of Operations
Office of Health Care Access
410 Capital Avenue, MS #13HCA
P O Box 340308
Hartford, CT 06106

RE: Certificate of Need Application
Yale-New Haven Hospital
Addition of 70 Inpatient Beds to Hospital Bed License
Certificate of Need Application

Dear Director Martone,

I am writing this letter in support of the Yale-New Haven Hospital (YNHH) Certificate of Need application to increase its bed license by 70 inpatient beds.

Over the last several years Orthopaedics services at YNHH has experienced significant growth in volume, creating significant bed constraints as inpatient volumes have far exceeded projections. YNHH provides a number of treatments and technologies that are not offered by any other Connecticut hospitals, and treats the largest inpatient Orthopaedics volumes of any hospital in the state. As a nationally ranked destination hospital that provides unique, highly specialized services by nationally recognized experts, YNHH requires expanded capacity in order to meet patient demand and provide the highest level of safety, clinical quality and efficiency.

Thank you for your consideration. I respectfully request that Yale-New Haven Hospital be granted its request for an increase of 70 licensed beds so that my fellow physicians and I will be able to continue to provide the best, most efficient care.

Sincerely,

Gary Elliott Friedlaender, MD
Chair, Department of Orthopaedics and Rehabilitation
Director, Sarcoma Service, Yale Cancer Center

ATTACHMENT II

Dashboard: YNHH Executive Scorecard

Executive Throughput Scorecard FY2012

Week Ending 12/03/2011

YALE-NEW HAVEN HOSPITAL

Area	Metric	Baseline	Threshold (R1)	Target (R2)	Max (Stretch)	Last Week Direction: (Last Week Compared to YTD Perf.)	YTD Performance	(Status YTD Perf. Compared to Targets)
Patient Services	**Surgery** - % 11am Discharges *(%)*	**11.4%**	19.8%	21.0%	22.0%	⇧ 25.0%	20.0%	○
	Surgery - Median Discharge Time *(hour)*	**14:19**	14:01	13:51	13:41	⇧ 13:10	13:53	○
	Medicine - % 11am Discharges *(%)*	**8.3%**	20.0%	21.0%	22.0%	⇧ 26.0%	22.0%	●
	Medicine - Median Discharge Time *(hour)*	**14:48**	14:31	14:21	14:11	⇧ 14:00	14:16	◍
	Oncology - % 11am Discharges *(%)*	**8.2%**	19.7%	21.0%	23.0%	⇧ 32.0%	21.0%	◍
	Oncology - Median Discharge Time *(hour)*	**n/a**	13:27	13:22	13:17	⇧ 12:30	13:23	○
	Children's - % 11am Discharges (%)	**12.2%**	24.0%	25.0%	26.0%	⇧ 26.0%	24.0%	○
	Children's - Median Discharge Time (hour)	**14:24**	13:27	13:22	13:17	⇩ 13:24	13:19	◍
	OB- % 11am Discharges *(%)*	**8.7%**	12.0%	12.0%	12.0%	⇩ 8.0%	11.0%	◍
	OB - Median Discharge Time *(hour)*	**13:36**	12:26	12:16	12:10	⇩ 12:34	12:26	○
	Psych - % 11am Discharges *(%)*	**25.3%**	37.0%	38.5%	40.0%	⇧ 47.0%	44.0%	●
	Psych - Median Admit Time (hour)							
	Heart & Vascular - % 11am Discharges *(%)*	**13.4%**	29.3%	30.5%	32.0%	⇧ 38.0%	27.0%	◍
	Heart & Vascular - Median Discharge Time *(hour)*	**n/a**	13:40	13:30	13:20	⇧ 12:02	13:26	◍
	Hospital Wide - % 11am Discharges *(%)*	**10.7%**	20.8%	21.8%	22.8%	⇧ 26.0%	21.0%	○
	Hospital Wide - Median Discharge Time *(hour)*	**14:40**	13:30	13:25	13:20	⇧ 12:47	13:22	◍
Adult ED	ED LOS Overall *(hours)*	**5:12**	4:57	4:57	4:57	⇧ 4:38	4:58	◍
Pedi ED	ED LOS Admit (hours)	**n/a**	4:14	4:05	3:55	⇧ 3:55	4:10	○
	ED LOS T&R (hours)	**n/a**	3:00	2:55	2:50	⇧ 2:49	2:53	◍

Area	Metric	Baseline	Threshold (R1)	Target (R2)	Max (Stretch)	Last Week Direction: (Last Week Compared to YTD Perf.)	YTD Performance	(Status YTD Perf. Compared to Targets)
MICU	ED LOS for ICU Patients (hrs)	**5:04**	4:05	4:00	3:45	⇧ 3:42	4:06	◍
	Bed Assignment to Transfer from MICU (hrs)	**2:02**	1:24	1:00	0:45	⇧ 0:56	1:02	○
Heart and Vascular*	**Cath\EP** - Turnaround Time *(minutes)*	**n/a**	31	27	25	⇧ 32	37	◍
	Cath\EP - Room Utilization *(percent)*	**n/a**	52%	57%	62%	⇩ 54%	56%	○
	IR - Turnaround Time *(minutes)*	**n/a**	31	27	25	⇩ 32	31	○
	IR - Room Utilization *(percent)*	**n/a**	62%	65%	68%	⇩ 59%	70%	●
Admitting	Median PACU Red Phone *(minutes)*	**n/a**	88					
	% PACU Red Phones *(%)*	**43%**	15%					
Physicians	**Surgery** - % Discharged Patients With Updated DC Status *(%)*	**0%**	70%	80%	85%	⇧ 77.8%	72.0%	○
	Medicine - % Discharged Patients With Updated DC Status *(%)*	**0%**	70%	80%	85%	⇩ 78.2%	84.4%	◍
	Oncology - % Discharged Patients With Updated DC Status *(%)*	**0%**	70%	80%	85%	⇧ 57.3%	53.2%	◍
	Psych - % Discharged Patients With Updated DC Status (%)	**0%**	70%	80%	85%	⇩ 78.6%	82.6%	◍
	Pedi - % Discharged Patients With Updated DC Status *(%)*	**0%**	70%	80%	85%	⇩ 70.3%	71.7%	○
	H&V- % Discharged Patients With Updated DC Status *(%)*	**0%**	70%	80%	85%	⇩ 83.3%	88.7%	●
Environmental Services	ICU BTAT (minutes)	**n/a**	63.2	60	56.9	⇧ 55.5	62.9	○
	Average Daily BTAT *(minutes)*	**84**	74.5	70.8	67.1	⇧ 68.5	75.2	◍
Consolidated Patient Transport	**Zone 78:** Average Pending To Complete Time Overall - ED	**14.4**	13.1	12.8	12.4	⇧ 10.8	11.0	●
	Zone TT: Average Pending To Complete Time Overall - Remainder of Hospital *(minutes)*	**44**	32.9	32.5	32	⇩ 31.2	30.8	●
Periop	OR Turnover Time *(mins)*	**n/a**	28	27	26	⇨ 29	29	◍
	OR First Case On-Time Starts *(%)*	**n/a**	73%	76%	80%	⇩ 75%	78%	◍
	OR Utilization (%)	**n/a**	62.0%	63.5%	65.0%	⇧ 69.0%	65.0%	●

***Direction** (Last Week Compared To YTD Performance)* ***Status** (YTD Performance Compared To R2)*

Legend

● Below Threshold ○ >= Threshold, < target ◍ >=Target, below max ● Max or above

⇩ Worsening ⇨ No Change ⇧ Improving

ATTACHMENT III

UHC Annual Conference 2011: Achieving Comprehensive Safe Patient Flow in an Academic Medical Center

YALE-NEW HAVEN HOSPITAL

UHC Annual Conference 2011
LEAP: Lead, Excel, Achieve, Perform

Achieving Comprehensive, Safe Patient Flow in an Academic Medical Center

Thomas J. Balcezak, M.D., M.P.H.
Vice President of Performance Management and Associate Chief of Staff
Yale-New Haven Hospital

Sandra Bacon, R.N., M.S.N.
Director of Operations Support
Yale-New Haven Hospital

YALE-NEW HAVEN HOSPITAL

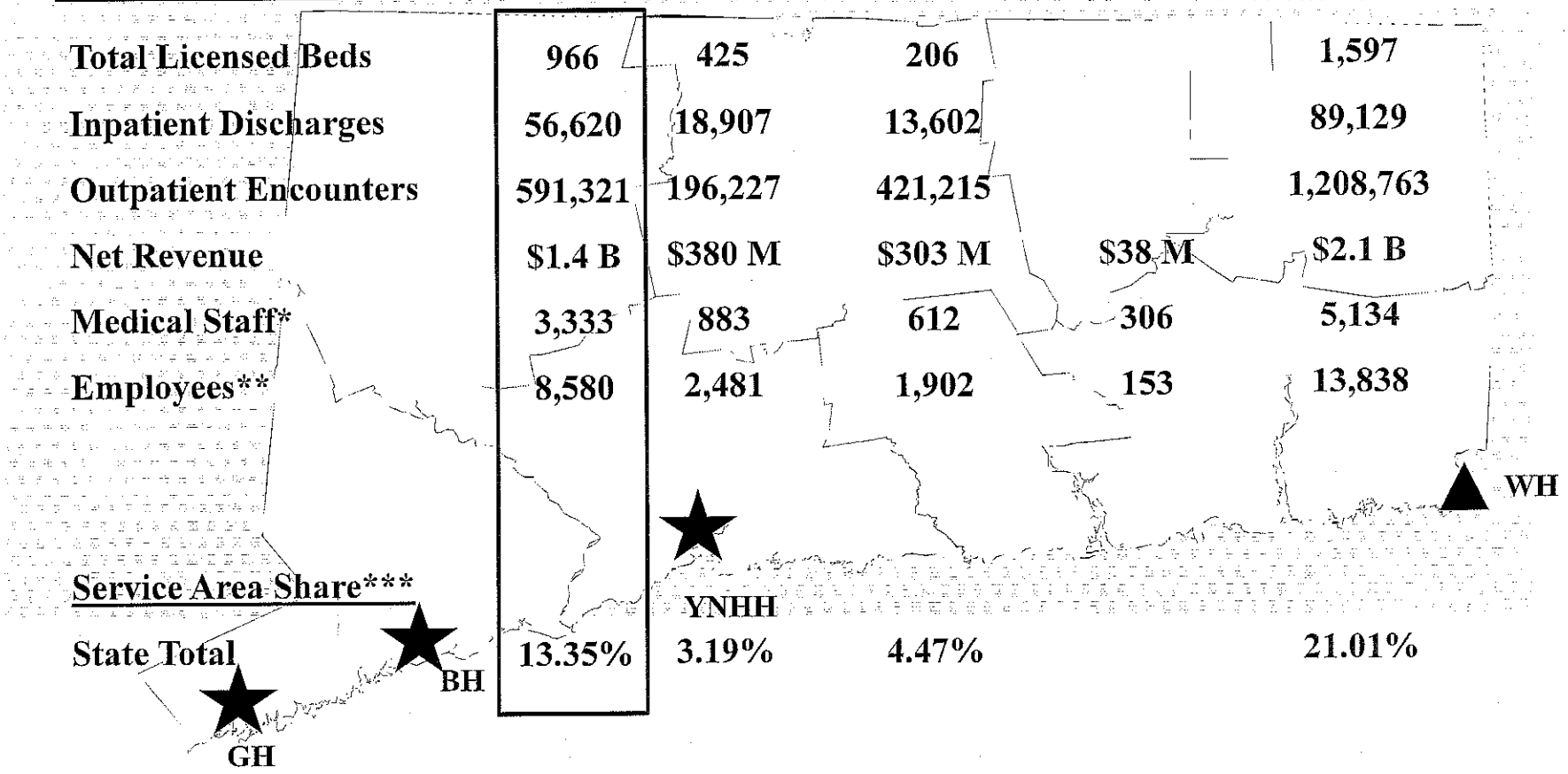
Session Objectives

- Demonstrate the connection between patient throughput and safety
- Identify elements of a successful throughput project that achieves safe patient flow
- Describe quantitative evidence of improved throughput
- Demonstrate how Yale-New Haven Hospital streamlined care and reduced emergency department length of stay, bed turnaround time, and transport time by implementing a comprehensive, institution-wide safe patient flow initiative

YALE-NEW HAVEN HOSPITAL

Yale New Haven Health System
Fiscal Year 2010

Critical Indicators	YNHDN	BDN	GDN	NEMG	System Total
Total Licensed Beds	966	425	206		1,597
Inpatient Discharges	56,620	18,907	13,602		89,129
Outpatient Encounters	591,321	196,227	421,215		1,208,763
Net Revenue	$1.4 B	$380 M	$303 M	$38 M	$2.1 B
Medical Staff*	3,333	883	612	306	5,134
Employees**	8,580	2,481	1,902	153	13,838
Service Area Share* **					
State Total	13.35%	3.19%	4.47%		21.01%



*Includes Residents and Fellows; MD Hospitalists included in NEMG column; excludes non-physician Affiliated/Allied Health
**As of October 1, 2010 SM101A-M- Head Count Report, excluding Residents, Fellows, and Physician Interns who are captured in the Medical Staff count; All Hospitalists are included in the NEMG column (updated as of 10/1/10); Note that HSC count of 722 is included in the System total
***Shares are based on September 2010 Patient Census Report (Full year FY 2010 CHIME data will be available in late January 2011)

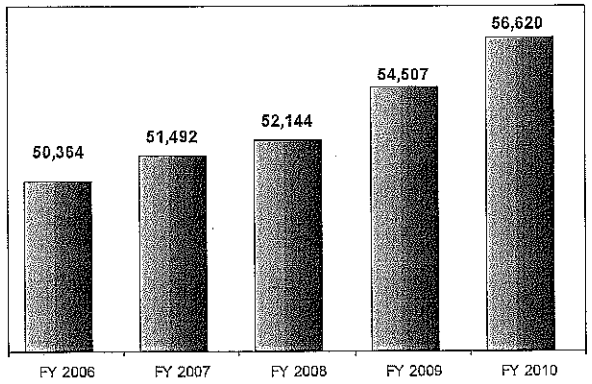
YALE-NEW HAVEN HOSPITAL

Organizational Challenges

1. Explosive volume growth
2. Adult Emergency Department overcrowding
3. Smilow Cancer Hospital growth and development plans
4. Standardization efforts
5. "Silo" mentality – the "departmental" view
6. Patient safety and quality

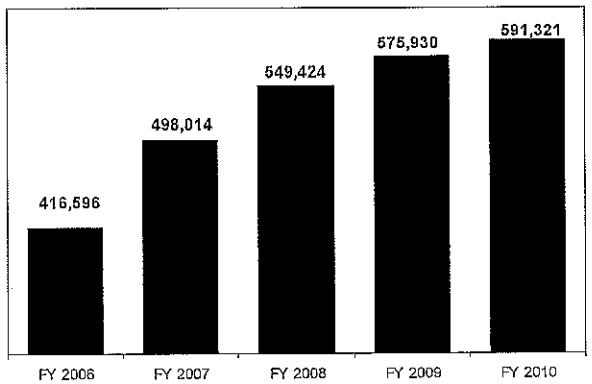
Inpatient Discharges

FY 2006 – 2010



Outpatient Encounters

FY 2006 – 2010



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Goals of Safe Patient Flow Initiative

Primary Objectives:

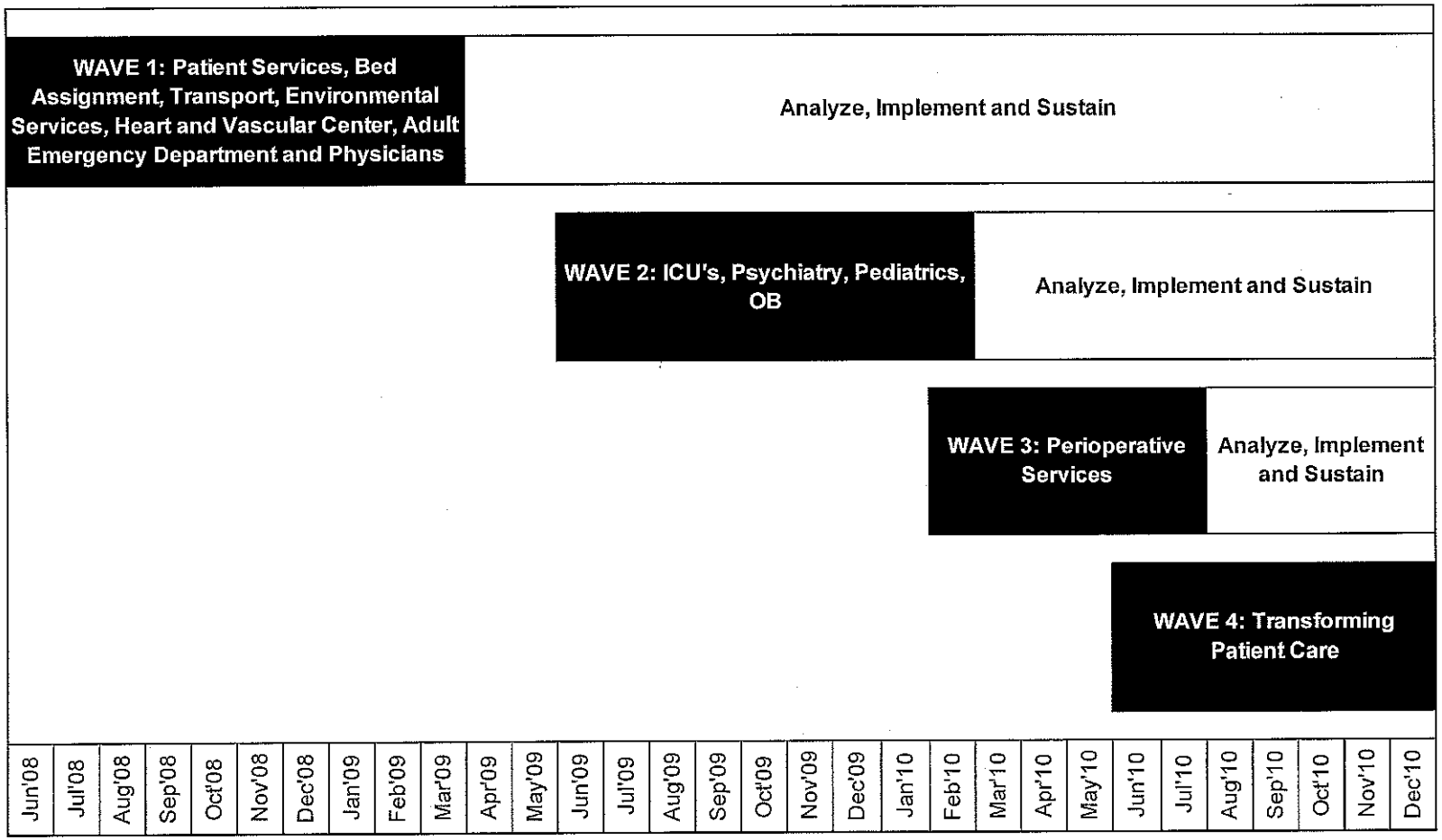
Enhanced Patient Safety and Flow

"Right Patient In The Right Bed At The Right Time"

- Patient Services
- Intensive Care Units
- Interventional Laboratories
- Physicians
- Adult Emergency Department
- Admitting/Bed Assignment
- Patient Transport
- Environmental Services

YALE-NEW HAVEN HOSPITAL

Waves of Change



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Cascade of Operational Meetings

1 Weekly Steering Committee

- Chaired by COO or VP Performance Management
- Weekly Frequency
- Area VPs Report on daily/weekly operating report results
- Report on reasons for variances to R2 (Required Result) and corrective action plans/action taken
- Report on Process and System Audit results

2 VP Updates (Pre-Presentation Meeting)

- Chaired by Area VP
- Weekly Frequency
- Area Managers report on daily operating report (DOR) results & variances to R2 and corrective action/plans taken
- Review Process and System Audits and plans to address yellow and red

3 Daily Huddle

- Chaired by Area Manager/Director
- Daily to twice Daily Frequency
- Area Managers review Daily Operating Report (DOR) results with key staff
- Document variances in variance report and identify corrective action

4 Variance Action Meetings

- Meetings as required to correct variances to R2

Senior Operations Group oversight maintained through weekly meetings

YALE-NEW HAVEN HOSPITAL

Executive Score Card

- Viewed weekly at Safe Patient Flow Senior Operations Group
- Compares area performance against previous week, year to date, and against targets
- Informs data-driven cycles of change

YALE-NEW HAVEN HOSPITAL

Executive Throughput Scorecard

As of May 22, 2010

Revised 2-16-10

Area	Metric	Threshold (R1)	Target (R2)	Max (Stretch)	Last Week	YTD Performance	Direction (Last Week Compared to YTD Perf.)	Status (YTD Perf. Compared to Targets)
Patient Services	Surgery - % 11am Discharges *(%)*	16%	16%	20%	16%	18%	↓	●
	Surgery - Median Discharge Time *(hour)*	13:58	13:43	13:28	13:54	13:46	↓	○
Periop	OR Turnover Time *(%)*	32%	37%	42%	24%	25%	↓	●
	OR First Case On-Time Starts *(%)*	65%	75%	85%	74%	74%	=	○
Admitting	ALOS PACU Red Phone *(minutes)*	133	120	110	124.1	129.8	↑	○
	% PACU Red Phones *(%)*	24%	22%	20%	17%	16%	↑	●
Physicians	Surgery - % Discharged Patients With Updated DC Status *(%)*	43.3%	80.0%	85.0%	81.6%	42.6%	↑	●

● Below Threshold ○ >= Threshold, <Target ● >=Target, below max ● Max or above

↓ Worsening = No Change ↑ Improving ↑ Above max

YALE-NEW HAVEN HOSPITAL

Visual Controls

Physicians / Providers:

- Identified day before readiness for discharge (red, yellow, green)
- Changed work flow – paperwork day before and round on "green" patients first

Bed Assignment:

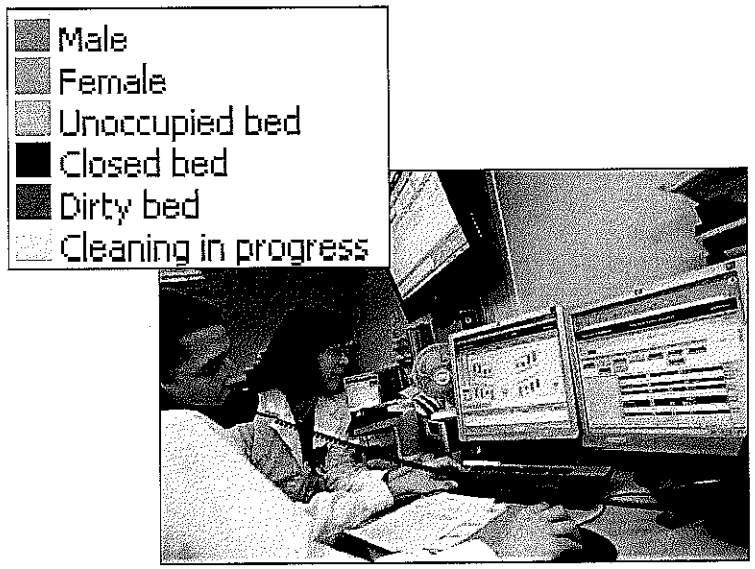
- Created a clinical bed manager role
- Centralized bed assignment in centralized admissions office
- Performed in sequence what was once done in parallel
- Provided split screen monitors and technology to track multiple areas

Discharge Status:

Unlikely to be discharged

Possibly ready to be discharged

Very likely to be discharged



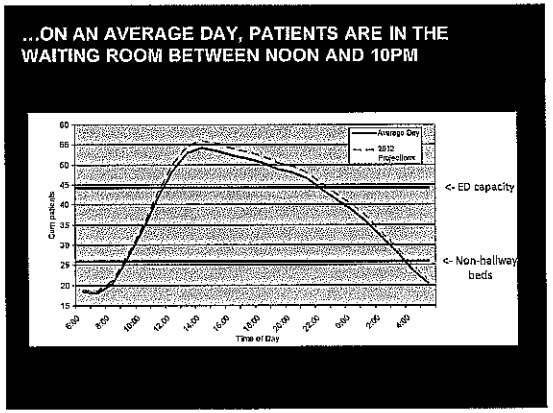
YALE-NEW HAVEN HOSPITAL

Method Changes

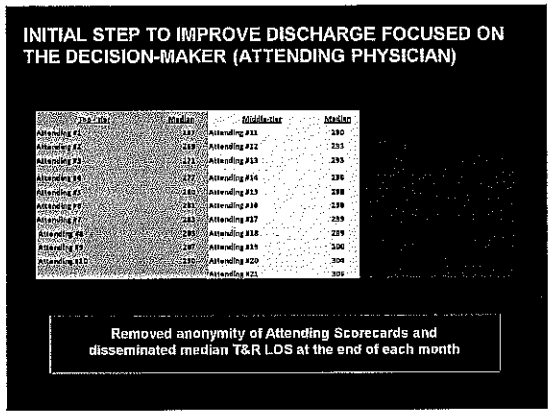
Adult Emergency Department (AED):

- Book clinically ready patients to available beds
- Book on Brown and Shoot for Sixty
- Perform transfer steps in parallel rather than in sequence (clean bed, call transport, ready patient)
- Share physician report card and best practices
- Implement quick registration and triage
- Implement patient flow coordinator role

Time of Day Capacity Challenges & Overcrowding



Physician Report Card



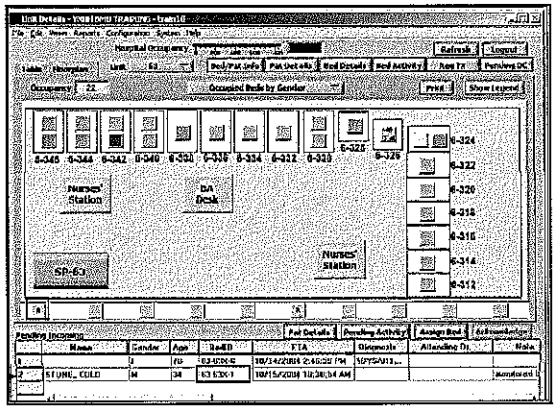
YALE-NEW HAVEN HOSPITAL

Method Changes

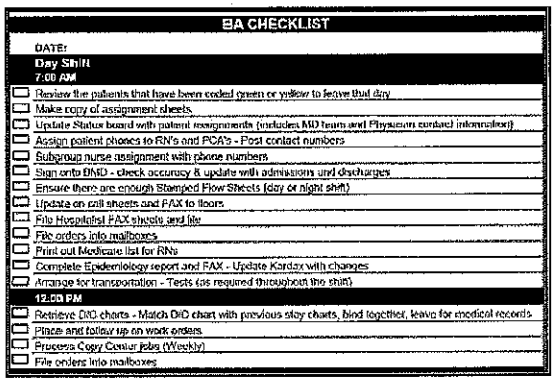
Patient Services:

- Identify and prepare patients day before
- Communicate readiness for discharge with patient, family and team
- "Huddle" regarding "green" patients
- Use status boards for visual control
- Standardize the Business Associate role using a checklist
- Standardize the discharge process
- Create ownership for information entered into the Bed Management Dashboard
- Improve accuracy and timeliness of data entry

Facility Boards & Bed Management Dashboard



Business Associate Checklist



BA CHECKLIST

DATE:

Day Shift

7:00 AM

- Review the patients that have been coded green or yellow to leave that day
- Make copy of assignment sheets
- Update Status board with patient assignments (includes MD team and Physicians contact information)
- Assign patient phones to RN's and PCA's - Post contact numbers
- Subgroup nurse assignment with phone numbers
- Sign onto DNO - check accuracy & update with admissions and discharges
- Ensure there are enough Stamped Flow Sheets (day or night shift)
- Update on call sheets and FAX to floors
- File Hospitalist FAX sheets and file
- File orders into mailboxes
- Print out Medicare list for RNs
- Complete Epidemiology report and FAX - Update Kardex with changes
- Arrange for transportation - Tests (as required throughout the shift)

12:00 PM

- Retrieve DIC charts - Match DIC chart with previous stay charts, bind together, leave for medical records
- Place and follow up on work orders
- Process Copy Center jobs (Weekly)
- File orders into mailboxes

YALE-NEW HAVEN HOSPITAL

Method Changes

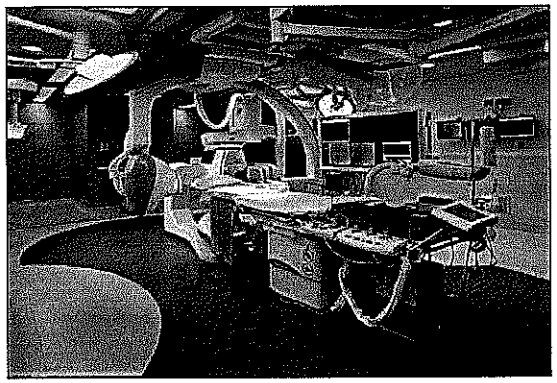
Heart and Vascular Center:

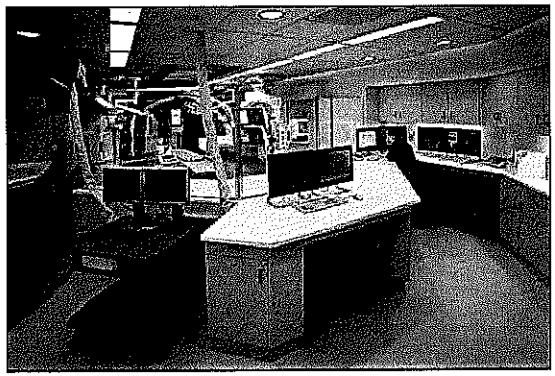
- Create master schedule (all roles)
- Implement unidirectional flow
- Improve patient charge capture

Central and Diagnostic Radiology Transport:

- Remove zones and consolidate departments
- Use monitor watcher to dispatch jobs
- Discourage "batching" requests
- Encourage appointments
- Transport via wheelchair rather than stretcher when clinically indicated

Catheterization Laboratory





YALE-NEW HAVEN HOSPITAL

Method Changes

Environmental Services:

- Create a discharge team
- Separate fixed and variable work
- Fix broken systems and processes
- Remove multiple zones by pavilion
- Dispatch via monitor watcher role and prioritize beds based on reservation not first in first out (FIFO)
- Ensure employees have the tools and equipment to do their jobs
- Standardize room cleaning across all patient care units and service lines
- Add full-time equivalents (FTEs) to department and increase supervisory presence 24 hours a day and 7 days a week
- Enhance training for Environmental Services Associates

Disseminate Success Stories

Environmental Services Discharge Team: Standardization, better cart wheels

When a sick, elderly patient in the Emergency Department is told that she needs to be hospitalized, the last thing she and her family are thinking about is the readiness of her room. However, preparing her bed is exactly what the Environmental Services Discharge Team is thinking about.

Environmental Services plays a key role in room and bed preparation and last year, as part of the Safe Patient Flow initiative, it developed a specialized 25-member team totally dedicated to preparing beds for the next patient.

"When patients in the ED or the

takes 30 minutes to clean a routine room and 45 minutes to clean an isolation room. In the past year, the team has reduced its bed turn-around time from 84 minutes to about 60 minutes, and is working to get that lower.

Washington has worked with patient service managers on units to standardize what the teams do to prepare the rooms. "Some units wanted two top sheets put on every bed, and that slowed the process down; others wanted different combinations of towels," points out Washington. "Our managers worked with us and these efforts now save on time.

YALE-NEW HAVEN HOSPITAL

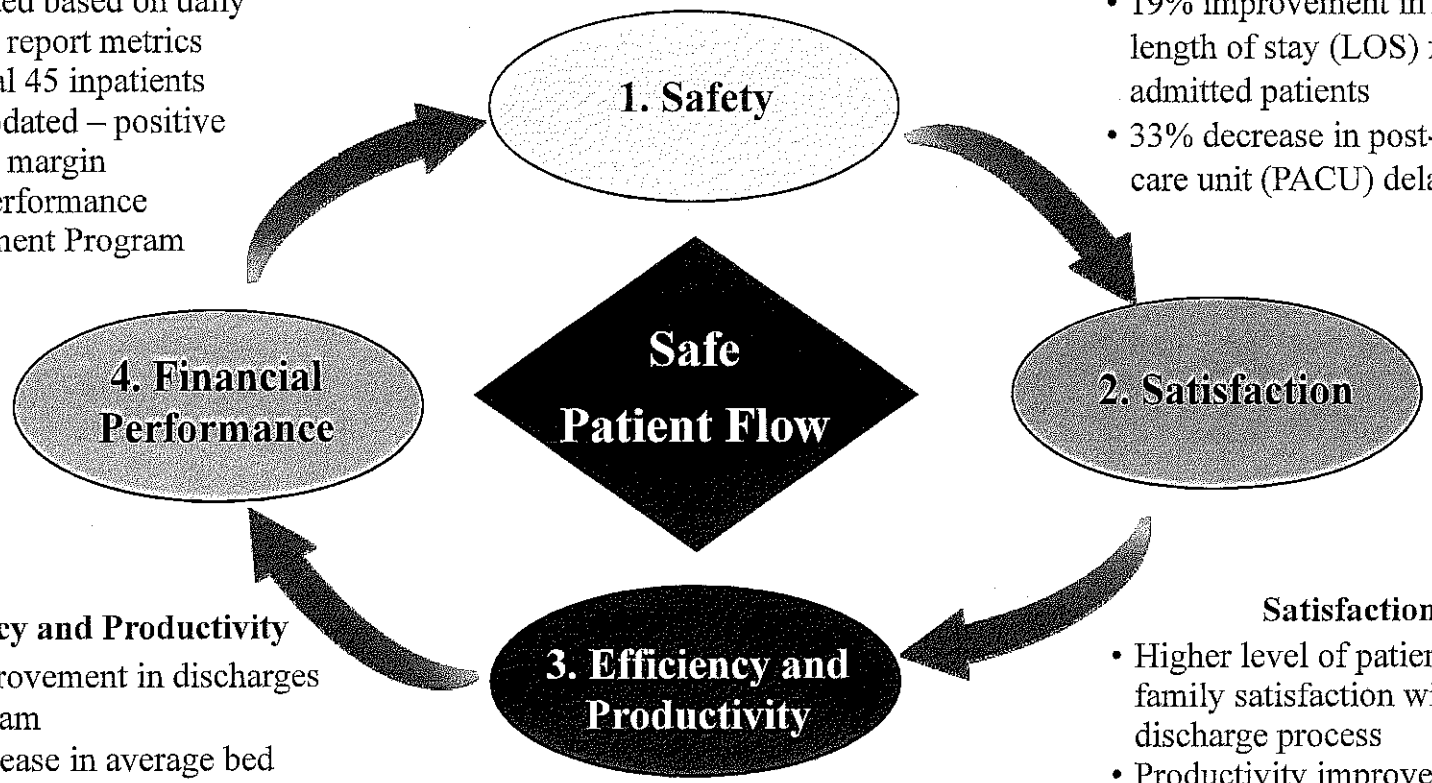
Safety Comes First

Financial Performance

- FTEs added based on daily operating report metrics
- Additional 45 inpatients accommodated – positive operating margin
- Strong Performance Improvement Program (PIP)

Safety

- 19% improvement in AED length of stay (LOS) for admitted patients
- 33% decrease in post-anesthesia care unit (PACU) delays



Efficiency and Productivity

- 32% improvement in discharges by 11:00 am
- 11% decrease in average bed cleaning turnover time

Satisfaction

- Higher level of patient and family satisfaction with the discharge process
- Productivity improvement without employee layoffs

YALE-NEW HAVEN HOSPITAL

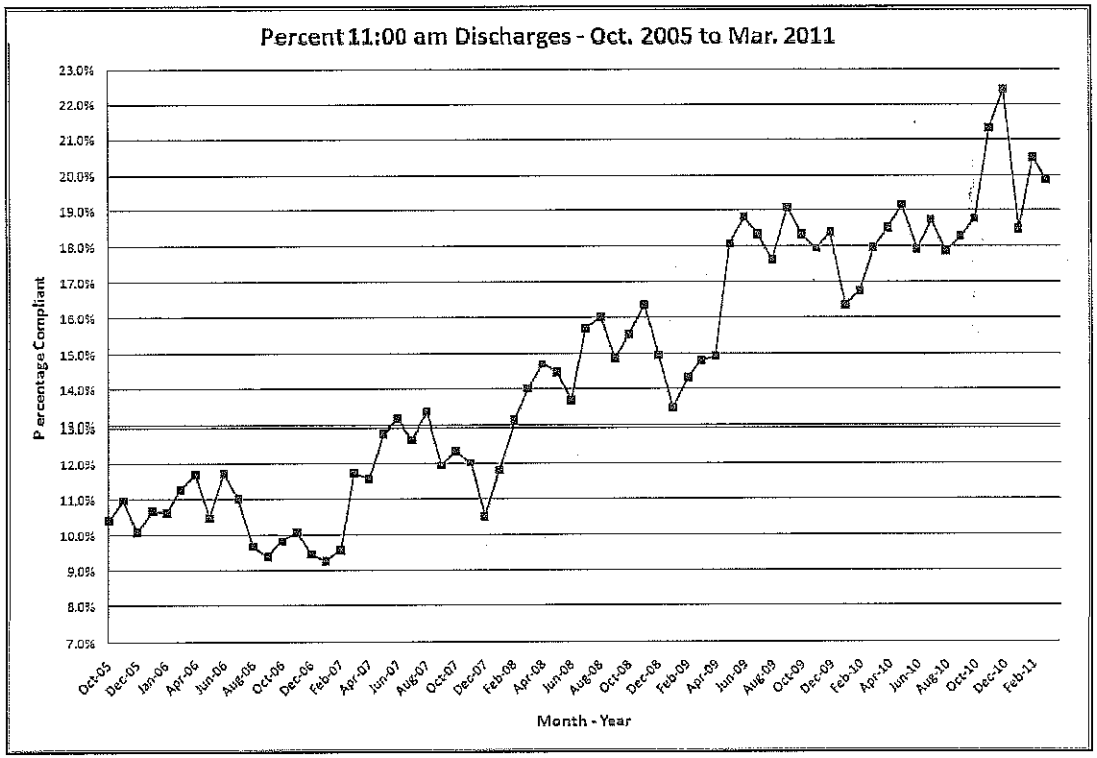
Bed Control Office Successes

- Ongoing patient throughput improvements with greater than **30%** increase in 800+ days
- Reduced Emergency Department:
  - Rebooking rate from **35% to 9%**
  - Bed reservation to inpatient unit arrival by ~ **30 minutes**
  - Admit request to bed reservation by ~ **15 minutes**
- Reduced intra-hospital transfer volume by **42%**
- Decreased adult PACU ALOS by **7 minutes**
- Decreased PACU delays due to:
  - "Booked Against a Discharge" from **29% to 8%**
  - "RN Unavailable" from **16% to 10%**

YALE-NEW HAVEN HOSPITAL

Key Outcomes and Results

Earlier discharges of clinically ready patients creates time of day capacity

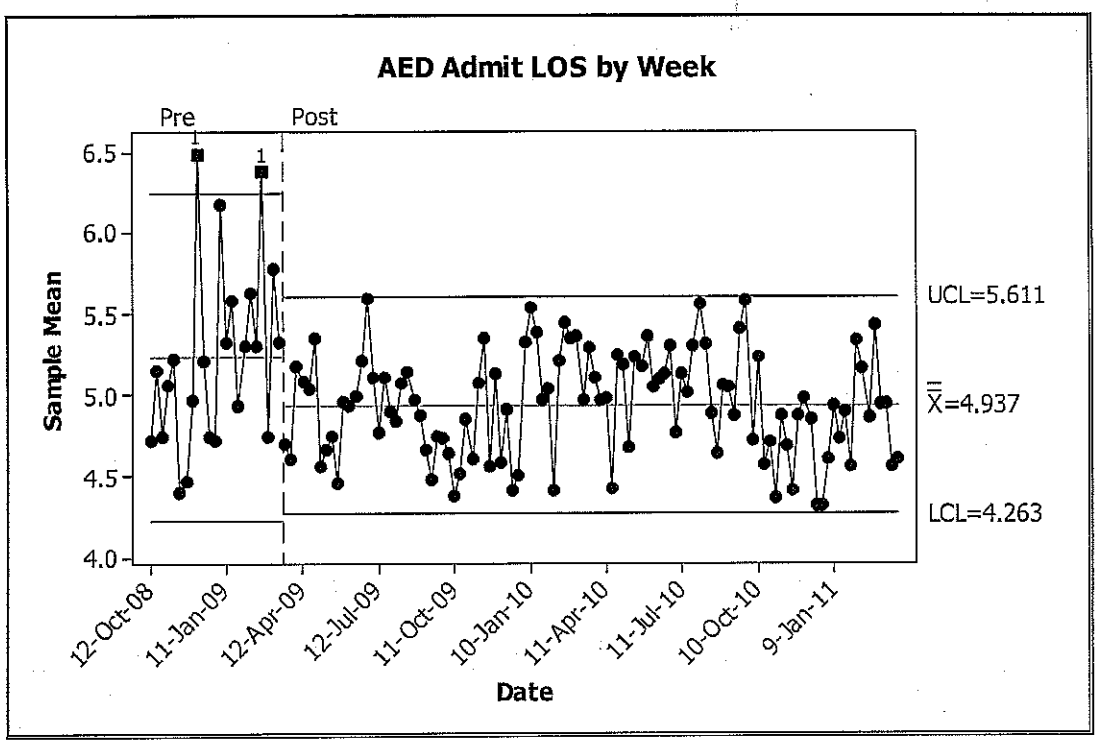


Increased discharges by 11:00 am accommodate admissions and transfers

YALE-NEW HAVEN HOSPITAL

Key Outcomes and Results

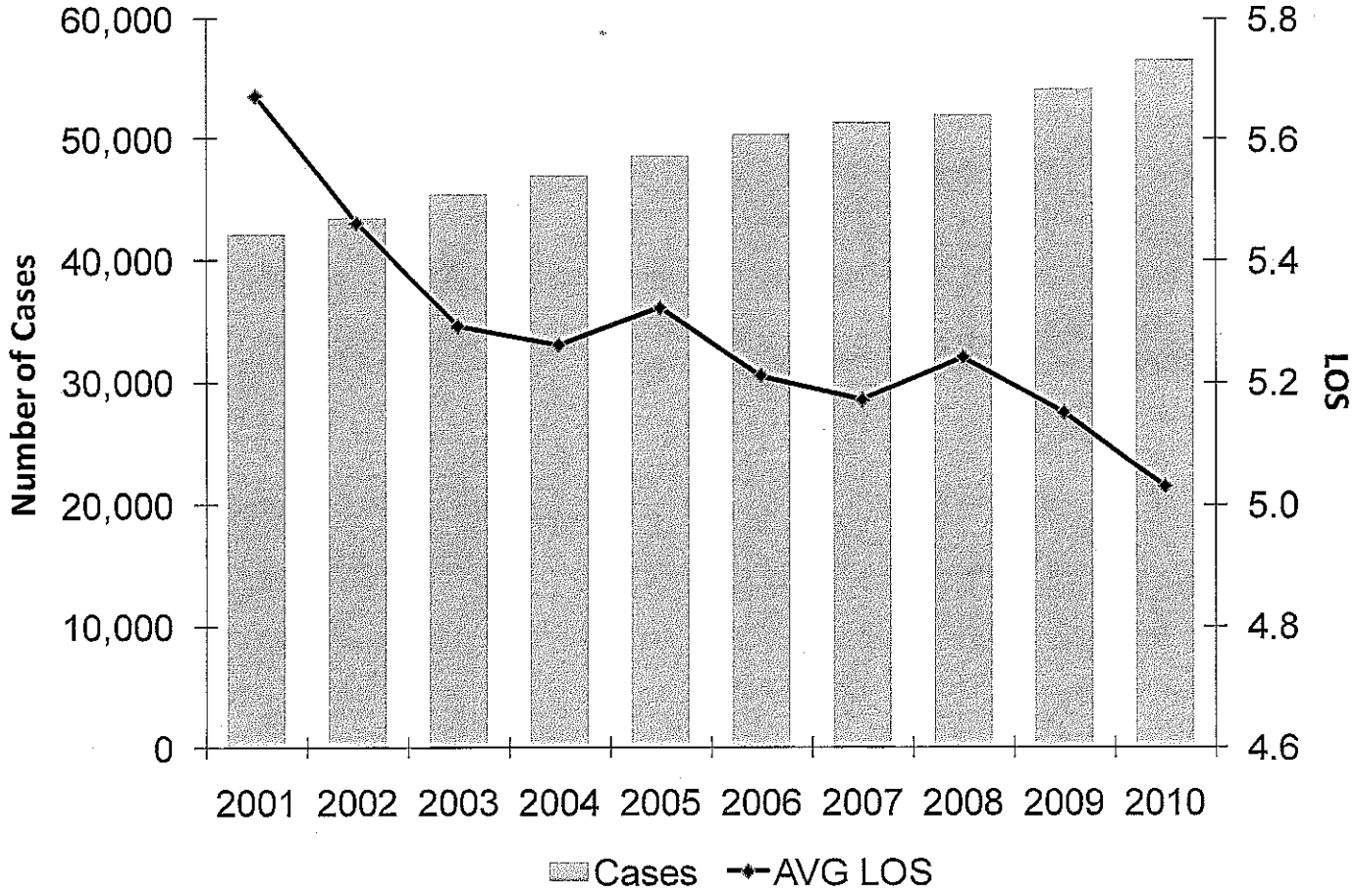
Booking clinically ready patients to available beds and earlier discharges create time of day capacity



Despite increased volume, AED LOS is reduced as time of day capacity is created

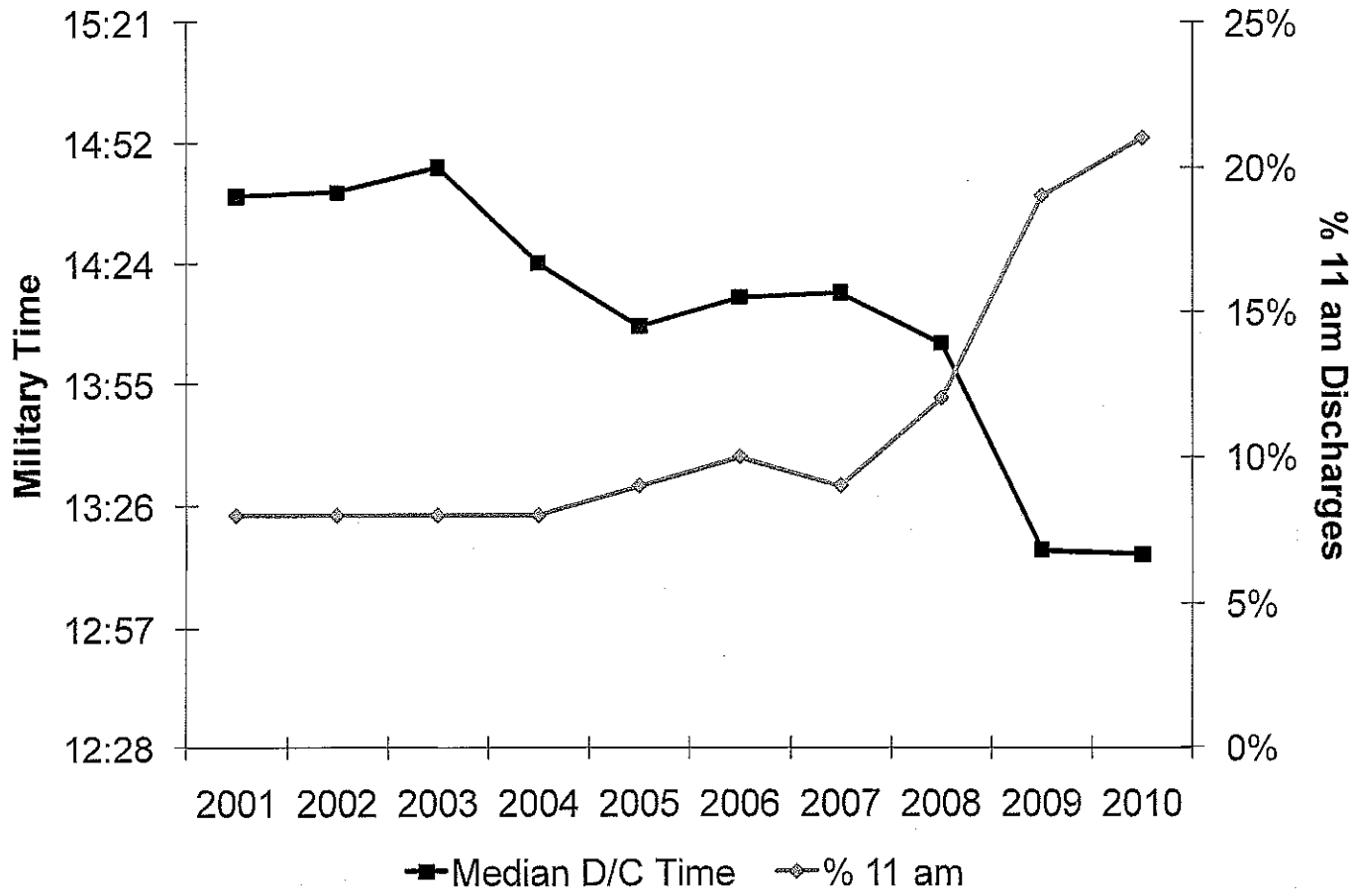
YALE-NEW HAVEN HOSPITAL

Length of Stay and Cases



YALE-NEW HAVEN HOSPITAL

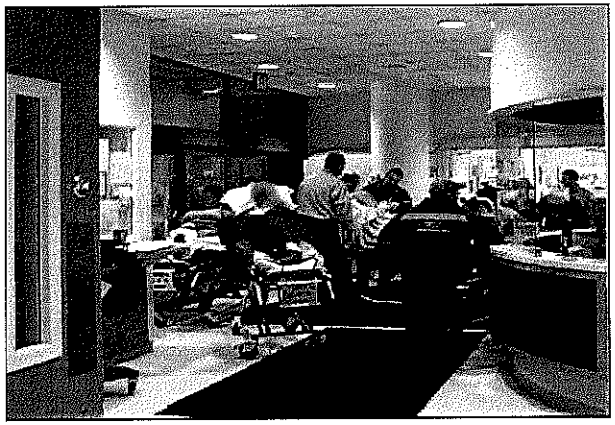
Snapshot of Success



YALE-NEW HAVEN HOSPITAL

Translation

- Midnight census of ~ **100 fewer** patients from LOS savings
- **20 more** discharges by 11:00 am
- **9.7 years** less time patients spent in the hospital
- ~ **75 patients** out the door by **13:30 versus 15:00**
- Similar **savings** in bed turnover, transports, and PACU time



YALE-NEW HAVEN HOSPITAL

Lessons Learned

- Focus on **early successes**
- Improve one process and **discover** more process improvement opportunities
- Utilize a **balanced scorecard**, versus individual measures, to more effectively evaluate success
- **Engage** employees in observations, brainstorming, and implementing process improvements
- **Reinforce** desirable behaviors
- Remove **incentives** for undesirable behaviors
- Reward team **metrics** or hospital wide **measures**
- **Communicate, communicate, communicate**

YALE-NEW HAVEN HOSPITAL

Questions....

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ATTACHMENT IV

Helicon Consulting Executive Summary

YALE-NEW HAVEN HOSPITAL

Bed Capacity Study

Findings Report

HELICON CONSULTING, INC.

Executive Summary

The findings are summarized below. The full report begins on page 9.

Functional Assessment

Safe Patient Flow process improvements have made steady and significant progress in enhancing bed utilization. In addition, the sophisticated and intense management of patient flow and bed assignment by the Bed Management department has prevented many potentially negative consequences that can occur when operating with a consistently high census. The high patient volume does, however, frequently result in the use of triple occupancy rooms and overflow spaces, a sub-optimal situation.

An insufficient number of single rooms, particularly on the medicine units, and the number and location of telemetry beds further complicates patient placement.

Bed Utilization

The Y-Access Line, initiated in August, 2010, is credited with a net increase of 996 patients in FY 2011. The growth from this program does not appear to have plateaued and additional growth is expected in FY 2012. Patients admitted through Y-Access are more complex and have a longer length of stay, reported to be 10.8 day. Approximately one-third of the Y-Access transfers were pediatric patients.

Adult Medical and Surgical Units[1]

In FY 2011, the average daily census (ADC) for the adult medical and surgical beds was 555 patients. Average bed utilization was 87%. Observation patients housed on inpatient units brought the ADC up to 559. On average, an additional 5.5 inpatients were in the Emergency Department waiting for bed placement. The combined adult medical and surgical unit census exceeded 90% bed utilization on 142 days, or 39% of the time. The census exceeded 95% utilization on 31 days, or 8% of the time.

Because the bed utilization is consistently high patients are commonly placed on units other than those assigned to the admitting services. All services regularly have patients distributed across many units, buildings, and floors

When beds are unavailable, patients may be temporarily cared for in overflow spaces until a bed is available. Individual unit midnight census' exceeded bed capacity on 351 occasions in FY 2011. When observation patients are included, individual unit census' exceeded beds on 523 occasions. It is assumed that when the census' exceeds capacity overflow beds or spaces were in use.

There were 13,155 discharges, in FY 2011, of patients whose length of stay was only 1 day. Based on estimates of FY 2011 discharges, based on YTD data on Aug 15, 2011, these patients represented 23% of YNHH discharges. These patients, however, account for only 4.4% of the patient days. Excluding the maternity patients, the ADC for 1-day patients is 34. In general, these patients are evenly distributed across the services line and represent a very diverse population.

In FY 2011, 3,278 patient days are associated with observation charges. An additional 1,021 inpatients started their admission as an observation patient and were converted to inpatient status. The ADC for this population was 9. The use of observations beds, however, increased significantly in November, 2012.

Children's Hospital

In FY 2011, the ADC for the pediatric units, excluding Child Psychiatry and the NBSCU, was 62. Average bed utilization was 69%. In addition, an average of 1.4 inpatients were in the Pediatric Emergency Department waiting for bed placement.

[1] Patient data applied to the bed utilization analyses represent midnight unit census from the RIMS database.

The Children's census exceeded bed capacity of 90 beds on 2 days. Overflow spaces, however, were utilized on 52 occasions.

The census data report 17,050 patient days for the NBSCU, an ADC of 46.7, in FY 2011. The unit operated with an average bed utilization of 90%. The midnight census exceeded the 52 beds on 63 days.

Yale Psychiatric Hospital

The average daily census of the Yale Psychiatric Hospital is 72. Bed utilization for FY 2011 was 99%. The psychiatric bed census exceeded bed capacity on 139 days. Units utilized non-designated overflow spaces on 289 occasions. The ADC of WS3, the general adult unit, exceeded bed capacity. These census data DO NOT include inpatients waiting overnight in the ED for bed placement.

Bed Need: FY 2011

When target utilization rates are applied to the FY 2011 census, significant bed shortages are noted for Internal Medicine (84 beds), Neurosciences (6 beds), NBSCU (11 bassinets), and Adult Psychiatry (8 beds). Patient census on the adult medical and surgical units supports the need for 61 additional beds. Midnight census data were used to evaluate FY 2011 bed utilization and determine bed need.

Target utilization rates applied to bed need calculations include 80% for adult beds, 75% for pediatric and maternity beds, and 90% for psychiatric beds. These represent commonly accepted rates within the industry.

Bed need calculations are presented in Table I, on the following page.

Table I: Bed Need for FY 2011

	Inpatient & ED Days	Bed Need @ Target Utilization	Beds Available	Variance
Adult Med/Surg		Target: 80%		
Heart & Vascular	28,101	96	97	1
Internal Medicine	113,352	389	305	-84
Neuroscience	13,251	46	40	-6
OB/GYN	7,392	25	28	3
Orthopedics	8,280	28	30	2
Surgery	33,625	115	140	25
Other[2]	551	2	0	-2
Adult total	**204,552**	**701**	**640**	**-61**
Children's Hospital		Target: 75%		
Pediatric Units	23,138	85	90	5
NBSCU		Target: 75%		
NBSCU	17,050	63	52	-11
Child Psychiatry		Target: 90%		
Child Psychiatry	4,347	14	15	1
Maternity		Target: 75%		
Maternity	13,996	52	56	4
Healthy Newborns		Target: 75%		
Newborn	9,527	35	40	5
Adult Psychiatry		Target: 90%		
Psychiatry	26,296	81	73	-8
Total	**298,906**	**1,031**	**966**	

[2] Other includes Anesthesiology, Dentistry, Diagnostic Imaging, Ophthalmology, and Pediatric and Psychiatry patients bedded on adult units.

Bed Need: FY 2012 - 2014

Bed need calculations for FY 2012 - 2014 were developed from projections generated by the YNHH Department of Finance.

The projects demonstrate a continued need for adult medical and surgical beds, NBSCU bassinets and adult psychiatry beds.

Table II: Bed Need at Target Utilization

	FY 2012		FY 2013		FY 2014		Current Bed Capacity
	Patient Days	Bed Need	Patient Days	Bed Need	Patient Days	Bed Need	
Adult Med/Surg	Target: 80%						
Heart & Vascular	30,135	103	30,998	106	31,881	109	97
Internal Medicine	113,711	389	115,467	395	117,281	402	305
Neuroscience	13,343	46	13,820	47	14,307	49	40
OB/GYN	7,549	26	7,694	26	7,841	27	28
Orthopedics	8,072	28	8,174	28	8,278	28	30
Other[3]	573	2	577	2	581	2	0
Surgery	34,112	117	34,756	119	35,417	121	140
Adult total	**207,495**	**711**	**211,486**	**723**	**215,586**	**738**	**640**
Children's Hospital	Target: 75%						
Pediatric Units	23,991	88	24,499	89	25,018	91	90
NBSCU	Target: 75%						
NBSCU	15,351	56	15,672	57	15,994	58	52
Child Psychiatry	Target: 90%						
Child Psychiatry	4,941	15	5,037	15	5,141	16	15
Maternity	Target: 75%						
Maternity	14,346	52	14,528	53	14,716	54	56
Healthy Newborns	Target: 75%						
Newborn	9,990	36	10,195	37	10,405	38	40
Adult Psychiatry	Target: 90%						
Psychiatry	26,799	82	27,201	83	27,617	84	73
Total	**302,913**	**1,040**	**308,618**	**1,057**	**314,477**	**1,079**	**966**
L&D	1,591		1,611		1,631		
TOTAL	**304,504**		**310,229**		**316,108**		

[3] Other includes Anesthesiology, Dentistry, Diagnostic Imaging, Ophthalmology, and Pediatric and Psychiatry patients bedded on adult units.

Challenges & Opportunities

YNHH is currently operating at a bed utilization level which makes patient placement to the "right bed" a significant challenge. At the present there is insufficient capacity to accommodate the continued growth from changing patient demographics and from demand for new and high quality patient services being delivered at YNHH. Changes to the facility that will increase capacity are being pursued but will not come to fruition as quickly as necessary. In the interim, YNHH must address their bed shortage by increasing capacity within the existing structure, decreasing demand wherever possible, and optimizing utilization.

Increase Capacity

In January 2012, YNHH is requesting the State of Connecticut increase their bed license by 70 beds. These beds are needed to resolve the current bed shortfall and accommodate projected growth in the adult medical and surgical services. The location and configuration of available beds makes them unsuited for psychiatry or NBSCU patients.

If the CON is approved, YNHH can increase bed capacity on several units. Total capacity available depends on whether YNHH intends to reopen triple occupancy rooms.

Table III: Potential Sites for Additional Beds

	Available Capacity without Triple Rooms	**Available Capacity with Triple Rooms**
EP 6 7/8	24	27
EP 5 7/8	24	26
EP 4 5/6	14	14
WP 8	4	4
EP 4-7	0	3
SICU2	7	7
Total	**73**	**81**

The double rooms on WP 8 and the triple rooms on EP 4-7 are currently used as overflow beds and are frequently used to accommodate current patient volume. Officially reopening these beds will have minimal impact on meeting future demand.

Utilization of critical care beds by the adult medical and surgical services, in FY 2011, was 15.9% of patient days. If adult medical surgical beds are increased by the 70 beds applied for without a corresponding increase in critical care capacity, the ratio of critical care beds will decrease to 15.1%. If the 7 beds on SP 7-1 SICU2 are opened as a portion of the bed increase, the critical care bed ratio will increase to 16.1%.

Reduce Bed Demand

Although extremely helpful, an increase of 70 beds is insufficient to address the current bed utilization and the projected increase in patient volume. Efforts to decrease the demand need the same rigor that has been invested in Process Improvement and Bed Management. During this Bed Capacity Study no single solution surfaced as having potential to significantly reduce utilization. Several patient management practices, however, offer potential to free up beds.

1-day Stay Discharges

The ADC for patients discharged after only one day is 34. Although these patients are distributed across all services and, based on DRG assignments, are a diverse population, rigorous retrospective review and prospective analysis will likely identify patients that can be cared for either as observation patients or as outpatients. Changes in hospital operational parameters and individual practice patterns will be needed. For example, the same interventions applied to the introduction and acceptance of 6:00 a.m. admissions prior to a procedure may be needed to facilitate 6:00 a.m. discharges.

ALOS Reduction

The Psychiatry liaison service reports success in reducing the ALOS in medicine service patients they identified as having psychiatric comorbidities and/or other risk factors. They have been unsuccessful in introducing a similar liaison service within the surgical services. A trial of a Psychiatry Liaison Team within a single surgical service would help determine if similar ALOS reductions are possible and identify any problems that such a service may create for the surgeons.

Non-acute Services

Expanding the continuum of care through the use of inpatient rehabilitation, sub-acute care, skilled nursing, hospice, and other long term care options can be beneficial in reducing ALOS. Efforts to increase the utilization of these levels of care both within and outside of the Yale New Haven Health System are needed to decrease ALOS and bed demand. The Temple Recovery Center has immediately available capacity.

Observation Beds

Classifying a patient as "observation" rather than "inpatient" allows the hospital to provide patient care services similar to acute care but offers flexibility in where these services are provided. Over half of the observation patients at YNHH are cared for on inpatient units. Benefits and efficiencies from clustering this population on a designated observation unit were voiced by several staff members. The number of beds on EP 5-7 is being increased from 14 to 24 beds. If this unit is converted to an inpatient unit, as a result of the CON application, an alternate location for the observation patients is required and has not yet been identified.

Optimize Bed Use

Y-Access

Growth from the Y-Access program does not appear to have plateaued and additional growth is expected. If the program grows in FY 2012 by half the rate it grew in FY 2011, almost 5,400 patient days (ADC = 14.8) will be added to the census. Sufficient bed capacity is needed to accommodate these patients.

Flexibility

There are numerous constraints on patient placement and bed utilization that result from the varying configuration of the YNHH bed facilities. All efforts, within reason, to standardize the patient rooms, equipment, and technology will facilitate efficient patient placement and reduce transfers within the system. An increase in telemetry capability seems the most promising investment to achieve this goal.

Re-align Capacity

All services have a portion of their patients floated to other units and have boarders on their units, likely at the same time. A re-alignment of the bed resources to better match projected need for the next few years will help to reduce this problem. A priority of the re-alignment should be to maximize the utilization of the newest and best beds and minimize the use of the oldest beds. Unfortunately the majority of the beds available to increase capacity are in the East Pavilion.

ATTACHMENT V

"Ten Implications for Future Inpatient Care" - The Healthcare Advisory Board

Ten Implications for Future Inpatient Care

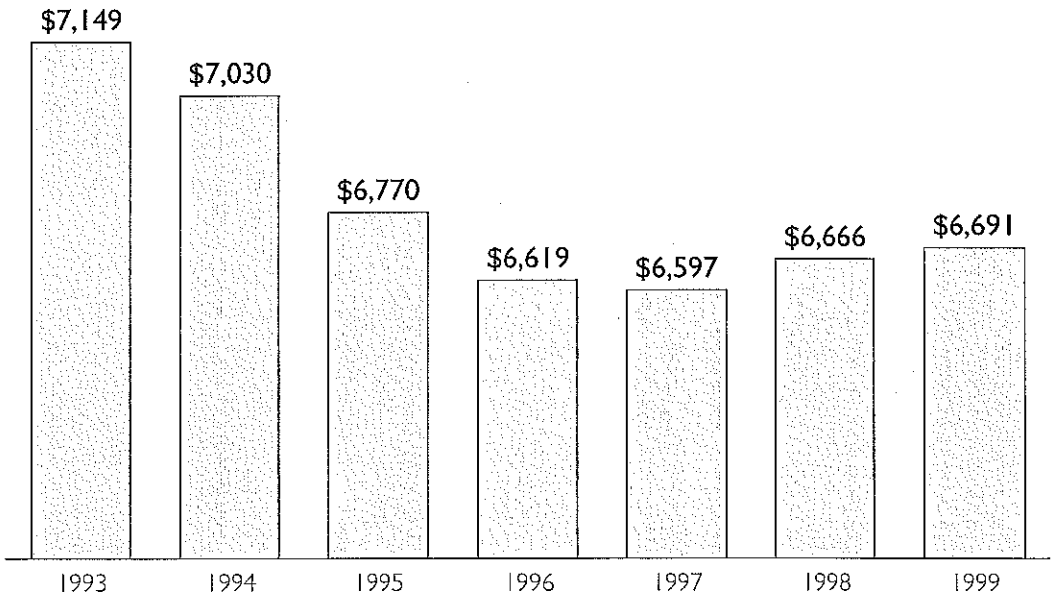
Implication #1: No Shrinking to Greatness

Conclusion #110 — Advisory Board reported last year that cost reduction lever diminishing in effectiveness—after a decade of concerted care reengineering, a number of hospitals reporting having hit bottom on savings

Conclusion #111 — Trouble on the Horizon: With emergence of scarcity-driven inflation, patient care costs likely to rise, not fall, in the future; hospitals already paying sharply higher prices for labor, drugs, and supplies

Hitting a Floor on Cost Reduction

Average Cost per Discharge, 1992–1999[1]



[1] In 2000 dollars.

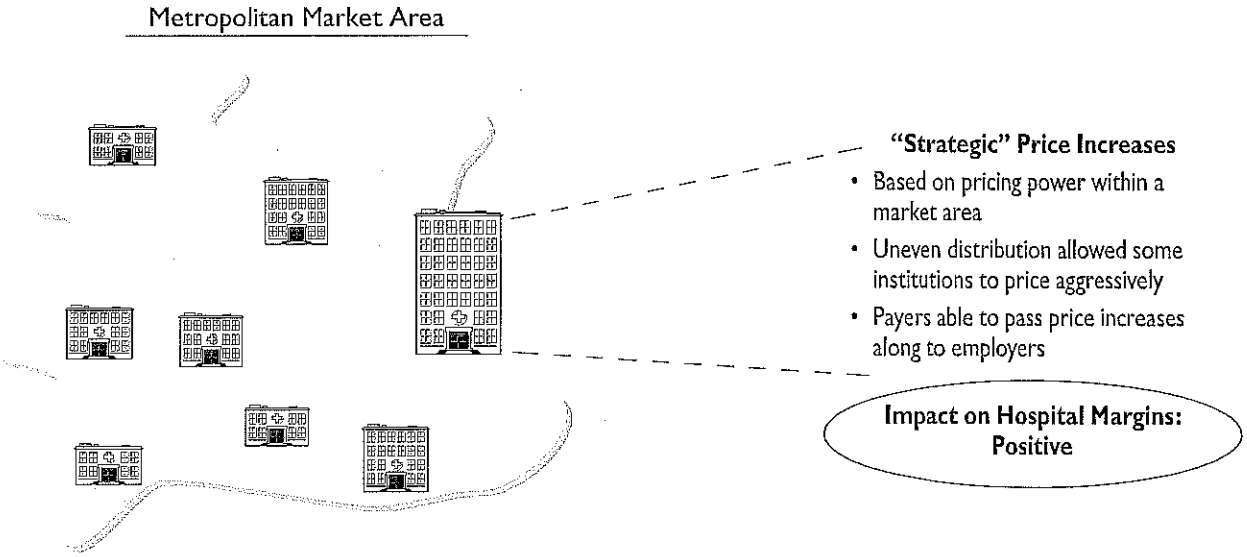
Source: American Hospital Association; Advisory Board analysis.

IMPLICATION #2: END OF PRICING-LED MARGIN EXPANSION

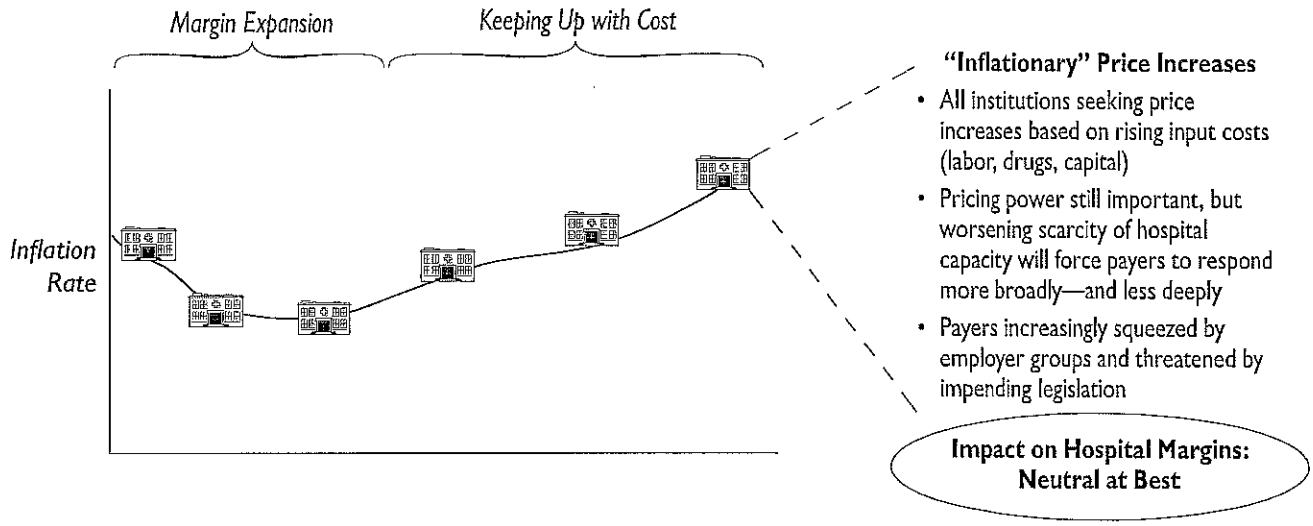
Conclusion #112 Concomitant Problem: Higher hospital pricing no longer sure route to higher margins; price concessions from health plans a matter of margin maintenance, not expansion—gains needed to cover increases in hospitals' own costs

PRICING TO KEEP UP,

Today's Strategic Pricing Environment



Tomorrow's Inflationary Pricing Environment



Conclusion #113 That pricing is no longer margin expanding not to say that it's no longer important; in fact, smaller hospitals not part of health systems especially disadvantaged—these institutions will find it increasingly difficult to recoup increases in their underlying costs

Not Get Ahead

A Tenuous Lever

The Advisory Board believes that the current market will allow some (small number of) hospitals and health systems with strong market leverage to gain double-digit increases in price negotiations with insurers.

While the recent return to less restrictive plans and surging patient demand further improve the clout wielded by hospitals with strong market positions, there remains some doubt as to smaller organizations' ability to leverage price to improve profit margin. Rates will be an important factor in mitigating inflationary prices, but will be a difficult lever for hospitals that do not have a strong bargaining base from which to negotiate.

Not for Everyone

"If premium increases flatten out or decelerate in 2002, we believe the lag effect will allow hospitals to continue solid rate increases for at least a year or two beyond 2002. But that's not equally true for all providers. Only hospitals with strong positions in their local markets will be able to demand mid- to high-single-digit rate increases."

John Hindelong
Analyst, Credit Suisse First Boston

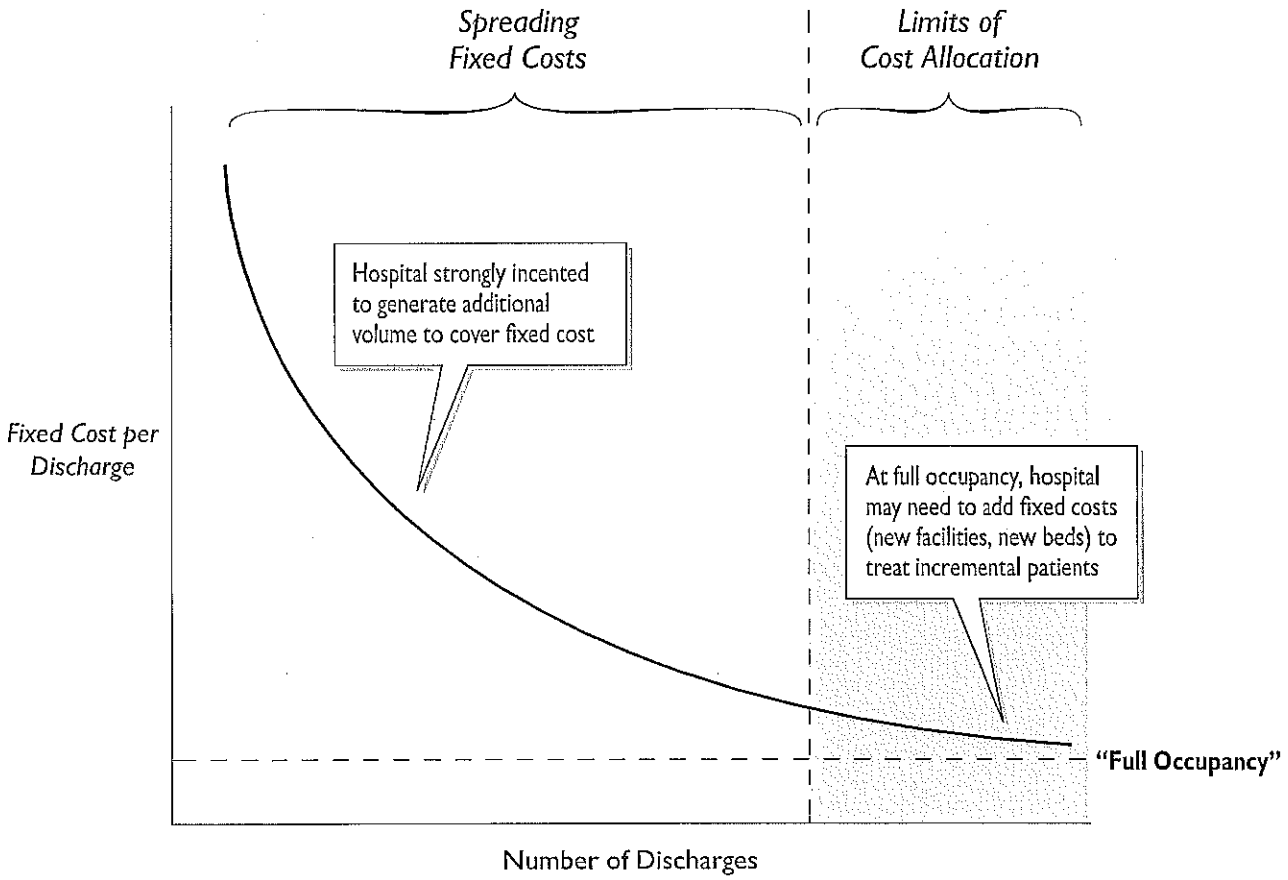
Source: "Is the Party Over?," *Managed Care Week*, May 14, 2001: 1; Freudenheim M, "A Changing World Is Forcing Changes on Managed Care," *New York Times*, July 2, 2001, 1; Strunk B, "Health Plan–Provider Showdowns on the Rise," *Center for Studying Health System Change*, June 2001; Advisory Board analysis.

Implication #3: End of Growth for Growth's Sake

Conclusion #114 Largest implication of new care economics is lessening need to worry about volume—with hospitals at or approaching effective capacity, growing patient volumes to spread fixed costs losing its power to affect margins

Running Out of Room

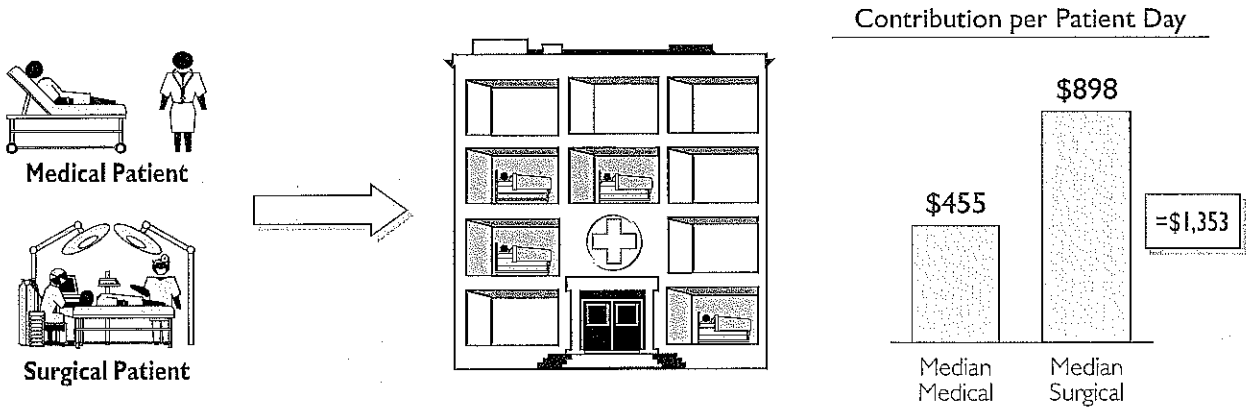
Reaching the End of Traditional Economics



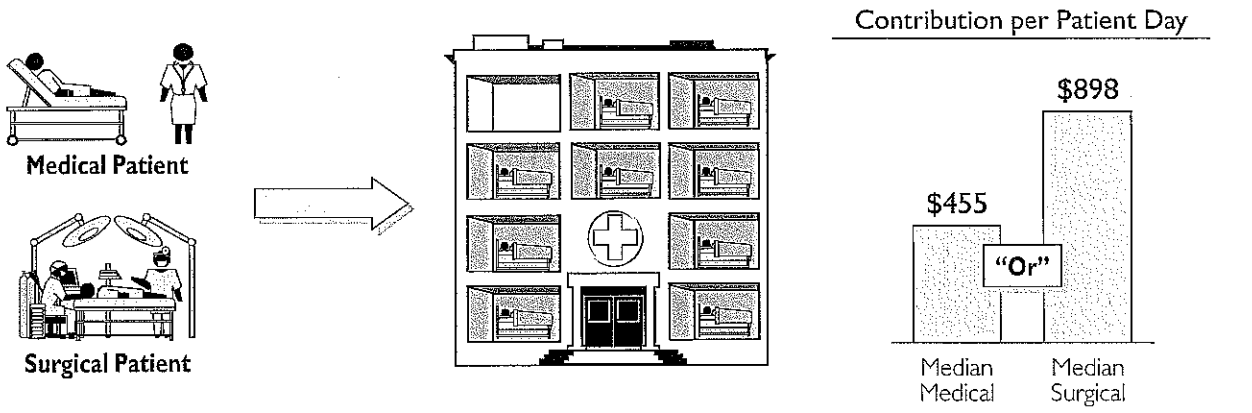
Conclusion #115 Rethinking Our Growth Ambition: With incremental patient volume increasingly coming at the expense of existing patient referrals, the role of growth for hospitals no longer clear cut—focus of strategy shifts (appropriately) to issue of patient mix

FOR VOLUME GROWTH

Not Forced to Discriminate



The Tyranny of the "Or"



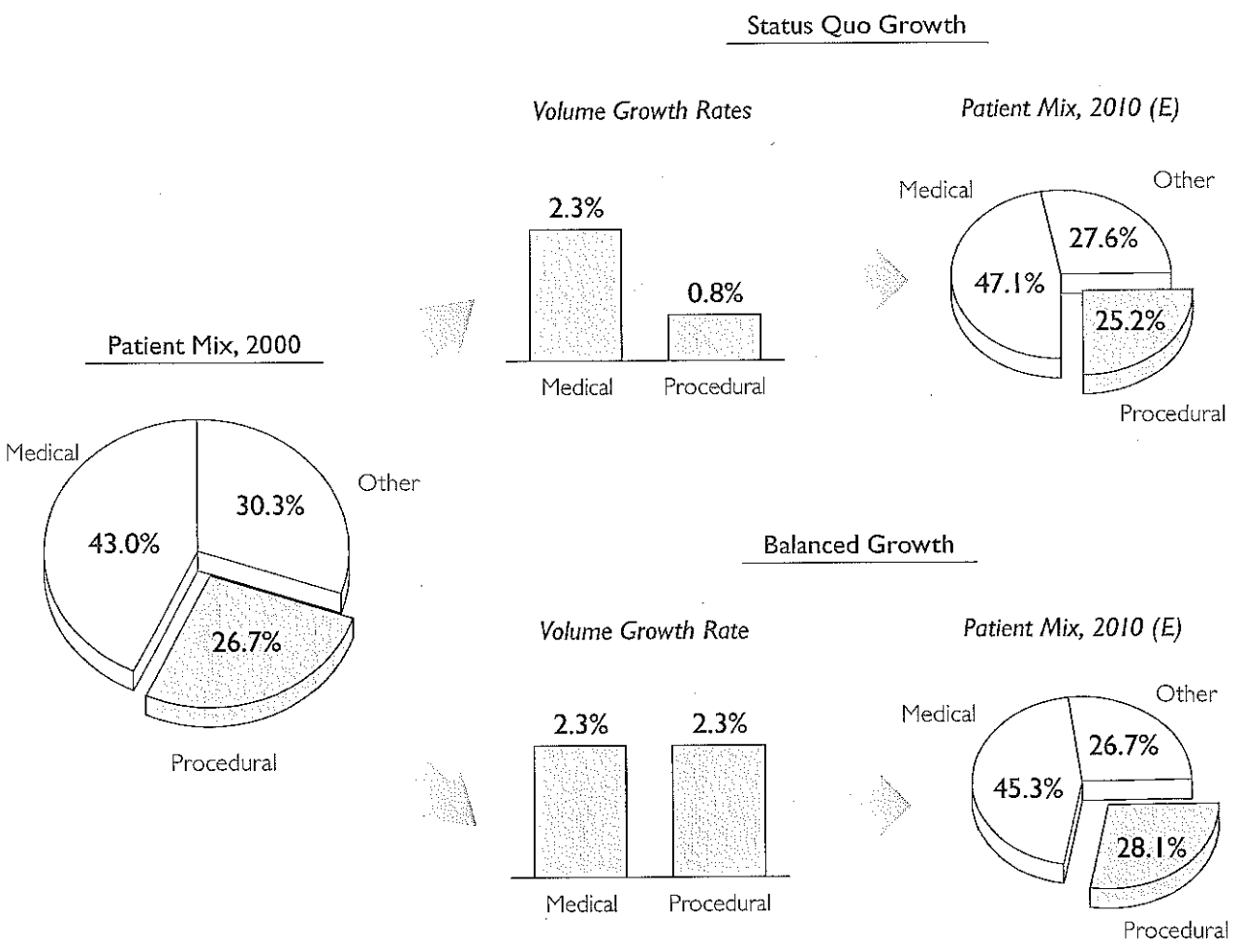
IMPLICATION #4: SUDDEN PRIMACY OF PATIENT MIX

Conclusion #116 With inpatient care costs, price and volume all receding in relative importance, inpatient mix takes center stage—hospital willingness to more aggressively manage revenue mix becomes key to future prosperity

Conclusion #117 Managing revenue mix really all about growing hospital inpatient procedure volumes at (or better, above) rate of medical admissions—ultimate hospital goal to achieve balanced growth

PATIENT MIX SHIFT PROFOUNDLY

Impact of Growth Rates on Future Mix



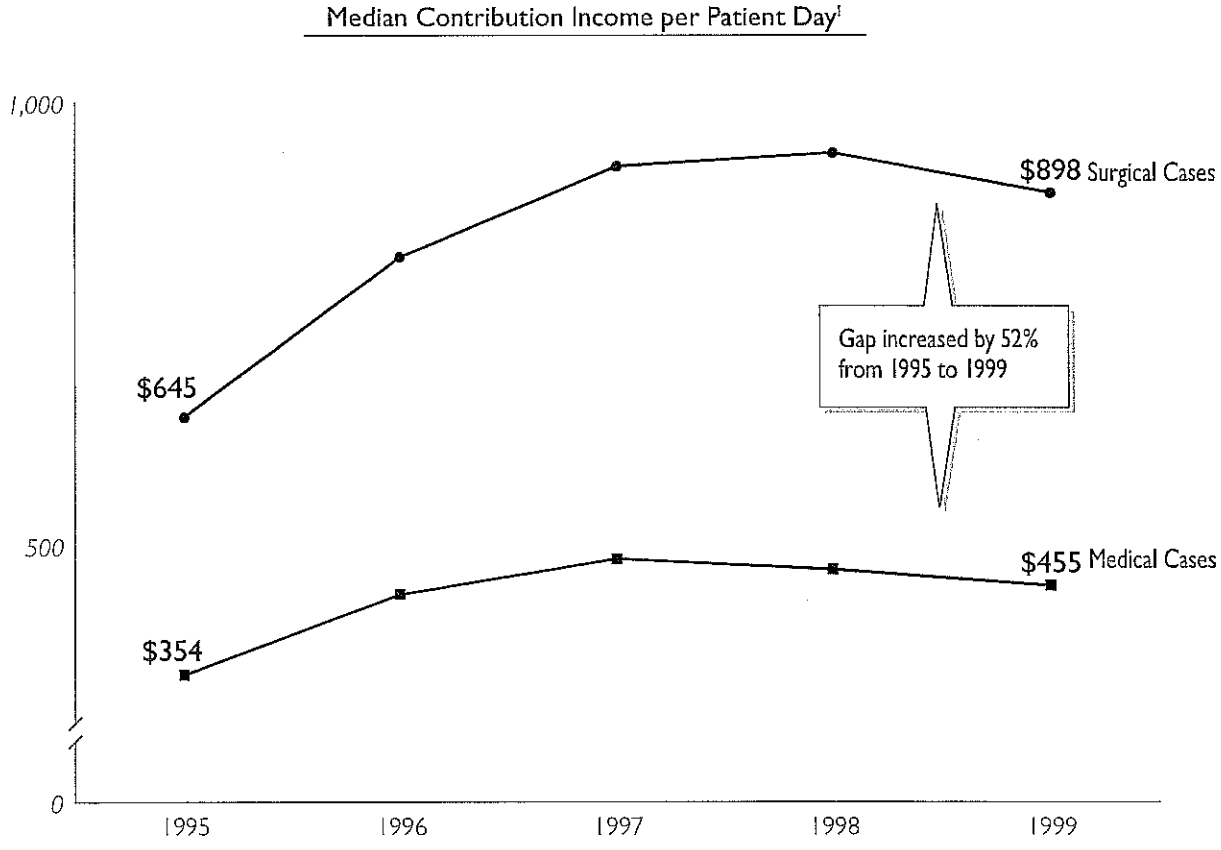
Note: Percentages may not total 100% due to rounding.

Source: Advisory Board Growth Database.

Conclusion #118 Importance of doing so rests on large profit gap between surgical and medical admissions; surgery patients (and patients having procedures generally) generating much higher incomes per patient day than medicine patients

Impacts Economics

Wide Gap Between Medical and Surgical Profitability



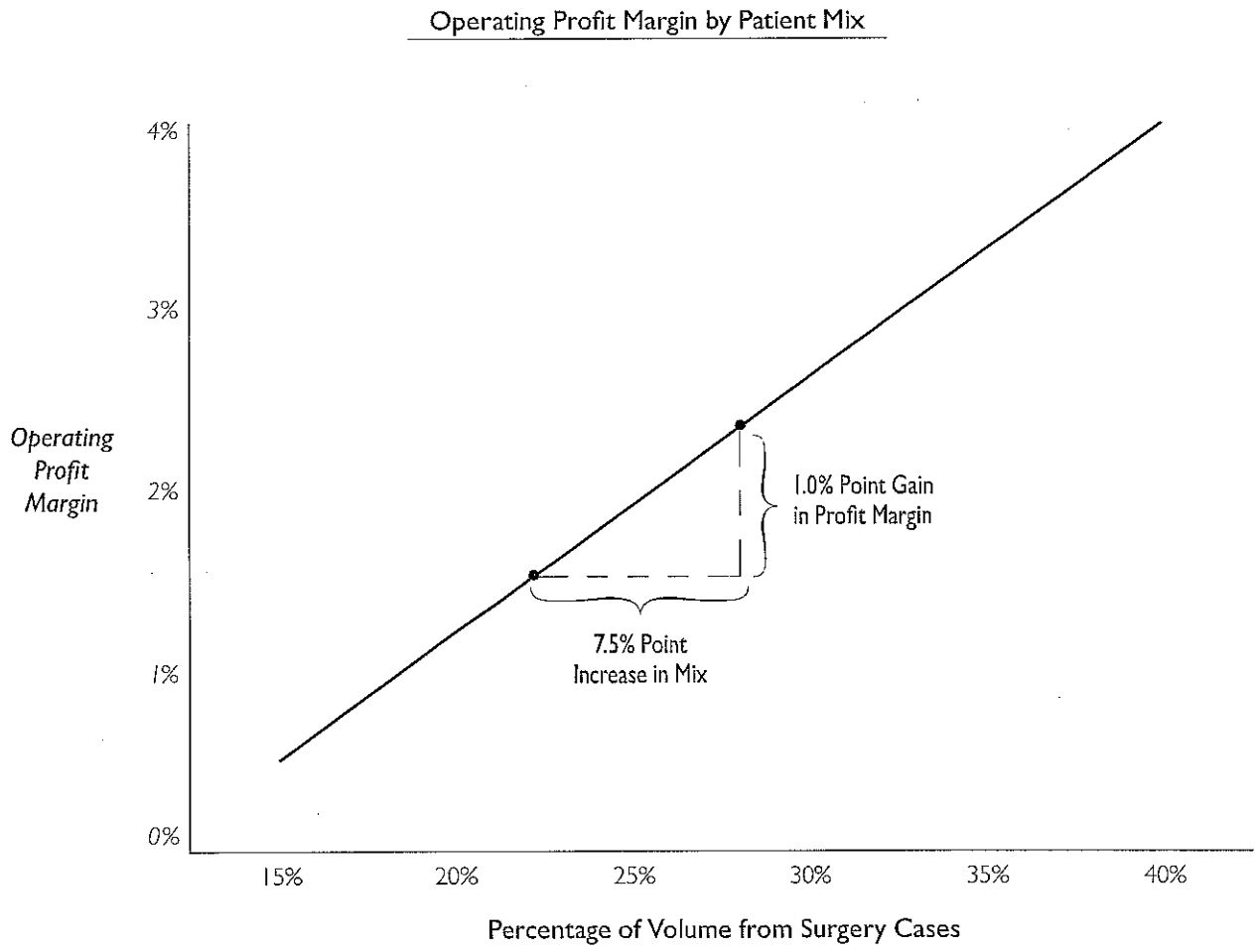
[1] Medicare income, in 1999 dollars.

Source: Advisory Board Growth Database.

Conclusion #119 Hard to overstate the power of migrating hospital mix; Advisory Board analysis suggests a 1.0 percentage point increase in operating margin for every 7.5 percentage point increase in procedures as percentage of hospital admissions

HIGHER PROCEDURAL MIX

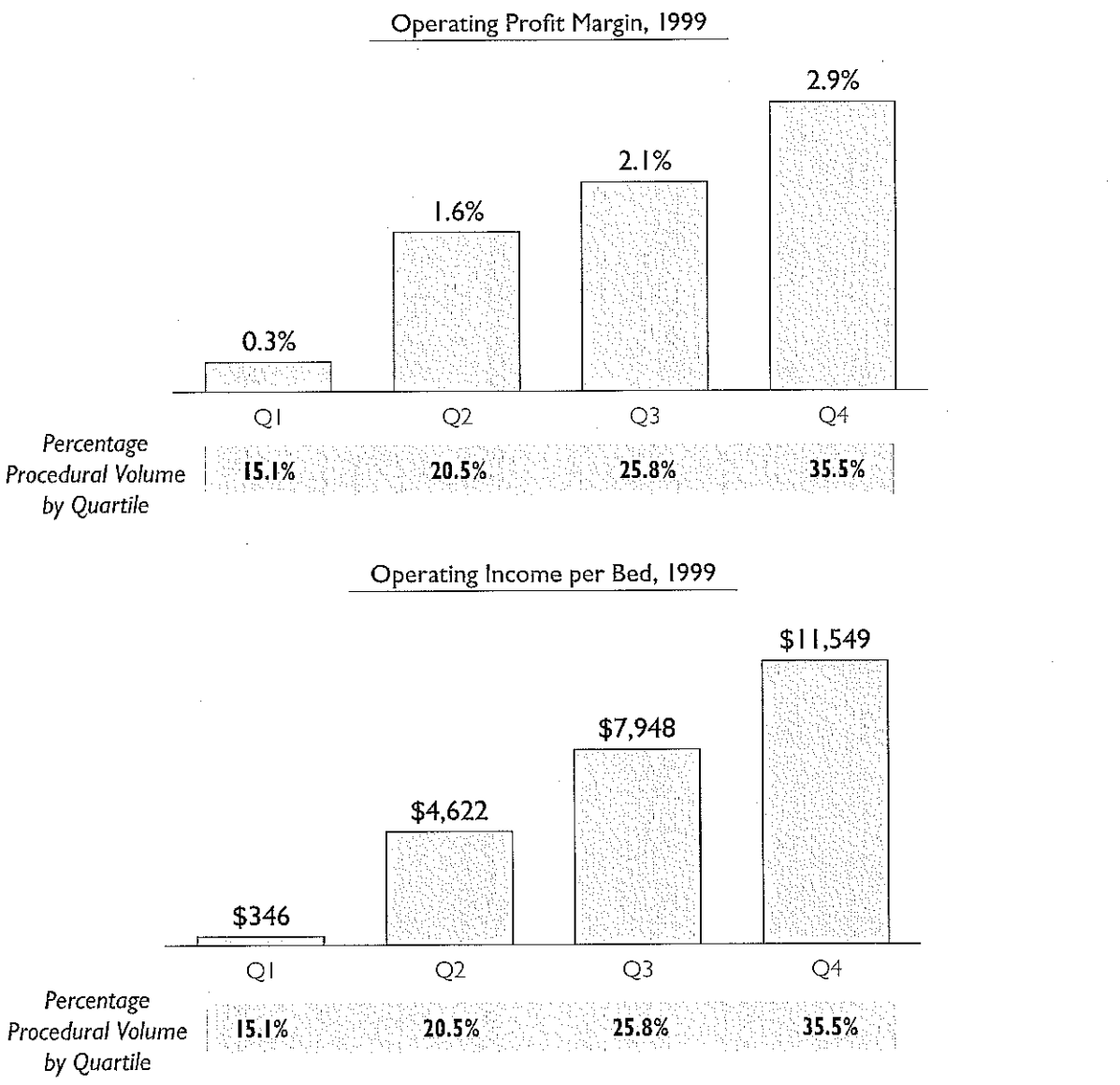
Clear Relationship Between Mix and Margin



Conclusion #120 Financial analysis corroborated by national data; hospital profitability strongly correlated with patient mix—hospitals with above-average surgery volumes also producing above-average profits

Drives Higher Profits

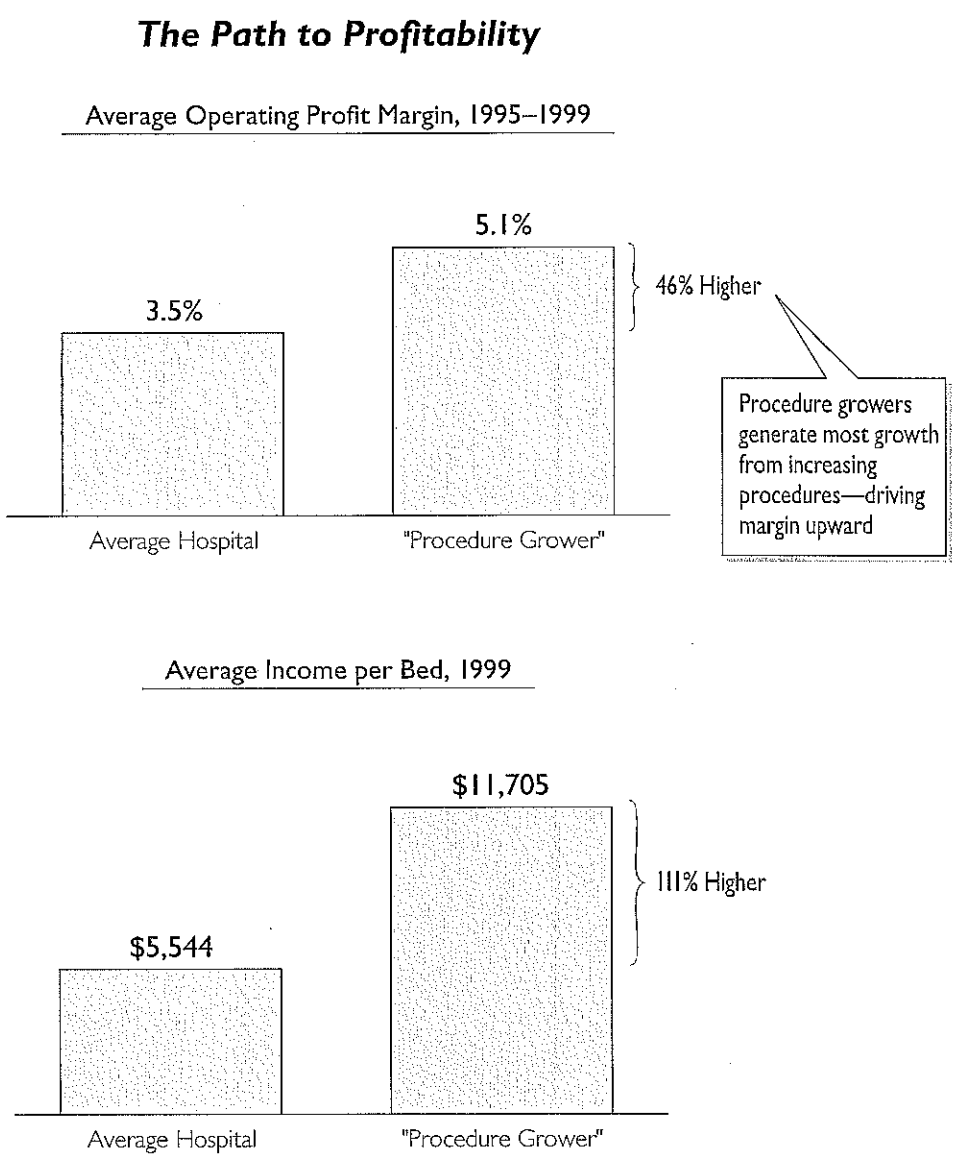
Profiting from Balance



Source: Advisory Board Growth Database.

Conclusion #121 Corollary Finding: Those hospitals most successful at migrating patient mix over time also among the most successful at growing their profits—"procedure growers" 46 percent more profitable than the average hospital

MARGIN GROWTH FROM GAINING



Source: Advisory Board Growth Database.

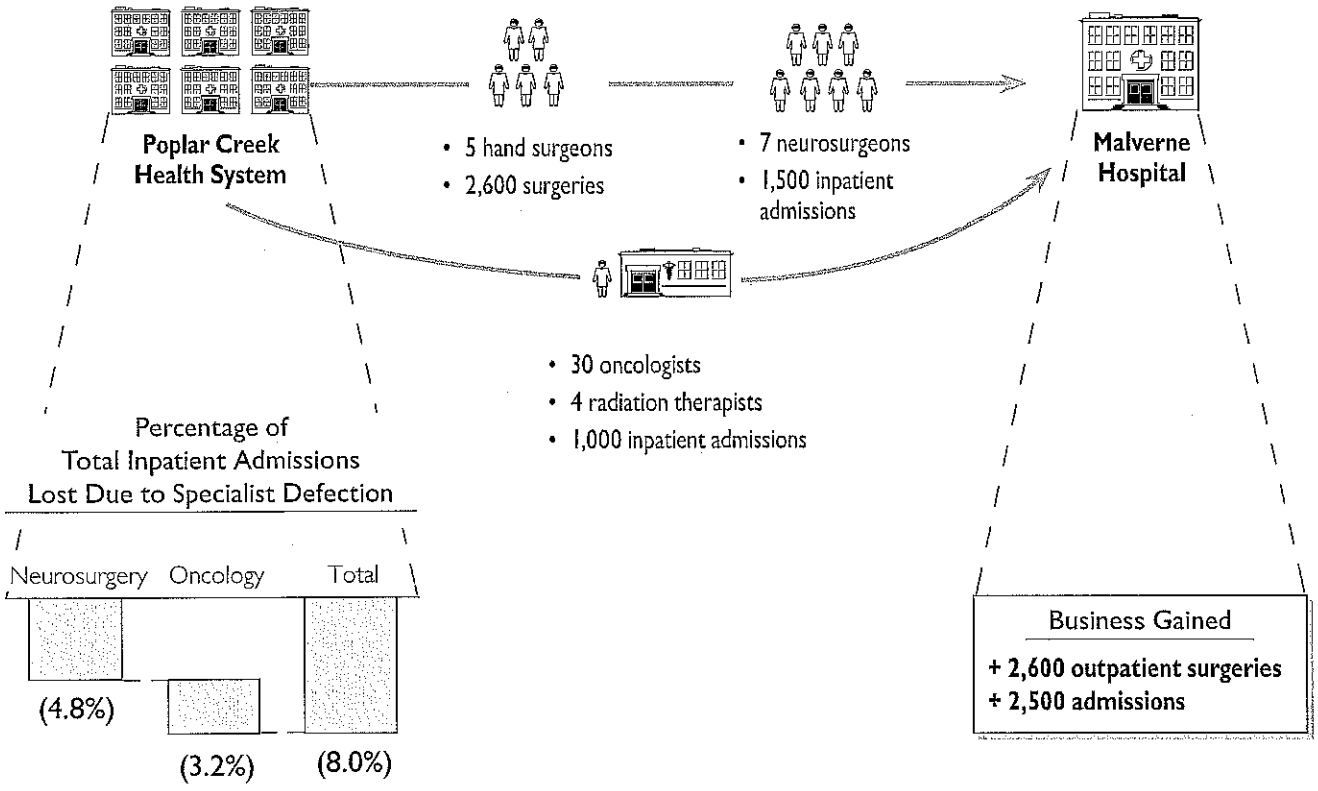
Conclusion #122 Not for the Faint of Heart: With surgical admissions growing much more slowly than medical admissions, even maintaining balance between the two a difficult task—hospitals will have no choice but to capture share from their neighbors

Procedural Market Share

Driving Mix by Capturing Share

Case in Brief

Poplar Creek Health System,[1] a six-hospital system in the Northeast, stumbled financially in the late 1990s, leading to major initiatives for reducing costs and restructuring debt. Due to financial uncertainty, Malverne Hospital,[1] a competitor, was able to recruit various specialists from Poplar Creek with assurances of financial stability and sustained growth.



[1] Pseudonymed institutions.

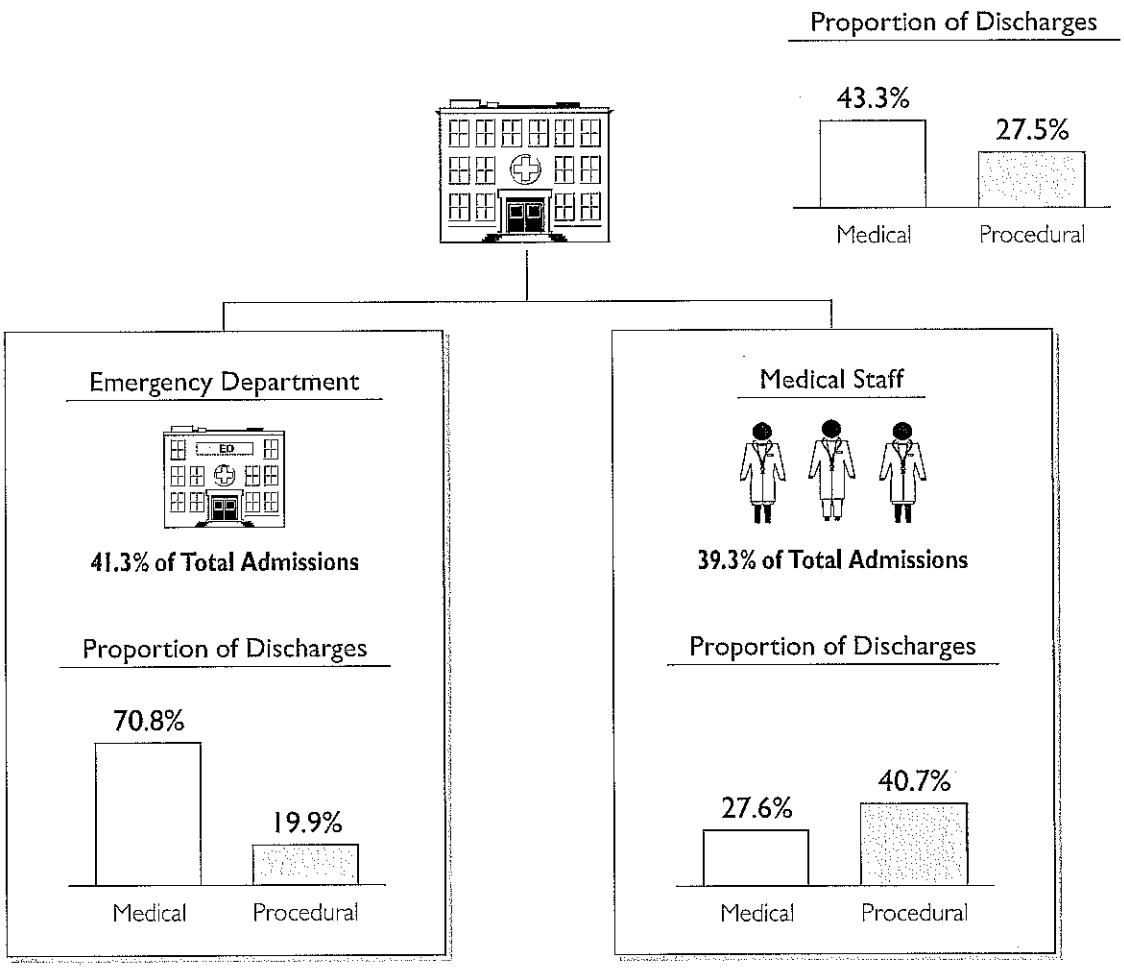
Source: Advisory Board interviews and analysis.

IMPLICATION #5: CHANGING REFERRAL CHANNEL ECONOMICS

Conclusion #123 Rethinking the value of traditional hospital referral channels central to any effort to migrate patient mix—hospitals will want to reexamine their facility investment and physician recruitment priorities in light of new economics of inpatient care

SIGNIFICANT VARIATION

Differentiating Among Referral Channels



Source: Advisory Board Growth Database.

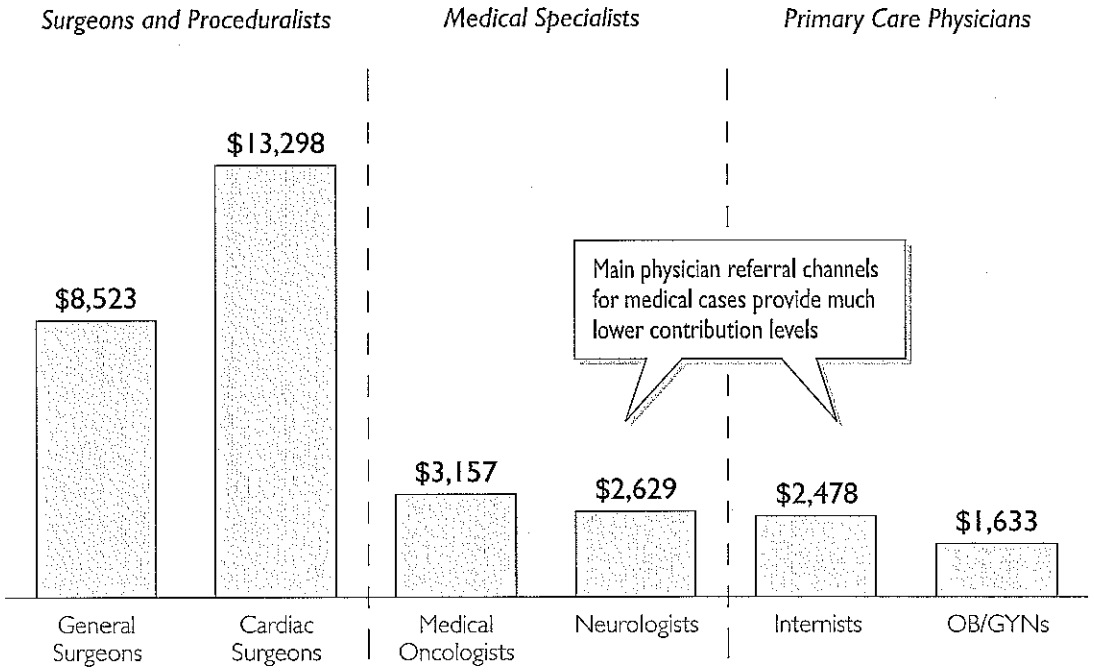
Conclusion #124 Changing Physician Referral Economics: Always the most profitable, surgeons and other proceduralists even hotter commodities with hospital beds (and procedures) in short supply—in contrast, medical specialist and primary care physician admissions decline in relative importance

Conclusion #125 Changing "Portal" Economics: As relative importance of physicians changes so too does patient point of entry into the hospital; most obvious change is greater importance of facilities serving proceduralists and their patients—inpatient ORs, cardiac cath labs, GI suites, and the like

IN CHANNEL ECONOMICS

Understanding Relative Physician Contribution

Average Contribution Income per Admission by Type of Admitting Physician[1]



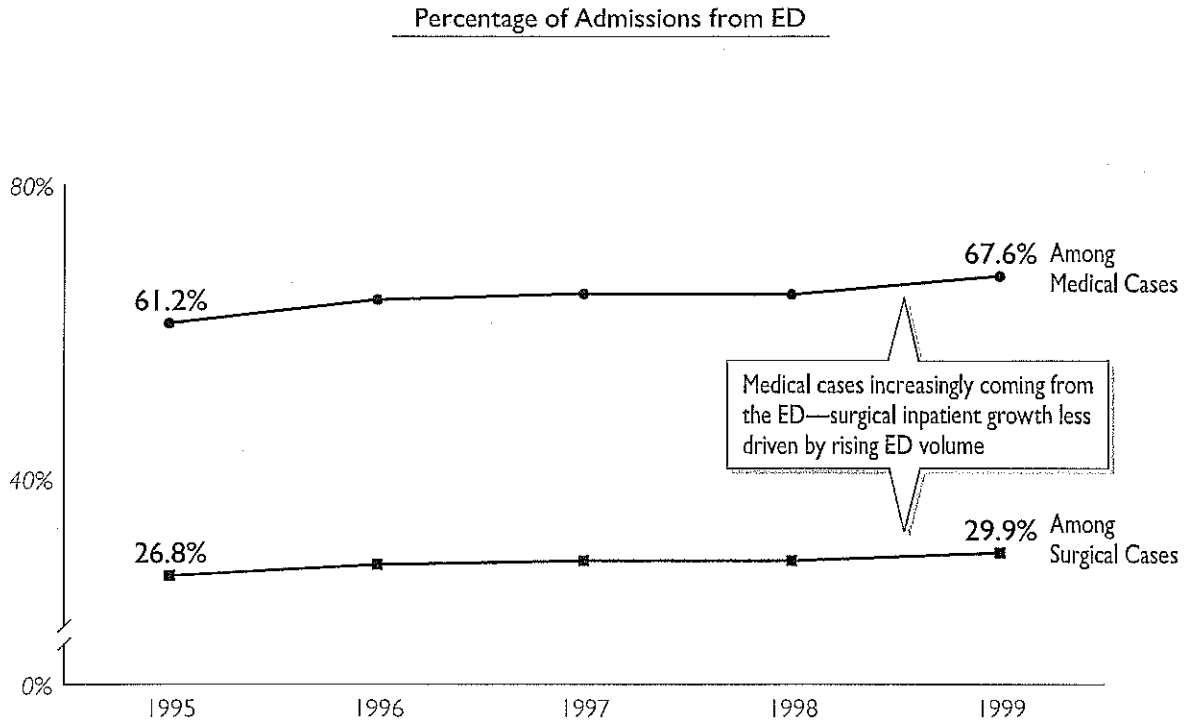
[1] Medicare income.

Source: Advisory Board Growth Database.

Conclusion #126 Less obvious but equally notable is lessened importance of the hospital ED; as largest single source of medical admissions into the hospital, emergency department in danger of becoming obstacle to enriching patient mix

IMPACT OF THE ED

ED Increasingly Important to Medical Lines



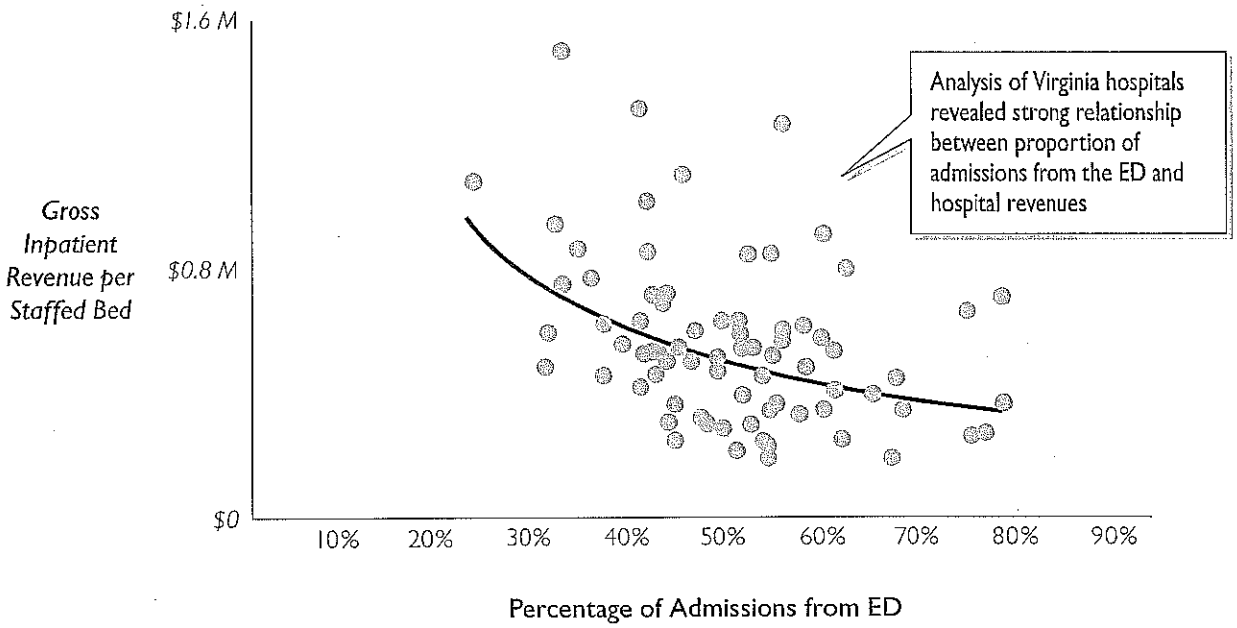
Source: Advisory Board Growth Database.

Conclusion #127 At a minimum fair to say that hospitals relying heavily on the ED for admissions in the past not profiting from that strategy—clear negative correlation between percentage of admissions originating in the ED and overall hospital margins

on Patient Mix

Hurting the Bottom Line

Revenue per Bed Versus Percentage Admissions Through ED

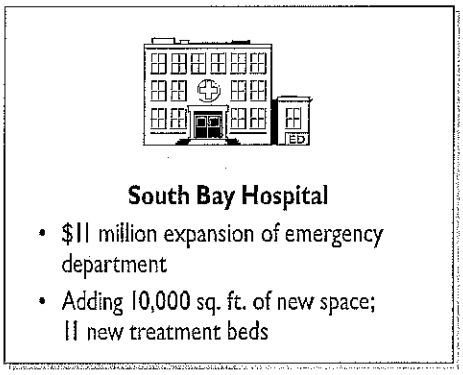


Source: Virginia Health Information; Advisory Board analysis.

IMPLICATION #6: PERILS OF REACTIVE GROWTH

Conclusion #128 Across next five years greatest danger for hospitals is assuming posture of reactive growth—investing solely in the (largely medical) patients guaranteed to arrive through their doors, neglecting to capture larger share of slower-growing inpatient procedure market

EXPANDING ED LEAST



South Bay Hospital

- $11 million expansion of emergency department
- Adding 10,000 sq. ft. of new space; 11 new treatment beds

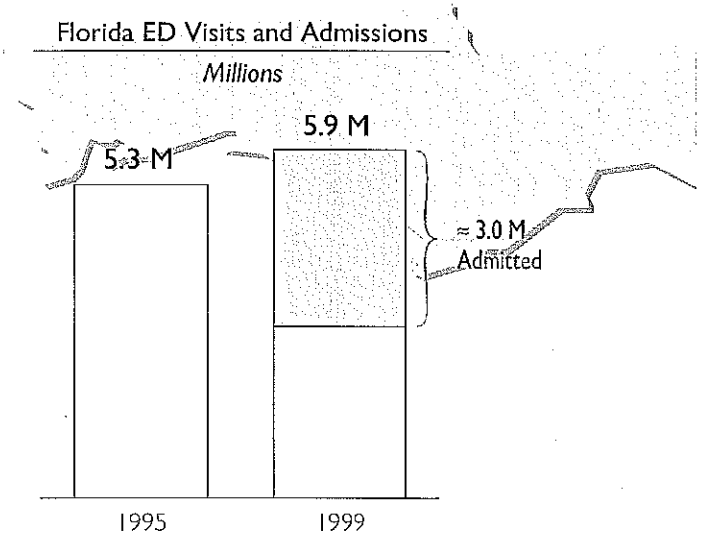
Spring Hill Regional Hospital

- Announced $6 million ED expansion plans
- Adding 14 new treatment beds; 14,000 sq. ft. of space

Bayfront Medical Center

- Converting office space to add 10 new beds to the ED

Millions of Dollars to



Helen Ellis Memorial Hospital

- Announced $3 million to $5 million expansion of emergency room
- Adding 9 new treatment areas
- Will allow for treatment of 10,000 additional patients per year

Conclusion #129 To date, many hospitals appear to be doing just that; overwhelming anecdotal evidence that hospitals investing disproportionately in relieving ED bottlenecks and delays, neglecting surgery and other procedures

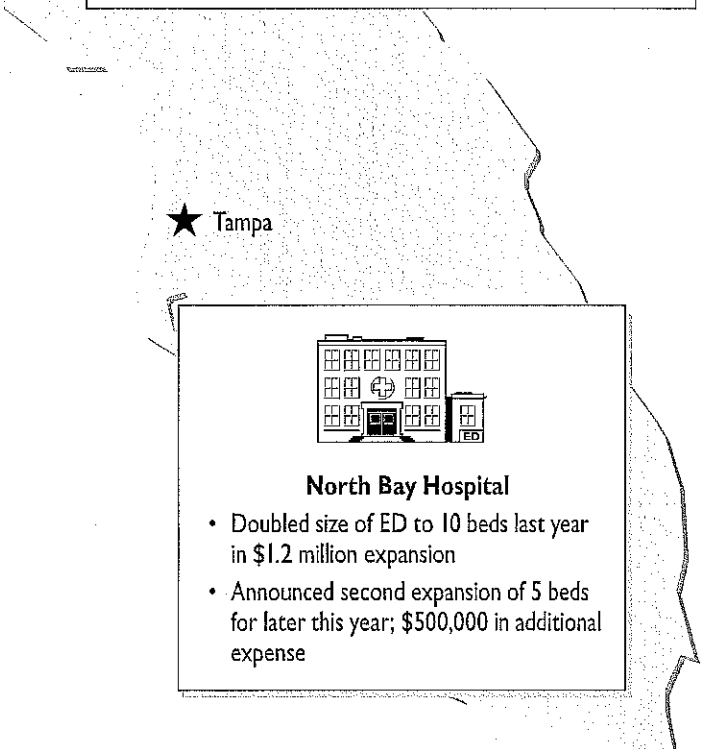
Promising Strategy

Relieve Florida ED Delays

Every Little Bit Counts

"I certainly don't think that there's a market limit on the expansion of emergency departments [in Florida]."

Director of Government Affairs
Florida Hospital Association



North Bay Hospital

- Doubled size of ED to 10 beds last year in $1.2 million expansion
- Announced second expansion of 5 beds for later this year; $500,000 in additional expense

Community Hospital

- $4 million expansion of emergency department under discussion
- Already renovating ED, adding 5 treatment bays and 10,000 sq. ft.

Mease Countryside Hospital

- As part of a $50 million phased hospital expansion, adding 60 observation beds for ED overflow patients

Town and Country Hospital

- $1.2 million expansion completed in May 2001
- Doubled ED capacity to 22 treatment areas, adding 5,000 sq. ft.

Source: Bleau L, "Hospital Rolls Out ER Expansion," *Tampa Tribune*, May 13, 2001: 2; Gazella K, "Hospital Lands $100,000 Gift for Expansion," *St. Petersburg Times*, May 5, 2001: 1; Amrhein S, "Hospitals Expand to Accommodate Growth," *St. Petersburg Times*, February 14, 2001: 28; Goldblatt J, "Emergency Facilities to Expand," *St. Petersburg Times*, January 11, 2001: 1; Collins L, "Mease Countryside Will Expand," *The Tampa Tribune*, December 23, 2000: 8; Morales R, "Area Hospitals Make Emergency Upgrades to Busy Trauma Centers," *Tampa Tribune*, June 7, 2001: 1.

Conclusion #130 Reaping What They Sow: While hospitals in midst of an unprecedented building boom—bringing thousands of new beds into service, staffing those beds with increasingly expensive nurse labor—those beds disproportionately being filled with less profitable medical cases, not surgeries

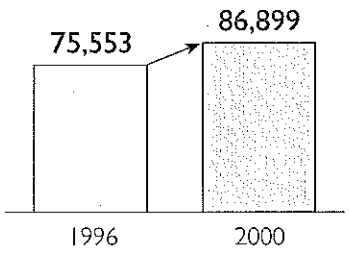
ADDED BEDS FILLING

Facing a Rising Tide of Medicine

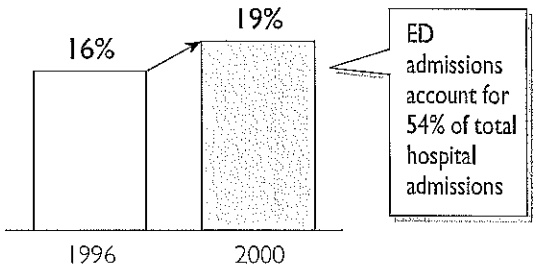
Baptist Hospital of Miami

- Licensed for 551 beds but only able to staff 480–520
- 50 new inpatient beds placed on-line—immediately absorbed by new demand
- Patient census increased 3%–5% following addition of new beds

ED Visits



Percentage of ED Patients Admitted



New Bed Capacity Immediately Absorbed

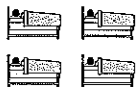
Low Demand Forecast

- Predicted downturn for hospital demand
- 23.5% population increase in Florida during 1990s
- 21.4% population increase in Miami during 1990s

Boom in ED Visits

- Physicians increasingly admit patients through ED
- 40–50 patients boarding in ED each day, on average

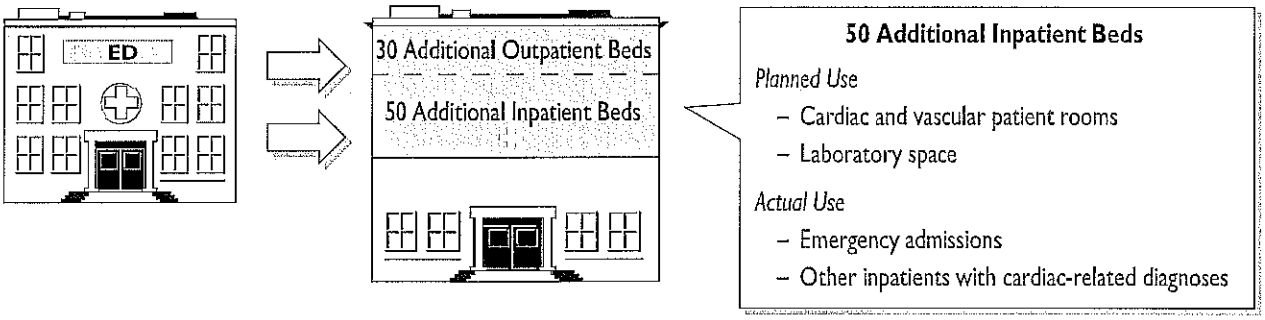
Increasing Occupancy



- Occupancy rates rising since 2000
- YTD licensed occupancy rate ≈ 70%
- YTD staffed occupancy rate 75%–81%

WITH MEDICAL CASES

Chasing a Moving Target



An Open Letter to the Community

Our doctors, nurses, and technicians are dedicated to providing the top quality care you expect from Baptist. But we have no control over the number of people who arrive at our ER door. Our ER staff is deluged with patients daily—we are often seeing more than 300 patients a day. Many people use the emergency room as a doctor's office. Of course, the most seriously ill get treated first, and that means patients with less serious ailments wait longer than we would like.

Baptist Hospital
A Part of Baptist Health Systems

8900 North Kendall Drive
Miami, Florida 33176-2192

Unfortunately, long waits in the Baptist Hospital Emergency Center—as in emergency centers throughout the nations—are all too common. We are doing everything in our power to fix the problem.

As in most crises, this one has multiple causes, and it will not be an easy, or immediate, fix. There haven't been enough hospital beds for patients who needed to be admitted, and so patients had to wait in the ER until a hospital bed was available. In February, we opened an entire new floor of hospital beds, but a global nursing shortage has made it difficult to staff the beds. (We've raised nursing salaries three times in the past year, but there just aren't enough nurses to meet demand.) We are doing everything we can to retain our valued, experienced nurses. At the same time, we are helping increase the supply of nurses by partnering with local colleges to sponsor nursing scholarships.

Meanwhile, we are looking at every process in the ER to see how we can streamline ordering tests and deliver care more quickly and efficiently to all of our patients. Our doctors, nurses, and technicians are dedicated to providing the top quality care you expect from Baptist. But we have no control over the number of people who arrive at our ER door. Our ER staff is deluged with patients daily—we are often seeing more than 300 patients a day. Many people use the emergency room as a doctor's office. Of course, the most seriously ill get treated first, and that means patients with less serious ailments wait longer than we would like.

We are instituting numerous changes in the next couple of months that we hope will help the situation until longer-term solutions (like more nurses) can be found. In the meantime, please support the doctors, nurses and ER support staff who heroically work in extremely stressful conditions taking care of our community.

Sincerely,

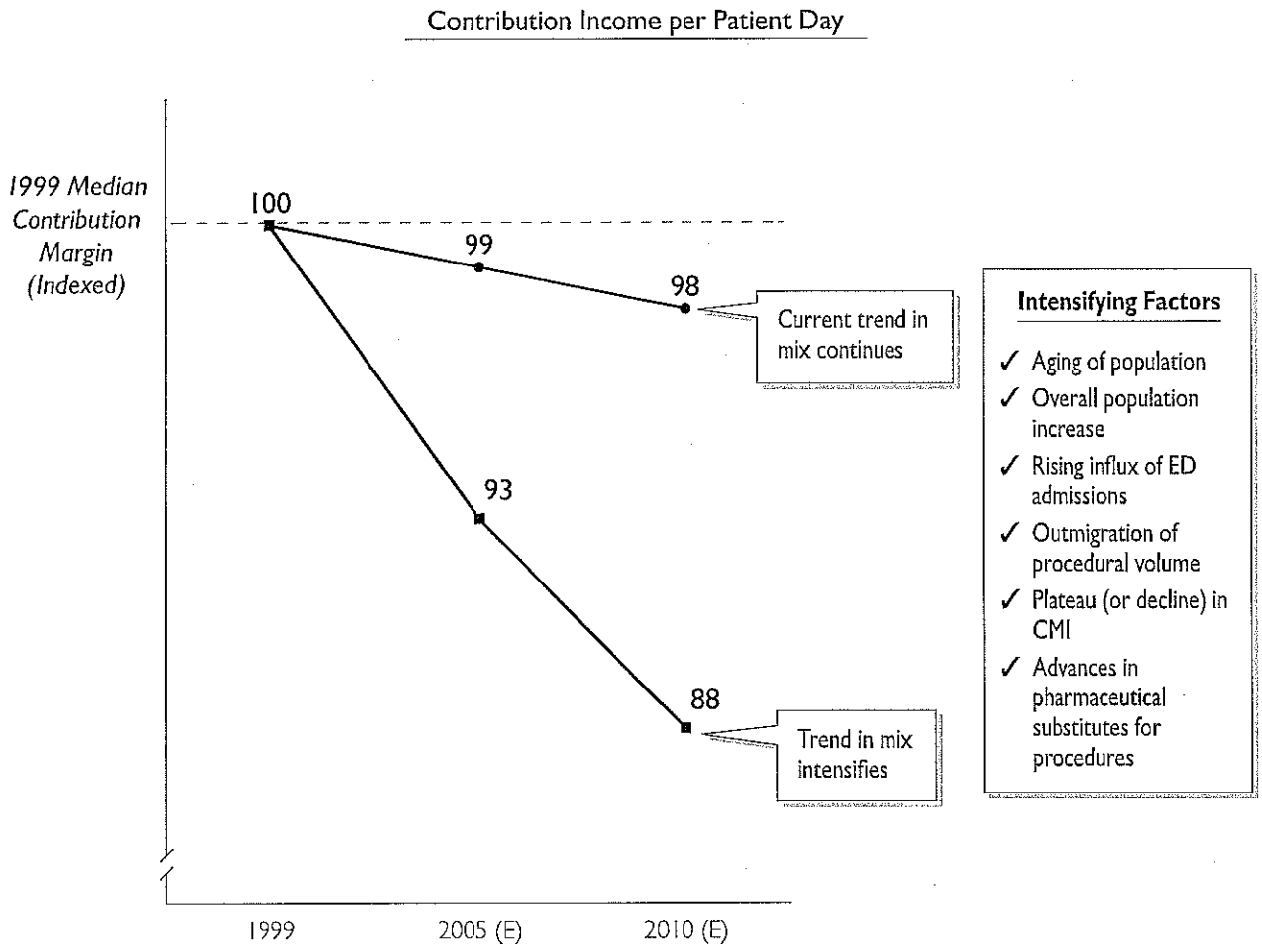
Lee S. Huntley
Baptist Hospital CEO

P.S. We encourage you to see your doctor before a health problem gets too serious. And when you have a minor emergency, visit Baptist Health Systems' conveniently located urgent care centers.

Conclusion #131 Hospital priorities here wholly understandable; with ED volumes growing and inpatient surgery growth anemic at best, greater investment in the ED surely warranted

Conclusion #132 That said, posture of reactive growth just as surely not helping hospitals to recover profitability—institutions growing medical admissions faster than procedures facing future of stagnant or even declining profitability

Cause for Concern—Even Alarm



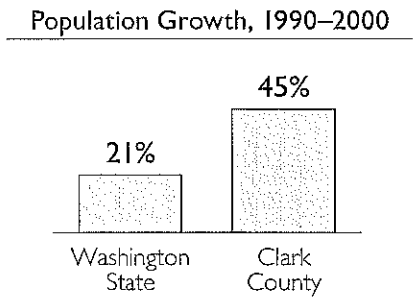
Conclusion #133 Dilemma of Profitless Growth: Gathering number of hospitals already reporting that last few years of strong inpatient admissions growth not yielding expected financial benefit—some even reporting operating margin declines

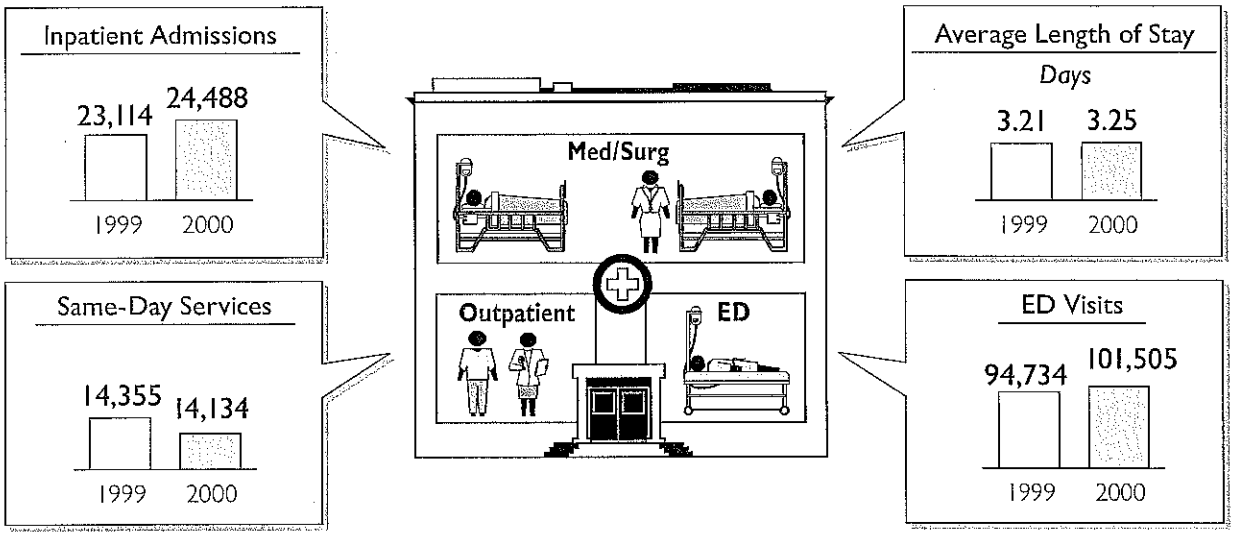
VOLUME GROWTH NO

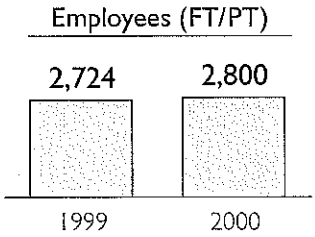
Steadily Increasing Inpatient Volumes

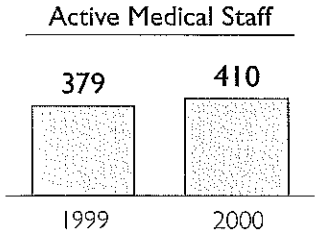
SOUTHWEST WASHINGTON MEDICAL CENTER

- 360-licensed-bed community hospital
- Serves rapidly growing suburban county
- One of two large hospitals in its market



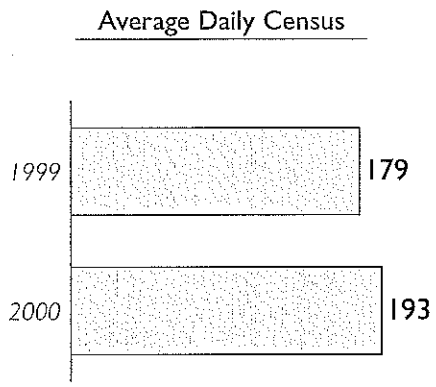


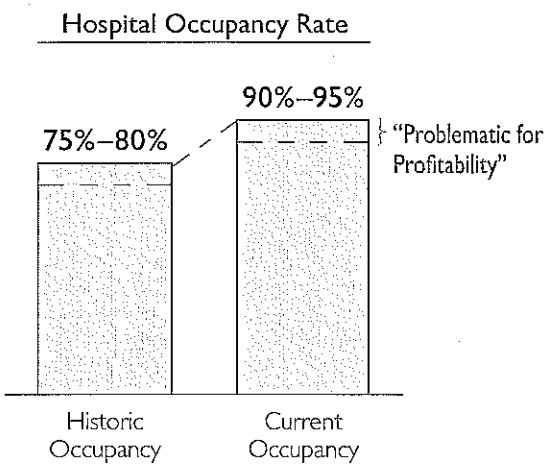




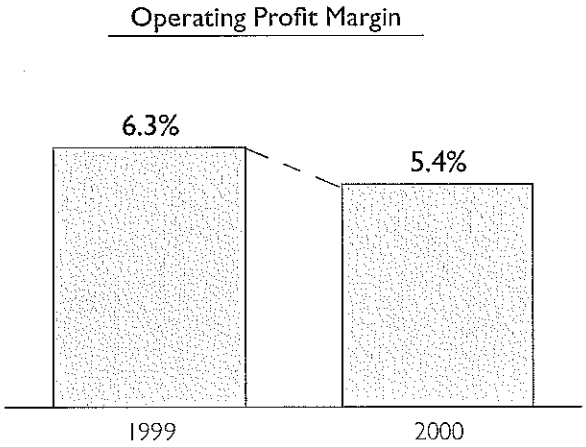
Guarantee of Higher Margins

Occupancy Above the Comfort Zone





Margins Declining as a Result



Factors Cited

- ✓ Premium labor costs
- ✓ Increased intrahospital transfers
- ✓ Cancellation of surgeries

Source: Advisory Board interviews.

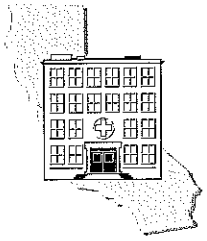
IMPLICATION #7: CROWDING OUT SURGERY (AND SURGEONS)

Conclusion #134 Unintended Consequence of Reactive Growth: Burgeoning growth in medical cases beginning to "crowd out" surgeries and other procedures; phenomenon likely to accelerate exodus of procedural specialists away from hospitals

Conclusion #135 Hospitals nationwide reporting increased instances of elective surgeries and other procedures delayed or rescheduled—unavailability of med/surg and critical care beds cited at least as often as staff shortage in explaining the phenomenon

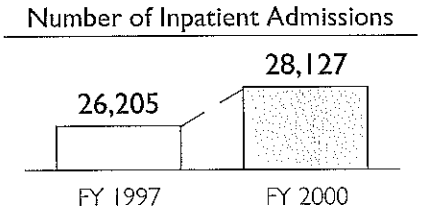
SACRIFICING SURGERIES TO

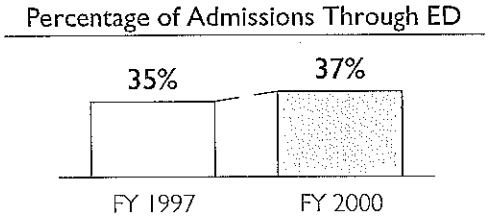
An Influx of Medical Cases



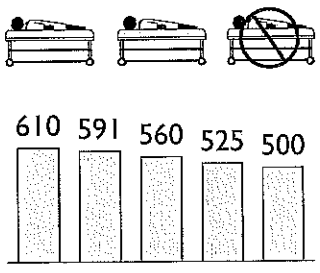
Acacia University Medical Center[1]

- 500-bed academic medical center in California
- Level I trauma center
- World-class programs in Digestive Health, Neuroscience, Cardiology, and Cardiac Surgery

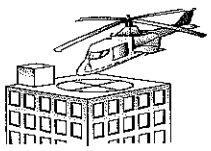




Decreasing Supply of Staffed Beds

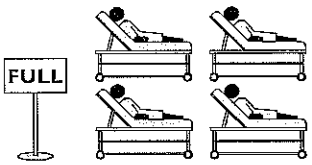


Increasing Transfers of Medical Cases



- Consistently high numbers of transfers from community hospitals
- Recent upsurge in questionable patient transfers

Growing Shortage of Inpatient Capacity



- Peak occupancy rates at 95 to 100 percent for all acute care beds
- ICU and med/surg beds full two-thirds of the time

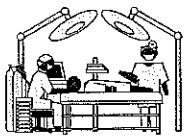
[1] Pseudonymed organization.

Conclusion #136 At the Heart of the Problem: With hospitals at or near full occupancy, and med/surg and critical care beds in short supply, elective surgeries losing out to admissions from the ED in the scramble for empty beds

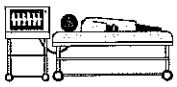
Accommodate Medicine

Surgeries Suffering as a Result

Areas of Concern

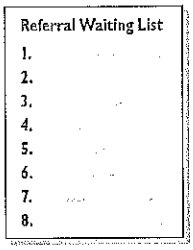


Surgery
ORs at 90% capacity during prime hours; losing profitable neurosurgery referrals



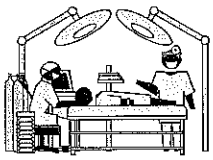
Cardiology
Tight capacity for recovering patients from cath labs

Threat to Referral Channels



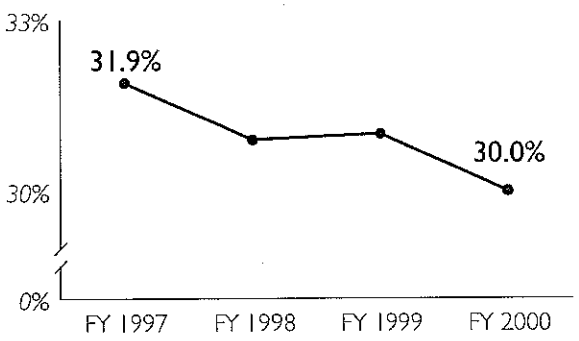
Lack of inpatient beds necessitating a "waiting list" several days long

Surgery Delays or Cancellations

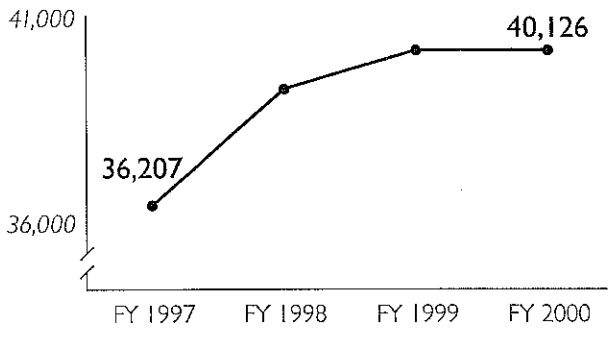


Administrators estimate between 70 and 100 cardiac referrals and surgeries lost due to understaffing and physical capacity constraints; with between 12 and 16 canceled surgeries per month during peak capacity crunch

Percentage of Procedural Inpatient Cases



OR Operating Hours



Source: Advisory Board interviews.

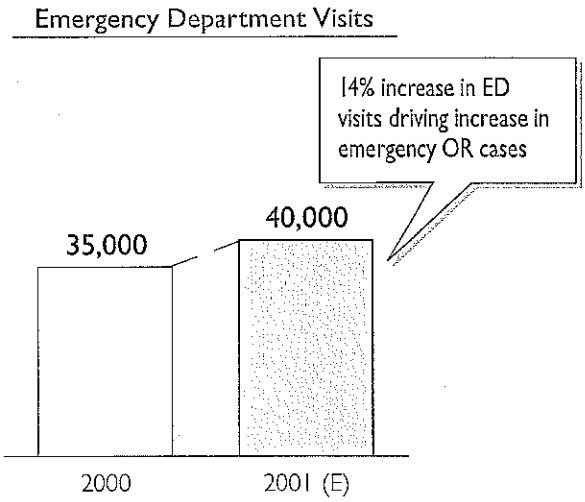
Conclusion #137 While hospitals surely doing the right thing in favoring emergency admissions, that hardly seems to matter to many specialists; recent surge in OR delays viewed by these physicians as further evidence of hospital mismanagement

LOSING SHARE IN A

Frustrating Our Most Lucrative Channel

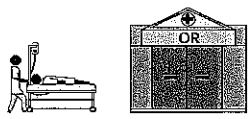
Heron University Medical Center

- 500-bed AMC with Level I trauma center
- 90 percent OR utilization rates at the AMC, up from 86 percent between 1998 and 1999
- Recently built a new ASC on campus and doubled the size of another site



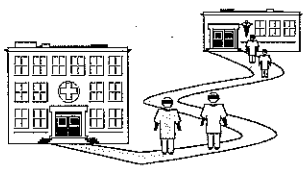
Scheduled Surgeries Displaced

- 20 percent of prime time cases are emergent surgeries
- Conflict between surgeons as emergency cases take precedence
- Administrators considering new trauma OR for prime-time use to appease surgeons



Poor OR Management

- Average OR turnover time 32 percent higher than industry average
- 28 percent of cases performed after 3 p.m.
- Only 26 percent of cases start on time



Surgeon Defection

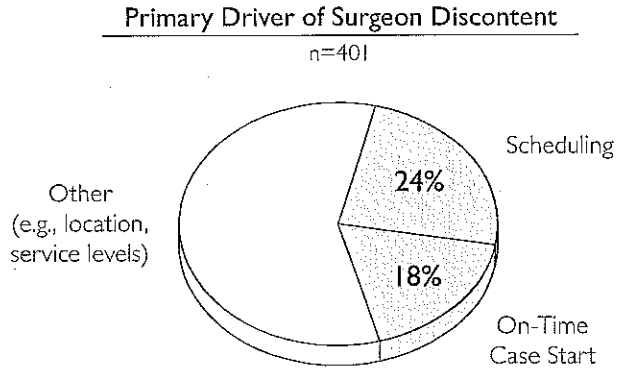
- Surgeons request permission to practice at other local hospitals
- Neighbor hospital recruits two Heron cardiologists
- Hospital stands to lose 28–45 percent of surgical business

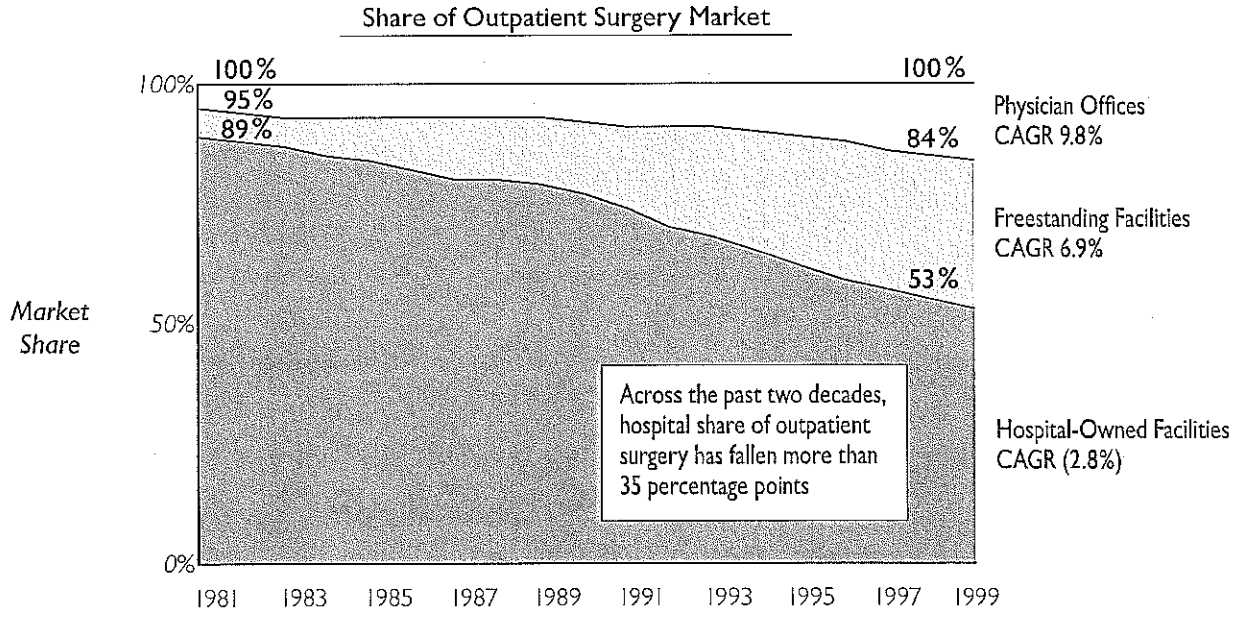
Source: Advisory Board interviews.

Conclusion #138 Shortage-led delays only adding impetus to decade-long specialist migration to freestanding outpatient (and more recently specialty inpatient) facilities; unaffected by emergency admissions, these facilities able to offer specialists "clockwork" service

Growing Market

Discontented Surgeons Continuing to Move Away

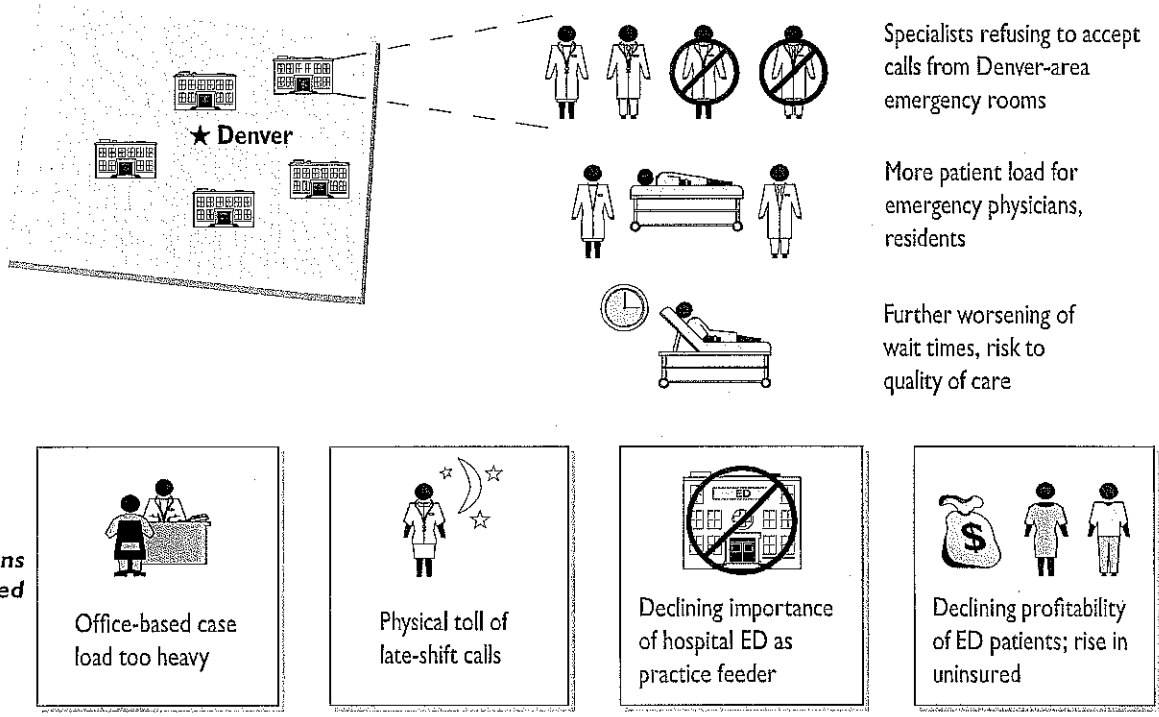




Source: Gallup Organization, Operating Room Directors Study, *Surgical Information Systems*, January 2001; SMG Marketing Group, FOSCs, Chicago, Ill.; Advisory Board interviews.

Conclusion #139 Anecdotal evidence that surge in medical admissions through hospital EDs already negatively affecting specialist relations—some evidence that hospital procedure volumes suffering as a result

Specialists Avoiding the Emergency Department



IT CAN ONLY GET WORSE

"It's been a stuttering crisis over the past three years and it's reached more epidemic proportions in the last 18 months. We'll have a patient that comes in that can be stabilized but ultimately needs the services of a specialist. And without one on call, we are kind of stuck. It ultimately impacts the health of our community."

Medical Director
Denver Emergency Physician Group

"People like me who take a lot of calls—I'm not going to do this forever. I'm going to find a way to leave if this continues for years and years and years. I'm supposed to have a life of my own."

Denver-area plastic surgeon

Source: "Specialists Shy Away from ERs," *Denver Business Journal*, June 15, 2001; Advisory Board interviews.

Conclusion #140 Given increased importance of patient mix, now more than ever hospitals can ill afford to lose these cases—accelerating specialist "flight of talent" will only deepen hospital reliance on medical admissions

Conclusion #141 Hard to miss the irony; hospitals' past reluctance to share procedure revenues with specialists justified by need to cross-subsidize less profitable medical admissions—today, those medical admissions crowding out procedure revenues

Losing Specialists at the Worst Possible Moment

Relying on Procedures to Fund Medicine

"Our profits from outpatient surgeries currently fund money-losing services like patient education, obstetrics, and emergency services. A physician-owned competing surgery center will not force us out of business, but will force us to eliminate some of the less profitable services that we now provide.

"In 5 to 10 years, if you are to get sick, I pray you have a disease that is profitable to your physician. Otherwise, you won't get access to the technology to heal you."

Vice President, Operations
Rural Hospital

"If MedCath is successful in carving out cardiac care, our ability to continue providing the comprehensive range of services currently available to the community could be severely impacted. Our net income is completely channeled back to the community through facility improvements, capital equipment, and new services."

Hospital administrator

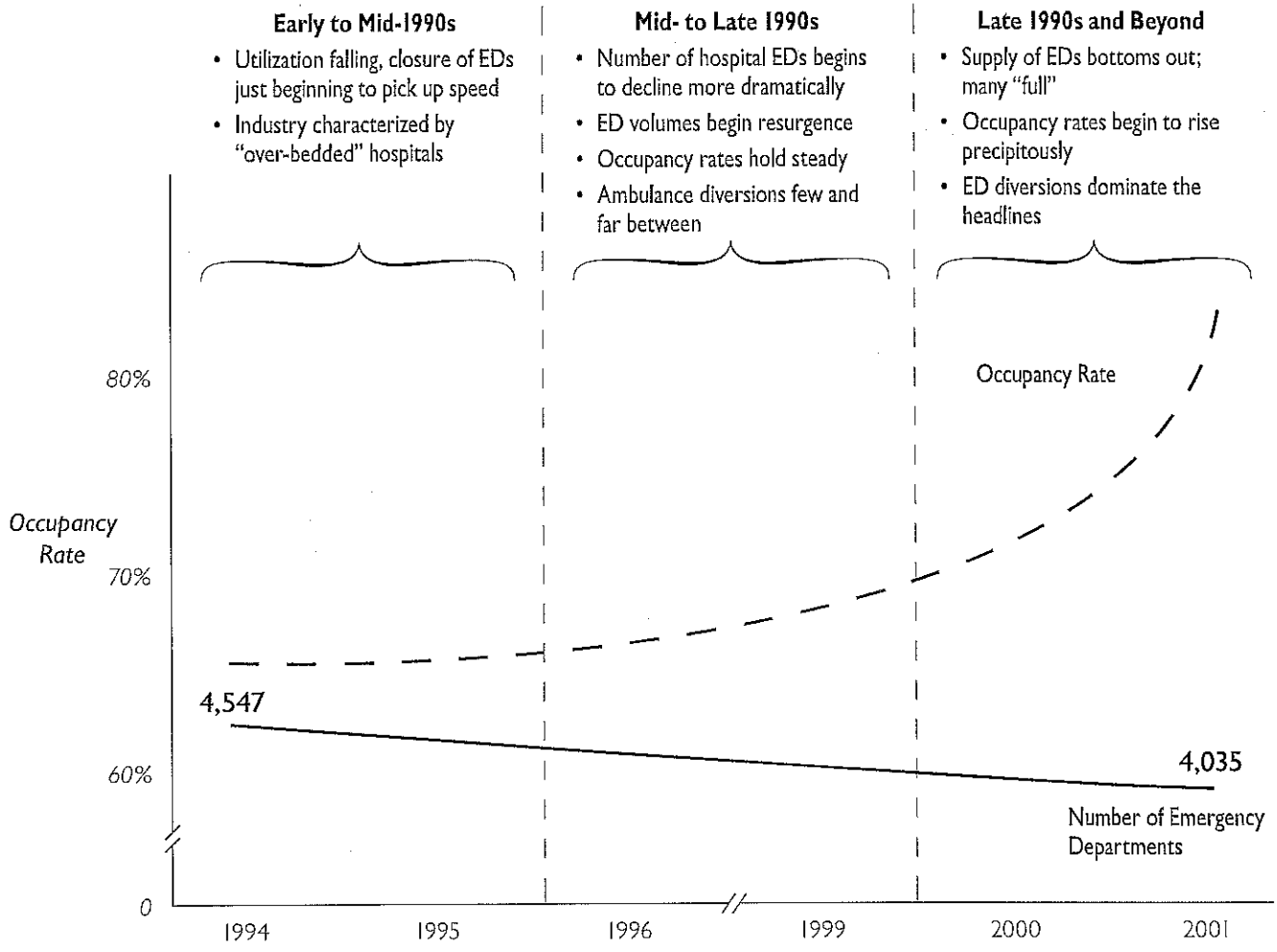
Source: *The Bakersfield Californian*, April 27, 1997; Advisory Board interviews.

IMPLICATION #8: DANGER OF RUNNING AT FULL OCCUPANCY

Conclusion #142 Explaining America's Diversion Problem: Recent (and sudden) rise in number of EDs going on divert largely attributable to hospitals running at high occupancy rates—physical capacity of EDs themselves a far less important factor

Conclusion #143 Surprise Finding in the Research: Even at average inpatient occupancy rates well below full capacity, hospitals will be forced to board patients, delay surgeries, or turn patients away on a routine basis

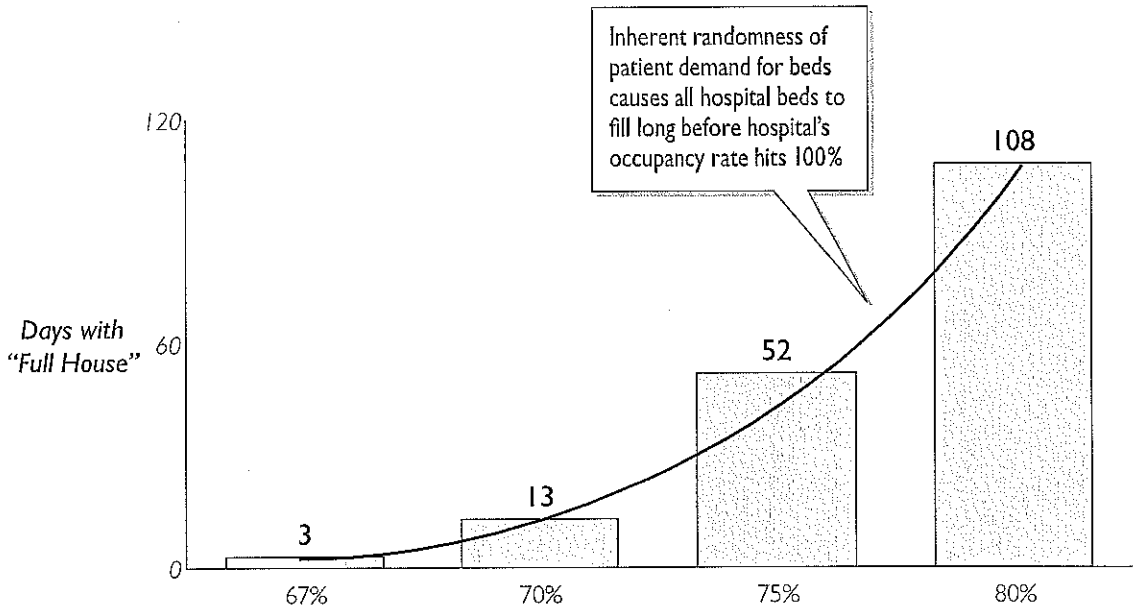
High Occupancy Driving ED Overcrowding



Conclusion #144 Reason: Given the uncertain nature of patient demand and the resulting unevenness in inpatient admissions, a hospital running at average occupancy rate of just 80 percent throughout the year will find itself, on numerous days, overwhelmed by patient volume

A Matter of Queuing Theory

Days Full, by Occupancy Rate

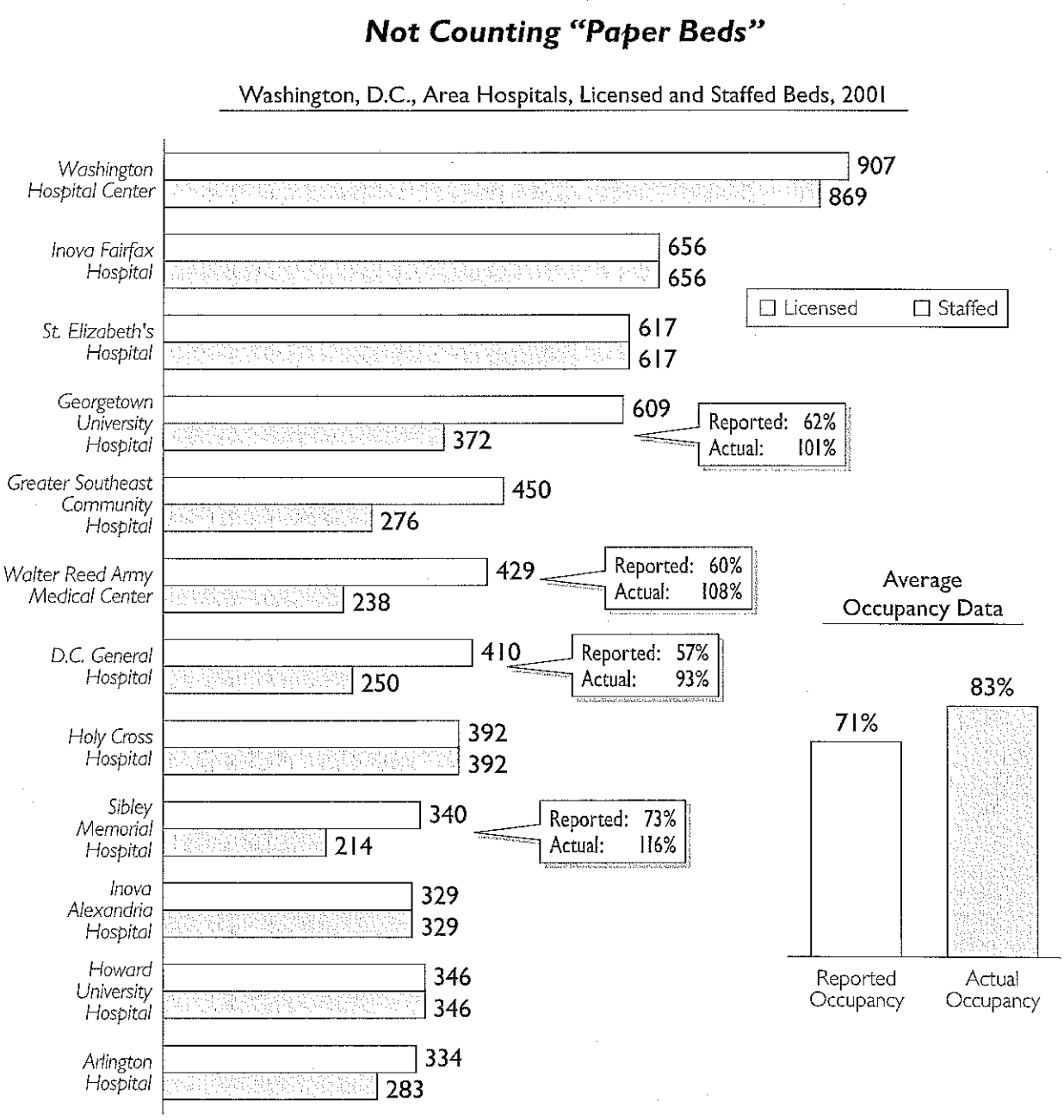


Key Assumptions

- ✓ 300-bed hospital
- ✓ 40,000 ED visits per year, evenly distributed
- ✓ 15 percent of ED patients admitted
- ✓ Five-day length of stay

Conclusion #145 Further, most hospitals are underestimating their true occupancy; research on markets across the country indicates many institutions are running a full 10 to 15 percentage points higher than senior management led to believe

REPORTED OCCUPANCY



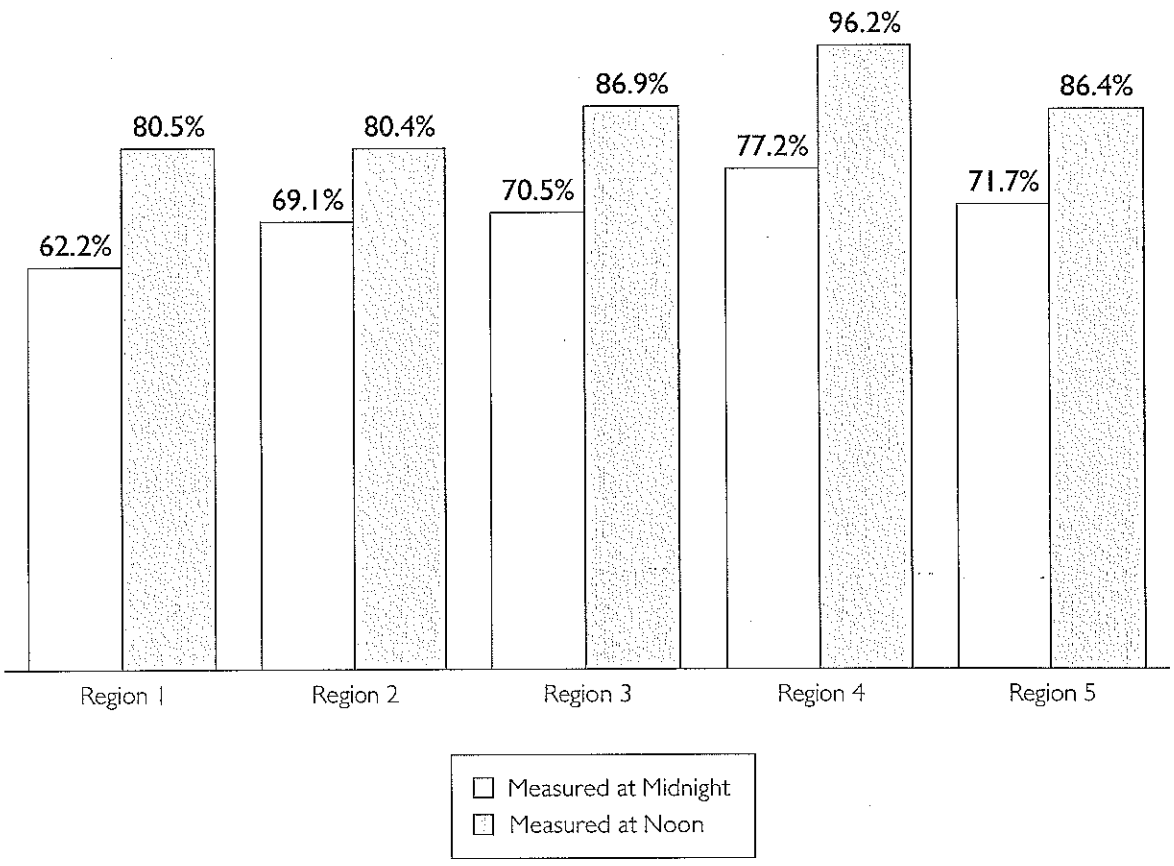
Conclusion #146 Problem in the Measures: Hospitals all too often measure patient census at midnight, then base occupancy calculation on licensed beds—staffed beds occupied at noon the better measure

Rates Often Understated

It Matters When You Measure

Hospital Occupancy Rate by EMS Region

Massachusetts



Source: "Largest Metro Area Hospitals," *Washington Business Journal*, March 30, 2001; "Emergency Department Overcrowding in Massachusetts: Making Room in Our Hospitals," Massachusetts Health Policy Forum, June 2001; Advisory Board interviews and analysis.

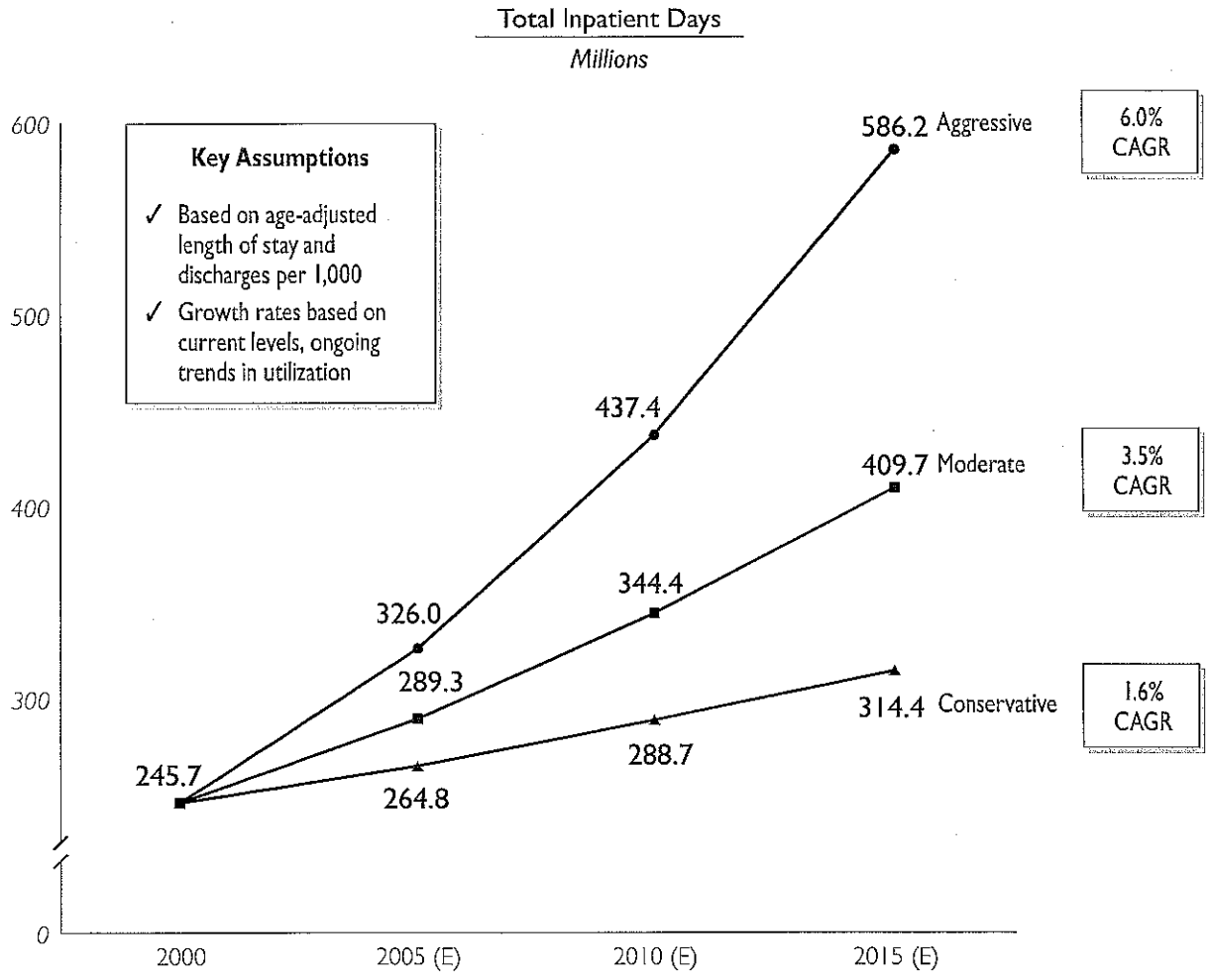
Implication #9: Questioning Yesterday's Correct Decisions

Conclusion #147 With baby boomers aging, hard to doubt primacy of the inpatient hospital in the future health care landscape; acute care admissions and revenues likely to grow steadily across next decade and beyond, placing ever greater demands on hospital facilities and staff

Conclusion #148 Advisory Board View: Health systems and hospitals should revisit their past facilities plans and employee recruiting efforts—neither particularly well-suited to the new health care environment

Forecasting the Future

Long March of Volumes Ahead



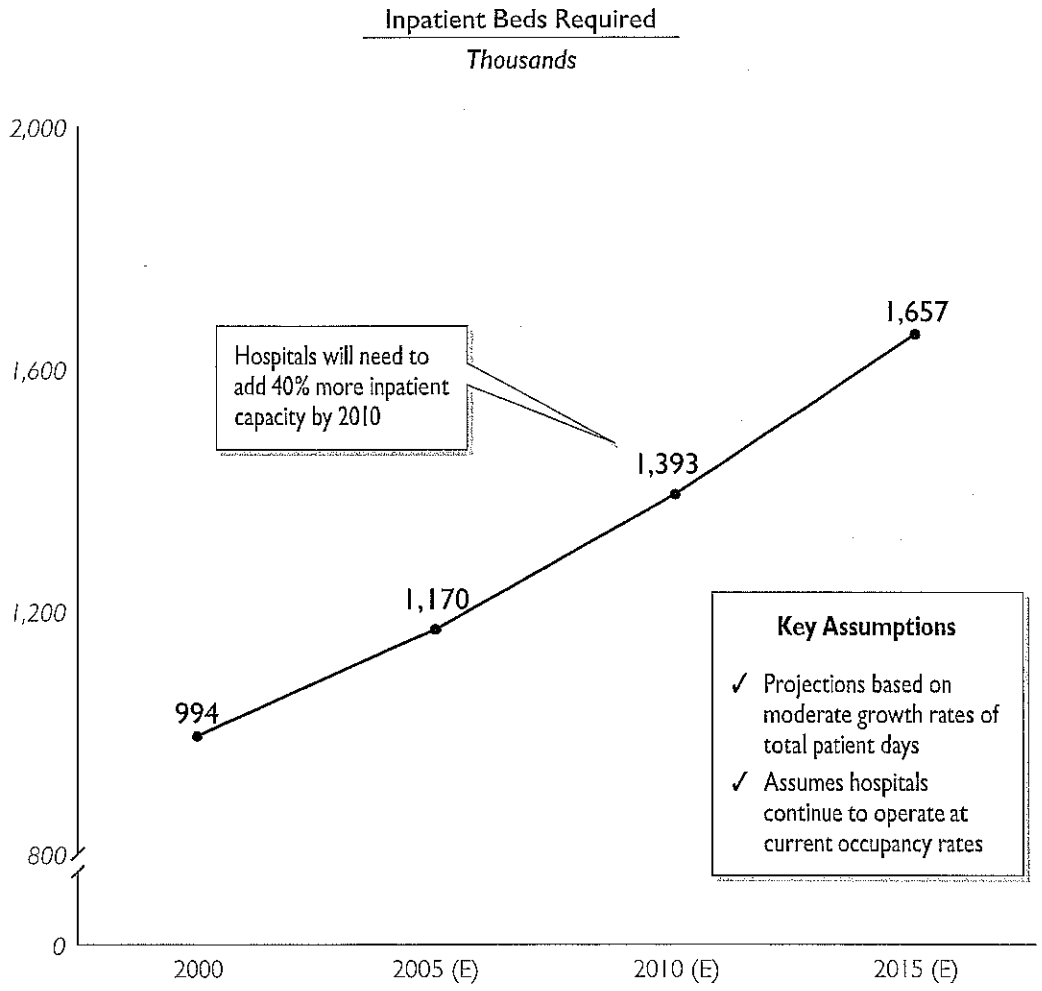
Source: Advisory Board analysis.

Conclusion #149 Current hospital bed capacity nationwide likely to prove inadequate to accommodate future demand—at current rates of utilization, industry might need to add as many as 399,000 beds across next 10 years

Conclusion #150 Surprise Finding in the Research: Many hospitals still implementing two- to three-year-old facility plans reflecting outdated (and often wildly inaccurate) inpatient demand assumptions; obvious need here for market reality testing

# of Patient Volume

Pushed to Build More Beds

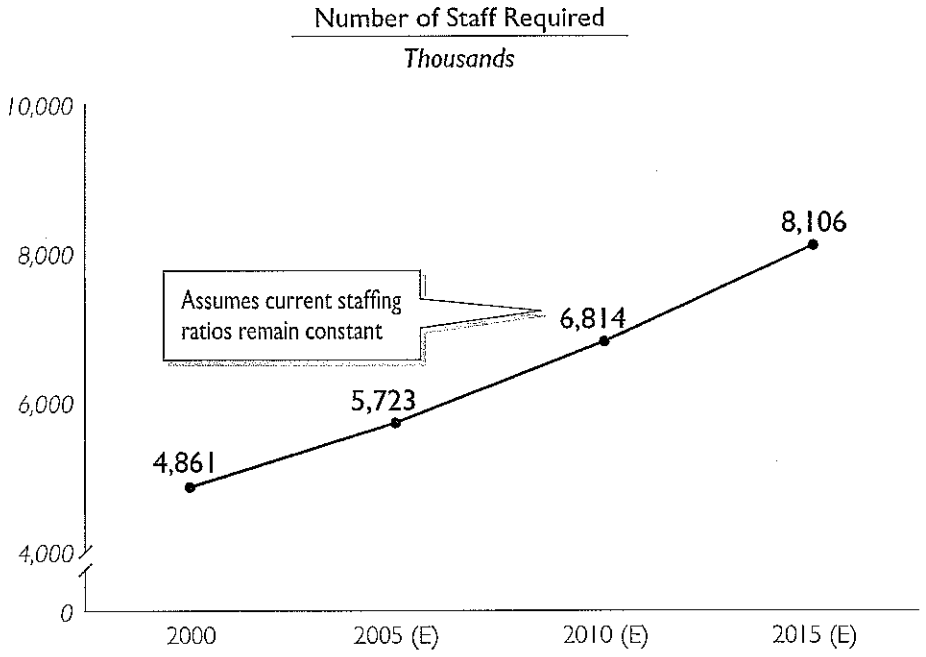


Source: Census Bureau; American Hospital Association; Advisory Board analysis.

Conclusion #151 Finding the capital to build new hospital beds will not be the end of life as we know it; recruiting and retaining employees to staff all the new beds may be; industry as a whole may need to hire as many as 1,950,000 more staff to meet demand across just the next 10 years

MUCH LARGER STAFF NEEDED

Increasing Need for Hospital Staff



THIS YEAR'S RESEARCH ON TALENT

As part of a larger initiative to investigate the impact of labor shortage on hospitals and health systems, the Advisory Board is publishing two volumes in the coming months. The first addresses the recruiting challenge facing hospitals attempting to fill increasing staff vacancies, and the second focuses on the difficult challenge of retaining a high-quality workforce in an era of increased competition. Both books will be available in unlimited quantity to Health Care Advisory Board members, beginning in fall 2001.

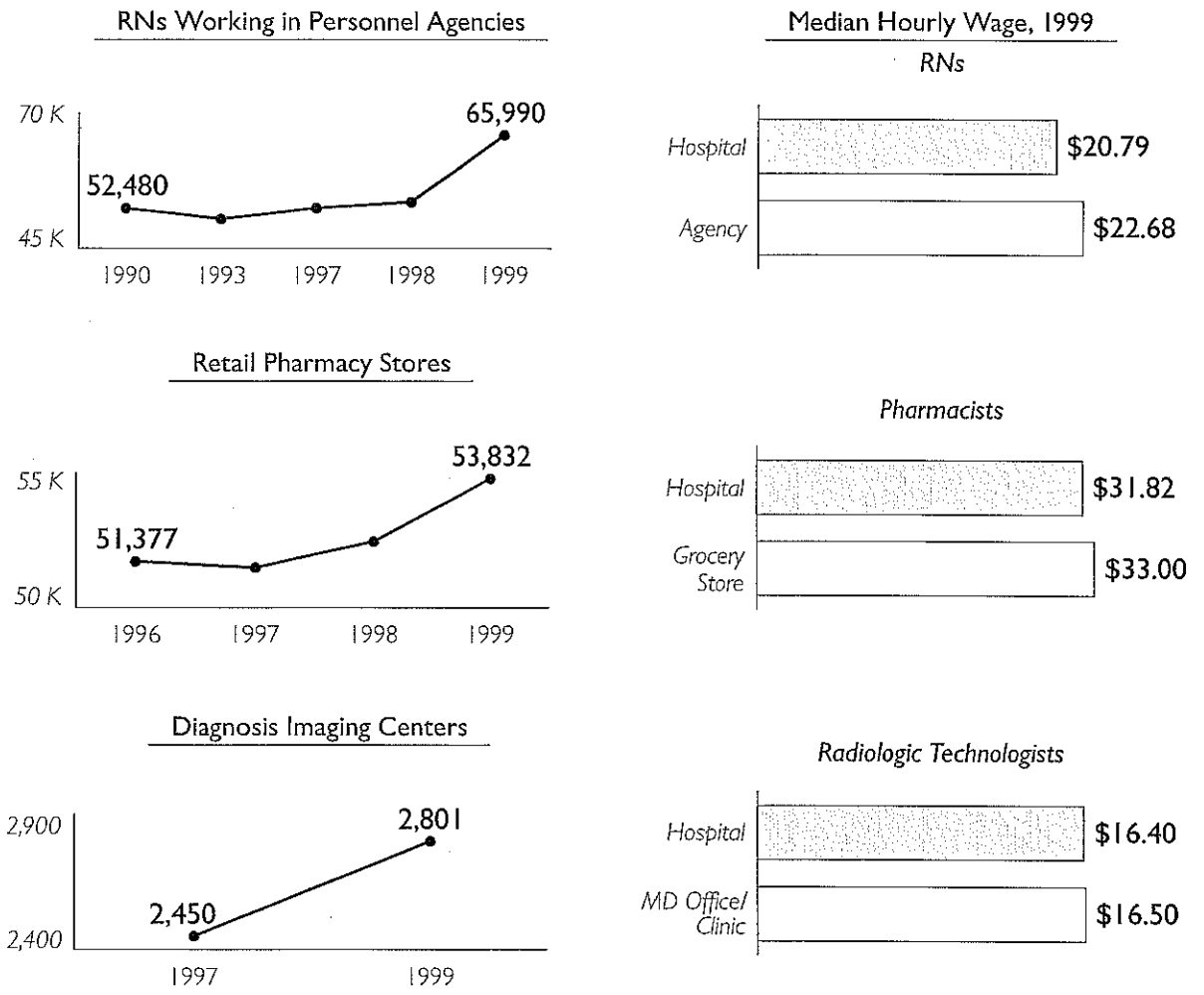
Source: Advisory Board analysis.

Conclusion #152 Coming Competition for Talent: With health care labor markets likely to remain tight well into the future, hospitals will need to compete for scarce employee talent as aggressively as they compete for procedure market share

Conclusion #153 Recruiting efforts at most hospitals still better suited for "soft" labor market of last decade than to current market; best hospitals moving fast to correct the problem—investing as heavily in recruiting as they are retention

to Meet Rising Demand

Facing the New-Breed Competitor



Source: BLS Office of Employment Statistics; National Association of Chain Drug Stores; SMG 1999 Market Report on Diagnostic Imaging Centers.

IMPLICATION #10: TOWARD A FUTURE OF INPATIENT MEDICAL CARE

Conclusion #154 To this point, run of discussion has focused on near-term implications of shortage for individual hospitals; there are equally large—if necessarily far more speculative—long-term implications for individual hospitals and the industry as a whole

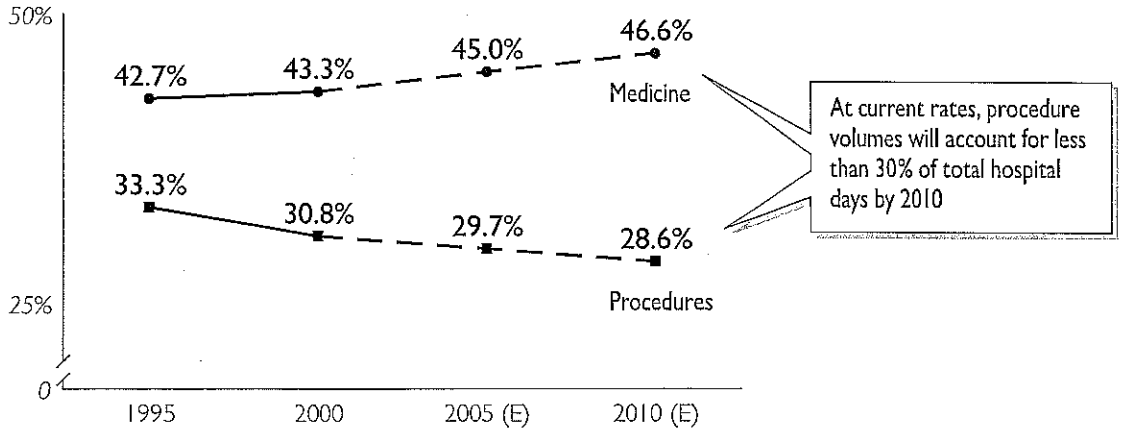
Conclusion #155 Advisory Board Caution: Conclusions that follow more provocative than definitive, represent four parts speculation for every one part research—the Advisory Board welcomes member feedback on need (if any) for further research

Conclusion #156 Future for the industry likely to be driven by two unalterable phenomena—increasing demand for inpatient services as the population ages, and continued migration of procedures outpatient as technology advances

Conclusion #157 Reasonable to assume that future inpatient enterprise will focus much more on acute care for chronic medical conditions, less on procedures and other interventions—at current growth rate, medicine accounts for 46.6 percent of patient days by the year 2010

Migrating Toward Medicine

Patient Day Mix, 1995–2010



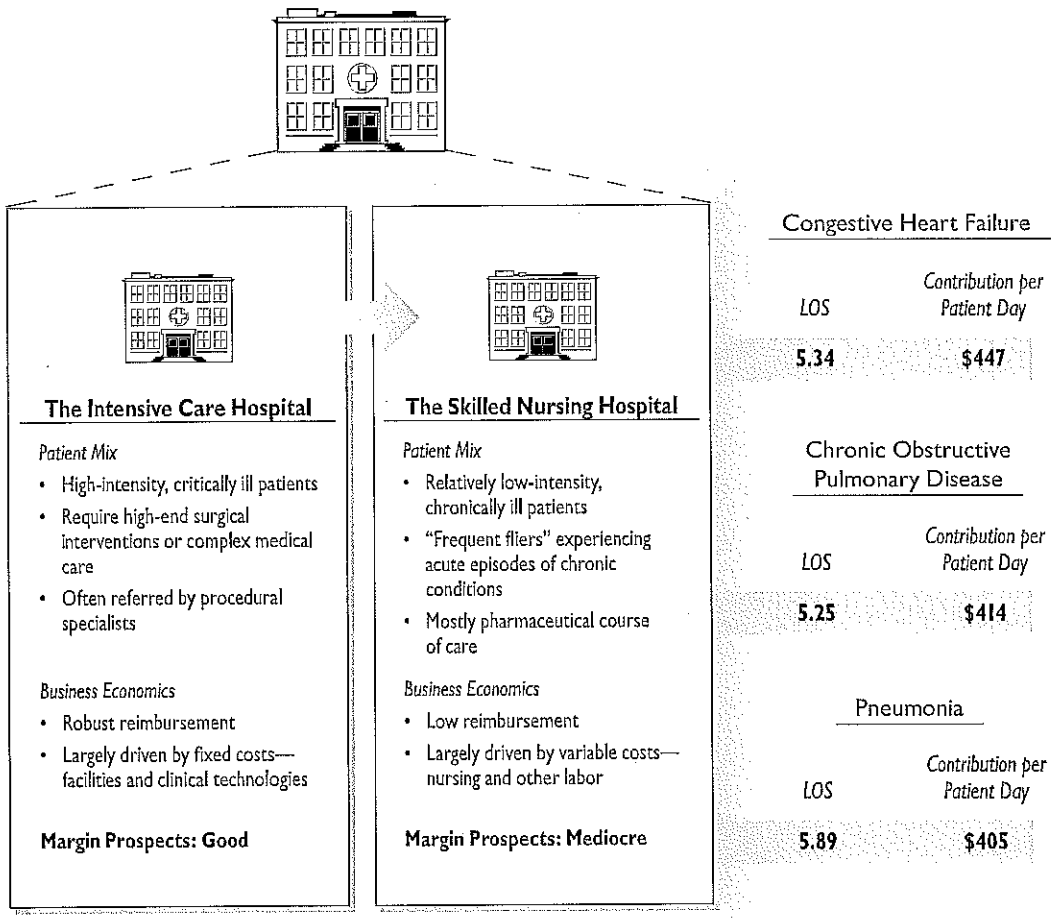
Source: Advisory Board Growth Database; Advisory Board analysis.

Conclusion #158 Typical inpatient of the future is older, chronically ill, and requires the hospital for relatively short stays focused on recovery and convalescence—CHF, COPD, pneumonia, and the like become dominant

Conclusion #159 Advisory Board Opinion: Popular view that hospital becoming one large intensive care unit may be misplaced—just as likely that best model for hospitals of the future to be found in skilled nursing facilities

Conclusion #160 Reenvisioning Acute Medical Care: In the long run, therefore, perhaps largest challenge for hospitals—and for the health care system as a whole—will be in developing alternative, less costly models for treating chronic medical conditions

Competing Visions of the Future



Source: Advisory Board Growth Database; Advisory Board analysis.

ATTACHMENT VI

OHCA Acute Care Hospital Bed Need Presentation

Acute Care Hospital Bed Need

Brian A. Carney, MBA
Associate Research Analyst

Department of Public Health, Office of Health Care Access

Background:

Section 19a-634 requires OHCA to establish and maintain a state-wide health care facilities and services plan.

The Plan may include:

- An assessment of the availability of acute hospital care
- An evaluation of unmet need and vulnerable populations
- A projection of future demand for health care services

In Addition,

Sec. 19a-638. (Formerly Sec. 19a-154). Certificate of need. When required and not required. Request for office determination. Policies, procedures and regulations. (a) A certificate of need issued by the office shall be required for:

(1) The establishment of a new health care facility;

(2) A transfer of ownership of a health care facility;

(3) The establishment of a free-standing emergency department;

(4) The termination of inpatient or outpatient services offered by a hospital, including, but not limited to, the termination by a short-term acute-care general hospital or children's hospital of inpatient and outpatient mental health and substance abuse services;

(5) The establishment of an outpatient surgical facility, as defined in section 19a-493b, or as established by a short-term acute care general hospital;

(6) The termination of surgical services by an outpatient surgical facility, as defined in section 19a-493b, or a facility that provides outpatient surgical services as part of the outpatient surgery department of a short-term acute care general hospital, provided termination of outpatient surgical services due to (A) insufficient patient volume, or (B) the termination of any subspecialty surgical service, shall not require certificate of need approval;

(7) The termination of an emergency department by a short-term acute care general hospital;

(8) The establishment of cardiac services, including inpatient and outpatient cardiac catheterization, interventional cardiology and cardiovascular surgery;

(9) The acquisition of computed tomography scanners, magnetic resonance imaging scanners, positron emission tomography scanners or positron emission tomography-computed tomography scanners, by any person, physician, provider, short-term acute care general hospital or children's hospital, except as provided for in subdivision (23) of subsection (b) of this section;

(10) The acquisition of nonhospital based linear accelerators;

(11) An increase in the licensed bed capacity of a health care facility;

(12) The acquisition of equipment utilizing technology that has not previously been utilized in the state; and

(13) An increase of two or more operating rooms within any three-year period, commencing on and after October 1, 2010, by an outpatient surgical facility, as defined in section 19a-493b, or by a short-term acute care general hospital.

Past/Present Practice:

- Certificate of Need (CON) applications are evaluated on a case-by-case basis.
- No standardized guidelines for Acute Care Bed Need

Proposed:

- Develop an Acute Care Bed Need Model to serve as a guideline for CON applications seeking to increase licensed bed capacity, and also to:
- help assess acute care service availability
- determine unmet need
- project future demand for acute care beds

Bed Need Models:

OHCA examined a variety of bed need models from various states – no perfect model

Many of the models utilize common elements and incorporate:

- Planning area
- Utilization of services
- Changes in Population
- Target Occupancy rates
- Age Groups

Three state bed need models were selected to illustrate differences in method:

- North Carolina
- Alabama
- South Carolina

Present Allocation of Acute Care Beds:

Statewide Totals*

Licensed:	9,358
Available:	8,360
Staffed:	6,848

*Connecticut Acute Care Hospitals, FY 2010

Hospital Name	Town	County	Licensed Beds[1]	Available Beds	Staffed Beds
Backus (William W.) Hospital	Norwich	New London	233	223	202
Bridgeport Hospital	Bridgeport	Fairfield	425	397	290
Bristol Hospital	Bristol	Hartford	154	154	132
Charlotte Hungerford Hospital	Torrington	Litchfield	122	122	81
CT Children's Medical Center	Hartford	Hartford	147	147	142
Danbury Hospital	Danbury	Fairfield	371	365	278
Day Kimball Hospital	Putnam	Windham	122	122	72
Essent - Sharon Hospital	Sharon	Litchfield	94	94	47
Greenwich Hospital	Greenwich	Fairfield	206	206	206
Griffin Hospital	Derby	New Haven	180	180	94
Hartford Hospital	Hartford	Hartford	867	760	630
Hospital of Central Connecticut[2]	New Britain	Hartford	446	356	341
John Dempsey Hospital	Farmington	Hartford	224	224	224
Johnson Memorial Hospital	Stafford	Tolland	101	95	72
Lawrence and Memorial Hospital	New London	New London	308	256	256
Manchester Memorial Hospital	Manchester	Hartford	283	283	140
Middlesex Memorial Hospital	Middletown	Middlesex	297	214	178
MidState Medical Center	Meriden	New Haven	156	156	142
Milford Hospital	Milford	New Haven	118	118	51
New Milford Hospital	New Milford	Litchfield	95	95	30
Norwalk Hospital	Norwalk	Fairfield	366	312	194
Rockville General Hospital	Vernon	Tolland	118	118	66
St. Francis Hospital	Hartford	Hartford	682	593	593
St. Mary's Hospital	Waterbury	New Haven	379	181	181
St. Raphael Hospital	New Haven	New Haven	533	489	364
St. Vincent's Medical Center	Bridgeport	Fairfield	520	423	423
Stamford Hospital	Stamford	Fairfield	330	322	269
Waterbury Hospital	Waterbury	New Haven	393	292	192
Windham Community Hospital	Willimantic	Windham	144	144	87
Yale-New Haven Hospital	New Haven	New Haven	944	919	871
Statewide			**9,358**	**8,360**	**6,848**

Source: CT Department of Public Health Division of Office of Health Care Access Hospital Reporting System Report 400 (FY10)

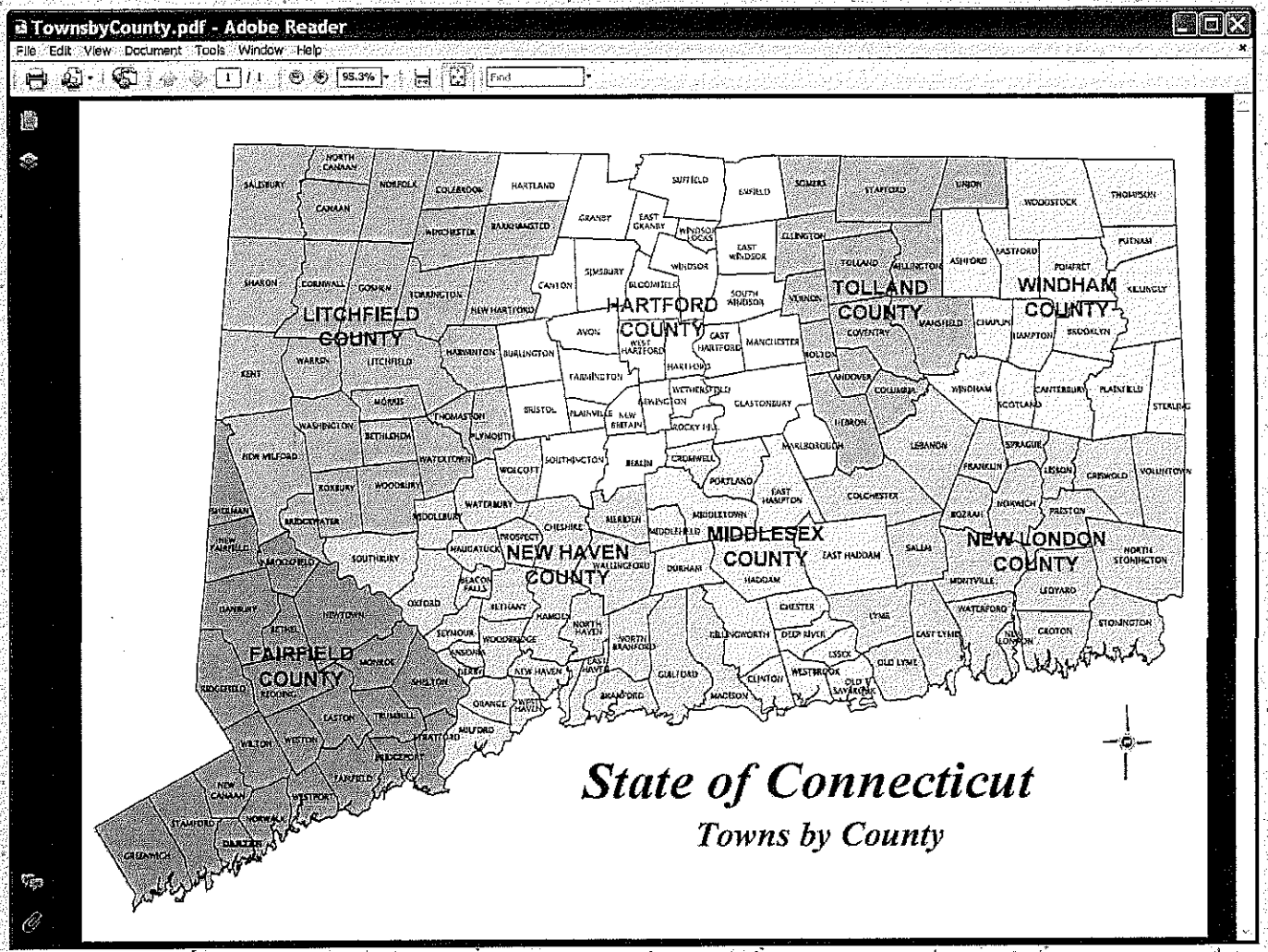
[1] CT Department of Public Health license data and includes newborn bassinets.

[2] Established on October 1, 2007 from the merger of New Britain General Hospital and Bradley Memorial Hospital.

Planning Area:

Internal discussions did not lead to a definitive conclusion on the most appropriate planning area to use.

Many states outside of New England use county as their planning regions, however in Connecticut we generally focus on towns, not counties.


TownsbyCounty.pdf - Adobe Reader
File Edit View Document Tools Window Help
LITCHFIELD COUNTY
HARTFORD COUNTY
TOLLAND COUNTY
WINDHAM COUNTY
NEW HAVEN COUNTY
MIDDLESEX COUNTY
NEW LONDON COUNTY
FAIRFIELD COUNTY
State of Connecticut
Towns by County

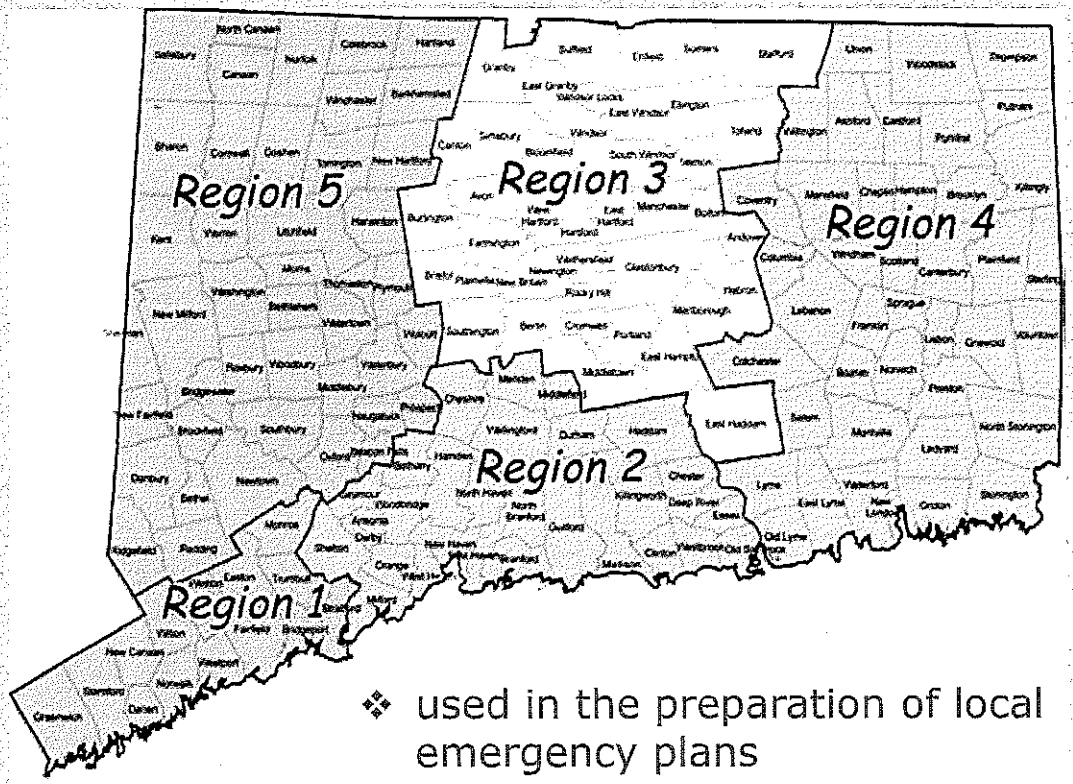
Planning Area - continued:

One proposed planning area alternative to county is the DEMHS (Dept. of Emergency Management & Homeland Security) regions.

So, for illustration purposes, we have used county and DEMHS regions.

DEMHS Regions:

(Dept. of Emergency Management & Homeland Security)



- used in the preparation of local emergency plans

Acute Care Beds per 1,000 population by county and DEMHS region:

County	County Population 2010 Est.	Licensed Beds per 1,000
Fairfield	907,033	2.4
Hartford	856,959	3.3
Litchfield	192,652	1.6
Middlesex	157,579	1.9
New Haven	819,772	3.3
New London	258,357	2.1
Tolland	134,193	1.6
Windham	115,296	2.3
Statewide	**3,441,841**	**2.7**

DEMHS	DEMHS Population 2010 Est.	Licensed Beds per 1,000
Region 1	672,391	2.7
Region 2	720,773	2.7
Region 3	1,036,480	3.2
Region 4	411,984	2.0
Region 5	600,216	2.4
Statewide	**3,441,841**	**2.7**

North Carolina Model:

- Pre-defined regions (county)
- Statewide 3 year utilization trend projected forward
- Target occupancy based on average daily census

ADC= 1-99 Target Occupancy 66.7%
ADC=100-200 Target Occupancy 71.4%
ADC= >200 Target Occupancy 75.2%

Hospital	DEMHS Region	County	Licensed Beds[1]	2010 Bed Days[2]	2015 Projected Bed Days[3]	2015 Projected Avg. Daily Census (days/365)	2015 Beds Adjusted for Target Occupancy	Projected 2015 Deficit (+) or Surplus (-)	2015 Need Determination
Hospital A	1	Fairfield	425	104,936	104,204	285	380	-45	
Hospital B	1	Fairfield	206	52,678	52,310	143	201	-5	
Hospital C	1	Fairfield	366	70,058	69,569	191	267	-99	
Hospital D	1	Fairfield	520	123,691	122,828	337	447	-73	
Hospital E	1	Fairfield	330	76,488	75,954	208	277	-53	
Total	**1**		**1,847**	**427,851**	**424,864**	**1,164**	**1,572**	**-275**	**0**

[1]Source: CT Department of Public Health Division of Office of Health Care Access Hospital Reporting System Report 400 - license beds include newborn bassinets.

[2]Source: CT Department of Public Health Division of Office of Health Care Access Acute Care Discharge Database

[3]Based on three year statewide historical average (-0.14% for FY07-10) growth (attrition) compounded forward

Alabama Model:

Based on:

- Pre-defined region (county)
- Service categories
- Weighted average daily census based on bed days(more weight given to the most recent year)
- Population changes in the region
- Target occupancy based on 8 service categories and size of hospital for Medical/Surgery and Pediatric

Alabama Model:

DEMHS Region	Facility	Services	2008 patient days	2009 patient days	2010 patient days	Weighted ADC	DEMHS Region Pop chg 2010 to 2015*	Projected ADC	Target Occupancy	Beds Needed	Licensed Beds	Excess (-) or Deficit (+)
1	Hospital A	Newborn	10,478	10,396	8,977	26.6	1.02	27.2	0.75	36		
		Maternity	8,886	8,235	7,584	22.0	1.02	22.5	0.75	30		
		Psychiatric	9,355	9,524	10,148	26.9	1.02	27.5	0.75	37		
		Rehabilitation	4,542	4,590	4,812	12.9	1.02	13.2	0.75	18		
		Pediatric	2,745	3,069	2,770	7.9	1.02	8.0	0.65	12		
		Medical/Surgical	72,268	68,541	70,645	192.4	1.02	197.0	0.80	246		
	Total									**379**	**425**	**-46**
1	Hospital B	Newborn	7,618	7,235	7,378	20.2	1.02	20.7	0.75	28		
		Maternity	6,774	6,868	7,245	19.3	1.02	19.8	0.75	26		
		Psychiatric	212	172	344	0.7	1.02	0.7	0.75	1		
		Rehabilitation	0	0	0	0.0	1.02	0.0	0.75	0		
		Pediatric	742	614	550	1.7	1.02	1.7	0.65	3		
		Medical/Surgical	36,260	35,354	37,161	99.7	1.02	102.2	0.80	128		
	Total									**185**	**206**	**-21**
1	Hospital C	Newborn	5,533	5,691	5,292	15.0	1.02	15.3	0.75	20		
		Maternity	5,226	5,499	4,938	14.2	1.02	14.5	0.75	19		
		Psychiatric	3,613	3,296	3,041	8.8	1.02	9.0	0.75	12		
		Rehabilitation	6,872	6,838	7,085	19.1	1.02	19.6	0.75	26		
		Pediatric	1,773	1,807	1,525	4.5	1.02	4.7	0.65	7		
		Medical/Surgical	54,961	47,957	48,177	134.9	1.02	138.2	0.80	173		
	Total									**258**	**366**	**-108**
1	Hospital D	Newborn	3,448	3,421	3,779	9.9	1.02	10.1	0.75	13		
		Maternity	3,712	3,521	3,586	9.8	1.02	10.1	0.75	13		
		Psychiatric	5,648	25,319	26,282	61.7	1.02	63.2	0.75	84		
		Rehabilitation	2,833	2,376	2,338	6.7	1.02	6.8	0.75	9		
		Pediatric	60	63	23	0.1	1.02	0.1	0.65	0		
		Medical/Surgical	89,409	89,328	87,683	242.5	1.02	248.4	0.80	311		
	Total									**431**	**520**	**-89**
1	Hospital E	Newborn	8,952	9,083	8,376	23.9	1.02	24.4	0.75	33		
		Maternity	8,373	8,942	8,202	23.2	1.02	23.8	0.75	32		
		Psychiatric	5,506	5,538	5,186	14.7	1.02	15.0	0.75	20		
		Rehabilitation	164	2,090	4,506	8.2	1.02	8.4	0.75	11		
		Pediatric	1,656	1,519	1,430	4.1	1.02	4.2	0.65	6		
		Medical/Surgical	50,664	46,595	48,788	132.5	1.02	135.7	0.80	170		
	Total									**272**	**330**	**-58**
									REGION	**1,525**	**1,847**	**-322**

South Carolina Model:

Based on:

- Pre-defined region (county)
- Age Groups
- Use Rates
- Population changes in the region
- Target occupancy based on # of beds
  - 0-174 bed hospitals, 65%
  - 175-349 bed hospital, 70%
  - 350+ bed hospitals, 75%

South Carolina Model:

DEMHS Region	Facility	Age Groups	2010 Bed Days	DEMHS 1 2010 Pop	Use rate	DEMHS 1 Estimated 2015 Pop	Proj Bed Days 2015	Proj ADC 2015	Occupancy Rate	Proj. Bed Need 2015	Licensed Beds	Bed Surplus (-) or Defecit (+)
1	Hospital A	0-14	11,378	141,932	0.08	142,976	11,462	31	0.75	42		
1	Hospital A	15 - 44	21,143	254,646	0.08	256,432	21,291	58	0.75	78		
1	Hospital A	45 - 64	25,527	187,795	0.14	192,876	26,218	72	0.75	96		
1	Hospital A	65+	46,888	88,017	0.53	96,432	51,371	141	0.75	188		
	Total									**403**	**425**	**-22**
1	Hospital B	0-14	7,928	141,932	0.06	142,976	7,986	22	0.7	31		
1	Hospital B	15 - 44	10,736	254,646	0.04	256,432	10,811	30	0.7	42		
1	Hospital B	45 - 64	8,191	187,795	0.04	192,876	8,413	23	0.7	33		
1	Hospital B	65+	25,823	88,017	0.29	96,432	28,292	78	0.7	111		
	Total									**217**	**206**	**11**
1	Hospital C	0-14	6,398	141,932	0.05	142,976	6,445	18	0.75	24		
1	Hospital C	15 - 44	12,509	254,646	0.05	256,432	12,597	35	0.75	46		
1	Hospital C	45 - 64	15,518	187,795	0.08	192,876	15,938	44	0.75	58		
1	Hospital C	65+	35,633	88,017	0.40	96,432	39,040	107	0.75	143		
	Total									**270**	**366**	**-96**
1	Hospital D	0-14	6,476	141,932	0.05	142,976	6,524	18	0.75	24		
1	Hospital D	15 - 44	26,615	254,646	0.10	256,432	26,802	73	0.75	98		
1	Hospital D	45 - 64	35,687	187,795	0.19	192,876	36,653	100	0.75	134		
1	Hospital D	65+	54,913	88,017	0.62	96,432	60,163	165	0.75	220		
	Total									**475**	**520**	**-45**
1	Hospital E	0-14	9,466	141,932	0.07	142,976	9,536	26	0.7	37		
1	Hospital E	15 - 44	18,053	254,646	0.07	256,432	18,180	50	0.7	71		
1	Hospital E	45 - 64	16,647	187,795	0.09	192,876	17,097	47	0.7	67		
1	Hospital E	65+	32,322	88,017	0.37	96,432	35,412	97	0.7	139		
	Total									**314**	**330**	**-16**
									REGION	**1,680**	**1,847**	**-167**

Connecticut Acute Care Bed Need
Summary of 2015 Projections
(For Discussion Purposes Only)

		Alabama Method		North Carolina Method		South Carolina Method	
DEMHS	Licensed Beds	Beds Needed	Surplus (-) or Deficit (+)	Beds Needed	Surplus (-) or Deficit (+)	Beds Needed	Surplus (-) or Deficit (+)
Region 1	1,847	1,525	-322	1,572	-275	1,680	-167
Region 2	1,931	1,792	-139	1,849	-82	1,983	52
Region 3	3,319	2,559	-760	2,631	-688	2,826	-493
Region 4	807	574	-233	622	-185	696	-111
Region 5	1,454	948	-506	972	-482	1,072	-382
Statewide*	**9,358**	**7,398**	**-1,960**	**7,646**	**-1,712**	**8,257**	**-1,101**

County	Licensed Beds	Beds Needed	Surplus (-) or Deficit (+)	Beds Needed	Surplus (-) or Deficit (+)	Beds Needed	Surplus (-) or Deficit (+)
Fairfield	2,218	1,863	-355	1,916	-302	2,078	-140
Hartford	2,803	2,233	-570	2,288	-515	2,431	-372
Litchfield	311	183	-128	200	-111	233	-78
Middlesex	297	199	-98	213	-84	239	-58
New Haven	2,703	2,220	-483	2,277	-426	2,425	-278
New London	541	425	-116	459	-82	504	-37
Tolland	219	125	-94	130	-89	153	-66
Windham	266	148	-118	162	-104	190	-76
Statewide*	**9,358**	**7,396**	**-1,962**	**7,646**	**-1,712**	**8,253**	**-1,105**

**Surplus/Deficit totals differ due to rounding of population estimates*

Proposed Exceptions:

Additional factors may need to be considered when evaluating bed need

Models are static in nature and don't always capture changes that occur rapidly

May want to allow an increase in licensed beds if, for example:

- area of hospital experiencing census levels at or above ? % of bed capacity over a defined time period
- other unique circumstances that would merit additional consideration

Moving Forward:

Issues in need of further discussion:

- Bed need model
- Planning area
- Age groups
- Target occupancy rate
- Exceptions

DPH-OHCA staff are looking forward to working collaboratively with the advisory body to determine the most effective and appropriate bed need model for Connecticut's health care system.

Thank You!

ATTACHMENT VII

YNHH FY 2010 Med-Surg Discharges by Town

YNHH FY 2010 Med-Surg Discharges by Town

State	City	Total
Foreign	Multiple	16
Other State	Multiple	1,220
CT	Abington	2
CT	Amston	3
CT	Ansonia	198
CT	Ashford	5
CT	Avon	10
CT	Ballouville	1
CT	Baltic	18
CT	Bantam	1
CT	Beacon Falls	34
CT	Berlin	33
CT	Bethany	117
CT	Bethel	34
CT	Bethlehem	12
CT	Bloomfield	8
CT	Bolton	4
CT	Bozrah	17
CT	Branford	1,688
CT	Bridgeport	569
CT	Bridgewater	5
CT	Bristol	80
CT	Broad Brook	2
CT	Brookfield	21
CT	Brooklyn	10
CT	Burlington	10
CT	Canaan	4
CT	Canterbury	30
CT	Canton	13
CT	Canton Center	3
CT	Centerbrook	11
CT	Central Village	10
CT	Chaplin	2
CT	Cheshire	269
CT	Chester	46
CT	Clinton	349
CT	Cobalt	3
CT	Colchester	36
CT	Colebrook	1
CT	Columbia	7
CT	Cornwall Bridge	5
CT	Cos Cob	18
CT	Coventry	5
CT	Cromwell	36
CT	Danbury	101
CT	Danielson	13
CT	Darien	40
CT	Dayville	2
CT	Deep River	65
CT	Derby	129
CT	Durham	54
CT	East Berlin	2
CT	East Granby	3
CT	East Haddam	26
CT	East Hampton	50
CT	East Hartford	35
CT	East Hartland	3
CT	East Haven	1,817
CT	East Lyme	50
CT	East Windsor	4
CT	Eastford	1
CT	Easton	47
CT	Ellington	13
CT	Enfield	24
CT	Essex	58
CT	Fairfield	282
CT	Falls Village	1
CT	Farmington	13
CT	Gales Ferry	65
CT	Georgetown	1
CT	Glastonbury	34
CT	Goshen	2
CT	Granby	2
CT	Greens Farms	2
CT	Greenwich	118
CT	Groton	217
CT	Guilford	997
CT	Haddam	18
CT	Hadlyme	2
CT	Hamden	2,141
CT	Hampton	3
CT	Hanover	3
CT	Hartford	73
CT	Harwinton	6
CT	Higganum	11
CT	Ivoryton	33
CT	Jewett City	113
CT	Kent	3
CT	Killingworth	164
CT	Lakeside	1
CT	Lakeville	2
CT	Lebanon	43
CT	Ledyard	62
CT	Litchfield	18
CT	Machester	2
CT	Madison	663
CT	Manchester	33
CT	Mansfield Ctr	7
CT	Marion	1
CT	Marlborough	11
CT	Mashantucket	1
CT	Meriden	362
CT	Middle Haddam	1
CT	Middlebury	28
CT	Middlefield	25
CT	Middletown	206
CT	Milford	690
CT	Milldale	2
CT	Monroe	53
CT	Montville	1
CT	Moodus	10
CT	Moosup	21
CT	Morris	2
CT	Mystic	107
CT	Naugatuck	148
CT	New Britain	49
CT	New Canaan	34
CT	New Fairfield	26
CT	New Hartford	4
CT	New Haven	8,062
CT	New London	195
CT	New Milford	45
CT	New Preston	1
CT	Newington	35
CT	Newtown	26
CT	Niantic	82
CT	Norfolk	1
CT	North Branford	448
CT	North Franklin	13
CT	North Granby	1
CT	North Grosvenordale	1
CT	North Haven	889
CT	North Stonington	25
CT	North Windham	5
CT	Northfield	2
CT	Northford	205
CT	Norwalk	275
CT	Norwich	294
CT	Oakdale	63
CT	Oakville	20
CT	Old Greenwich	12
CT	Old Lyme	104
CT	Old Mystic	2
CT	Old Saybrook	201
CT	Oneco	3
CT	Orange	334
CT	Oxford	102

YNHH FY 2010 Med-Surg Discharges by Town		
State	City	Total
CT	Pawcatuck	70
CT	Plainfield	26
CT	Plainville	30
CT	Plantsville	23
CT	Pleasant Valley	7
CT	Plymouth	7
CT	Pomfret Center	2
CT	Portland	31
CT	Preston	46
CT	Prospect	57
CT	Putnam	5
CT	Quaker Hill	40
CT	Quinebaug	1
CT	Redding	19
CT	Ridgefield	48
CT	Riverside	25
CT	Riverton	3
CT	Rockfall	9
CT	Rocky Hill	36
CT	Roxbury	10
CT	Salem	18
CT	Salisbury	3
CT	Sandy Hook	28
CT	Scotland	2
CT	Seymour	161
CT	Shelton	271
CT	Sherman	4
CT	Simsbury	10
CT	Somers	4
CT	South Glastonbury	13
CT	South Windham	1
CT	South Windsor	8
CT	Southbury	63
CT	Southington	65
CT	Southport	13
CT	Stafford Springs	7
CT	Stamford	256
CT	Sterling	6
CT	Stevenson	2
CT	Stonington	34
CT	Storrs Mansfield	4
CT	Stratford	227
CT	Suffield	5
CT	Taftville	17
CT	Tariffville	4
CT	Terryville	16
CT	Thomaston	12
CT	Thompson	4
CT	Tolland	11
CT	Torrington	40
CT	Trumbull	145
CT	Uncasville	91
CT	Unionville	9
CT	Vernon Rockville	20
CT	Voluntown	22
CT	W Hartford	55
CT	Wallingford	700
CT	Washington	2
CT	Washington Depot	2
CT	Waterbury	335
CT	Waterford	162
CT	Watertown	39
CT	West Cornwall	1
CT	West Haven	2,405
CT	West Simsbury	1
CT	West Suffield	1
CT	Westbrook	98
CT	Weston	35
CT	Westport	93
CT	Wethersfield	21
CT	Willimantic	10
CT	Willington	1
CT	Wilton	43
CT	Windham	2
CT	Windsor	14
CT	Windsor Locks	3
CT	Winsted	11
CT	Wolcott	42
CT	Woodbridge	326
CT	Woodbury	28
CT	Yantic	3
Total		32,390

ATTACHMENT VIII

"In a Down Economy, Fewer Births"
- Pew Research Center

PewResearchCenter
Social & Demographic Trends

Wednesday, October 12, 2011

In a Down Economy, Fewer Births

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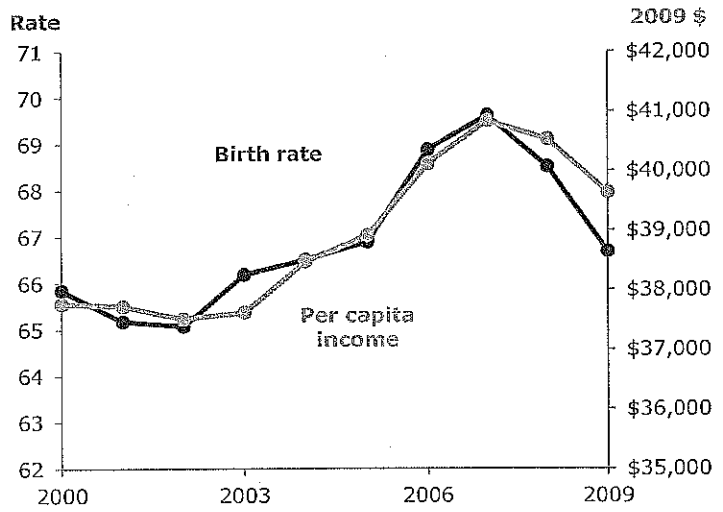
In a Down Economy, Fewer Births

By Gretchen Livingston

A sharp decline in fertility rates in the United States that started in 2008 is closely linked to the souring of the economy that began about the same time, according to a new analysis of multiple economic and demographic data sources by the Pew Research Center.

U.S. Birth Rate and Per Capita Income Decline Since Recession Onset



Notes: Birth rate (general fertility rate) is the number of births per thousand women ages 15-44. Birth rate data for 2009 are preliminary.

Source: Statistics calculated using data from National Center for Health Statistics, U.S. Census Bureau and Bureau of Economic Analysis

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The year 2007 marked a record high number of births in the U.S.—4,316,233. Since that time, births have been declining, even as the U.S. population continues to grow. Preliminary data for 2009 indicate that the number of births dropped to 4,131,018—the lowest number since 2004. Provisional data show that in 2010 births numbered just over 4 million (4,007,000).[1]

A state-level look at fertility illustrates the strength of the correlation between lower birth rates and economic distress. States experiencing the largest economic declines in 2007 and 2008 were most likely to experience relatively large fertility declines from 2008 to 2009, the analysis finds. States with relatively minor economic declines were likely to experience relatively small declines.

For example, North Dakota, which experienced one of the nation's lowest unemployment rates (3.1%) in 2008, was the only state to show even a slight increase (0.7%) in births from 2008 to

[1] In recent years provisional and preliminary birth data have come close to the final birth counts. For 2008 data, the provisional estimates equaled 99.98% of the final estimates, and the preliminary estimates equaled 100.08% of the final estimates.

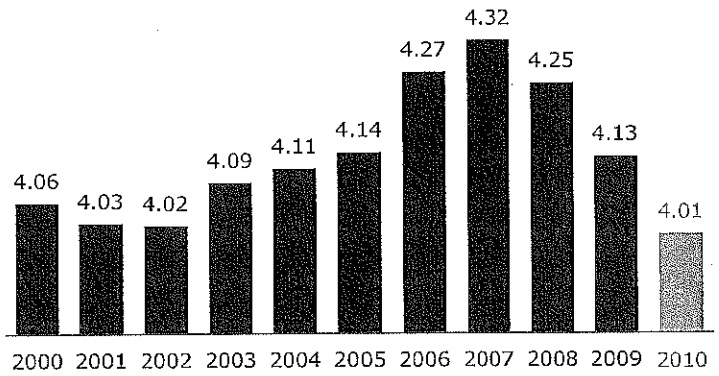
2009. All other states and the District of Columbia experienced either no change, or declines, in births during that period.

These correlations are based on fertility trends calculated using data from the National Center for Health Statistics and the U.S. Census Bureau and economic trend data from six familiar indicators (per capita income, per capita gross domestic product, employment rate, unemployment rate, initial unemployment claims, and foreclosure rates) tracked by the Bureau of Economic Analysis, the Bureau of Labor Statistics and RealtyTrac.[2]

Since 2007, the U.S. fertility rate—which controls for variations in the size of the female population of childbearing age—has dropped markedly from 69.6 births per thousand women ages 15-44 to 66.7 births per thousand women ages 15-44 in 2009. Provisional data for 2010 indicate a further drop to 64.7 births per thousand women ages 15-44.

Since 2007, Total U.S. Births Have Declined Sharply

in millions



Note: Birth data for 2009 are preliminary, and birth data for 2010 are provisional.

Source: National Center for Health Statistics

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The Pew Research Center analysis also finds evidence of an association between economic hard times and fertility declines by race and ethnicity. Hispanics, whose employment levels and household wealth were particularly hard hit by the Great Recession, have experienced the largest fertility declines of the nation's three major racial and ethnic groups. Conversely, whites have experienced smaller economic hardships, and smaller declines in fertility. From 2008 to 2009, birth rates dropped by 5.9% among Hispanic women, while birth rates dropped 2.4% among black women and 1.6% among white women.

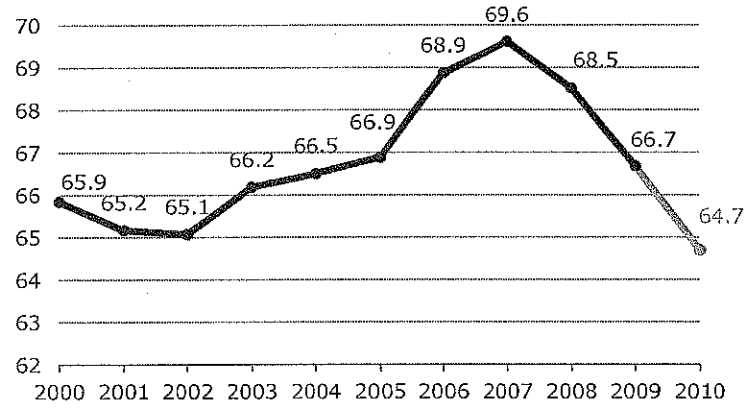
[2] An earlier Pew Social & Demographic Trends report analyzed the association of fertility and the economy for 25 states using 2008 fertility data.

Fertility and the Recession

The official start of the U.S. economic recession was in December 2007, according to the National Bureau of Economic Research. However, the timing and magnitude of economic declines associated with the recession have varied markedly from state to state. For instance, per capita income in Nevada declined by 4.6% from 2007 to 2008, while in West Virginia, per capita income increased by 1.6%. And in states such as Arizona, per capita income began declining by 2007, while in states such as Alaska and Montana declines did not appear until 2009.

This research capitalizes on such across-state differences to examine whether the economic downturn is associated with the sharp fertility declines that the U.S. has experienced since 2007. Six of the seven economic indicators that the Pew Research Center analyzed were strongly linked to subsequent changes in fertility at the state level. In particular, changes in per capita personal income, per capita GDP, employment rate, unemployment rate and initial unemployment claims from 2007 to 2008 were closely related to changes in fertility rates occurring from 2008 to 2009, as were 2008 state-level foreclosure rates.[3] The change from 2007 to 2008 in the Home Price Index, an indicator of housing value, was not linked to subsequent fertility.

Since 2007, U.S. Birth Rates Have Declined Dramatically



Note: Birth rate (general fertility rate) is the number of births per thousand women ages 15-44. Birth rate data for 2009 are preliminary, and birth rate data for 2010 are provisional.

Source: Statistics calculated using data from National Center for Health Statistics and U.S. Census Bureau

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[3] The correlation coefficients for the significant relationships between the 2008-2009 percent GFR change and six economic indicators were as follows: 2007-2008 percent change in per capita income (0.49); 2007-2008 percent change in per capita gross domestic product (0.31); 2007-2008 percent change in employment rate (0.33); 2007-2008 percent change in unemployment rate (-0.72); 2007-2008 percent change in first unemployment claims; and (-0.33); 2008 foreclosure rate (-0.51). Correlations for the change in per capita income; change in unemployment; and foreclosures were significant at the 0.01 level. All other correlations were significant at the 0.05 level.

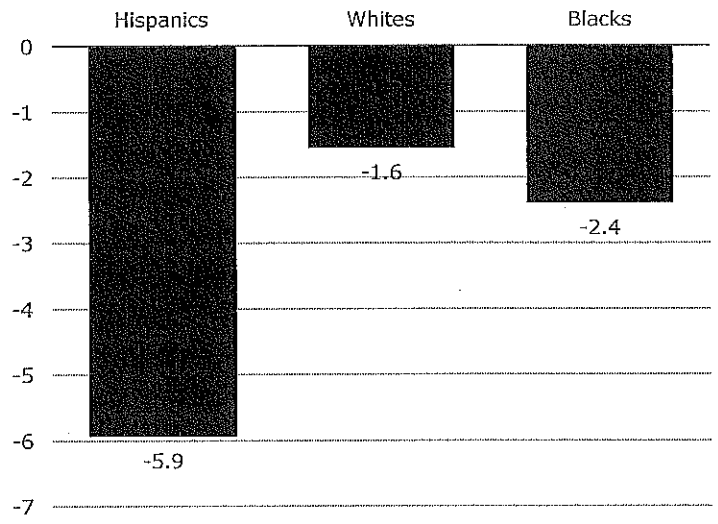
In 48 of 51 states (a number that includes the District of Columbia), fertility declines occurred within one to two years of the start of economic declines (as indicated by the percent change in personal income per capita, and the percent change in the employment rate). This does not conclusively prove that the economic changes led to fertility changes. However, the timing is consistent with the time it might take people to act upon fertility decisions.

Hispanics Hardest Hit by Recession, Show Biggest Fertility Declines

It is difficult to obtain reliable annual indicators of fertility and the economy at the state level by separate racial and ethnic groups. But an examination of national-level data shows that Hispanics, who have been hit the hardest in terms of employment and wealth, have also experienced the largest fertility declines since the onset of the recession. Conversely, the smaller birth rate declines among whites could reflect the fact that they were less hard hit by the recession than were Hispanics or blacks.

Hispanics Experience Large Fertility Declines, 2008 to 2009

% change in birth rate



Notes: Birth rate (general fertility rate) is the number of births per thousand women ages 15-44. Birth rate data for 2009 are preliminary. Whites and blacks include non-Hispanics only.

Source: Statistics calculated using data from National Center for Health Statistics and U.S. Census Bureau

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From 2008 to 2009, the birth rate among Hispanics dropped almost 6%. In comparison, blacks experienced a 2.4% decline, and whites experienced a 1.6% decline. While Hispanics continue to have birth rates that are much higher than their non-Hispanic counterparts, the 2009 Hispanic birth rate of 93.3 births per 1000 women of childbearing age is the lowest rate since 1999.

The relatively large birth rate declines among Hispanics mirror their relatively large economic declines, in terms of jobs and wealth. From 2007 to 2008, the employment rate among Hispanics declined by 1.6 percentage points, compared with declines of 1.0 percentage points for blacks and 0.7 points for whites. The unemployment rate shows a similar pattern—

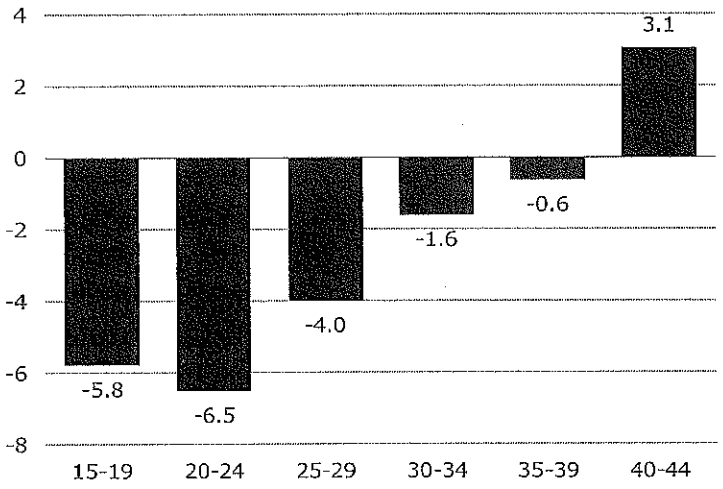
unemployment among Hispanics increased 2.0 percentage points from 2007 to 2008, while for blacks it increased 1.8 percentage points, and for whites the increase was 0.9 percentage points.[4] A recent report from the Pew Hispanic Center revealed that Hispanics have also been the biggest losers in terms of wealth since the beginning of the recession, with Hispanic households losing 66% of their median wealth from 2005 to 2009. In comparison, black households lost 53% of their median wealth and white households lost only 16%. From 2007 to 2008, there were no statistically significant differences by race and ethnicity in per capita income.

Fertility Delayed or Fertility Foregone?

It's typically quite difficult to determine if economic changes are causing fertility changes, since other social and cultural factors may also be at play, such as changes in women's labor force participation, contraceptive technology, and public policy (Pison 2009). However, there is historical evidence of a link between economic cycles and fertility in the U.S.—Carl Haub of the Population Reference Bureau points to both the Great Depression and the oil bust of the early 1970s as examples. Research examining fertility across multiple industrialized countries has also shown a link between economic declines and fertility declines (Sobotka et al. 2011; Goldstein et al. 2009).

Fertility Declines for All Women, Except Those Ages 40 and Older, 2008 to 2009

% change in birth rate



Note: Birth rate is the number of births per thousand women. Birth rate data for 2009 are preliminary.

Source: Statistics calculated using data from National Center for Health Statistics

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Experts suggest that much of the fertility decline that occurs during an economic decline is postponement of childbearing and does not represent a decision to have fewer children (Sobotka

[4] Employment and unemployment statistics by race and ethnicity calculated using data from the Current Population Survey.

et al. 2011; Goldstein et al. 2009). In other words, people put off having children during the economic downturn, and then catch up on fertility once economic conditions improve.

It's too early to know if fertility will bounce back as the U.S. economy recovers,[5] but preliminary evidence suggests that the fertility decline may indeed be driven by postponement. Survey findings from the Pew Research Center and vital statistics data have shown that the recession is more strongly associated with fertility declines among younger women, who presumably have the luxury of postponing fertility until better economic times prevail. Conversely, older women are less likely to say that they have postponed fertility due to economic declines. They are the only age group that has shown consistent, if not rising, fertility in recent years.

[5] See Philip Cohen's analysis of internet search trends for an interesting interpretation of what may lie ahead for U.S. fertility in the near future.

APPENDIX 1

Appendix Table 1

Births, 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
U.S.	4,058,814	4,025,933	4,021,726	4,089,950	4,112,052	4,138,349	4,265,555	4,316,233	4,247,694	4,131,018
Alabama	63,299	60,454	58,967	59,552	59,510	60,453	63,232	64,804	64,546	62,476
Alaska	9,974	10,003	9,938	10,086	10,338	10,459	10,996	11,052	11,442	11,325
Arizona	85,273	85,597	87,837	90,967	93,663	96,199	102,429	102,981	99,442	92,816
Arkansas	37,783	37,010	37,437	37,784	38,573	39,208	40,961	41,378	40,669	39,853
California	531,959	527,759	529,357	540,997	544,843	548,882	562,440	566,414	551,779	527,011
Colorado	65,438	67,007	68,418	69,339	68,503	68,944	70,751	70,809	70,031	68,627
Connecticut	43,026	42,648	42,001	42,873	42,095	41,718	41,820	41,660	40,399	38,896
Delaware	11,051	10,749	11,090	11,329	11,369	11,643	11,989	12,170	12,090	11,562
District of Columbia	7,666	7,625	7,498	7,619	7,933	7,971	8,523	8,864	9,130	9,044
Florida	204,125	205,793	205,579	212,250	218,053	226,240	236,802	239,165	231,445	221,391
Georgia	132,644	133,526	133,300	135,979	138,849	142,200	148,633	151,137	146,603	141,375
Hawaii	17,551	17,072	17,477	18,100	18,281	17,924	18,982	19,134	19,484	18,888
Idaho	20,366	20,688	20,970	21,800	22,532	23,062	24,184	25,019	25,149	23,731
Illinois	185,036	184,064	180,622	182,495	180,778	179,020	180,572	180,836	176,795	171,255
Indiana	87,699	86,459	85,081	86,434	87,142	87,193	88,631	89,864	88,742	86,698
Iowa	38,266	37,619	37,559	38,174	38,438	39,311	40,607	40,886	40,224	39,700
Kansas	39,666	38,869	39,412	39,476	39,669	39,888	40,968	42,004	41,833	41,396
Kentucky	56,029	54,658	54,233	55,236	55,720	56,444	58,250	59,368	58,375	57,558
Louisiana	67,898	65,352	64,872	65,040	65,369	60,937	63,376	66,301	65,268	64,988
Maine	13,603	13,759	13,559	13,855	13,944	14,112	14,151	14,120	13,609	13,470
Maryland	74,316	73,218	73,323	74,930	74,628	74,980	77,494	78,095	77,289	75,061
Massachusetts	81,614	81,077	80,645	80,184	78,484	76,865	77,676	77,967	77,022	75,104
Michigan	136,171	133,427	129,967	131,094	129,776	127,706	127,483	125,261	121,127	117,293
Minnesota	67,604	67,562	68,025	70,050	70,624	70,919	73,525	73,735	72,421	70,648
Mississippi	44,075	42,282	41,518	42,380	42,827	42,395	46,056	46,491	44,947	42,905
Missouri	76,463	75,464	75,251	77,045	77,765	78,618	81,385	81,930	80,963	78,920
Montana	10,957	10,970	11,049	11,422	11,519	11,583	12,508	12,439	12,594	12,261
Nebraska	24,646	24,820	25,383	25,917	26,332	26,145	26,727	26,934	26,989	26,937
Nevada	30,829	31,382	32,571	33,647	35,200	37,268	40,027	41,181	39,506	37,627
New Hampshire	14,609	14,656	14,442	14,393	14,565	14,420	14,378	14,168	13,683	13,378
New Jersey	115,632	115,795	114,751	116,983	115,253	113,776	115,020	116,063	112,710	110,324
New Mexico	27,223	27,128	27,753	27,821	28,384	28,835	29,936	30,616	30,173	29,002
New York	258,737	254,026	251,415	253,714	249,947	246,351	250,104	253,451	250,383	248,110
North Carolina	120,311	118,185	117,335	118,323	119,847	123,096	127,859	131,037	130,839	126,846
North Dakota	7,676	7,629	7,757	7,972	8,189	8,390	8,621	8,840	8,938	9,001

Note: 2009 data are preliminary.

Source: National Center for Health Statistics

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Appendix Table 1 (continued)

Births, 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Ohio	155,472	151,570	148,720	149,679	148,954	148,388	150,593	150,879	148,821	144,772
Oklahoma	49,782	50,118	50,387	50,981	51,306	51,801	54,016	55,065	54,781	54,574
Oregon	45,804	45,322	45,192	45,953	45,678	45,922	48,689	49,378	49,096	47,199
Pennsylvania	146,281	143,495	142,850	145,959	144,748	145,383	149,090	150,713	149,273	146,432
Rhode Island	12,505	12,713	12,894	13,209	12,779	12,697	12,372	12,376	12,048	11,443
South Carolina	56,114	55,756	54,570	55,649	56,590	57,711	62,171	62,875	63,071	60,632
South Dakota	10,345	10,483	10,698	11,027	11,338	11,462	11,919	12,261	12,071	11,935
Tennessee	79,611	78,340	77,482	78,890	79,642	81,747	84,355	86,711	85,560	82,213
Texas	363,414	365,410	372,450	377,476	381,293	385,915	399,603	407,625	405,554	402,011
Utah	47,353	47,959	49,182	49,860	50,670	51,556	53,504	55,130	55,634	53,887
Vermont	6,500	6,366	6,387	6,589	6,599	6,295	6,511	6,513	6,339	6,109
Virginia	98,938	98,884	99,672	101,254	103,933	104,555	107,817	108,884	106,686	105,056
Washington	81,036	79,570	79,028	80,489	81,747	82,703	86,876	88,978	90,321	89,284
West Virginia	20,865	20,428	20,712	20,935	20,880	20,836	20,931	21,994	21,501	21,270
Wisconsin	69,326	69,072	68,560	70,040	70,146	70,984	72,340	72,784	72,261	70,840
Wyoming	6,253	6,115	6,550	6,700	6,807	7,239	7,672	7,893	8,038	7,884

Note: 2009 data are preliminary.

Source: National Center for Health Statistics

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Appendix Table 2

Birth Rates, 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
U.S.	65.85	65.18	65.08	66.19	66.51	66.89	68.88	69.62	68.52	66.69
Alabama	65.25	62.76	61.84	62.81	62.98	63.98	66.66	68.25	67.86	65.74
Alaska	70.67	71.08	70.46	71.05	72.39	73.06	76.32	77.02	80.25	78.34
Arizona	78.20	77.01	77.43	78.86	79.47	79.29	82.00	80.90	77.09	71.50
Arkansas	67.09	65.84	66.81	67.47	68.70	69.50	72.10	72.76	71.48	70.11
California	70.22	69.16	69.15	70.43	70.79	71.41	73.23	73.83	71.84	68.50
Colorado	67.11	67.69	68.74	69.82	69.15	69.41	70.72	70.20	68.79	66.80
Connecticut	59.55	59.27	58.49	59.89	59.21	59.11	59.61	59.91	58.32	56.51
Delaware	63.55	61.67	63.55	64.70	64.74	65.90	67.70	68.63	68.23	65.40
District of Columbia	53.43	52.95	52.40	53.56	55.69	55.65	58.89	60.77	62.03	59.96
Florida	63.14	62.81	61.90	63.21	63.84	65.10	67.35	67.98	66.02	63.56
Georgia	69.62	69.15	68.33	69.04	69.79	70.62	72.68	72.93	70.27	67.67
Hawaii	69.37	68.08	69.89	72.26	72.65	71.30	75.40	76.66	78.12	75.79
Idaho	73.07	73.80	74.35	76.80	78.49	78.97	81.36	82.97	82.45	77.44
Illinois	67.45	67.26	66.34	67.43	67.14	66.88	67.71	67.96	66.64	64.71
Indiana	66.22	65.50	64.87	66.23	67.05	67.28	68.52	69.68	68.96	67.64
Iowa	62.66	62.12	62.63	64.30	65.08	66.96	69.49	70.28	69.40	68.72
Kansas	69.11	68.07	69.22	69.71	70.49	71.23	73.70	75.67	75.57	74.72
Kentucky	63.08	61.82	61.62	62.95	63.78	64.74	66.88	68.32	67.23	66.65
Louisiana	67.53	65.72	65.77	66.35	67.03	63.00	70.61	72.17	70.28	69.82
Maine	50.84	51.63	51.02	52.38	53.20	54.29	55.11	55.75	54.43	54.80
Maryland	62.40	61.21	61.05	62.30	62.05	62.33	64.60	65.56	65.34	63.83
Massachusetts	57.35	56.98	56.98	57.10	56.43	55.76	56.74	57.23	56.65	55.39
Michigan	63.18	62.17	61.03	62.04	61.89	61.42	61.98	61.74	60.72	59.76
Minnesota	62.36	62.18	62.76	64.98	65.83	66.48	69.23	69.70	68.83	67.51
Mississippi	69.44	67.19	66.55	68.36	69.23	68.80	75.64	76.37	73.98	70.88
Missouri	63.37	62.55	62.52	64.17	64.80	65.53	67.85	68.39	67.71	66.24
Montana	59.13	59.72	60.65	62.88	63.42	63.76	68.76	68.23	68.90	67.26
Nebraska	67.52	68.41	70.27	72.02	73.59	73.37	75.38	76.26	76.63	76.37
Nevada	72.16	71.41	72.39	73.08	73.82	75.70	78.72	78.95	74.83	71.24
New Hampshire	54.17	54.02	53.20	53.14	53.91	53.62	53.86	53.57	52.35	51.92
New Jersey	63.74	63.97	63.63	65.24	64.71	64.38	65.67	66.84	65.43	64.47
New Mexico	69.64	69.79	71.15	71.19	72.41	73.39	76.00	77.46	76.48	73.37
New York	61.44	60.47	60.15	60.99	60.36	59.89	61.17	62.29	61.90	61.68
North Carolina	67.45	65.86	65.14	65.39	66.00	67.19	68.91	69.53	68.74	66.32
North Dakota	56.85	57.36	59.10	61.32	62.99	65.24	67.35	69.64	70.61	70.79

Notes: Birth rate (general fertility rate) is the number of births per thousand women ages 15-44. Birth rate data for 2009 are preliminary.

Source: Statistics calculated using data from National Center for Health Statistics and U.S. Census Bureau

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Appendix Table 2 (continued)

Birth Rates, 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Ohio	63.66	62.46	61.77	62.71	62.89	63.16	64.68	65.28	64.96	63.76
Oklahoma	67.82	68.58	69.17	70.14	71.06	71.90	74.69	76.03	75.55	74.85
Oregon	63.36	62.51	62.01	63.08	62.94	62.95	66.08	66.28	65.40	62.53
Pennsylvania	57.19	56.49	56.62	58.23	58.10	58.62	60.34	61.26	60.91	60.07
Rhode Island	53.78	54.70	55.48	56.99	55.78	56.21	55.66	56.57	55.80	53.62
South Carolina	63.42	63.02	61.76	62.88	63.66	64.74	69.25	69.42	69.06	66.31
South Dakota	65.55	66.82	68.57	70.90	72.95	74.16	77.47	79.68	78.63	77.75
Tennessee	63.61	62.62	62.07	63.18	63.73	65.09	66.70	68.28	67.25	64.73
Texas	76.45	76.07	76.88	77.42	77.71	78.12	79.66	80.35	79.13	77.57
Utah	89.57	89.41	90.65	91.01	91.07	91.21	92.60	93.28	92.63	88.44
Vermont	49.80	49.08	49.61	51.53	51.93	50.03	52.19	52.90	52.11	50.83
Virginia	62.15	61.87	62.09	62.83	64.17	64.24	66.13	66.77	65.46	64.37
Washington	62.62	61.23	60.68	61.83	62.59	63.15	65.83	67.03	67.64	66.38
West Virginia	55.97	55.76	57.19	58.34	58.71	59.07	59.76	63.13	62.13	61.75
Wisconsin	59.87	59.70	59.34	60.89	61.23	62.28	63.85	64.64	64.60	63.72
Wyoming	59.84	59.53	63.92	66.06	67.45	72.14	76.16	77.31	77.84	75.04

Notes: Birth rate (general fertility rate) is the number of births per thousand women ages 15-44. Birth rate data for 2009 are preliminary.

Source: Statistics calculated using data from National Center for Health Statistics and U.S. Census Bureau

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Appendix Table 3

Per Capita Income, 2000-2009

in 2009 dollars

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
U.S.	37,771	37,727	37,518	37,625	38,478	38,912	40,116	40,837	40,529	39,635
Alabama	29,985	30,396	30,773	31,172	32,221	32,781	33,436	33,916	33,807	33,411
Alaska	38,036	39,092	39,538	39,093	39,604	40,391	41,325	42,632	44,255	43,212
Arizona	32,718	32,625	32,409	32,448	33,527	34,592	35,567	35,555	34,336	33,207
Arkansas	28,127	28,914	28,943	29,651	30,487	30,655	31,344	32,520	32,481	32,315
California	41,608	41,053	40,598	40,781	41,910	42,584	44,233	44,748	43,696	42,395
Colorado	42,329	42,755	41,765	40,990	41,625	42,351	43,521	43,864	43,404	41,895
Connecticut	52,225	52,835	51,722	51,050	52,763	53,323	56,196	58,447	56,994	55,296
Delaware	50,435	54,684	54,656	55,583	58,231	60,325	63,390	66,223	68,617	68,843
District of Columbia	38,629	39,240	39,608	39,512	40,559	40,644	41,603	41,523	40,501	39,597
Florida	36,228	36,110	36,346	36,473	38,091	39,111	40,608	40,825	39,989	38,965
Georgia	35,544	35,368	34,893	34,592	34,777	35,323	35,568	35,897	35,236	34,129
Hawaii	36,217	35,731	36,390	36,721	38,333	39,329	40,980	42,596	42,334	42,152
Idaho	30,750	31,061	31,013	30,825	32,269	32,508	33,610	33,876	32,943	31,857
Illinois	40,659	40,194	40,193	40,342	40,890	40,913	42,212	43,129	43,044	41,856
Indiana	34,210	33,967	33,996	34,459	34,774	34,347	34,933	35,002	34,889	34,022
Iowa	34,002	33,836	34,429	34,384	36,030	35,555	36,103	37,348	38,083	37,647
Kansas	35,478	35,940	35,479	35,938	36,255	36,409	38,066	39,092	39,879	39,173
Kentucky	30,878	30,716	30,822	30,708	31,208	31,295	31,959	32,266	32,181	32,258
Louisiana	29,363	30,734	30,937	31,134	31,864	33,049	35,943	37,038	38,006	37,632
Maine	33,259	34,161	34,452	34,895	35,734	35,159	35,856	36,415	36,466	36,547
Maryland	43,206	43,852	44,236	44,480	46,029	46,663	47,864	48,637	48,299	48,247
Massachusetts	47,603	47,800	47,045	46,734	47,722	48,066	50,168	51,358	50,832	49,653
Michigan	36,617	36,315	36,005	36,402	35,956	35,461	35,342	35,444	35,179	34,315
Minnesota	40,610	40,396	40,641	41,147	42,108	41,729	42,550	43,228	43,081	41,854
Mississippi	26,854	27,633	27,584	27,954	28,561	29,448	29,788	30,669	30,618	30,401
Missouri	34,747	34,672	34,887	35,199	35,607	35,329	36,078	36,621	36,752	36,181
Montana	29,239	30,664	30,630	31,480	32,499	33,113	34,241	35,097	35,142	34,828
Nebraska	35,628	36,198	36,118	37,427	37,746	37,665	37,967	39,508	40,019	39,332
Nevada	38,602	37,773	37,342	38,089	40,069	41,879	41,758	41,798	39,895	37,670
New Hampshire	42,466	42,116	41,944	41,683	42,748	42,226	43,611	44,321	43,565	42,646
New Jersey	48,170	48,030	47,671	47,228	48,170	48,369	50,769	52,261	51,526	49,980
New Mexico	28,343	30,029	29,870	30,019	30,963	31,719	32,470	33,135	33,489	33,267
New York	43,142	42,960	42,218	42,160	43,618	44,693	46,808	48,781	47,968	46,516
North Carolina	34,776	34,381	33,939	33,759	34,704	35,192	35,715	36,188	35,556	34,879
North Dakota	31,923	32,332	32,622	34,683	34,433	35,515	35,721	38,329	41,309	40,802

Source: Statistics calculated using data from the Bureau of Economic Analysis and the U.S. Census Bureau

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Appendix Table 3 (continued)

Per Capita Income, 2000-2009

in 2009 dollars

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Ohio	35,748	35,433	35,554	35,728	35,827	35,603	36,154	36,346	35,824	35,408
Oklahoma	30,654	31,759	31,265	31,374	32,697	33,469	35,353	35,744	36,779	35,837
Oregon	35,778	35,407	35,496	35,628	35,904	35,716	36,865	37,099	36,693	36,191
Pennsylvania	37,512	37,167	37,504	37,697	38,300	38,235	39,482	40,418	40,301	40,175
Rhode Island	36,732	37,758	38,349	39,026	39,839	39,783	40,815	41,847	41,674	41,392
South Carolina	31,246	31,073	31,092	31,116	31,694	32,104	32,909	33,254	32,945	32,505
South Dakota	32,923	33,710	33,421	35,440	36,491	36,370	35,874	38,023	39,274	38,374
Tennessee	33,252	33,347	33,541	33,810	34,360	34,384	34,990	35,431	34,994	34,277
Texas	35,511	35,332	34,509	34,495	35,299	36,453	37,535	38,383	39,695	38,609
Utah	30,544	30,930	30,584	30,121	30,478	31,434	32,281	33,063	32,440	31,584
Vermont	35,111	35,711	35,797	36,173	37,175	36,739	38,346	39,330	39,244	39,205
Virginia	39,418	40,312	40,250	40,809	41,909	42,803	44,015	44,951	44,516	44,057
Washington	40,373	39,919	39,478	39,476	40,845	40,361	42,098	43,640	43,555	42,870
West Virginia	27,625	28,601	29,077	29,045	29,285	29,313	30,537	30,911	31,409	32,080
Wisconsin	36,302	36,455	36,717	36,882	37,153	36,978	37,922	38,178	37,770	37,373
Wyoming	36,479	37,942	38,254	39,549	41,181	43,330	47,542	47,886	50,508	48,302

Source: Statistics calculated using data from the Bureau of Economic Analysis and the U.S. Census Bureau

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APPENDIX 2: METHODOLOGY

Fertility Data

Birth data were obtained from the National Center for Health Statistics (NCHS). NCHS birth statistics for 2009 are preliminary and include 99.95% of all births in that year. Birth statistics for 2010 are provisional.

Vintage 2009 population estimates provided by the U.S. Census Bureau were used in calculating birth rates.

Birth rates are measured using the general fertility rate (GFR), which is the number of births divided by the number of women of childbearing age (15-44).[6]

When the annual change in number of births is within the range of plus or minus 0.5%, this change is considered "leveling off." Similarly, a fertility rate is defined as "leveling off" if its annual change is within the range of plus or minus 0.5%.

Economic Data

In choosing economic indicators to use in this report, we were most interested in finding those variables that are good indicators of an individual's experiences with the economic downturn; that are available at the state level; and that use standardized metrics, which allow for cross-state comparisons. Ultimately, seven indicators relating to income, employment and the housing market were tested to see whether their variations were associated with variations in fertility at the state level:

- Annual Per Capita Income, calculated using data from the Bureau of Economic Analysis, and the U.S. Census Bureau, and adjusted to year 2009 dollars using the National Consumer Price Index-U. The other major estimate of income is household income as estimated by the U.S. Census Bureau from its Annual Social and Economic Supplement to the Current Population Survey. Both measures of income are comprehensive, including wages and salaries, and also interest, rental and other sources of income. They also trend similarly across the business cycle. We chose to use the per capita income measure because it is readily available at the state level. Per capita income is also a more comprehensive measure because it includes employer contributions to pension funds and health and other insurance plans.

[6] In 2008, women ages 15-44 accounted for 99.7% of all births in the U.S.

- Real Per Capita Gross Domestic Product, by state, using 2005 dollars, available from the Bureau of Economic Analysis
- Annual Employment Rate for the civilian noninstitutionalized workforce (persons ages 16 and older), calculated using data available from the Bureau of Labor Statistics
- Annual Unemployment Rate, available from the Bureau of Labor Statistics
- Initial Unemployment Claims for the second quarter, available from the Department of Labor
- Foreclosure Rate, the percent of all housing stock in foreclosure, as determined by RealtyTrac
- House Price Index (HPI) for the second quarter, which measures single-family house prices, available through the Federal Housing Finance Agency

ATTACHMENT IX

Population-Based Discharge Projections Methodology

YNHH Inpatient Discharge Projections
Population-Based Model
FY 2012 - 2016 Projected

	Baseline FY 2009	Baseline FY 2010	Baseline FY 2011	Trended Ann. Addend	Projected Y1 FY 2012	Projected Y2 FY 2013	Projected Y3 FY 2014	Projected Y4 FY 2015	Projected Y5 FY 2016
Historical Core Service Area Population	698,954	698,947	699,764	817	700,581	701,398	702,215	703,032	703,849
Inpatient Discharges - CT Hospitals	92,611	93,009	91,760						
Inpatient Discharges - NY Hospitals*	478	522	602						
Inpatient Discharges - MA Hospitals*	267	333	296						
Inpatient Discharges - RI Hospitals*	33	38	33						
Total Discharges from Historical Core Service Area Residents	**93,389**	**93,902**	**92,691**		92,399	92,108	91,818	91,528	91,240
				Trended Multiplier					
Trended Discharge Rate/1000 Population	133.61	134.35	132.46	-0.0043115	131.89	131.32	130.75	130.19	129.63
YNHH Discharges from Historical Core Service Area	**40,556**	**42,055**	**42,056**		**42,863**	**43,684**	**44,522**	**45,376**	**46,246**
				Trended Multiplier					
YNHH Share	43%	45%	45%	0.0223974	46%	47%	48%	50%	51%
				Trended Multiplier					
YNHH Discharges from outside Historical Core Service Area	**13,864**	**14,707**	**15,368**	0.05424	**16,202**	**17,080**	**18,007**	**18,983**	**20,013**
TOTAL YNHH Discharges	**54,420**	**56,762**	**57,424**		**59,064**	**60,765**	**62,529**	**64,359**	**66,259**

*Most recent data available: 2009

Sources:
Population: Claritas
CT historical volumes (FY09-FY11): CHIME
NY historical volumes (FY09-FY11): SPARCS
MA historical volumes (FY09-FY11): MA Data Health Consortium
RI historical volumes (FY09-FY11): RI Dept of Health
YNHH historical volumes (FY09-FY11): YNHH Department of Financial Planning

ATTACHMENT X

Curriculum Vitae

MARNA PARKE BORGSTROM

Home: 458 Three Mile Course
Guilford, Ct. 06437
(203) 453-8782

Business: Yale-New Haven Hospital
20 York Street
(203) 688-2608

EDUCATION

1977-1979 Yale University School of Medicine
Department of Epidemiology and Public Health
Program in Hospital Administration, M.P.H.

1972-1976 Stanford University
Bachelor of Arts in Human Biology awarded June, 1976

EXPERIENCE

2005-Present President and Chief Executive Officer: Yale New Haven Health System (YNHHS)

Yale New Haven Health System is a regional, integrated health care delivery system composed of three local health care delivery networks. Anchored by Yale-New Haven Hospital, the Yale-New Haven Children's Hospital, and the Yale-New Haven Psychiatric Hospital totaling 944-beds, the System includes a Bridgeport network led by the 425-bed Bridgeport Hospital and a Greenwich network anchored by 160-bed Greenwich Hospital. Westerly Hospital (Rhode Island) is also a network participant. In total, the System has 1,545 beds, over 80,000 admissions, 11,610 employees, 3,476 medical staff members, and annual net revenues of over $1.5 billion.

2005-Present President and Chief Executive Officer: Yale-New Haven Hospital and Delivery Network (YNHH)

Yale-New Haven, a private not-for-profit 944-bed hospital founded in 1826. It serves as the primary teaching hospital for the Yale University School of Medicine and provides tertiary and quaternary patient care for the State of Connecticut and Southern New England, as well as general acute care services for the Greater New Haven metropolitan area. In FY 2006 there were 50,369 discharges and 669,422 outpatient visits. The institution's net revenues were over $900 million with approximately 7,200 employees, and a Medical Staff numbering over 2,400.

1993-2005 Executive Vice President & Chief Operating Officer: Yale-New Haven Hospital
Executive Vice President and Secretary: Yale-New Haven Health Services Corporation

Responsible for New Haven Delivery Network operations ($850 million operating budget), included Yale-New Haven Hospital operations, finance, human resources and planning and marketing; and Yale-New Haven Ambulatory Services Corporation, which operates two independent surgery centers and a large, full-service radiology business in New Haven and Guilford. Served as the senior Hospital interface for Yale School of Medicine operational issues.

Represented the YNHH Delivery Network in all Health System strategic and operational activities.

Major Accomplishments:

- Achieved nearly 14% growth in inpatient volume and grew operating gain from .7% to 4.1% between 2000-2004.
- Acquired the assets of an independent Psychiatric facility losing more than $3 million/year and successfully integrated it into Yale-New Haven, eliminating the operating loss.
- Opened the Shoreline Medical Center, integrating services offered by Yale-New Haven Hospital and Yale-New Haven Ambulatory Service Corp.
- Implemented the New Clinical Program Development Fund with Yale University School of Medicine to seed key new clinical programs and program enhancements.
- Completed $51.5 million renovation project in South Pavilion
- Implemented a comprehensive nursing recruitment and retention plan resulting in a registered nurse vacancy rate of 2% at the end of fiscal year 2004.
- As part of organization-wide performance enhancement initiative, implemented training partnership with GE, resulting in more than 40 Six Sigma competent staff who have been redeployed throughout the Hospital.

1992-1993 Senior Vice President, Administration: Yale-New Haven Hospital
Senior Vice President and Secretary: Yale-New Haven Health Services Corporation

Responsible for Hospital strategic planning and marketing, facilities planning and design, risk management and medicolegal affairs, managed care contracting, Service Quality Improvement, Community Relations, Public Affairs and Engineering.

Project Executive for implementation of Yale-New Haven's $156 million Facilities Renewal Project.

1985-1992 Vice President, Administration: Yale-New Haven Hospital

Responsible for Hospital strategic planning and marketing, facilities planning and design, risk management and medicolegal affairs, managed care contracting, Service Quality Improvement, Community Relations, Public Affairs and Engineering. Provided administrative leadership to Yale-New Haven Health Services Corporation corporate affairs and strategic initiatives.

Major Accomplishments:

- Responsible for program and facilities planning associated with the initiation of a $156 million Facilities Renewal Project adding 450,000 square feet of new inpatient space and renovating 390,000 square feet.
- Developed Facilities Master Plan for the Hospital including a phased design and construction plan.
- Project Captain for the acquisition by YNHHS of two independent surgery centers and a large radiology practice.
- Established a Service Quality Improvement initiative for Yale-New Haven.
- Developed and presented YNHHS Corp's response to Memorial Hospital (Meriden, Connecticut) RFP for a managed contract, which was awarded to Yale-New Haven.
- Developed multi-hospital HMO in Connecticut which began with a YNHH-HMO feasibility study and was subsequently implemented with six Hospital/Physician Organizations.
- Established Facilities Planning and Design function responsible for hospital architecture, space planning and real estate acquisition and management.

1984-1985 Assistant Vice President: Yale-New Haven Hospital

Directed the development and implementation of annual Hospital business plan format derived from strategic plan. Completed $6 million renovation of Hospital clinical laboratories. Represented Hospital on underwriting and eligibility and finance activities in malpractice insurance captive.

Dec. 1982-1984 Associate Administrator: Yale-New Haven Hospital

Responsible for Hospital planning activities, including Strategic Planning and general facilities planning and related capital budget activities. Also responsible for Clinical Laboratories ($23 million gross revenue and $11 million expense) and Risk Management and Medicolegal Affairs.

Dec. 1980-Nov. 1982 Assistant Administrator: Yale-New Haven Hospital

Responsible for planning and implementing $11 million renovation program done in concert with major facility replacement project, and for planning and overseeing the move of five major departments and three clinical services (including 80 ICU beds) to a new $73 million facility, during the Spring of 1982. Prepared and presented to the Health Systems Agency and Commission on Hospitals and Health Care, three Certificates of Need; all were approved. Also responsible for Hospital space planning and management, and provided general staff support to the Executive Vice President.

Jan. 1980-Dec. 1980 Administrative Associate: Yale-New Haven Hospital

Provided general staff support to Executive Vice President. Major activities included employee fundraising and campaign to support $73 million facility replacement and renovations program (50% of Hospital employees contributed almost $500,000) and preparation of capital and operating budget materials.

Jan. 1979-Dec. 1980 Administrative Resident: Yale-New Haven Hospital

Summer 1978 Administrative Intern: Alexian Brothers Hospital, San Jose, California

PROFESSIONAL AWARDS:

1992 Up and Comers Award - Sponsored by Modern Healthcare and 3M Health Systems
Women In Leadership Award, 1993 - YWCA
Junior Achievement Hall of Fame, 1998
20 Noteworthy Women, New Haven Business Times, 1999
Gateway Community College Hall of Fame, 2002

MAJOR PROFESSIONAL AFFILIATIONS, BOARDS AND ACTIVITIES:

Yale-New Haven Hospital Board of Trustees,(1994 – present)
Yale New Haven Health System Board of Directors (2005 - present)
Yale Medical Group Board of Governors, (current)
Yale-New Haven Ambulatory Services Corporations, Board President
University HealthSystem Consortium, Board of Directors, (current)
Healthcare Executives Study Society, 2006-present
Greater New Haven Regional Leadership Council, 2005-present
American Hospital Association, Committee on Health Professions
The Connecticut Hospital Association, Vice Chair, Board of Trustees; Member, Executive Committee (2006-), Secretary and Member, Executive Committee (1999-2001)
The Country School, Pre-K through 8, Madison, Connecticut, Board Member; Chair (2002-2007).
Novation, Inc., Dallas, Texas ,Founding Board member – (1998-2000)
Greater New Haven Chamber of Commerce, (1997-1998; Board of Directors, Executive Committee
United Way of Greater New Haven Board of Directors (1995-1998)
The Hole in the Wall Gang Camp Board of Directors (2007)
Fellow – American College of Healthcare Executives (2007)

University Appointments

Yale University – Lecturer, Department of Epidemiology & Public Health, Health Policy & Administration Division.

PERSONAL:
Married: Eric N. Borgstrom (5/27/78)
Children: Christopher (4/14/85) and Peter (8/4/89)

CURRICULUM VITAE

RICHARD D'AQUILA
282 Boston Post Road
Westbrook, CT 06498
Telephone: (860) 669-0871

PERSONAL DATA:
Married
U.S. Citizen
Birth Date: 6/29/55

BUSINESS ADDRESS:

Yale-New Haven Hospital
20 York Street
New Haven, CT 06510
Telephone: (203)-688-2606

PROFESSIONAL EXPERIENCE:

May, 2006 to Present

Executive Vice President and Chief Operating Officer
Yale-New Haven Hospital/Yale New Haven Health System

Organizational Profile

Yale New Haven Health System (YNHHS) is a 1545-bed delivery network formed in 1995 which consists of Yale-New Haven, Bridgeport and Greenwich Hospitals. YNHHS has revenues in excess of $1.1 billion in FY '05 based on 80,000 discharges and 1.3 million outpatient visits. Yale-New Haven Hospital is a 944-bed tertiary referral medical center that includes the 201-bed Yale New Haven Children's Hospital and the 76-bed Yale New Haven Psychiatric Hospital. Both Yale New Haven Health System and Yale-New Haven Hospital are formally affiliated with Yale University School of Medicine.

Responsibilities

Overall responsibility for all aspects of day to day operations for Yale-New Haven Hospital (YNHH) and the senior network leader at the Yale New Haven Health System representing the YNHH delivery network. Hospital leadership responsibilities include direct accountability for the senior leadership team, strategic planning, organizational performance, quality improvement, labor relations and human resources management, system integrations, external relations and service line development. Senior leadership and implementation responsibility for all aspects of the hospital's annual business (operating) plan. Senior level oversight of the hospital's facility plan including construction of a 112-bed, $450 million Comprehensive Cancer Pavilion commencing construction in the fall of 2006.

August, 2000 to April, 2006

Senior Vice President/Chief Operating Officer
New York Presbyterian Hospital/
Weill Cornell Medical Center
New York, New York

Organizational Profile
New York Presbyterian Hospital is a 2,369 bed Academic Medical Center created from the merger between the New York Hospital and the Presbyterian Hospital in the City of New York. The Weill Cornell Medical Center consists of an 880 bed acute care facility in Manhattan and the 239 bed Westchester Division campus in White Plains specializing in behavioral health.

Responsibilities
Overall responsibility for all aspects of day to day operations for the Weill Cornell Medical Center and the Westchester Division, a two campus Academic Medical Center of 1120 beds. Direct responsibility for a total operating expense budget in excess of $450,000,000 and revenues of $850,000,000. Senior leadership and implementation for all aspects of the Medical Center's operating plan including quaternary and tertiary service development, medical staff relations and recruitment, employee relations and labor strategy. System level member of the Corporate Management Team with involvement in strategic and facilities planning, service line development, information technology and performance improvement.

May 1992 to June 2000

Executive Vice President/Chief Operating Officer
St. Vincent's Medical Center
Bridgeport, Connecticut

President
Vincentures, Inc.

President
St. Vincent's Development Corporation, Inc.

Chief Operating Officer of 391 bed, university-affiliated acute care hospital and health system. President/CEO of affiliated subsidiaries with management responsibility at the Medical Center and corporate level. Medical Center responsibilities including day to day operations oversight

for patient care services; support services and facilities planning and development. Corporate responsibilities including information systems, ambulatory network development, managed care contracting network oversight and real estate/satellite facility development.

January 1987-April 1992

President/CEO
Health Initiatives Corporation
Providence, Rhode Island

Chief Executive Officer of a consulting practice specializing in strategic planning, business development and project implementation assistance for acute care and specialty hospitals, state planning agencies and private investors. Specific responsibilities included:

- Practice Leadership
- Engagement Planning and Management
- Project Supervision and Control
- Client Interface
- Practice Marketing and Business Development

June 1984-December 1986

Vice President
The Mount Sinai Hospital Corporation
Hartford, Connecticut

June 1981-June 1984

Vice President, Division of Planning and Community Services
The Mount Sinai Hospital
Hartford, Connecticut

June 1979-June 1981

Assistant Executive Director
The Mount Sinai Hospital
Hartford, Connecticut

January 1979-May 1979

Administrative Resident
The Mount Sinai Hospital
Hartford, Connecticut

OTHER APPOINTMENTS:

November 2000
To Present

Member, Board of Directors
Voluntary Hospitals of America/Metro New York
New Rochelle, New York

January 1995-
June 2000

Member, Board of Directors
Goodwill Industries
Bridgeport, Connecticut

December 1993- June 2000	**Founding Board Member** Park City Primary Care Center Bridgeport, Connecticut
May, 1992- June 2000	**Member, Board of Directors** St. Vincent's Development Corporation Vincentures, Inc. Omicron, Inc. Connecticut Health Enterprises Bridgeport, Connecticut
January 1992- December 1994	**Member, Board of Directors** Visiting Nurses Association of Fairfield County Bridgeport, Connecticut
January 1989- December 1991	**Member, Board of Directors** Easter Seal Society/Meeting Street Rehabilitation Center, Inc. of Rhode Island Providence, Rhode Island
January 1980- December 1989	**Member, Board of Directors** Combined Hospitals Alcohol Program Hartford, Connecticut

September 1985- December 1986	**President, Board of Directors** Regional Alcohol and Drug Abuse Resources, Inc. Hartford, Connecticut
September 1981- December 1986	**Adjunct Faculty/Lecturer** University of Hartford, Barney School of Business and Public Administration West Hartford, Connecticut
January 2001 - Present	**Adjunct Faculty/Residency Preceptor and Lecturer** Robert F. Wagner Graduate School of Public Service New York University New York, N.Y.
December 2000 - Present	**Adjunct Faculty/Lecturer** Weill Medical College of Cornell University Department of Public Health, New York New York, N.Y.

EDUCATION:

Yale University School of Medicine
Graduate Program in Hospital Administration
Academic Distinctions: Research Excellence Award (1979)
1979 Graduate

Central Connecticut State University
Bachelor of Arts: Economics/Business
Academic Distinctions: Omicron Delta Epsilon
Economics Honor Society
1977 Graduate

PROFESSIONAL AFFILIATIONS:
Fellow, American College of Health Care Executives
Yale Hospital Administration Alumni Association
Connecticut Hospital Association

CURRICULUM VITAE

NAME: James M. Staten
BIRTHDATE: September 26, 1958
EDUCATION: 1980 – B.S. – Business / Economics / State University College of NY

Yale New Haven Health System (YNHHS) and Yale-New Haven Hospital (YNHH)

October 2000 - Present

Executive Vice President of Finance and Corporate Services, YNHHS
Senior Vice President and CFO, YNHH

Yale New Haven Health system is a regional, integrated health care system composed of three regional health care delivery networks. The New Haven-based delivery system is anchored by Yale-New Haven Hospital, the Yale-New Haven Children's Hospital, and the Yale-New Haven Psychiatric Hospital, which total 944-beds. The system includes a Bridgeport-based delivery system led by the 425-bed Bridgeport Hospital and Greenwich-based delivery system anchored by 160-bed Greenwich Hospital. The System is also affiliated with the Westerly Hospital in Rhode Island. The Yale New Haven Health System has a formal affiliation with the Yale University School of Medicine, as does Yale-New Haven Hospital which serves as the Medical School's primary teaching hospital. System services include acute care hospitals, ambulatory surgery and outpatient diagnostic imaging centers, as well as primary care centers. In total, the System has 1,500 beds, 74,000 admissions, 10,000 employees, assets of $1.6 billion, and annual net revenues of over $1.4 billion.

Responsible for financial and corporate services of YNHHS including managed care, information systems, materials management, admitting/registration, and medical records, as well as all financial responsibilities such as accounting, budgeting, financial and operational reporting, tax, reimbursement, and treasury.

OTHER EMPLOYMENT

New York-Presbyterian Hospital (NYPH) and New York-Presbyterian Healthcare System (NYPHS)

July 1999 – October 2000 Senior Vice President of Finance

Responsible for assuring the financial viability of a $3 billion Health System, including monitoring financial condition of approximately 15 corporately-controlled Sponsored/Member Hospitals and other healthcare related organizations. Report regularly to the NYPHS Board and NYPH Board Executive Committee on financial performance.

January 1997 - June 1999 Vice President of Financial Planning
June 1993 - December 1996 Director of Financial Planning

Responsible for complete integration of financial planning at all Sponsored Hospital Members including NYPH and leading the financial group of approximately 70 professionals in performing budget, reimbursement, managed care contracting, decision support and business plan development functions.

Ernst & Young

January 1991 - June 1993 Senior Manager - Consulting Services

Directed and coordinated Ernst & Young's New York State Reimbursement Consulting Services.

Pannell Kerr Forster

October 1980 – December 1990 Partner

Elected Partner in June 1990 after working 10 years in the firm's large healthcare practice as a certified public accountant. 11th Largest Public Accounting Firm in United States during late 1980s.

PROFESSIONAL MEMBERSHIPS

American Institute of Certified Public Accountants (1982 – 1998)
New York State Society of Certified Public Accountants (1982 – 1996)
- Healthcare Committee (1988 – 1991)
- Chairman of the Hospital Sub-Committee (1990/1991)

Healthcare Financial Management Association (1984 – 1994)
- Chairman of various Committees (1984 – 1994)
- Trustee (1990/1991)
- President Elect (1993/1994)

Greater New York Hospital Association
- Fiscal Policy Committee (1993 – 2000)
- Managed Care Committee (1995 – 2000)

Connecticut Hospital Association
- Finance Committee (2000 – 2004)
- Special Committee on Medicaid Reimbursement (2000 – 2004)

Blue Ribbon Committee on the Future of Healthcare in Connecticut (2000 – 2003)

OTHER PROFESSIONAL ACTIVITIES

Presenter at New Jersey Health Care Financing Authority on Medicare Payment System
Presenter on Hospital Reimbursement Issues for the NYS Society of CPAs
Presenter on Accounts Receivable Issues for the Connecticut Hospital Association
Guest Speaker at NYU's graduate program in Hospital Administration on Healthcare Financing
Guest speaker at Cornell University's Sloan Program in Health Services on Managed Care
Presenter on Mergers and Acquisitions to New York State Hudson Valley HFMA
Guest speaker at Chicago Municipal Bond Analysts Society on New York State Hospital Deregulation
Guest speaker at Yale's School of Epidemiology and Public Management on Health Systems

CURRICULUM VITAE

BIOGRAPHICAL

NAME:	Peter N. Herbert	**BIRTHDATE:**	December 8, 1941
HOME ADDRESS:	57 Island View Avenue Branford, CT 06405	**BIRTH PLACE:** **CITIZENSHIP:**	Troy, New York U.S.A.
BUSINESS ADDRESS:	Yale-New Haven Hospital CB1063 20 York Street New Haven, CT 06504	**SOCIAL SEC. #:** **PERSONAL:**	089-32-0581 Married, 4 children
BUSINESS PHONE:	(203) 688-2604		
NPI #:	1033191465		

EDUCATION AND TRAINING

UNDERGRADUATE:

1959-1963	Rensselaer Polytechnic Institute, Troy, NY	B.S., 1963 Biology

GRADUATE:

1963-1967	Yale University School of Medicine New Haven, CT	M.D., 1967 Medicine Dr. Patrick J. Mulrow, Thesis Advisor

POSTGRADUATE:

1967-1969	Intern and Resident Yale-New Haven Hospital New Haven, CT	Phillip K. Bondy, M.D. Internal Medicine
1969-1972	Clinical Associate National Heart, Lung and Blood Institute Bethesda, MD	Donald S. Fredrickson, M.D. Robert I. Levy, M.D. Molecular Disease Branch

APPOINTMENTS AND POSITIONS

ACADEMIC:

1973-1977	Molecular Disease Branch NHLBI Bethesda, MD	Section Chief
1974-1977	Clinical Service Molecular Disease Branch NHLBI Bethesda, MD	Chief
1977-1983	Brown University Providence, RI	Associate Professor
1983-1986	Brown University Providence, RI	Program Director, General Clinical Research Unit, (GCRC)
1983-1990	Brown University Providence, RI	Professor

1986-1990	Brown University Providence, RI	Associate Program Director GCRC and Director, GCRC Nutrition Center
1990-2004	Brown University Providence, RI	Adjunct Professor
1991-Present	Yale University New Haven, CT	Clinical Professor

HOSPITAL APPOINTMENTS:

1977-1990	Miriam Hospital Providence, R.I.	Attending Staff
1990-1995	Miriam Hospital Providence, R.I.	Courtesy Staff
1990-present	Hospital of Saint Raphael New Haven, CT	Attending Staff
1991-present	Yale-New Haven Hospital New Haven, CT	Attending Staff
1993-1999	Veterans Affairs Medical Center West Haven, CT	Attending Staff

NON-ACADEMIC POSITIONS:

1969-1977	United States Public Health Service	Surgeon
1977-1990	The Miriam Hospital Providence, RI	Director, Division of Nutrition & Metabolism
1990-1999	Hospital of Saint Raphael New Haven, CT	Chairman, Department of Medicine
1999-present	Yale-New Haven Hospital	Chief of Staff/Senior Vice President, Medical Affairs
1999-present	Yale-New Haven Health System	Senior Vice President Medical Affairs

SPECIALTY CERTIFICATION:

1972	American Board of Internal Medicine No. 38937

MEDICAL OR OTHER PROFESSIONAL LICENSURE:

1977-1994	State of Rhode Island and Providence Plantations Department of Health No. MD5749
1989-1991	Commonwealth of Pennsylvania No. MD-044076-E
1968-present	State of Connecticut No. 13647

MEMBERSHIPS IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

American Federation of Clinical Research
American College of Physicians (Fellow) No. 027692 (1972)
American Heart Association (RI Board of Governors)
Council on Epidemiology, AHA (Fellow) (1985)
American Diabetes Association
American Society for Clinical Investigation (1986)
American Association for the Advancement of Science
New York Academy of Sciences
American College of Nutrition (Fellow) (1986)
Society of Behavioral Medicine (Fellow) (1985)

Updated: 7/27/05

PUBLICATIONS

Refereed Articles

1. Philip, B.A., Herbert, P., and Hollingsworth, J.W.: Separation of contaminating pyrogenic material from commercial bovine serum albumin. Proc. Soc. Exp. Biol. Med. 123: 774-778, 1968.

2. Anderson, R.C., Herbert, P.N., and Mulrow, P.J.: A comparison of properties of renin obtained from the kidney and uterus of the rabbit. Am. J. Physiol. 215: 774-778, 1968.

3. LaRosa, J.C., Levy, R.I., Herbert, P.N., Lux, S.E., and Fredrickson, D.S.: A specific apoprotein activation for lipoprotein lipase. Biochem. Biophys. Res. Commun. 41: 57-62, 1970.

4. Herbert, P.N., Levy, R.I., and Fredrickson, D.S.: Correction of COOH-terminal amino acids of human plasma very low density apolipoproteins. J. Biol. Chem. 246: 7068-7069, 1971.

5. Windmueller, H.G., Herbert, P.N., and Levy, R.I.: Biosynthesis of lymph and plasma lipoprotein apoproteins by isolated perfused rat liver and intestine. J. Lipid Res. 14: 215-223, 1973.

6. Herbert, P.N., Shulman, R.S., Levy, R.I., and Fredrickson, D.S.: Fractionation of the C-apoproteins from human plasma very low density lipoproteins: artifactual polymorphism from carbamylation in urea-containing solutions. J.Biol. Chem. 248: 4941-4946, 1973.

7. Levy, R.I., Fredrickson, D.S., Stone, N.J., Bilheimer, D.W., Brown, W.V., Glueck, C.J., Gotto, A.M., Herbert, P.N., Kwiterovich, P.O., Langer, T., LaRosa, J., Lux, S.E., Rider, A.K., Shulman, R.S., and Sloan, H.R.: Cholestyramine in type II hyperlipoproteinemia: a double-blind trial. Ann. Int. Med. 79: 51-58, 1973.

8. Krauss, R.M., Herbert, P.N., Levy, R.I., and Fredrickson, D.S.: Further observations on the activation and inhibition of lipoprotein lipase by apolipoproteins. Circ. Res. 33: 403-411, 1973.

9. Shulman, R.S., Herbert, P.N., Fredrickson, D.S., Wehrly, K., and Brewer, H.B., Jr.: Isolation and alignment of the tryptic peptides of alanine apolipoprotein, and apolipoprotein from human plasma very low density lipoproteins. J. Biol. Chem. 249: 4969-4974, 1974.

10. Brewer, H.B., Jr., Shulman, R.S., Herbert, P.N., Ronan, R., and Wehrly, K.: The complete amino acid sequence of alanine apolipoprotein (apo C-III), an apolipoprotein from human plasma very low density lipoproteins. J. Biol. Chem. 249-4975-4984, 1974.

11. Herbert, P.N., Windmueller, H.G., Bersot, T.P., and Shulman, R.S.: Characterization of the rat apolipoproteins: I. The low molecular weight proteins of rat plasma high density lipoproteins. J. Biol.Chem. 249: 5718-5724, 1974.

12. Shulman, R.S., Herbert, P.N., Wehrly, K., and Fredrickson, D.S.: The complete amino acid sequence of C-I (apo Lp-Ser), and apolipoprotein from human very low density lipoproteins. J. Biol. Chem. 250: 182-190, 1975.

13. Herbert, P.N., Forte, T.M., Shulman, R.S., LaPiana, M.J., Gong,E.L., Levy, R.I., Fredrickson, D.S., and Nichols, A.V.: Structural and compositional changes attending the ultracentrifugation of very low density lipoproteins. Prep. Biochem. 5: 93-129, 1975.

14. Yee, R.D., Herbert, P.N., Bergsma, D.R., and Biemer, J.J.: Atypical retinitis pigmentosa in familial hypobetalipoproteinemia. Am. J. Ophthalmol. 82: 64-71, 1976.

15. Witters, L.A., Herbert, P.N., Shulman, R.S., Krauss, R.M., and Levy, R.I.: Therapeutic failure in familial type II hyperlipoproteinemia. Metabolism. 25: 1017-1026, 1976.

16. Rosseneu, M., Soetewey, F., Peeters, H., Bausserman, L.L., and Herbert, P.N.: Interaction of the apoproteins of very low density and high density lipoproteins with synthetic phospholipids. Eur. J. Biochem. 70: 285-289, 1976.

17. Papadopoulos, N.M., and Herbert, P.N.: The beta-lipoprotein doublet in type 3 hyperlipoproteinemia. Clin. Chem. 23: 978-981, 1977.

18. Assmann, G., Herbert, P.N., Fredrickson, D.S., and Forte, T.: Isolation and characterization of abnormal high density lipoprotein in Tangier disease. J. Clin. Invest. 60: 242-252, 1977.

19. Musliner, T.A., Church, E.C., Herbert, P.N., Kingston, M.J., and Shulman, R.S.: Lipoprotein lipase cofactor activity of a carboxylterminal peptide of apolipoprotein C-II. Proc. Natl. Acad. Sci. (USA) 74: 5358-5362, 1977.

20. Henderson, L.O., Herbert, R.N., Fredrickson, D.S., Heinen, R.J., and Easterling, J.F.: Abnormal concentration and anomalous distribution of apolipoprotein A-I in Tangier disease. Metabolism. 27: 165-174, 1978.

21. Heinen, R.J., Herbert, P.N., Fredrickson, D.S., Forte, T., and Lindgren, F.T.: Properties of the very low and low density lipoproteins in Tangier disease. J. Clin. Invest. 61: 120-132, 1978

22. Dyck, P.J., Ellefson, R.D., Yao, J.K., and Herbert, P.N.: Adult-onset Tangier disease: I. Morphometric and pathologic studies suggesting delayed degradation of neutral lipids after fiber degeneration. J. Neuropath. & Exptl. Neurol., Vol. XXXVII, No. 2, 119-137, 1978

23. Yao, J.K., Herbert, P.N., Fredrickson, D.S., Ellefson, R.D., Heinen, R.J., Forte, T., and Dyck, P.J.: Biochemical studies in a patient with a Tangier syndrome. J. Neuropath. & Expt1., Vol. XXXVII, No. 2, 138-154, 1978.

24. Herbert, P.N., Forte, T., Heinen, R.J., and Fredrickson, D.S.: Tangier disease: One explanation of lipid storage. The N. Engl. J. Med. 299: 519-521, 1978.

25. Musliner, T.A., Herbert, P.N., and Church, E.C.: Activation of lipoprotein lipase by native and acylated peptides of apolipoprotein C-II. Biochim. Biophys. Acta 573-: 501-509, 1979.

26. Rosseneu, M., Vercaemst, R., Caster, H., Lievens, M.-J., Van Tornout, P., and Herbert, P.N.: Fluorescence depolarization studies of fluidity and phase transition in human apoprotein phospholipid complexes. Eur. J. Biochem. 96: 357-362, 1979.

27. Herbert, P.N., and Henderson, L.O.: Plasma triglycerides do not regulate high density lipoprotein levels. The Lancet i: 1368-1369, 1979.

28. Musliner, T.A., Herbert, P.N., and Kingston, M.J.: Lipoprotein substrates of lipoprotein lipase and hepatic triglyceride lipase from human post-heparin plasma. Biochim. Biophys. Acta 575: 277-288, 1979.

29. Henderson, L.O., LaGarde, E., and Herbert, P.N.: Artifactual reduction of HDL cholesterol estimates after dextran sulfact-Mg2+ precipitation. Am. J. Clin. Pathol. 73: 664-668, 1980.

30. Thompson, P.D., Cullinane, E., Henderson, L.O., and Herbert, P.N.: Acute effects of prolonged exercise on serum lipids. Metabolism 29: 662-665, 1980.

31. Henderson, L.O., Saritelli, A.L., LaGarde, E., Herbert, P.N., and Shulman, R.S.: Minimal within-day variation of high density lipoprotein cholesterol and apolipoprotein A-I levels in normal subjects. J. Lipid Res. 21: 953-955, 1980.

32. Bausserman, L.L., Herbert, P.N., and McAdam, K.P.W.J.: Heterogeneity of human serum amyloid A. proteins. J. Exp. Med. 152: 641-656, 1980.

33. Cullinane, E., Lazarus, B., Thompson, P.D., Saritelli, A., and Herbert, P.N.: Acute effects of a single exercise session on serum lipids in untrained men. Clin. Chim. Acta 109: 341-344, 1981.

34. Rosseneu, M., Vercaemst, R., Vinaimont, N., Van Tornout, P., Henderson, L.O., and Herbert, P.N.: Quantitative determination of human plasma apolipoprotein A-I by laser immunonephelometry. Clin. Chem. 27: 856-859, 1981.

35. Bausserman, L.L., Herbert, P.N., and McAdam, K.P.W.J.: Serum amyloid A polymorphism in a subject with a naturally occurring inflammatory response. Clin. Chim. Acta 118: 201-207, 1982.

36. Musliner, T.A., Garner, P.A., Henderson, L.O., and Herbert, P.N.: Radioimmunoassay of apolipoprotein A-II. Arteriosclerosis 2: 160-169, 1982.

37. Friedland, M.L., and Herbert, P.N.: Lipoprotein abnormalities associated with a viral syndrome. JAMA 248: 82, 1982.

38. Bausserman, L.L., Saritelli, A.L., Herbert, P.N., McAdam, K.P.W.J., and Shulman, R.S.: NH2-terminal analysis of four of the polymorphic forms of human serum amyloid A proteins. Biochim. Biophys. Acta 704: 556-559, 1982.

39. Ansbacher, L.E., Singsen, B.H., Hosler, M.W., Grimminger, H., and Herbert, P.N.: Familial erythrophagocytic lymphohistiocytosis: an association with serum lipid abnormalities. Pediatrics 102: 270-273, 1983.

40. Shulman, R.S., Herbert, P.N., Capone, R., McClure, D., Hawkins, C., Henderson. L.O., Saritelli, A.L., and Campbell, J.L.: Effects of propranolol on blood lipids and lipoproteins in myocardial infarction. Circulation 67:6 Part 2: I-19-21, 1983.

41. Thompson, P.D., Lazarus, B., Cullinane, E., Henderson, L.O., Musliner, T., Eshleman, R., and Herbert, P.N.: Exercise, diet, or physical characteristics as determinants of HDL-levels in endurance athletes. Atherosclerosis 46: 333-339, 1983.

42. Bausserman, L.L., Herbert, P.N., Forte, T., Klausner, R.D., McAdam, K.P.W.J., Osborne, J.C., Jr., and Rosseneu, M.: Interaction of the serum amyloid A proteins with phospholipid. J. Biol. Chem. 258: 10681-10688, 1983.

43. Kantor, M.A., Cullinane, E.M., Herbert, P.N., and Thompson, P.D.: Acute increase in lipoprotein lipase following prolonged exercise. Metabolism 33: 454-457, 1984

44. Rosseneu, M., Vinaimont, N., Musliner, T.A., Bernier, D., Herbert, P.N., and Belpaire, F.: Immunonephelometry of apolipoprotein A-II in plasma. Clin Chem. 30/2: 234-237, 1984.

45. Thompson, P.D., Cullinane, E., Eshleman, R., and Herbert, P.N.: Lipoprotein changes when a reported diet is tested in distance runners. Am. J. Clin. Nutr. 39: 368-374, 1984.

46. Bausserman, L.L., and Herbert, P.N.: Degradation of serum amyloid A and apolipoproteins by serum proteases. Biochemistry 23: 2241-2245, 1984.

47. Thompson, P.D., Cullinane, E.M., Eshleman, R., Sady, S.P., and Herbert, P.N.: Effects of caloric restriction or exercise cessation on the serum lipid and lipoprotein concentrations of endurance athletes. Metabolism 33: 943-950, 1984.

48. Bausserman, L.L., Herbert, P.N., Rodger, R., and Nicolosi, R.J.: Rapid clearance of serum amyloid A from high density lipoproteins. Biochim. Biophys. Acta 792: 186-191, 1984.

49. Follick, M.J., Abrams, D.B., Smith, T.W., Henderson, L.O., and Herbert, P.N.: Contrasting short- and long-term effects of weight loss on lipoprotein levels. Arch. Intern. Med. 144: 1571-1574, 1984.

50. Herbert, P.N., Bernier, D.M., Cullinane, E.M., Kantor, M.A. and Thompson, P.D.: High density lipoprotein metabolism in runners and sedentary men. JAMA 252: 1034-1037, 1984.

51. Thompson, P.D., Cullinane, E.M., Eshleman, R., Kantor, M.A., and Herbert, P.N.: The effects of high carbohydrate and high fat diets on the serum lipid and lipoprotein concentrations of endurance

athletes. Metabolism 33:1003-1010, 1984.

52. Sady, S.P., Cullinane, E.M., Herbert, P.N., Kantor, M.A., and Thompson, P.D.: Training, diet and physical characteristics of distance runners with low or high concentrations of high density lipoprotein cholesterol. Atherosclerosis 53: 273-281, 1984.

53. Jonas, A., Sweeny, S.A., and Herbert, P.N.: Discoidal complexes of A and C apolipoproteins with lipids and their reactions with lecithin: cholesterol acyltransferase. J. Biol. Chem. 259: 6369-6375, 1984.

54. Herbert, P.N., Hyams, J.S., Bernier, D.N., Berman, M.M., Saritelli, A.L., Lynch, K.M., Nichols, A.V., and Forte, T.M.: Apolipoprotein B-I00 deficiency: intestinal steatosis despite apolipoprotein B-48 synthesis. J. Clin. Invest. 76: 403-412, 1985.

55. Thompson, P.D., Kantor, M.A., Cullinane, E.M., Sady, S.P., Saritelli, A., and Herbert, P.N.: Postheparin plasma lipolytic activities in physically active and sedentary men after varying and repeated doses of intravenous heparin. Metabolism 35: 999-1004, 1986.

56. Kantor, M.A., Cullinane, E.M., Sady, S.P., Herbert, P.N., and Thompson, P.D.: Exercise acutely increases HDL-cholesterol and lipoprotein lipase activity in trained and untrained men. Metabolism 36: 188-192, 1987.

57. Herbert, P.N., and Friedland, M.L.: Reversible deficiency of serum high density lipoproteins in Hodgkin's disease. Cancer Investigation 4(4): 301-303, 1986.

58. Sady, S.P., Thompson, P.D., Cullinane, E.M., Kantor, M.A., Domagala, E., and Herbert, P.N.: Prolonged exercise augments plasma triglyceride clearance. JAMA 256: 2552-2555, 1986.

59. Hegele, R.A., Huang, L-S., Herbert, P.N., Blum, C.B., Buring, J.E., Hennekens, C.H., and Breslow, J.L.: Apolipoprotein B-gene DNA polymorphisms associated with myocardial infarction. N. Engl. J. Med. 315: 1509-1515, 1986.

60. Bausserman, L.L., Saritelli, A.L., Van Zuiden, P., Gollaher, C.J., and Herbert, P.N.: Degradation of serum amyloid A by isolated perfused rat liver. J. Biol. Chem. 262: I583-1589, 1987.

61. Zannie, E.E., Zannis, V.I., Blum, C.B., Herbert, P.N., and Breslow, J.L.: Effect of egg cholesterol and dietary fats on plasma lipids, lipoproteins and apoproteins of human subjects consuming natural diets. J. Lipid Res. 28: 518-527, 1987.

62. Chong, K.S., Nicolosi, R.J., Rodger, R.F., Arrigo, D.A., Yuan, R.W., MacKey, J.J., and Herbert, P.N.: Effect of dietary fat saturation on plasma lipoproteins and high density lipoprotein metabolism of the rhesus monkey. J. Clin. Invest. 79: 675-683, 1987.

63. Herbert, P.N., Bausserman, L.L., Lynch, K.M., Saritelli, A.L., Kantor, M.A., Nicolosi, R.J., and Shulman, R.S.: Homologues of the human C and A apolipoproteins in the M.fasicularis (cynomolgus) monkey. Biochemistry 26: 1457-1463, 1987.

64. Stacpoole, P.W., Alig, J., Kilgore, L.L., Ayala, C.M, Herbert, P.N., Zech, L.A., and Fisher, W.R.: Lipodystrophic diabetic mellitus. Investigations of lipoprotein metabolism and the effects of omega-3 fatty acid administration in two patients. Metabolism 37: 944-951, 1988.

65. Smith, S.J., Cooper, G.R., Henderson, L.O., Hannon, W.H., and the Apolipoprotein Standardization Collaborating Group: Alaupovic, P., Assmann, G., Bachorik, P.S., Calvert, G.D., Connelly, P.W., Demacker, P.N.M., Dolphin, P.J., Fruchart, J.C., Gauldie, J., Ginsberg, H., Goldberg, R.B., Havekes, L., Herbert, P.N., et al. An international collaborative study on standardization of apolipoproteins A-I and B. Part I. Evaluation of a lyophilized candidate reference and calibration material. Clin. Chem. 33: 2240-2249, 1987.

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67. Bausserman, L.L., Bernier, D.N., McAdam, K.P.W.J., and Herbert, P.N.: Serum amyloid A and high-

density lipoproteins during the acute phase response. Eur. J. Clin Invest. 18: 619-626, 1988.

68. Thompson, P.D., Cullinane, E.M., Sady, S.P., Chenevert, C., Saritelli, A.L., Sady, M.A., and Herbert, P.N.: Contrasting effects of testosterone and oral anabolic steroids on serum lipoproteins. JAMA 261: 1165-1168, 1989.

69. Sady, S.P., Hanumara, R.C., and Herbert, P.N.: Mathematical models of the relationship between HDL-cholesterol and serum triglycerides: an empirical evaluation. Mathl. Comput. Modeling 12: 1103-1112, 1989.

70. Bausserman, L.L., Sadaniantz, A., Saritelli, A.L., Martin, V.L., Nugent, A.M., Sady, S.P., and Herbert, P.N.: Time course of serum amyloid A response in myocardial infarction. Clin. Chim. Acta 184: 297-306, 1989.

71. Hyams, J.S., Treem, W.R., Andrews, W.S., and Herbert, P.N.: Lipid abnormalities in pediatric hepatic allograft recipients. J. Pediatr. Gastroenterol. Nutr. 9: 441-444, 1989.

72. Terpstra, A.H.M., Nicolosi, R.J., and Herbert, P.N.: In vitro incorporation of radiolabeled cholesterol esters into high and low density lipoproteins. J. Lipid Res. 30: 1663-1671, 1989.

73. Longcope, C., Herbert, P.N., McKinlay, S.M., and Goldfield, S.R.W.: The relationship of total and free estrogens and sex hormone-binding globulin with lipoproteins in women. J. Clin. Endocrin. Metab. 71: 67-72, 1990.

74. Levinson, P.D., Iosiphidis, A.H., Saritelli, A.L., Herbert, P.N., and Steiner, M.: Effects of n-3 Fatty Acids in Essential Hypertension. Am. J. Hypertension. 3:754-760, 1990.

75. Thompson, P.D., Cullinane, E.M., Sady, Stanley P., Flynn, M.M., Chenevert, C.B. and Herbert, P.N. HDL metabolism in endurance athletes and sedentary men. Circulation, 84:140-152, 1991.

76. Thompson, P.D., Gadaleta, P.A., Yurgalevitch, S., Cullinane, E.M. and Herbert, P.N. The effects of exercise and lovastatin on serum creatine kinase activity. Metabolism, 40:1333-1336, 1991.

77. Niaura, R., Herbert, P., Saritelli, A., Goldstein, M., Flynn, M., Follick, M., Gorkin, L., Ahern, D. Lipid and lipoprotein responses to episodic occupational and academic stress. Arch. Intern. Med. 151: 2172-2179, 1991.

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79. Niaura, R., Herbert, P.N., McMahon, N., and Sommerville, L.: Repressive coping and blood lipids in men and women. Psychosomatic Medicine, 54:698-706, 1992.

80. Levinson, P.D., McGarvey, S.T., Carlisle, C.C., Eveloff, S.E., Herbert, P.N., and Millman, R.P. Adiposity and cardiovascular risk factors in men with obstructive sleep apnea. CHEST, 103:1336-1342, 1993.

81. Boden, W.E., Moss, A.J., Herbert, P.N., Saritelli, A., Oakes, D., Eberly, S. and the Multicenter Diltiazem Post-Infarction Trial Research Group. Effect of long-term diltiazem administration on serum lipids in post- infarction survivors, Am J Cardiol, 73(7):513-14, 1994.

82. Saliba, B., Herbert, PN. Oxacillin Hepatoxicity in H IV-infected Patients. Ann Int Med, 120(12);1048, 1994.

83. Cullinane, EM, Yurgalevitch S.M., Saritelli, A.L., Herbert, P.N., and Thompson, P.D. Variations in plasma volume affect total and LDL cholesterol concentrations during the menstrual cycle. Metabolism, 44(8): 965-971, 1995.

84. Thompson, P.D., Yurgalevitch, S.M., Flynn, M.F., Zmuda, J.M., Spannus-Martin, D., Saritelli, A., Herbert, P.N. and Bausserman, L. The effect of prolonged exercise training without weight loss on high density lipoprotein metabolism in overweight men. Metabolism 46:217-223, 1997.

85. Bausserman, L.L., Saritelli, A.L., and Herbert, P.N. Effects of stanozolol on serum lipoproteins in hepatic lipase deficiency. Metabolism 46(9):992-996, 1997.

86. Flynn, M.M., Zmuda, J.M., Milosavljevic, D., Caldwell, M.J., and Herbert, P.N. Lipoprotein response to a National Cholesterol Education Program Step II diet with and without energy restriction. Metabolism 48(7):822-826, 1999.

87. Zmuda, J.M., Yurgalevitch, S.M., Flynn, M.M., Bausserman, L.L., Saratelli, A., Spannaus-Martin, D.J., Herbert, P.N., Thompson, P.D. Exercise training has little effect on HDL Levels and Metabolism in Men with Initially Low HDL Cholesterol. Artherosclerosis 137:215-221, 1998.

Reviews, Invited Published Papers, Proceedings of Conference and Symposia, Monographs, Books and Book Chapters

1. Brewer, H.B., Jr., Shulman, R., Herbert, P.N., Ronan, R., and Wehrly, K.: The complete amino acid sequence of an apolipoprotein obtained from human very low density lipoprotein (VLDL). In Zambotti, V., Tettamanti, G., and Arrigoni, M. (Eds.): Glycolipids, Glycoproteins and Mucopolysaccharides of the Nervous System (Advances in Experimental Medicine Biology), New York, Plenum Publishing Corp., 1972, vol. 25, pp. 280-281.

2. Fredrickson, D.S., Lux, S.E., and Herbert, P.N.: The apolipoproteins. In Holmes, W., Paoletti, R., and Kritchevsky, D. (Eds.): Pharmacological Control of Lipid Metabolism (Advances in Experimental Medicine & Biology), New York, Plenum Publishing Corp., 1972, vol. 26. pp. 25-56.

3. Levy, R.I., Fredrickson, D.S., Shulman, R., Bilheimer, D.W., Breslow, J.L., Stone, N.J., Lux, S.E., Sloan, H.R., Krauss, R.M., and Herbert, P.N.: Dietary and drug treatment of primary hyperlipoproteinemia. Ann. Int. Med. 77: 267-294, 1972

4. Herbert, P.N., and Frederickson, D.S.: The hypobetalipoproteinemias. In Schettler, G., Greten, H., Schlierf, G., and Swidel, D. (Eds.): Handbuch der Inneren Medizin 7/4: Fettstoffwechsel, Heidelberg, Springer-Verlag, 1976, pp. 485-521.

5. Herbert, P.N.: Hyperlipoproteinemia: a return to the basics. In Rose, L., and Lavine, R. (Eds.): New Concepts in Endocrinology and Metabolism, New York, Grune & Stratton, Inc., 1977, pp. I53-I66.

6. Herbert, P.N., Gotto, A.M., and Fredrickson, D.S.: Familial lipoprotein deficiency (abetalipoproteinemia, hypobetalipoproteinemia and Tangier disease). In Stanbury, J.B., Wyngaarden, J.B., and Frederickson, D.S. (Eds.): The Metabolic Basis of Inherited Disease, New York, McGraw-Hill, 1978, pp. 544-588 (Ch. 28).

7. Herbert, P.N., Bausserman, L.L., Henderson, L.O., Heinen, R.J., LaPiana, M.J., Church, E.C., and Shulman, R.S.: Apolipoprotein Quantitation. In Peeters, H. (Ed.): The Lipoprotein Molecule, London, Plenum Pub. Corp., 1978, pp. 35-56.

8. Fredrickson, D.S., and Herbert, P.N.: Genetic dyslipoproteinemias. In Dietschy, J.M., Ontko, J.A., and Gotto, A.M. (Eds.): Disturbances in Lipid and Lipoprotein Metabolism, Bethesda, Maryland, American Physicological Society, 1978, pp. 199-212 (Ch. 12).

9. Herbert, P.N.: Is risk factor modification indicated after myocardial infarction? In Zohman, L.R., and Kattus, A.A. (Eds.): Progress in Cardiac Rehabilitation, New York, Stratton Intercontinental Medical Book Corp., 1979, vol. II, pp. 82-94 (Ch. 7).

10. Herbert, P.N., Heinen, R.J., Bausserman, L.L., Henderson, L.O., and Musliner, T.A.: Abetalipoproteinemia and hypobetalipoproteinemia: questions still exceed insights. In Gotto, A.M., Jr., Smith, L.C., and Allen, B. (Eds.): Atherosclerosis, V. Proceedings of the Fifth International Symposium on Atherosclerosis, New York, Springer-Verlag, 1980, pp. 684-688.

11. McAdam, K.P.W.J., Bausserman, L., Herbert, P.N., and Green, K.M.: Polymorphism of SAA within human high density lipoprotein. In Glenner, G., Pinho e Costa, P. and Falcao de Freitas, A. (Eds.): Amyloid and Amyloidosis. Proceedings of the Third International Symposium on Amyloidosis. Amsterdam Excerpta Medica, 1980, pp. 302-321.

12. Herbert, P.N., Henderson, L.O., Musliner, T.A., and Shulman, R.S.: Apolipoproteins - Analysis and possible impact on the early diagnosis of atherogenic risk. Munch. Med. Wschr. I22: S209-2I3, 1980.

13. McAdam, K.P.W.J., Li, J., Knowles, J., Foss, N.T., Dinarello, C.A., Rossenwasser, L.J., Selinger, M.J., Kaplan, M.M., Goodman, R., Herbert, P.N., Bausserman, L.L., and Nadler, L.M.: The biology of SAA: Identification of the inducer, in vitro synthesis and heterogeneity demonstrated with monoclonal antibodies. In Kushner, I., Volanakis, J.E., and Gewurz, H. (Eds.): C-Reactive Protein and the Plasma Protein Response to Tissue Injury, New York, The New York Academy of Sciences, 1980, pp. 126-136.

14. Herbert, P.N., Assmann, G., Gotto, A.M., Jr., and Fredrickson, D.S.: Familial lipoprotein deficiency (abetalipoproteinemia and Tangier disease). In Stanbury, J.B., Wyngaarden, J.B., Fredrickson, D.S., Goldstein, J.L., and Brown, M.S. (Eds.): The Metabolic Basis of Inherited Disease, New York, McGraw-Hill, 1982, pp. 589-621 (Chap. 29).

15. Herbert, P.N., Thompson, P.D., and Shulman, R.S: Determinants of plasma high density lipoprotein concentrations. In Peeters, H., and Gresham, G. (Eds.): Arterial Pollution, London, Plenum Publishing Corp.,1983, pp. 183-211.

16. Herbert, P.N., and Bausserman, L.L.: The apolipoproteins - taxonomy and functions. In Peeters, H., and Gresham, G. (Eds.): Arterial Pollution, London, Plenum Publishing Corp., 1983, pp. 143-182.

17. Herbert, P.N.: Abetalipoproteinemia and Tangier disease. In Dyck, P.J., Thomas, P.K., and Lambert, E.H. (Eds.): Peripheral Neuropathy, New York, McGraw-Hill, 1984, pp. 1728-1744.

18. Herbert, P.N.: Converting the diet-heart hypothesis to a theorem. In Perkins, E.G., and Visek, W.J. (Eds.): Dietary Fats and Health, American Oil Chemists' Society, 1983, Chap. 30, pp. 512-517.

19. Herbert, P.N.: Experience with individual lipid-lowering drugs: Probucol. Cardiovasc. Rev. & Reports January: 38-39, 1983.

20. Herbert, P.N., and Terpstra, A.H.M.: Diet and exercise in the treatment of hyperlipoproteinemia. Drug Therapy 14: 42-52, 1984.

21. Herbert, P.N.: Eating disorders. In Andreoli, T.E., Carpenter, C.C.J., Plum F., and Smith L.H. (Eds.): Cecil Essentials of Medicine, Philadelphia, W.B. Saunders Co., 1989, pp. 420-424 (Ch. 59).

22. Herbert, P.N.: Disorders of lipid metabolism. In Andreoli, T.E., Carpenter, C.C.J., Plum F., and Smith L.H. (Eds.): Cecil Essentials of Medicine, Philadelphia, W.B. Saunders Co., 1989, pp. 431-435 (Ch. 62).

23. Niaura, R., Stoney, C.M., and Herbert, P.N. Lipids in psychological research: The last decade. Bio. Psych. 34:1-43, 1992.

24. The Apoprotein and Antibody Standardization Program Planning Committee. The Apoprotein and Antibody Standardization Program. Arteriosclerosis 9:144-145, 1989.

25. Yao, J., Herbert, P.: Lipoprotein Deficiency and Neuromuscular Manifestations. In Dyck, P.J. and Thomas, P.K. (Eds.): Peripheral Neuropathy, Philadelphia, W.B. Saunders Co., 1993, pp. 1179-1193 (Ch. 62).

26. Flynn, M.M. and Herbert, P.N.: Effects of lowering dietary fat on health status. In Low-Calorie Foods Handbook, Ed. A.M. Altschul, 1993, pp. 479-495 (Ch. 23).

27. Herbert, P.N.: Section on Metabolic Diseases. Chap. 56, Introduction. Chap. 57, Eating Disorders. Chap. 58, Principles of Alimentation and Hyperalimentation. Chap. 59, Hyperuricemia and Gout. Chapt. 60, Disorders of Lipid Metabolism. Chap. 61, Disorders of Metals and Metalloproteins. Chap. 62, Disorders of Amino Acid Metabolism. Chap. 63, Disorders of Carbohydrate Metabolism. Chap. 64, Inherited Disorders of Connective Tissue. In Andreoli, T.E., Bennett, J.C., Carpenter, C.C.J., Plum, F. and Smith, L.H. (Eds.): Cecil Essentials of Medicine, Third Edition, Philadelphia, W.B. Saunders Co., 1993.

28. Herbert, P.N.: Section on Metabolic Diseases. Chap. 56, Introduction. Chap. 57, Eating Disorders. Chap. 58, Principles of Alimentation and Hyperalimentation. Chap. 59, Hyperuricemia and Gout. Chapt. 60, Disorders of Lipid Metabolism. Chap. 61, Disorders of Metals and Metalloproteins. Chap. 62, Disorders of Amino Acid Metabolism. Chap. 63, Disorders of Carbohydrate Metabolism. Chap. 64, Inherited Disorders of Connective Tissue. In Andreoli, T.E., Bennett, J.C., Carpenter, C.C.J., Plum, F. and Smith, L.H. (Eds.): Cecil Essentials of Medicine, Fourth Edition, Philadelphia, W.B. Saunders Co., 1996.

29. Herbert, P.N.: Section on Metabolic Diseases. Chap. 58, Principles of Alimentation and Hyperalimen-tation. Chap. 59, Hyperuricemia and Gout. Chap. 61, Disorders of Metals and Metalloproteins. Chap. 62, Disorders of Amino Acid Metabolism.. Chap. 64, Inherited Disorders of Connective Tissue. In Andreoli, T.E., Bennett, J.C., Carpenter, C.C.J., Plum, F. and Smith, L.H. (Eds.): Cecil Essentials of Medicine, Fifth Edition, Philadelphia, W.B. Saunders Co., 1999 (in press).

30. Citkowitz, E. and Herbert, P.N.: Lipoproteins and Apoproteins. In Gorlin, R., Dangas, M.D., Toutouzas, P.K., Konstadoulakis, M.M. (Eds.): Contemporary Concepts in Cardiology - Pathophysiology and Clinical Management, Kluwer Academic Publishers, 1999, pp. 28-68 (Ch. 3).

pnh:kfq (10/28/99)

PROFESSIONAL ACTIVITIES

TEACHING (1977-1989):

Undergraduate	**(Brown University)**
1984	Nutrition in Biology, Health and Politics (Summer, 2 Months, Course Director)
1984-1999	Biomed 6 - Introduction to Human Physiology (Lecturer)
1985-1989	Human Nutrition (Lecturer)
1980, 1982, 1983	Biomed 196 - Independent Study (Preceptor)
Graduate and Medical School	**(Brown University)**
1987-1989	Biomed 363B - Organ System Pharmacology (Lecturer)
1978-1981	Biomed 371 - Cardiology (Lecturer)
1986-1989	Biomed 130 - Medical Biochemistry (Section Lecturer)
1979-1981	Biomed 364 - Nutrition (Co-Director)
1977-1989	Biomed 301 - Medicine (Core Clerkship Preceptor)
1986-1989	Biomed 370 - Introduction to Clinical Medicine (Physical Diagnosis Course Preceptor)
1989-1999	Biomed 372 - Endocrinology (Lecturer)
Graduate and Medical School	**(Yale University)**
1991-present	Pharmacology 501 (Lecturer)
1991-1993	Introduction to Clinical Medicine (Nutrition Workshop Leader)
1991-1995	Clinical Examination Course (Clinical Tutor)
1991-present	Internal Medicine - Core Medical Clerkship
1992-1994	Cardiovascular Disease Epidemiology 522b Yale University School of Public Health (Lecturer)
1995-1999	Doctor-Patient Encounter Course
1997-1999	Clinical Advisor Program
1995-present	Professional Responsibility course (Seminar Leader)

Ph.D. Thesis Direction
Linda L. Bausserman (George Washington University)

Postgraduate

Preceptor, Primary Care Clinic, HSR
Preceptor for Cardiology and Endocrinology Fellows in Lipid Clinic
Internal Medicine Medical Director and Teaching Attending
Research Elective for Residents
Board Review and Other CME Lectures
Beeson/Peters Firm Attending, Yale-New Haven Hospital

Other

Board of Rhode Island Schools of Medicine Technology (Lipid Lectures)

RESEARCH

1. **Grants**

1979-1982	HL23789 - Lipids and lipoproteins in myocardial infarction	N.I.H.
1981-1988	HL26516 - Transport and catabolism of serum amyloid A	N.I.H.
1983-1985	Plasma cholesterol ester metabolism	A.H.A.
1979-1983	R.J. Reynolds multi-disciplinary program in cardiovascular disease	R.J. Reynolds
1981-1989	HL28467 - Lipoproteins in active men: Role of exercise and diet	N.I.H
1983	Development of Outpatient Nutrition Center	Champlin Foundation
1983-1990	RR02038 - The General Clinical Research Center; Program Director; Associate Program Director	N.I.H.
1987-1988	HL-32141 (sub grant) - Validation and field test for risk appraisal instruments	N.I.H.
1986-1988	Diet and coronary heart disease	A.H.A.
1980-1989	HL23269 (sub grant) - Pawtucket Heart Health Program	N.I.H.
1987-1989	Lipids and apolipoprotein in the Diltiazem Post-Infarction Trial	Marion Laboratories
1988-1989	Evaluation of XU-62-320 Study No. 12	Sandoz Pharmaceuticals
1990-1991	Comparison of Safety and Efficacy of XU 62-320 and Lovastatin	Sandoz Pharmaceuticals
1990-1991	Fluvastatin Study No. 26	Sandoz Pharmaceuticals
1992-1995	Coping Style Stress Responsiveness and Lipids	NIH

2. **Extramural Grant Reviewing (1985-1997)**

1985-1989	AHR for March of Dimes, U.S.- Israel BSF, VA
1985	NHLBV41: HV-85-2 Apoprotein and Antibody Standardization Program (AHR)
1985	RR: GCRC - Francis Scott Key Medical Center
1985	NHLBI: HL-25P - Nutrition and cardiovascular disease (AHR)
1986	NHLBI: HV-87-01 - Clinical Trails Review Committee (AHR - Chairman)
1987	NHLBI: Clinical Trails Review Committee (AHR)
1987	RR: GCRC - Washington University

1988	NHLBI: SRG - Demonstration and education and "Physicians role in lowering elevated lipids by diet" (AHR - Chairman)
1988	AHA: New England Regional Review
1988-1991	NIH: Nutrition Study Section
1989	NHLBI: SRC - Demonstration and education and "Physicians role in lowering elevated lipids by diet" (AHR - Chairman)
1990	NHLBI: 89-HL-I5P - Postprandial lipoproteins and atherosclerosis (AHR)
1990	NHLBI: SRG - Demonstration and Education Research (AHR - Chairman)
1993	NHLBI: Special Emphasis Panel (CARDIA) (AHR)
1996	NHLBI: Special Emphasis Panel (Dietary Effects on Lipoproteins and Thrombogenic Activity)
1997	NIH: Study of Women's Health Across the Nation - Advisory Panel

3. **Research Consultation**

1986-1988	NHLBI: DECA, Ad-Hoc Committee Member
1985-1988	NHLBI: Apoprotein and Antibody Standardization Planning Committee Member
1987-1990	AHA (RI): Research Committee (Chairman 1987-1989)
1986-1989	Rhode Island Partnership for Science and Technology (Institutional Representative)
1989	NHLBI: Workshop on Biochemical Markers of Compliance to Modified Fat Diets - Chairman

SERVICE:

1. **University and Medical School**
   Clinical Faculty Promotion Committee (Chairman)
   Academic Standing Committee
   Brown Biology Forum
   Section of Medicine Research Committee (Chairman)
   General Clinical Research Center - Scientific Advisory Council (1983- 1990)
   Department of Medicine Senior Faculty Promotions Committee (1984-1989)
   Brown University M.D. - Ph.D. Committee
   Medical Faculty Council
   Yale University School of Medicine Alumni Council (1994-present; Secretary 1997-1999)
   APT Foundation Central Medical Unit (1993-present)
   Yale University School of Medicine - Medical School Council (1997)
   Yale University School of Medicine - Board of Permanent Officers (1992-)

2. **Search Committees**

Chief of Neurology (1), Chief of Cardiology (1), Chief of Medicine (1), GCRC Program Director (1), Cardiologists (4), Endocrinologists (3), Hematology (1), Nephrology (1), Infectious Disease (3), General Internal Medicine (6), Emergency Medicine (1)

3. **Hospital Committees**

Miriam Hospital
Clinical Research Review Board (IRB)
Research Building (Chair)
Pharmacy
Nutrition
Medical Staff Selection
Internship Selection
Biomedical Research Support Grant (Chair and Principal Investigator)
Division Directors
University Physicians Foundation, Inc. (Department of Medicine Practice Plan - Vice President)
University Physicians Foundation, Inc. (Finance Committee - Chairman)
University Physicians Foundation, Inc. (Board of Directors)
Attending
Continuing Medical Education
Medical Advisory
Department of Medicine Research Committee (Chairman)
Academic Medicine Task Force
Capital Campaign (1989-1990)

Hospital of Saint Raphael
Executive
Medical Board
Administrative Council
Human Investigation
Ethics
Pharmacy and Therapeutics
Risk Management
Credentials
Quality Assurance - A
Quality Assurance - B
Clinical Chairmen
Graduate Medicine Education
Attending
Continuing Medical Education
Chair, Emergency Department Search Committee
Residency Recruitment and Review
Chair, Cardiology Fellowship Research Committee
Senior Staff
Computer Systems
Clinical Operations Group
Hospital Quality Improvement
Information Systems Task Force
Nuclear Medical Record Task Force Chair

Yale-New Haven Hospital
Board of Trustees

4. **Community**

American College of Physicians, Connecticut Chapter

1995 -	Scientific Program Judge
1993 - 1995	Scientific Program Committee (Chair, 1993)
1993 - present	Governor's Council

5. **Yale-New Haven Hospital/Yale University School of Medicine**

Search Committees:
Chair/Chief, Department of Surgery
Chair/Chief, Department of Obstetrics and Gynecology
Chair/Chief, Department of Radiology
Chair/Chief, Department of Internal Medicine
Chair, Section of Cardiology
Chair/Chief, Department of Child Psychiatry and Child Study Center
Chief, Department of Dentistry
Chair/Chief, Department of Laboratory Medicine
Chair/Chief, Department of Ophthalmology
Chair/Chief, Department of Pediatrics
Chief Medical Information Officer

Committee Memberships:
Chair, General Clinical Research Center Advisory Committee (GAC), 1993-1995
Board of Governors, Yale Medical Group
Comprehensive Cancer Center Dean's Committee
New Clinical Program Development Fund – Development Committee
Yale University School of Medicine Strategic Planning Committee
Yale Alumni in Medicine, Executive Committee and Secretary
Yale-New Haven Health System Quality Council
Yale-New Haven Hospital Performance Leadership Group
Yale-New Haven Hospital Patient Safety Steering Committee
Yale-New Haven Health System, Executive Committee
Yale-New Haven Hospital Senior Operations Group
Clinical Performance Improvement Steering Committee
Chair, Clinical Information Systems Steering Committee
Medical Center Insurance Corporation, Patient Safety Committee

Director, Ambulatory Services Corporation Board
President, Yale-New Haven Medical Services, PC
President, Yale-New Haven Nursing Home, PC

Community:
Columbus House, Capital Campaign Committee
CT State Quality in Health Care Advisory Committee

Updated: 7/27/05

CURRICULUM VITAE

PATRICIA SUE FITZSIMONS, R.N., Ph.D

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Madison, Connecticut 06443
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EDUCATION

B.S.N. (Nursing) Cornell University New York, New York	1968
M.A. (Nursing) New York University New York, New York	1974
Ph.D. (Education) The Ohio State University Columbus, Ohio	1983

POSITIONS HELD

Staff Nurse (Cardiac Unit) Cornell University New York Hospital New York	1968- 1970
Staff Nurse (Medical-Surgical) Long Island Jewish Hospital New York	1970- 1971
Instructor of Nursing Queensboro Community College New York	1971- 1973
Assistant Professor of Nursing Adjunct Associate Professor Miami University Oxford, Ohio	1981- 1997

P.S. Fitzsimons, R.N., Ph.D.

POSITIONS HELD(continued)

Instructor of Nursing Assistant Professor of Nursing Graduate Faculty Director, Hospital Clinical Studies Wright State University Dayton, Ohio	1978- 1997
Senior Vice President Hospital Operations Miami Valley Hospital Dayton, Ohio	1982- 1997
Senior Vice President for Patient Services Yale-New Haven Hospital New Haven, Connecticut	1997- present

REARCH

• "Sensory Deprivation and Nightime Behavioral Disorders in the Aged, Immobilized Adult on an Orthopaedic Unit"	1973
• Continuity of Care Study (curriculum) Wright State University	1978
• "Attitudes Towards the Aged" following completion of a 3-credit hour gerontology course, curriculum study, Wright State University	1978
• "Life Skills Needed at Different Life Stages by Professional Nurses," original dissertation research	1982
• "An Ethnography-Closure of a Diploma School of Nursing," Dr. Betsy Frank, Wright State University, Dayton, Ohio	1983
• A Triangulation Model for Evaluating an Educational Service in a Hospital Setting	1984
• "An Oral History of the Alumni of the Miami Valley Hospital School of Nursing,"	1986
• "Patient Care Outcomes", Miami Valley Hospital	1986

P.S. Fitzsimons, R.N., Ph.D.

AWARDS

- Graduated with Distinction, Cornell University College of Nursing, New York, New York — 1968
- "Excellence in Teaching Award," Wright State University School of Nursing — 1978
- "Role of the Administrator," Second Place, Midwest Alliance in Nursing, Oklahoma City, Oklahoma — 1982
- "Salute to Women in Education", Second Place, Shilito-Rikes Career Lifestyle Program, Dayton, Ohio — 1984
- "Who's Who in Nursing" — 1984
- "Top Ten Women of Dayton", Dayton Daily News — 1989
- "YWCA Salute to Career Women," Certificate of Merit — 1994
- "YWCA Tribute to Mentors" — 1995
- South Central Connecticut Chapter of Alzheimer's Association, Hall of Fame — 1999
- "20 Noteworthy Women in Connecticut for 2001" — 2001
- Ohio State University, College of Education Alumni Advisory Board "Career Achievement Award", October, 2001, Columbus, Ohio — 2001

PUBLICATIONS

- "Adult Development", videotape by Miami University — 1982
- "Nursing Research: It's for you," slide/tape — 1984
- "Pro-Active Decision-Making Model," Midwest Alliance in Nursing — 1984
- A Model for Collaboration, published by Wright State University-Miami Valley School of Nursing, (two chapters) — 1988
- A Time to Remember: A History of the Miami Valley hospital School of Nursing — 1986
- Setting the PACE: Managing Transition to Patient Centered Care, Health Administration Press — 1995

P.S. Fitzsimons, R.N., Ph.D.

PROFESSIONAL/COMMUNITY ORGANIZATIONS

- Wright State University College of Nursing Advisory Council
- Leadership Dayton Program
- Sinclair Community College Department of nursing Advisory
- City of Oakwood Board of Education Finance Committee
- Sigma Theta Tau
- Miami University Applied Sciences Advisory Council Board Member
- Dayton Area Nurse Administrators
- Midwest Alliance in Nursing
- Greater Dayton Area Hospital Association
- Buckeye Trails Girl Scout Council
- American organization of Nurse Executives
- VHA Central Nursing Task Force
- Ohio Organization of Nurse Executives Board Member
- Ohio Organization of Nurse Executives President
- Ohio Organization of Nurse Executives Legislative Committee Chair
- National League of Nursing Board Member
- Yale University, School of Nursing-Associate Clinical Professor
- VHA National Nursing Board
- East Shore Regional Day Care Center, Branford, CT.-Board Member
- United Health Care Corporation, Bridgeport, CT.-Board Member
- Southern Connecticut Pastoral Education Consortium Advisory Board
- UHC Chief Nursing Officers Steering Committee
- VHA National Nursing Leadership Council Education Committee Chair
- VHA National Nursing Leadership Council
- American College of Healthcare Executives
- American Organization of Nurse Executives
- Connecticut League for Nursing
- Connecticut Nurses Association
- Connecticut Colleagues in Caring
- The Advisory Board Company: Advisor on Hospital and Health System Workforce
- United Way of Greater New Haven–Board of Directors
- Connecticut Hospital Association: Future of Nursing in Connecticut Planning Project Planning Board

OTHER

- Thesis Advisement, Wright State University 1985-1997
- Manuscript Reviewer for The Journal of the Midwest Alliance:MAIN 1989-1997

P.S. Fitzsimons, R.N., Ph.D.

WRITTEN WORKS/PRESENTATIONS

- "Life Skills Needed for Development of Professional Nurses," Miami Valley Hospital Nursing Research Symposium — 1982
- "Nursing Research: An Integral Facet of Clinical Practice in New Knowledge for Nursing Practice," American Nurses Association — 1983
- "Qualitative Research," Miami Valley Hospital Research Symposium — 1983
- "Trends and Issues in Continuing Education," Ohio State University — 1983
- "A Pro Active Decision Making Model," co-authored with Donna Deane, Midwest Alliance in Nursing — 1984
- "Productivity: Nursing Administration in the 1980's, Wright State University Continuing Education — 1985
- "Service and Education: A Unified Collaboration Model," Midwest Alliance in Nursing — 1987
- The Use of Knowledge Deficit as a Nursing Diagnosis Made by RNs," Eighth Annual Research in Nursing Conference, Cincinnati, Ohio — 1988
- "Patterns in Care Outcomes for Clinical Nurse Specialists and Clinical Nurses, Clinical Nurse Specialist: Strategies for the 90's Workshop, Novi, Michigan — 1988
- Reengineering the Delivery of Care," American College of Healthcare Executives — 1994
- "Leadership for the Next Millennium: A Passion of Patients", keynote speaker, Sybil Palmer Bellos Lecture, Yale School of Nursing — 1998
- "Nursing in the Next Millennium", keynote speaker, Yale-New Haven Hospital, Nurse Day — 1998
- "The Future of Nursing" keynote speaker, Miami Valley Hospital, PACE Group, Dayton, Ohio — 1999
- "Medication Errors Improvement Initiatives, University Health System Consortium, Chicago — 2000
- Medication Error Competency Training, Connecticut Hospital Association, Wallingford, Connecticut — 2000
- "It's Up to You: Building Your Career and the Profession", keynote speaker, Connecticut League for Nursing, Student Day, Wallingford, Connecticut — 2000
- "The Nursing Shortage", Healthcare Policy Journal Club, Yale School of Medicine, Yale University — 2002

Curriculum Vitae

Thomas J. Balcezak, M.D., M.P.H.

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New Haven, CT 06504
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(w) 203-688-1343
(cell) 203-415-3052
Thomas.Balcezak@ynhh.org

EDUCATION:

Graduate: M.P.H.	Yale University School of Medicine Department of Epidemiology and Public Health Concentration in Management New Haven, CT 2001-2003
Residency:	Yale University/ Yale-New Haven Hospital Categorical Internal Medicine Program New Haven, CT *Medical Chief Resident from 1995-1996* 1993-1996
Internship:	Yale University/ Yale-New Haven Hospital Categorical Internal Medicine Program New Haven, CT 1992-1993
Medical: M.D.	University of Connecticut Farmington, CT 1988-1992
Undergraduate: A.B.	Amherst College Amherst, MA Chemistry, *Cum Laude* 1984-1988

ADMINISTRATIVE EMPLOYMENT:

2008 – Present	**Vice President, Performance Management** **Associate Chief of Staff** Clinical Service Coordinator, Neurosciences Service Line (2007) Clinical Service Coordinator, Department of Medicine (2005) *Yale-New Haven Hospital* *New Haven, CT*

2004 - 2008

Administrative Director, Performance Management
Associate Chief of Staff
Clinical Service Coordinator, Neurosciences Service Line (2007)
Clinical Service Coordinator, Department of Medicine (2005)
Yale-New Haven Hospital
New Haven, CT

- Reported to the Executive Vice President and Chief Operating Officer, and Senior Vice President for Medical Affairs.
- Managed the following direct reports: Directors of Hospital Epidemiology, Infection Control, Regulatory Readiness, and Quality Improvement Support Services, Medical Staff Office, and Center for Outcomes Research (CORE).
- Coordinated Hospital Performance Management functions, including measuring, monitoring, communicating, evaluative analysis, improvement, and meeting regulatory requirements for The Joint Commission, State Department of Public Health, and Center for Medicare and Medicaid Services.
- Chaired the Clinical Process Improvement Committee and Hospital Throughput Committee.
- Directed Clinical Documentation Management Program (CDMP), a concurrent registered nurse review program aimed to improve accuracy of documentation and coding.
- Provided oversight of the Medical Staff Office operations, serving as Ex Officio member of Credentials Committee, Medical Executive Committee, and Medical Committee of Board of Trustees.
- Substituted for the Chief of Staff when necessary.
- Orchestrated strategic planning, recruitment and growth efforts of the Neuroscience service line.

2002 - 2004

Assistant Chief of Staff
Director, Clinical Quality
Yale-New Haven Hospital
New Haven, CT

- Provided oversight of the Medical Staff Office operations, serving as Ex Officio member of Credentials Committee, Medical Executive Committee, and Medical Committee of Board of Trustees.
- Implemented CDMP Program yielding improved clinical documentation and incremental net revenue of greater than $3 million per year.
- Chaired Clinical Process Improvement Committee which was charged with improving clinical processes and reducing costs of care.
- Directed multiple Quality Improvement Projects, especially focused on utilizing CPOE. Collaborated with Finance to integrate quality improvements with operational, clinical, and financial domains.

1996 - 2002 **Assistant to Chief of Staff**
Yale-New Haven Hospital
New Haven, CT

- Responsible for multiple Quality Improvement Projects focused on utilizing CPOE. Worked closely with Finance to integrate quality improvements with operational, clinical, and financial domains.
- Organized efforts and coordinated resources for institutional ACGME visit
- Served as a project leader in correcting Medicare Grade Medical Education billing issues and in creating new process to accurately capture Resident and Fellow FTE's for DGME and Indirect Medical Education reimbursement.

PRACTICE EXPERIENCE:

Private practice in Internal Medicine
Branford Internal Medicine
Branford, CT
One session per week from
1997-2011

Service Attending in Internal Medicine
Yale-New Haven Hospital
New Haven, CT
One to two months per year
1995-2011

LICENSURE: State of Connecticut (#033928)

CLINICAL APPOINTMENTS:

Attending Physician, Yale-New Haven Hospital
Department of Internal Medicine
New Haven, CT
1996-2011

Courtesy Attending Physician, Hospital of Saint Raphael
Department of Internal Medicine
New Haven, CT
1997-2011

Attending Physician, Yale-New Haven Hospital
Department of Emergency Medicine
West Haven, CT
1994-1998

ACADEMIC APPOINTMENTS: Yale-New Haven Hospital/ Yale University School of Medicine
New Haven, CT
Associate Clinical Professor of Medicine, 2008 – Present
Lecturer in Public Health, 2003 – Present
Assistant Clinical Professor of Medicine, 2005 – 2008
Assistant Professor of Medicine, 1999 – 2005
Clinical Instructor in Medicine, 1997 – 1999
Instructor in Medicine, 1995–1997

PROFESSIONAL ORGANIZATION: Member of Association of American Medical Colleges
Member of American College of Healthcare Executives
Member of American College of Physicians
Member of the Institute for Healthcare Improvement
Member of the University HealthSystem Consortium
Member of the Connecticut Hospital Associations:

- Board of Trustee Committee on Patient Care Quality
- Hospital Oversight Workgroup
- Subcommittee on Pursing the Elimination of Harm of Board of Trustee Committee on Patient Care Quality

Member of the Gaylord Specialty Healthcare Board of Directors
Member of the Gaylord Specialty Healthcare Strategic Operations Committee

CERTIFICATION: Board Certified by the American Board of Internal Medicine, 1996. Recertified 2007.

Board Certified by the National Medical Examiners, 1996.

PUBLICATIONS:

Topal J, Conklin S, Camp K, Morris V, Balcezak T, Herbert P. Prevention of Nosocomial Catheter-Associated Urinary Tract Infections Through Computerized Feedback to Physicians and a Nurse-Directed Protocol. Am J Med Qual 2005; 20:121-126.

Mason P, Morris V, Balcezak TJ. Serotonin Syndrome: Presentation of Two Cases and a Review of the Literature. Medicine. 2000. 79:201-209.

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Miller, Balcezak TJ, Morris V, Topal J, Yazdi M, Stump L. Cost-Benefit of a Multidisciplinary Formulary Management Model. American Journal of Medical Quality. March/April 2011 Volume 26. (Suppl 2).

Jenq, GY, Bacon SM, Balcezak TJ, Horwitz LI. Achieving earlier discharge time through teamwork and local initiative. Quality Safety Health Care. Aug 2008 17(4):11-12.

Bozzo JA, Lin Z, Ulisse G, Psarakis H, Thomas P, Balcezak T, Inzucchi SE. A Decade of Inpatient Diabetes Management: Trends at an Academic Medical Center. American Diabetes Association 68th Scientific Sessions, San Francisco, CA June 2008.

Bozzo JA, Lin Z, Ulisse G, Psarakis H. Thomas P, Balcezak T, Inzucchi, SE. Assessing the Impact of an Inpatient Diabetes Management Team with Glucometrics. American Diabetes Association 67th Scientific Sessions, Chicago, IL June 2007 (Diabetes 56 (Supl 2):A153, 2007).

Mesmer M, Bozzo JE, East K, Balcezak TJ, Inzucchi SE. Coding for Inpatient Diabetes (DM Care: Lost Opportunities? American Diabetes Association 65th Scientific Sessions, San Diego, CA June 2005 (Diabetes 54 (Suppl 2):A296,2005).

Morris VA, Balcezak TJ, Getnick G, Betz J, Cadman EC. How Physicians Spend Their Time; A Comparison of Primary Care vs. Non-primary Care Physicians Trained at Yale-New Haven Hospital 1929-1994. J. Invest Med. 1997; 45(3): 291A.

Balcezak TJ, Morris VA, Getnick G, Betz J, Cadman EC. Current Attitudes Regarding Health Care Reform and Job Satisfaction Among House Staff Graduates of Yale-New Haven Hospital 1929-1994. J. Invest Med. 1997; 45(3): 289A.

Balcezak T, Getnick G, Cadman E. Using a Computerized Order Entry System to Improve Utilization of an Efficacious weigh-based heparin nomogram. 36th Annual Research in Medical Education Conference, RIME/1997. 1997: page 25.

Balcezak T, Jaffe CC, Lynch P, Simon P, Jackson S. Cadman E. A Network Model for Documentable Graduate Medical Education Using Internet Technology. 36th Annual Research in Medical Education Conference, RIME/1997. 1997: page 22.

Balcezak T, Getnick G, Cadman E. Using a Computerized Order Entry System to Improve Utilization of an Efficacious weigh-based heparin nomogram. 36th Annual Research in Medical Education Conference, RIME/1997. 1997: page 25.

Balcezak T, Jaffe CC, Lynch P, Simon P, Jackson S. Cadman E. A Network Model for Documentable Graduate Medical Education Using Internet Technology. 36th Annual Research in Medical Education Conference, RIME/1997. 1997: page 22.

LETTERS:

Balcezak TJ, Lynch P, Cadman EC. An Internet-Based Law and Medicine Curriculum for Residents. Academic Medicine. 1999; 74(10):1053-54.

Mallory R, Balcezak T. Treatment of Mobile Left Ventricular Thrombus with Low Molecular Weight Heparin. NEJM; 1999:341(14):1082-3.

ORAL PRESENTATIONS/INVTIED LECTURES:

Achieving Comprehensive, Safe Patient Flow in an Academic Medical Center; Balcezak TJ, Capozzalo G. Institute for Healthcare Improvement 22nd National Forum, Orlando, Florida. December 2010.

Clinical Initiatives: The View from Hospital Administration; T Balcezak, American Association of Clinical Endocrinologists-American Diabetes Association Consensus Development Conference: Improving Inpatient Diabetes Care: A Call to Action, Washington, D.C.. January 2006

Decision Support as Internal Consultants; Thomas J. Balcezak, M.D.; Charles Torre, Jennifer Lombardi. 2001 Eclipsys User Network Annual International Conference; Orlando, Florida, October 2001.

Changing Physician Ordering Behavior; Thomas J. Balcezak, M.D; Marvin S. Lurie, Rph, MS; MISPA International Conference; Orlando, Florida. November 2011.

Medical Grand Rounds-"Quality Improvement-The Case of Intravenous Heparin Therapy". Yale School of Medicine Department of Medicine. June 1997.

POSTER PRESENTATIONS:

Jenq G, Balcezak T, et al. Earlier Discharges from Inpatient Medicine: Using information technology, dialogue, feedback, and staff accountability. Poster Presentation at the International Forum on Quality and Safety in Healthcare, Amsterdam, Holland. April 2011.

Bacon S, Balcezak TJ, Damore P, Hayes M, Vorio D. Safe Patient Flow: Improving Time of Day Capacity with 11 am Discharges. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; May, 2010.

Hendrickson K, Bozzo J, Zimkus, Scorel K., Psarakis H, Maerz L, Balcezak, TJ, Inzucchi S. Evaluating Inpatient Glycemic Management: The QHS. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; May, 2010.

Nystrom K, Schindler J, Bedard L, Moalli D, Cusano A, Cemeno, Baehring J, Nygard H, Harel N, Balcezak TJ, Capozzalo G. We Can Hear (and See) You Now! Connecticut's First Telestroke Program – Part 2. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; May, 2010,

Bedard L, Nystrom K, Moalli D, Cusano A, Cememo M, Baehring J, Nygard H, Harel N, Balcezak TJ, Capozzalo G. Implementation of a JUB and SPOKE Model for Acute Stroke Care – Part 1. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; May, 2010.

Sangkachand P, Tangredi R, Cooper D, Gorero N, Marshal P, Maccubbin, Devin L, Fletcher E, Hewitt R, LoRusso F, Wira C, Curtis J, Roumanis S, Nystrom K, Bautista C, Schindler J, Yazdi M, DeFilippo G, Ehrenkranz R, Mercurio M, Swan A, Pettker C. Balcezak TJ. Therapeutic Hypothermia. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; May, 2010.

Moss, RL, Hirsch MW, Ferigno DL, Balcezak TJ, Carusone CA. Yale-New haven Children's Hospital's Role in Developing a National system for Assessing Outcomes in Children's Surgery. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; May, 2009.

Zinck-Lederer T, Jenq G, Hawkins H, Depukat D, Mccausland K, Russell-Milici H, PSMs of Medicine, Chief Residents Medicine, Benis L, Morris V, Balcezak TJ, Bennick M, Fisher R. Linking SCM and Smartweb Paging to improve communication between Nursing and Medical Staff on the Inpatient Medical Units. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; May, 2009.

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Jenq G, Balcezak T, Crede W, Lee L, Benis L. Medication reconciliation: inpatient medicine's approach. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; April, 2008.

Bacon S, Balcezak TJ, Bursey C, Byrne P, Carraway N, Carter K, Finoia B, Forth D, Ghidini J, Horwitz LI, Iacomacci A, Jenq G, Lober F, Masselli W, Sward J. Achieving 11 am discharge through teamwork and local initiative. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; April, 2008.

Lin Z, Scorel K, Teng W, Goldberg PA, Roussel M, Psarakis H, Ulisse G, Roumanis S, Siegel M, Carageno T, Danilowicz C, Farrington J, Finoia B, For-Flanel D, Lanouette L, Nickless N, Nikolisch J, Thomas P, Balcezak T, Inzucchi S. A decade of progress in blood glucose management. Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; April, 2008.

Balcezak T, Apkon M, Bacon S, Guglin M, Holland C, Horwitz L, Lisitano R, Merz SM, Morris V, Riley T, Shwayhat S, Smith N, Vorio D. Improving patient flow through in-hospital interventions.Poster presentation at the Joseph A. Zaccagnino Patient Safety and Clinical Quality Conference, New Haven, CT; April, 2008.

Balcezak TJ, Jaffe CC, Lynch P, Simon P, Jackson S, Cadman EC. A Network Model for Documentable Graduate Medical Education Using Internet Technology. AAMC Annual Meeting, Washington, D.C. November 1997.

Balcezak TJ, Getnick GS, Cadman EC. Using a Computerized Order Entry System to Improve Utilization of an Efficacious Weight-based Heparin Nomogram. AAMC Annual Meeting, Washington, D.C. November 1997.

PERSONAL:

Born:	Hartford, Connecticut
Married:	Soni K. Clubb, MD
Children:	Lucy Olivia Balcezak
	Isabel Luna Balcezak

REFERENCES: Provided upon request

ATTACHMENT XI

YNHH 501(c)(3) Letter

Internal Revenue Service

District
Director

Department of the Treasury
P.O. Box 9107
JFK Federal Bldg., Boston, Mass. 02203

Yale-New Haven Hospital Inc.
789 Howard Avenue
New Haven, Ct. 06504

Person to Contact: Daniel T. Valenzano

Telephone Number: (617) 223-1442

Refer Reply to: EO:Processing Unit

Date: JUL 10 1979

Name of Organization: Same

Gentlemen:

This is in reply to your recent letter requesting a copy of an exemption letter for the above-named organization.

Due to our records retention program, a copy of the original letter is not available.

[x] However, records in this office show that a determination letter was issued in November 1966 ruling that the organization was exempt from Federal Income Tax under Section (now) 501(C)(3) of the Internal Revenue Code of 1954.

[ ] However, records in this office show that the organization is exempt under Section (now) _____ of the Internal Revenue Code as part of a group ruling issued to _____

[x] Further, the organization is not a private foundation because it is an organization described under Section 170(b)(1)(a)(vi) and 509(a)(1).

This ruling remains in effect as long as there are no changes in the character, purposes, or method of operation of the organization.

I trust the foregoing information will serve your purpose.

If you have any questions, you may contact the person whose name ar telephone number are shown in the heading of this letter.

Sincerely yours,

District Director

ATTACHMENT XII

Connecticut Department of Public Health License

STATE OF CONNECTICUT

Department of Public Health

License No. 0044

General Hospital

In accordance with the provisions of the General Statutes of Connecticut Section 19a-493:

Yale-New Haven Hospital, Inc. of New Haven, CT, d/b/a Yale-New Haven Hospital, Inc. is hereby licensed to maintain and operate a General Hospital.

Yale-New Haven Hospital, Inc. is located at 20 York Street, New Haven, CT 06504

The maximum number of beds shall not exceed at any time:
92 Bassinets
874 General Hospital beds

This license expires **September 30, 2013** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, October 1, 2011. RENEWAL.

Satellites
Hill Regional Career High School, 140 Legion Avenue, New Haven, CT
Branford High School Based Health Center, 185 East Main Street, Branford, CT
Walsh Middle School, 185 Damascus Road, Branford, CT
James Hillhouse High School Based Health Center, 480 Sherman Parkway, New Haven, CT
Weller Building, 425 George Street, New Haven, CT
Yale-New Haven Psychiatric Hospital, 184 Liberty Street, New Haven, CT
Yale-New Haven Shoreline Medical Center, 111 Goose Lane, Guilford, CT
Pediatric Dentistry Center, 860 Howard Avenue, New Haven, CT
YNHASC Temple Surgical Center, 60 Temple Street, New Haven, CT
YNHASC Women's Surgical Center, 40 Temple Street, New Haven, CT
Mauro-Sheridan School Based Health Center, 191 Fountain Street, New Haven, CT
Yale-New Haven Hospital Dental Center, 2560 Dixwell Avenue, Hamden, CT
Murphy School Based Health Center, 14 Brushy Plain Road, Branford, CT

Jewel Mullen, MD, MPH, MPA
Commissioner

ATTACHMENT XIII

Summary of Revenue, Expense, and Volume Statistics, with the CON Project, Incremental to the CON Project, and without the CON Project

Yale-New Haven Hospital
Bed CON
(All dollars are in thousands)

Total Facility: Description	FY 2011 AFS With CON	FY 2012 Projected With CON	FY 2012 Projected Incremental	FY 2012 Projected W/O CON	FY 2013 Projected With CON	FY 2013 Projected Incremental	FY 2013 Projected W/O CON	FY 2014 Projected With CON	FY 2014 Projected Incremental	FY 2014 Projected W/O CON	FY 2015 Projected With CON	FY 2015 Projected Incremental	FY 2015 Projected W/O CON
Net Patient Revenue													
Non- Government	$ 831,993	$ 885,344	$ 7,424	$ 877,920	$ 970,540	$ 7,019	$ 963,521	$ 1,035,868	$ 8,441	$ 1,027,427	$ 1,092,537	$ 8,818	$ 1,083,719
Medicare	415,678	439,931	9,228	430,703	504,189	8,725	495,464	530,213	4,328	525,885	552,580	4,495	548,085
Medicaid and Other Medical Assistance	187,979	237,504	4,635	232,869	244,948	4,382	240,566	255,699	2,049	253,650	270,028	2,129	267,899
Other Government	6,407	6,922	63	6,859	6,929	60	6,869	6,936	60	6,876	6,943	59	6,884
Total Net Patient Revenue	$ 1,442,057	$ 1,569,700	$ 21,350	$ 1,548,350	$ 1,726,606	$ 20,186	$ 1,706,420	$ 1,828,716	$ 14,878	$ 1,813,838	$ 1,922,087	$ 15,501	$ 1,906,586
Other Operating Revenue	$ 46,640	$ 35,000	$ -	$ 35,000	$ 35,000	$ -	$ 35,000	$ 35,000	$ -	$ 35,000	$ 35,000	$ -	$ 35,000
Revenue from Operations	$ 1,488,697	$ 1,604,700	$ 21,350	$ 1,583,350	$ 1,761,606	$ 20,186	$ 1,741,420	$ 1,863,716	$ 14,878	$ 1,848,838	$ 1,957,087	$ 15,501	$ 1,941,586
Salaries and Fringe Benefits	$ 690,313	$ 741,136	$ 2,943	$ 738,195	$ 733,255	$ 4,891	$ 728,364	$ 769,030	$ 6,573	$ 762,457	$ 795,990	$ 6,788	$ 789,202
Professional / Contracted Services	285,100	334,627	7,383	327,244	357,769	7,568	350,201	383,512	3,278	380,234	406,574	3,468	403,206
Supplies and Drugs	322,526	326,887	8,929	317,958	429,658	9,242	420,416	458,965	3,922	455,043	491,565	4,195	487,370
Bad Debts	26,390	29,677	515	29,162	30,567	541	30,026	31,484	269	31,215	32,429	277	32,152
Other Operating Expense	15,721	19,513	343	19,170	20,879	360	20,519	22,340	191	22,149	23,904	204	23,700
Subtotal	$ 1,340,050	$ 1,451,842	$ 20,113	$ 1,431,729	$ 1,572,128	$ 22,601	$ 1,549,527	$ 1,665,331	$ 14,233	$ 1,651,098	$ 1,750,562	$ 14,932	$ 1,735,630
Depreciation/Amortization	$ 67,946	$ 74,127	$ -	$ 74,127	$ 87,337	$ 184	$ 87,153	$ 93,393	$ 184	$ 93,209	$ 98,980	$ 184	$ 98,796
Interest Expense	16,867	17,858	-	17,858	34,478	-	34,478	33,772	-	33,772	33,027		33,027
Lease Expense	10,941	12,673	-	12,673	13,053	-	13,053	13,445	-	13,445	13,848		13,848
Total Operating Expense	$ 1,435,806	$ 1,556,500	$ 20,113	$ 1,536,387	$ 1,706,996	$ 22,785	$ 1,684,211	$ 1,805,941	$ 14,417	$ 1,791,524	$ 1,896,417	$ 15,116	$ 1,881,301
Gain/(Loss) from Operations Before extraordinary Gain / (Loss)	$ 52,891	$ 48,200	$ 1,237	$ 46,963	$ 54,610	$ (2,599)	$ 57,209	$ 57,775	$ 461	$ 57,314	$ 60,670	$ 385	$ 60,285
Plus: Non-Operating Revenue	$ 14,272	$ 25,000	$ -	$ 25,000	$ 37,100	$ -	$ 37,100	$ 39,236	$ -	$ 39,236	$ 41,309	$ -	$ 41,309
Revenue Over/(Under) Expense	$ 67,163	$ 73,200	$ 1,237	$ 71,963	$ 91,710	$ (2,599)	$ 94,309	$ 97,011	$ 461	$ 96,550	$ 101,979	$ 385	$ 101,594
Number of FTE's	7,864	7,896	29	7,867	7,974	48	7,926	8,056	26	8,030	8,142	26	8,116
Inpatient Cases	57,451	59,242	1,791	57,451	60,930	1,688	59,242	62,667	914	61,753	64,453	933	63,520
Patient Days	300,989	304,504	3,515	300,989	310,229	5,725	304,504	316,108	4,610	311,498	322,151	4,664	317,487
Outpatient volumes	634,795	685,247	-	685,247	718,139	-	718,139	752,610	-	752,610	788,735	-	788,735

Notes:
AFS = Audited Financial Statements

ATTACHMENT XIV

3-Year Projection of Incremental Revenue, Expense, and Volume Statistics Attributable to the Proposal by Payer

Yale-New Haven Hospital

5.a(ii). Please provide three years of projections of incremental revenue, expense and volume statistics **attributable to the proposal** in the following reporting format:

Type of Service Description	Bed CON									
Type of Unit Description:	Cases									
# of Months in Operation	12									
Year 1 - 2012	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FY Projected Incremental		Rate	Units	Gross Revenue Col. 2 * Col. 3	Allowances/ Deductions	Charity Care	Bad Debt	Net Revenue Col.4 - Col.5 -Col.6 - Col.7	Operating Expenses Col. 1 Total * Col. 4 / Col. 4 Total	Gain/(Loss) from Operations Col. 8 - Col. 9
Total Incremental Expenses:	**$20,113,000**									
Total Facility by Payer Category:										
Medicare		$46,872	555	$26,013,960	$20,811,119			$5,202,841	$6,232,672	($1,029,831)
Medicaid		$46,872	501	$23,482,872	$21,134,585			$2,348,287	$5,626,250	($3,277,962)
CHAMPUS/TriCare		$46,872	-	$0	$0			$0	$0	$0
Total Governmental		$46,872	1,056	$49,496,832	$41,945,704	$0	$0	$7,551,128	$11,858,921	($4,307,793)
Commercial Insurers		$46,872	681	$31,919,832	$17,868,000			$14,051,832	$7,647,657	$6,404,175
Uninsured		$46,872	54	$2,531,088		$1,771,599	$1,012,430	($252,941)	$606,422	($859,363)
Total NonGovernment		$46,872	735	$34,450,920	$17,868,000	$1,771,599	$1,012,430	$13,798,891	$8,254,079	$5,544,812
Total All Payers		$46,872	1,791	$83,947,752	$59,813,704	$1,771,599	$1,012,430	$21,350,019	$20,113,000	$1,237,019

Yale-New Haven Hospital

5.a(ii). Please provide three years of projections of incremental revenue, expense and volume statistics **attributable to the proposal** in the following reporting format:

Type of Service Description	Bed CON									
Type of Unit Description:	Cases									
# of Months in Operation	12									
Year 2 - 2013	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FY Projected Incremental		Rate	Units	Gross Revenue Col. 2 * Col. 3	Allowances/ Deductions	Charity Care	Bad Debt	Net Revenue Col.4 - Col.5 -Col.6 - Col.7	Operating Expenses Col. 1 Total * Col. 4 / Col. 4 Total	Gain/(Loss) from Operations Col. 8 - Col. 9
Total Incremental Expenses:	**$22,785,000**									
Total Facility by Payer Category:										
Medicare		$49,216	523	$25,739,968	$20,591,974			$5,147,994	$7,059,570	($1,911,577)
Medicaid		$49,216	473	$23,279,168	$20,951,251			$2,327,917	$6,384,659	($4,056,743)
CHAMPUS/TriCare		$49,216	-	$0	$0			$0	$0	$0
Total Governmental		$49,216	996	$49,019,136	$41,543,226	$0	$0	$7,475,910	$13,444,230	($5,968,319)
Commercial Insurers		$49,216	641	$31,547,456	$18,937,658			$12,609,798	$8,652,361	$3,957,437
Uninsured		$49,216	51	$2,510,016		$1,757,011	$652,604	$100,401	$688,409	($588,009)
Total NonGovernment		$49,216	692	$34,057,472	$18,937,658	$1,757,011	$652,604	$12,710,199	$9,340,770	$3,369,428
Total IP All Payers		$49,216	1,688	$83,076,608	$60,480,884	$1,757,011	$652,604	$20,186,109	$22,785,000	($2,598,891)
		5% Inflation								

Yale-New Haven Hospital

5.a(ii). Please provide three years of projections of incremental revenue, expense and volume statistics attributable to the proposal in the following reporting format:

Type of Service Description	Bed CON									
Type of Unit Description:	Cases									
# of Months in Operation	12									
Year 3 - 2014	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FY Projected Incremental		Rate	Units	Gross Revenue Col. 2 * Col. 3	Allowances/ Deductions	Charity Care	Bad Debt	Net Revenue Col.4 - Col.5 -Col.6 - Col.7	Operating Expenses Col. 1 Total * Col. 4 / Col. 4 Total	Gain/(Loss) from Operations Col. 8 - Col. 9
Total Incremental Expenses:	**$14,417,000**									
Total Facility by Payer Category:										
Medicare		$51,677	283	$14,624,591	$10,822,197			$3,802,394	$4,463,907	($661,513)
Medicaid		$51,677	256	$13,229,312	$10,715,743			$2,513,569	$4,038,022	($1,524,453)
CHAMPUS/TriCare		$51,677	-	$0	$0			$0	$0	$0
Total Governmental		$51,677	539	$27,853,903	$21,537,940	$0	$0	$6,315,963	$8,501,929	($2,185,966)
Commercial Insurers		$51,677	347	$17,931,919	$9,398,657			$8,533,262	$5,473,412	$3,059,850
Uninsured		$51,677	28	$1,446,956		$926,052	$491,965	$28,939	$441,659	($412,720)
Total NonGovernment		$51,677	375	$19,378,875	$9,398,657	$926,052	$491,965	$8,562,201	$5,915,071	$2,647,130
Total IP All Payers		$51,677	914	$47,232,778	$30,936,597	$926,052	$491,965	$14,878,164	$14,417,000	$461,164
		5% Inflation								

Yale-New Haven Hospital

5.a(ii). Please provide three years of projections of incremental revenue, expense and volume statistics attributable to the proposal in the following reporting format:

Type of Service Description	Bed CON									
Type of Unit Description:	Cases									
# of Months in Operation	12									
Year 4 - 2015	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FY Projected Incremental		Rate	Units	Gross Revenue Col. 2 * Col. 3	Allowances/ Deductions	Charity Care	Bad Debt	Net Revenue Col.4 - Col.5 -Col.6 - Col.7	Operating Expenses Col. 1 Total * Col. 4 / Col. 4 Total	Gain/(Loss) from Operations Col. 8 - Col. 9
Total Incremental Expenses:	**$15,116,000**									
Total Facility by Payer Category:										
Medicare		$54,261	289	$15,681,429	$11,463,125			$4,218,304	$4,682,234	($463,929)
Medicaid		$54,261	261	$14,162,121	$11,896,182			$2,265,939	$4,228,592	($1,962,652)
CHAMPUS/TriCare		$54,261	-	$0	$0			$0	$0	$0
Total Governmental		$54,261	550	$29,843,550	$23,359,306	$0	$0	$6,484,244	$8,910,825	($2,426,582)
Commercial Insurers		$54,261	354	$19,208,394	$10,353,324			$8,855,070	$5,735,331	$3,119,738
Uninsured		$54,261	29	$1,573,569		$967,589	$444,281	$161,698	$469,844	($308,145)
Total NonGovernment		$54,261	383	$20,781,963	$9,304,693	$740,118	$374,906	$9,016,768	$6,205,175	$2,811,593
Total IP All Payers		$54,261	933	$50,625,513	$31,239,513	$740,118	$374,906	$15,501,012	$15,116,000	$385,012

5% Inflation

ATTACHMENT XV

Assumptions Utilized in Developing the Projections

YALE-NEW HAVEN HOSPITAL
Proposal for the Additional 70 Beds for CON

Assumptions

Net Revenue Rate Increases	FY 2012	FY 2013	FY 2014	FY 2015
1) Government	0.0 - 2.8%	0.0 - 2.8%	0.0 - 2.8%	0.0 - 2.8%
2) Non-Government	5.0 - 6.0%	5.0 - 6.0%	5.0 - 6.0%	5.0 - 6.0%

	FY 2012	FY 2013	FY 2014	FY 2015
EXPENSES				
A. Salaries and Fringe Benefits	5.0%	5.0%	5.0%	5.0%
B. Non-Salary				
1) Medical and Surgical Supplies	3.5%	3.5%	3.5%	3.5%
2) Pharmacy and Solutions	15.0%	15.0%	15.0%	15.0%
3) Malpractice Insurance	7.0%	7.0%	7.0%	7.0%
4) Professional and Contracted Services	2.5%	2.5%	2.5%	2.5%
5) All Other Expenses	3 - 7%	3 - 7%	3 - 7%	3 - 7%

FTEs	FY 2012	FY 2013	FY 2014	FY 2015
1) Total estimated FTEs	7,896.0	7,973.6	8,055.6	8,141.8

Note - The above increase projections reflect all changes relating to Medicare and Medicaid reimbursement regulations.

Greer, Leslie

From: Lazarus, Steven
Sent: Thursday, February 23, 2012 3:31 PM
To: Stephen Cowherd (SCowherd@jeffers-law.com)
Cc: Greer, Leslie; Martone, Kim
Subject: FW: YNHH Completeness Letter for Bed Addition Request
Attachments: 12-31745 COMP LETTER.doc

Stephen,

Here is the updated CL, I believe we will be sending it out tomorrow.

Steven

Steven W. Lazarus
Associate Health Care Analyst
Connecticut Department of Public Health
Division of Office of Health Care Access
410 Capitol Avenue, MS 13HCA
Hartford, Connecticut 06134
Phone: (860) 418-7012 (Direct)
Fax: (860) 418-7053 (Main)

From: Huber, Jack
Sent: Thursday, February 23, 2012 3:16 PM
To: Martone, Kim; Riggott, Kaila; Carney, Brian; Yandow, Joanne
Cc: Roberts, Karen; Lazarus, Steven
Subject: YNHH Completeness Letter for Bed Addition Request

Dear all – Forgot the inclusion of the two "cost effectiveness" questions. They have been added to the end of the letter. Thanks, Jack

Ps: Kim – Question #14 corrected.

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Office of Health Care Access

February 24, 2012 VIA FAX & EMAIL ONLY

Ms. Jean Ahn
System Director
Yale-New Haven Hospital
Planning & Business Development Office
20 York Street (Howe 3)
New Haven, CT 06504

RE: Certificate of Need Application; Docket Number: 12-31745-CON
Yale-New Haven Hospital
Proposal to Increase the Hospital's Licensed Bed Count (less Bassinets) by 70, from 896 to 966 Licensed Inpatient Hospital Beds

Dear Ms. Ahn:

On January 26, 2012, the Office of Health Care Access ("OHCA") received your initial Certificate of Need ("CON") application filing proposing to increase Yale-New Haven Hospital's ("YNHH's" or "Hospital's") licensed bed count by 70, from 896 to 966 licensed inpatient hospital beds, at a total capital expenditure of $1,438,919.

OHCA has reviewed the CON application and requests the following additional information pursuant to General Statutes §19a-639a(c):

Project Description – page 13

1. With respect to the proposed request, YNHH has indicated that "This proposal is an interim step to a longer term plan to develop additional inpatient capacity at YNHH in order to meet current inpatient demand as well as anticipated increases in demand."

   Provide the Hospital's longer term plan that addresses the institution's annual inpatient bed requirements from the current fiscal year to three fiscal years beyond the complete integration of the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael with Yale-New Haven Hospital accounting for all inpatient beds by service by campus location.

2. The Hospital states that "YNHH is proposing to establish these 70 beds on three "retired" patient care units in its East Pavilion. Although not ideal, the East Pavilion offers the only available space for a temporary location of inpatient beds." Please address the following:

   a. Describe the condition of the three East Pavilion floors earmarked for inpatient use.
   b. Explain why the three East Pavilion floors were retired from providing inpatient services.
   c. What are the current drawbacks for the utilization of this space for inpatient services?
   d. Are inpatient services currently being offered on other floors in the East Pavilion?
   e. If inpatient services are currently being offered on other floors in the East Pavilion, identify these services and describe whether any of these services operate with existing waivers or known deficiencies to the CT Public Health Code.
   f. What is the likelihood once these floors become operational that they will be able to accommodate inpatient service within the East Pavilion for a longer period of time?
   g. What other hospital services are currently located in the East Pavilion?
   h. What is the Hospital's plan for future use of the East Pavilion between now and three fiscal years beyond the complete integration of the Saint Raphael Healthcare System, Inc. and Hospital of Saint Raphael with Yale-New Haven Hospital?
   i. What is YNHH's plan for the permanent placement of these beds and the timeline to make all 70 operational in their permanent location?

3. The Hospital indicates that "These beds will have to be phased in over the current fiscal year (2012) and FY 2013 in order to be able to recruit staff and equip the East Pavilion units. In addition, one East Pavilion unit is temporarily occupied by the Emergency Department while renovations are completed (projected to be complete in December 2012)." Please address the following:

   a. Describe the nature of the building work required to convert the East Pavilion space for inpatient service use.
   b. Provide a timetable that relates to the preparation and introduction of each new inpatient unit resulting from the proposal.
   c. Describe specifically how the procurement of trained licensed personnel will affect the opening of each new inpatient unit.
   d. Describe specifically how the completion of the Emergency Room expansion project will affect the opening of the inpatient units associated with this currently utilized space.
   e. How will the plan for permanent placement of the requested 70 licensed beds be affected if regulatory approval of YNNH's application to acquire the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael is granted?
   f. How will the plan for permanent placement of the requested 70 licensed beds be affected if regulatory approval of YNNH's application to acquire the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael **is not granted**?

4. With respect to the proposed request, please address the following:

   a. Provide the excerpt from the minutes of the Hospital Board of Director's meeting that verifies the Board voted favorably to move forward with the proposal to add 70 inpatient beds.
   b. Describe the efforts the Hospital made in seeking community input for the proposal.
   c. Describe how the proposal reflects the input received from the community.
   d. Discuss the interaction YNHH has had with the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael with regard to the proposal for 70 additional beds to the YNHH campus.

Actual Hospital and Medical-Surgical Inpatient Demand – pages 14 through 16

5. On the days when bed occupancy exceeded 85% (according to the midnight census), provide the total number of inpatients and a breakdown of those patients receiving elective and non-elective procedures.

6. Has YNHH attempted to modify the scheduling process of elective procedures requiring an inpatient stay to help better manage bed occupancy rates? Provide details of steps taken.

7. Provide evidence from independent sources that substantiates the Hospital's assertion that "80% occupancy is generally acknowledged as an optimal level for efficient operation of inpatient services, effective patient flow, and allows a hospital to best incorporate urgent admissions and acute transfers from other institutions."

Current & Proposed Bed Count – pages 16 & 17

8. Please provide an itemization of the Hospital's current and proposed staffed and licensed bed configuration by service **without the proposed HSR/SRHS acquisition** in the following format:

Table 1: Current and Proposed Staffed and Licensed Hospital Beds w/o the Acquisition

General Medical/Surgical	Current Staffed Beds	Proposed Staffed Beds	Current Licensed Beds	Proposed Licensed Beds
Medical				
Surgical				
Intensive Care Unit				
Cardiac Care Unit				
Exempt Psychiatric				
Exempt Rehabilitation				
Other:				
Specialty Services				
Maternity				

Newborn				
Psychiatric				
Oncology				
Other:				
Total Bed Count				

9. Please provide an itemization of the Hospital's current and proposed staffed and licensed bed configuration by service **with the proposed SRHS/HSR acquisition** in the following format:

Table 2: Current and Proposed Staffed and Licensed Hospital Beds with the Acquisition

General Medical/Surgical	Current Staffed Beds	Proposed Staffed Beds	Current Licensed Beds	Proposed Licensed Beds
Medical				
Surgical				
Intensive Care Unit				
Cardiac Care Unit				
Exempt Psychiatric				
Exempt Rehabilitation				
Other:				
Specialty Services				
Maternity				
Newborn				
Psychiatric				
Oncology				
Other:				
Total Bed Count				

Clear Public Need – Volume Growth - pages 17 through 25

10. Provide any available evidence that substantiates the Hospital's assertion that "due to the lack of general medical/surgical beds, transfers out of an ICU to a regular bed can be delayed, thus impacting ICU bed availability."

11. The Hospital indicates the following: Because of the large and frequent fluctuations in census, pediatrics and obstetrics are two departments that experience significant fluctuations in occupancy. As these areas must maintain a lower average occupancy level in order to accommodate the spikes in census, 75% is indicated as the target occupancy level for each service. Provide any available evidence that substantiates this Hospital assertion.

12. For fiscal years 2009, 2010, 2011 and the first four months of FY 2012, please provide the daily total inpatient census numbers for each day by month and year in the following format:

Table 3: Daily Total Inpatient Census Numbers

Daily Total Inpatient Census Numbers	FY 2009 Actual		FY 2010 Actual		FY 2011 Actual		FY 2012 Actual 1st 4 mos.
October 1							
2							
3....							
31							
November 1							
2							
3...							
30							
December 1							
2							
3.....							
31							
Etc., with the Remaining Months & Days in the Fiscal Year							

Note: Each day with a given FY is to be reflected as a separate line in the table.

13. For fiscal years 2009, 2010, 2011 and the first four months of FY 2012, please provide the daily medical-surgical inpatient census numbers for each day by month and year in the following format:

Table 4: Daily Medical-Surgical Inpatient Census Numbers

Daily Medical-Surgical Inpatient Census Numbers	FY 2009 Actual		FY 2010 Actual		FY 2011 Actual		FY 2012 Actual 1st 4 mos.
October 1							
2							
3....							
31							
November 1							
2							
3...							
30							
December 1							
2							
3.....							
31							
Etc., with the Remaining Months & Days in the Fiscal Year							

Note: Each day with a given FY is to be reflected as a separate line in the table.

Physician Recruitment – page 25

14. What are the Hospital's current programmatic objectives with respect to attracting additional physicians to its medical staff?

15. Certain physician specialties, whose recruitment has or is expected to result in increasing incremental service volume, have been identified with an asterisk in Table V. What determines whether a recently recruited physician or an anticipated physician recruit will effectuate incremental service volume increases?

16. With regard to Table V., Recent and Planned Physician Recruitment, please recast the table to provide the following additional information:

    a. For each specialty in Column 1, identify the individual number of physicians in Columns 2 and 3 that are considered clinical physician leaders whose specialized capabilities, expertise, and advanced skills have expanded the clinical services available at the Hospital.
    b. For each specialty in Column 1, identify the individual number of physicians in Columns 2 and 3 that are considered in the category of replenishing the medical staff complement of the Hospital due to physicians leaving the Hospital system.

24/7 Y Access Line – pages 26 & 27

17. How does the 24/7 Y Access Line facilitate the direct admission and inter-facility transfer of acutely ill patients from physician offices, smaller community hospitals, and other healthcare facilities to YNHH?

18. How does the program provide referring physicians with ongoing access and communication regarding their patients' conditions?

19. Provide data as summarized in Table VI. Access Line to YNHH by Service Line for the first five months of FY 2012, October 1, 2011 through February 29, 2012, and annualized for FY 2012.

20. Provide a projection of the Hospital's inpatient transferred cases (i.e. TOTAL Line for the sum of all services) for FYs 2013, 2014 and 2015.

21. The Hospital states "In the first full year of the Y Access Line implementation, YNHH received referrals from 45 different Connecticut health care facilities outside the Yale-New Haven Delivery Network, 53 U.S. hospitals in 13 states outside of Connecticut and 7 hospitals outside the continental U.S. including Puerto Rico and 4 foreign countries." Identify by the four aforementioned categories the health care facilities that have referred/transferred to the Hospital in year 1 of the Y Access Line.

Performance Improvements – pages 28 through 30

22. In 2008 the Hospital embarked on its Safe Patient Flow Initiative as its performance improvement solution to address volume growth, overcrowding and limited space and staff resources. Identify and discuss whether YNHH plans to undertake any other performance improvement initiatives prior to FY 2016 to address the aforementioned problems.

Proposal's Effect on Existing Providers – page 35

23. The Hospital indicates that "Given that the majority of patients seek care at YNHH or physicians refer patients to YNHH for its specialized tertiary and quaternary services, minimal effect is expected on other existing providers." Explain why the Hospital feels that the expansion of 70 inpatient beds would impact only tertiary and quaternary services and not primary and secondary hospital services.

Quality Measures – pages 43 & 44

24. YNHH retained Helicon Consulting, Inc. to conduct a bed capacity and stacking study. Submit a list of all key professional, administrative, and analytical personnel from Helicon Consulting related to the development of the bed study. Attach a copy of their Curriculum Vitae.

25. The Hospital states that "The YNHH Trauma Department relies on an 80% or lower bed occupancy level to accept transfers because the department will not decline a transfer from a lower level trauma center based on bed availability. When bed occupancy is too high to accommodate new trauma patients or assign them to the appropriate beds, they are triaged and prioritized to accommodate the critical patients by temporarily moving the most stable patients to rooms with beds that are not fully appropriate for that patient's condition. In order to do this, there must be acute bed availability and flexibility. Quantify the number of occasions that a stable patient has been relocated to accommodate new trauma patients annually for the last three fiscal years and year-to-date for 2012 (i.e. October 1, 2011 through January 31, 2012).

Financial Information – pages 44 & 45

26. Provide a short description of the costs contained in each of the following capital expenditure categories:

    a. Medical Equipment Purchases
    b. Non-Medical Equipment Purchases
    c. Construction/Renovation
    d. Other non Construction (Specify)

Type of Financing – page 45

27. Explain how funded depreciation will cover 80% of the proposal's capital expenditure.

28. How will YNNH's proposed acquisition of the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael affect the funding of the proposed bed addition project?

Revenue, Expense and Volume Projections – pages 46 and 221

29. Explain why the addition of the remaining 42 inpatient beds in FY 2013 results in a projected $2,599,000 incremental loss when incremental gains are projected in FY 2012 (the fiscal year in which the first 28 inpatient beds go on-line), FY 2014 and FY 2015.

Proposal's Cost Effectiveness – page 47

30. How does this proposal to expand inpatient capacity translate to the Hospital's ability to provide services in a more cost effective manner?

In responding to the questions contained in this letter, please repeat each question before providing your response. **Paginate and date** your response (i.e., each page in its entirety). Information filed after the initial CON application submission (i.e. completeness response letter, prefile testimony, late file submissions and the like) must be numbered sequentially from the Applicant's document preceding it. Please reference "Docket Number: 12-31745-CON." Submit one (1) original and five (5) hard copies of your response. In addition, please submit a scanned copy of your response including all attachments on CD in an Adobe format (.pdf) and in an MS Word format.

If you have any questions concerning this letter, please feel free to contact me or Brian A. Carney at (860) 418-7001.

Sincerely,

Jack A. Huber
Health Care Analyst

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2806
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TIME USE	04'18
PAGES SENT	9
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STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
OFFICE OF HEALTH CARE ACCESS

FAX SHEET

TO: JEAN AHN

FAX: (203) 688-5013

AGENCY: YALE-NEW HAVEN HOSPITAL

FROM: JACK HUBER

DATE: 2/24/2012 **Time:** ~3:00 pm

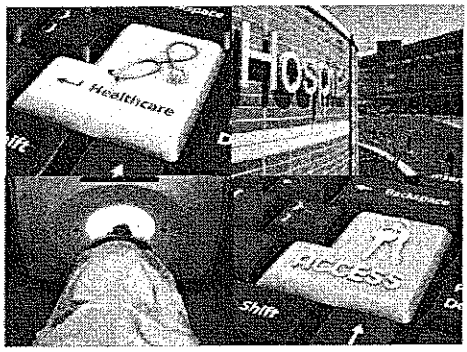
NUMBER OF PAGES: 9
(including transmittal sheet)

Comments: Transmitted: YNHH's Inpatient Bed Addition Project
Completeness Letter
DN: 12-31745-CON

PLEASE PHONE Jack A. Huber at (860) 418-7069
IF THERE ARE ANY TRANSMISSION PROBLEMS.

OHCA Main
Certificate of Need
Consumer Assistance Process
Facilities Plan
OHCA Forms
Freedom of Information
Hospital Financial Data
Laws and Regulations
OHCA Publications
Glossary
Contact OHCA
Legal Notices and Status Reports

TRAINConnecticut
H.I.P.A.A NOTICE
HealthCare Reform
Check the Calendar
Receive Updates by E-mail. Sign -Up for E-alerts
CT Alert
WE CAN'T ALERT YOU IF WE CAN'T REACH YOU



Welcome to the Office of Health Care Access. Our Mission is to ensure that the citizens of Connecticut have access to a quality health care delivery system.

CT State-Wide Health Care Facilities and Services Plan Advisory Body

Outpatient Data Work Group

News:

- **NEW !!!** On February 17, 2012 OHCA received the CON Application of Community Mental Health Affiliates, Inc. (CMHA) for the transfer of ownership of CMHA from Central Connecticut Health Alliance to CMHA. Filed under Docket No.: 12-31750-CON.
- **NEW !!!** On February 24, 2012, OHCA Deemed Complete the CON application of WBC Connecticut East, LLC to establish a Partial Hospital and Intensive outpatient program for the treatment of adults and adolescents with Eating Disorders in South Windsor, filed under Docket No.: 11-31731-CON.
- **NEW !!!** On February 23, 2012, OHCA deemed Complete the CON Application of MCI Healthcare LLC d/b/a Mountainside Treatment Center for the increase of licensed bed capacity by 16, filed under Docket No.: 11-31734-CON.
- **NEW !!!** On February 9, 2012 OHCA received the CON Application of Yale-New Haven Hospital and Saint Raphael Healthcare System d/b/a Hospital of Saint Raphael, Inc. for Yale-New Haven Hospital to acquire ownership of Saint Raphael Healthcare System, Inc. and certain associated assets. Filed under Docket No.: 12-31747-CON.
- On January 30, 2012, OHCA deemed Complete the CON Application of Eastern Connecticut Health Network for the acquisition of four MRI Scanners located in the towns of Enfield, Glastonbury, Middletown and South Windsor, as filed under Docket Number 11-31737-CON.
- On January 27, 2012 OHCA received the CON Application for Yale-New Haven Hospital's proposal to increase its licensed general hospital bed count by 70, from 896 to 966 licensed beds, at a total capital expenditure of $1,438,919, Docket Number 12-31745-CON.
- On January 17, 2012, OHCA deemed Complete the CON Application of Lawrence & Memorial Hospital for the acquisition of a PET-CT scanner to be located at its L&M Diagnostic Imaging at Crossroads in Waterford, as filed under Docket Number 11-31730-CON.
- On January 6, 2012, OHCA deemed Complete the CON Application of Eastern Connecticut Health Network and Manchester Memorial Hospital for the transfer of ownership of Evergreen Imaging Center to an affiliate of ECHN, as filed under Docket Number 11-31736-CON.
- On December 09, 2011 OHCA received the CON Application of Eastern Connecticut Health Network, Inc. and Mandell & Blau, M.D.s, P.C. for the Acquisition by Eastern Connecticut Health Network, Inc. of the Open MRI scanners currently operated by Mandell & Blau, M.D.'s P.C. under Docket No.: 11-31737-CON.

April 2, 2012

Ms. Kimberly Martone
Director of Operations
Office of Healthcare Access
410 Capitol Avenue
MS #13HCA
P.O. Box 340308
Hartford, CT 06106

Re: Yale-New Haven Hospital (YNHH)
Proposal to Increase the Hospital's Licensed Bed Count (less Bassinets) by 70
Docket Number: 12-31745-CON

Dear Ms. Martone:

Enclosed please find the original, five (5) hard copies and an electronic copy on CD of the Certificate of Need (CON) application for YNHH's proposal to increase its licensed beds by 70 beds. YNHH continues to experience high occupancy and the need for these 70 additional beds remains paramount. We have tried to provide comprehensive answers to OHCA's questions and hope they meet with your approval and the application can be deemed complete following your review.

Please do not hesitate to contact me with any questions or concerns. I can be reached at (203) 688-2609.

Thank you for your time and support of this project.

Sincerely,

Jean Ahn
Director, Planning & Business Development

Enclosures

Yale-New Haven Hospital

Proposal to Increase the Hospital's Licensed Bed Count (less Bassinets) by 70

Docket Number: 12-31745-CON

Responses to Completeness Questions

April 3, 2012

Yale-New Haven Hospital

Certificate of Need Application
Docket Number: 12-31745-CON
Proposal to Increase the Hospital's Licensed Bed Count (less Bassinets)
By 70, from 874 to 944 Licensed Inpatient Hospital Beds (New Haven Campus)

Responses to Completeness Questions
Table of Contents

PRIVILEGED AND CONFIDENTIAL
ATTORNEY-CLIENT COMMUNICATION

Yale-New Haven Hospital

Certificate of Need Application
Docket Number: 12-31745-CON
Proposal to Increase the Hospital's Licensed Bed Count (less Bassinets)
By 70, from 874 to 944 Licensed Inpatient Hospital Beds (New Haven Campus)

Responses to Completeness Questions

Project Description – page 13

1. With respect to the proposed request, YNHH has indicated that "This proposal is an interim step to a longer term plan to develop additional inpatient capacity at YNHH in order to meet current inpatient demand as well as anticipated increases in demand."

   Provide the Hospital's longer term plan that addresses the institution's annual inpatient bed requirements from the current fiscal year to three fiscal years beyond the complete integration of the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael with Yale-New Haven Hospital accounting for all inpatient beds by service by campus location.

   Response

   YNHH has developed a preliminary plan which includes annual inpatient bed requirements up to three fiscal years beyond the complete integration with Saint Raphael's. Although the clinical vision for the HSR campus has largely been set, specific beds by service by campus have not yet been finalized. These efforts will be ongoing over the next several months. In order to allow for adequate planning relative to clinical integration, no changes to beds and clinical services are planned during the first 12 months post closing.

   The table below provides a high level overview of annual inpatient bed requirements for YNHH, assuming the acquisition of HSR, from FY 2012 through FY 2016 (3 years beyond the complete integration).

Projected Combined ADC and Bed Need

	FY 2012		FY 2013		FY 2014		FY 2015		FY 2016	
	ADC	Bed Need	ADC	Bed Need	ADC	Bed Need	ADC	Bed Need	ADC	Bed Need
Adult Medical/Surgical Beds	831	1,040	841.5	1,053	852.7	1,067	864.3	1,082	875.4	1,096
Pediatric Beds	66.3	89	67.7	90	69.1	92	70.6	94	72	96
Acute Rehab Beds	11	14	11	14	11	14	11	14	11	14
Psychiatric Beds	123.1	137	124.5	138	126	140	127.4	141	128.8	143
Maternity Beds	50.2	67	50.7	68	51.2	69	51.7	69	52.2	70
NBSCU - Critical Care	46.6	62	47.4	63	48.3	64	49.2	66	50.1	67
Newborn Bassinets	35	46	35.4	47	36	48	36.6	49	37.2	50
Total		**1,455**		**1,473**		**1,494**		**1,515**		**1,536**

***Bed requirements are based on target occupancy levels of 80% for medicine/surgery and rehabilitation, 90% for psychiatry, 75% for pediatrics, maternity and bassinets.**

It is important to note that the 70 beds being requested in this CON application are <u>required with or without the HSR transaction</u> and as shown on applicant page 36 are needed to reduce YNHH's current occupancy which exceeded 85% in FY 2011. These 70 beds will provide some short term relief to YNHH's existing capacity issues and reduce occupancy to 82% in FY 2013 and 83.6% in FY 2014.

2. The Hospital states that "YNHH is proposing to establish these 70 beds on three "retired" patient care units in its East Pavilion. Although not ideal, the East Pavilion offers the only available space for a temporary location of inpatient beds." Please address the following:

   a. Describe the condition of the three East Pavilion floors earmarked for inpatient use.

   <u>Response</u>

   The three units of the East Pavilion are in satisfactory condition. While the East Pavilion was originally built in 1953, renovations have occurred over the years to improve the space and provide, as much as possible, a high quality clinical environment for patients and staff. Each of the three units has had improvements made to the floor layout, cosmetic appearance, electronic infrastructure and workspaces to varying degrees. Some additional minor renovations are required and are described in more detail in response to question 3a. All units meet licensing and accreditation standards.

   b. Explain why the three East Pavilion floors were retired from providing inpatient services.

   <u>Response</u>

   As part of the planning for the Smilow Cancer Hospital (Smilow), YNHH had planned to retire the three East Pavilion floors once Smilow opened. Based on inpatient volume projections prepared at that time, the beds established in Smilow along with those elsewhere in the institution were thought to be sufficient to meet inpatient demand. However, inpatient discharges and census have exceeded those projections, as described on Applicant pages 21-24 of the original CON submission. As a result, these three targeted units are the last of the remaining East Pavilion

units that can be used for inpatient care and will have to be re-opened in order to provide space for 63 of the 70 requested beds.

c. What are the current drawbacks for the utilization of this space for inpatient services?
Response
As previously stated, the East Pavilion is almost 60 years old. Although the space meets all accreditation and regulatory requirements and patient safety is not jeopardized, there are numerous drawbacks associated with the space and providing contemporary inpatient care. In particular, the patient rooms in the East Pavilion are small and there are very few private rooms. Family oriented care has become the standard in hospitals across the country. A family member will often spend the night in the patient's room and patients may have multiple visitors during the day. It is very difficult to accommodate patients, associated bedside equipment and family members in the small rooms.

The need for private rooms has also grown over the years, in large part due to infection control needs, but also as part of family oriented care and patient privacy needs. Patients with drug-resistant organisms require a private room or must be cohorted with like colonized/infected patients. Private rooms are also used for patients who have a contagious condition such as chicken pox or influenza. The lack of private rooms in the East Pavilion contributes to the daily challenges YNHH faces in meeting its inpatient demand.

Despite these drawbacks to the East Pavilion, the building currently includes 8 inpatient units and until this building can be replaced it will continue to be required to meet YNHH's inpatient demand.

d. Are inpatient services currently being offered on other floors in the East Pavilion?
Response
Inpatient services are currently provided on eight units in the East Pavilion. Please refer to the response to question 2e for additional detail.

e. If inpatient services are currently being offered on other floors in the East Pavilion, identify these services and describe whether any of these services operate with existing waivers or known deficiencies to the CT Public Health Code.
Response
Inpatient services are provided on 8 units in the East Pavilion. General internal medicine and orthopedic services are provided to patients in the East Pavilion. Other clinical services such as neurology may be provided in the East Pavilion if the neurology floor is full.

The diagram below provides each floor in the building and the services provided. Inpatient services are provided on floors 4 through 10, excluding 8. The clinical support services located on several floors exist to support the clinical care provided in the building.

East Pavilion Floor	Services Provided (as of 3/2012)	Additions if 70 Beds CON Approved
Basement	• Food/Nutrition Offices, Kitchen • Environmental Services • Information Technology • Patient Transport Services • EP Loading Dock • Materials Management Storage	
1	• OR Preadmission Testing • Admitting • Patient Financial Services • Conference Rooms • Cafeteria	
2	• Surgical Pathology Physician Offices • Surgical Pathology • Nuclear Cardiology Clinical Space • Diagnostic Radiology Reception • Diagnostic Radiology Resident/Physician Spaces • Mechanical Space	
3	• Ambulatory Operating Rooms • Recovery Room • Express Admission for ORs • Operating Room Waiting & Consult Space	
4	• Heart & Vascular Interventional Recovery • Adult Emergency Department Section E (until ED renovation complete 12/31/12) • On-call Suite • Medicine Unit (4-7/8) – 25 beds	Medicine Unit 4-6 opened – 14 beds (in space where adult ED Section E is currently in operation)
5	• Medicine Unit (EP 5-5/6)- 28 beds • Observation Beds (5-7/8) • Conference Space • Assoc. Chief of Medicine Offices • EP Medical Director Office • On-Call Suite	Medicine Unit opened (EP 5-7/8) – 26 beds (Observation beds relocated)
6	• Medicine Unit (ACE- Acute Care of Elderly) – EP 6-5/6 – 22 beds • On-Call Suite • Off Shift Executive Offices • Surgical Residency Space	Medicine Unit (EP 6-7/8) – 23 beds (closed unit re-opened)
7	• Medicine Unit (EP 7-5/6) – 27 beds • Orthopedic Surgery Unit (EP 7-7/8) • Respiratory Therapy Satellite • On-Call Suite	
8	• Acute Dialysis Center • Respiratory Therapy	

East Pavilion Floor	Services Provided (as of 3/2012)	Additions if 70 Beds CON Approved
	Administration, Storage, Classrooms • Rehabilitation Therapy Offices, Clinical Space • Hospitalist Offices/Work Spaces • Centralized Staffing & Scheduling • Simulation Center	
9	• Medicine Unit (EP 9-5/6) – 29 beds • Medicine Unit (EP 9-7/8) – 34 beds • Social Work Office • Care Coordination Office • Food & Nutrition Office • Conference Space • Medical Resident Workspace	
10	• General Clinical Research Center (EP 10-5/6) – 2 beds • Medical Unit (EP 10-7/8) – 26 beds • Social Work Administration • Elder Life Program • Conference Space • Bone Density	

There are no known deficiencies or waivers with respect to the CT Public Health Code. If significant renovations were to be performed in the East Pavilion, then current building codes would apply. It should be noted that if the building were to be renovated and would have to meet current building codes, approximately 50% of the existing beds would have to be eliminated. Significant renovation of this building is not an option to obtain additional inpatient bed capacity due to cost and limited yield on beds.

f. What is the likelihood once these floors become operational that they will be able to accommodate inpatient service within the East Pavilion for a longer period of time?

Response

The East Pavilion will be required for the provision of inpatient care for the next several years. As noted above, there are 223 inpatient beds currently in operation and 63 will be added with approval of this CON application. Even if YNHH receives approval for the acquisition of the Saint Raphael Healthcare System and the Hospital of Saint Raphael, the East Pavilion will have to remain in service for the foreseeable future.

g. What other hospital services are currently located in the East Pavilion?

Response

Please refer to the summary table provided in response to question 2e.

h. What is the Hospital's plan for future use of the East Pavilion between now and three fiscal years beyond the complete integration of the Saint Raphael Healthcare System, Inc. and Hospital of Saint Raphael with Yale-New Haven Hospital?

Response

Based on projected inpatient volume, YNHH will have to continue to operate the East Pavilion between now and three fiscal years beyond the complete integration of the SHRS and HSR.

i. What is YNHH's plan for the permanent placement of these beds and the timeline to make all 70 operational in their permanent location?

Response

For the next several years, the location of the 70 additional beds will remain unchanged. At this point in time, there are no alternative locations identified for these 70 beds.

3. The Hospital indicates that "These beds will have to be phased in over the current fiscal year (2012) and FY 2013 in order to be able to recruit staff and equip the East Pavilion units. In addition, one East Pavilion unit is temporarily occupied by the Emergency Department while renovations are completed (projected to be complete in December 2012)." Please address the following:

a. Describe the nature of the building work required to convert the East Pavilion space for inpatient service use.

Response

There are three East Pavilion units impacted by the proposal. East Pavilion 4-6 is currently being used as swing space for the Emergency Department (ED) while the ED renovations are completed. Once the ED vacates this space at the end of 2012, it will be used for 14 of the 70 additional beds. The building work required to establish these 14 beds consists primarily of general "clean-up" such as patching walls, repainting, stripping floors and re-waxing. East Pavilion 5-7&8 is currently being used for observation beds. This unit was recently refurbished so only minor cleaning and painting will be required. Twenty-six (26) of the 70 beds will be placed on this unit. East Pavilion 6-7&8 is currently closed. This unit will require more building work including extensive patching and painting. Additionally, the unit will require furniture and equipment such as new beds, a new nurse call system and new monitoring equipment. Minor equipment such as waste baskets, sharps containers, chairs, etc. are also required. Once renovations are complete and equipment is in place, this unit will house 23 beds.

The last unit impacted by this proposal is South Pavilion 7-1 (intensive care unit) which was recently renovated. An additional 7 beds will be added to this unit and no additional building work is required.

b. Provide a timetable that relates to the preparation and introduction of each new inpatient unit resulting from the proposal.

Response

The table below summarizes the timetable relating to the preparation and introduction of each new inpatient unit resulting from the proposal.

Unit	Beds Established	Timing to Open
East Pavilion 6-7&8	23	July 2012 (FY 12)
East Pavilion 5-7&8	26	January 2013 (FY 13)
East Pavilion 4-6	14	January 2013 (FY 13)
South Pavilion 7-1	7	February 2013 (FY 13)
TOTAL	70	

c. Describe specifically how the procurement of trained licensed personnel will affect the opening of each new inpatient unit.

Response

In order to open the new inpatient units, nursing staff will have to be recruited and hired. Although YNHH, as a Nursing Magnet Organization, has had tremendous success recruiting nursing staff, identifying and hiring staff generally requires at least two months for new graduates and can take as long as 9 months to recruit experienced critical care nurses. If necessary, agency nurses will be hired during recruitment time frames. Advanced practice nurses and physician assistants also have to be recruited to support the added intensive care beds (South Pavilion 7-1). Recruitment of these staff can take 6-9 months with three months required for medical staff credentialing. Therefore, the ICU beds are not scheduled to open until February 2013. Preliminary efforts have been underway to recruit staff for EP 6-7 which could be opened this summer. Recruitment efforts for the additional two EP units would be initiated upon approval of this CON in order to be ready to open both units by the end of the calendar year.

YNHH is confident that based on the time schedule provided in response to question 3b, the hospital will be able to recruit sufficient nursing and other clinical staff.

d. Describe specifically how the completion of the Emergency Room expansion project will affect the opening of the inpatient units associated with this currently utilized space.

Response

As mentioned in response to question 2, the Emergency Department has been using the space on EP 4-6 while renovations are completed in the main ED area. The ED will vacate the EP space by December 2012 and then the unit will be cleaned and receive minor renovations as previously described and be available for inpatients within a few weeks.

e. How will the plan for permanent placement of the requested 70 licensed beds be affected if regulatory approval of YNNH's application to acquire the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael is granted?

Response

As previously stated, for the foreseeable future, the requested 70 beds will remain in the East Pavilion and South Pavilion locations identified with or without regulatory approval of YNHH's application to acquire the Saint Raphael HealthCare System, Inc. and the Hospital of Saint Raphael. At this time, there is no other location identified.

f. How will the plan for permanent placement of the requested 70 licensed beds be affected if regulatory approval of YNNH's application to acquire the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael **is not granted**?

Response

As previously stated, for the foreseeable future, the requested 70 beds will remain in the East Pavilion and South Pavilion locations identified with or without regulatory approval of YNHH's application to acquire the Saint Raphael HealthCare System, Inc. and the Hospital of Saint Raphael. At this time, there is no other location identified.

4. With respect to the proposed request, please address the following:

a. Provide the excerpt from the minutes of the Hospital Board of Director's meeting that verifies the Board voted favorably to move forward with the proposal to add 70 inpatient beds.

Response

A copy of the minutes of the Hospital Board of Director's meeting that verifies the Board voted favorably to move forward with the proposal to add 70 inpatient beds is provided in Attachment I.

b. Describe the efforts the Hospital made in seeking community input for the proposal.

Response

The Hospital has met with local community groups and elected officials over the course of the last several months to provide the community with information about current demand and existing patient census levels. During the course of these meetings, the Hospital outlined its plans to seek regulatory approval from the Office of Health Care Access for an additional 70 beds to specifically address this issue, in addition to our proposal to acquire the assets of the Hospital of Saint Raphael.

These sessions were held between April 1, 2011 and March 6, 2012 and included one-on-one meetings with nearly every member of New Haven's Board of Aldermen, and a majority of new members who were sworn-in following the results of the 2011 local election. In addition, the Hospital co-sponsored, along with the Hospital of Saint Raphael, a well attended meeting on December 13, 2011 for the New Haven delegation to the State General Assembly and met with members of the Connecticut Congressional delegation in Washington, DC on February, 14, 2012 and provided information about the current space constraints at YNHH and the need for additional beds. The need for these additional beds was outlined by YNHH's Chief Executive Officer.

Additionally, YNHH has met with neighborhood management teams (as listed in the table below), including Hill North, Hill South, West River, Dwight, Downtown/Worcester Square, Newhallville and Westville to discuss the need for the additional beds and to receive input directly from the community.

Community Group Name	Meeting Date
Dwight Central	4/15/11
Whalley-Edgewood-Beaver Hills	4/19/11
Hill South	4/20/11
West River Neighborhood Community Meeting	4/26/11
Hill North	5/10/11
Westville-West Hills	5/11/11
Downtown-Wooster Square	5/17/11
Newhallville	6/28/11

c. Describe how the proposal reflects the input received from the community.

Response

There was widespread recognition of YNHH's need for additional capacity at each of the meetings and feedback from the community about preserving access, which is a core component of YNHH's CON for 70 additional beds, was stressed.

d. Discuss the interaction YNHH has had with the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael with regard to the proposal for 70 additional beds to the YNHH campus.

Response

The SRHS/HSR is aware of YNHH's CON application for 70 additional beds to the YNHH campus as this had been discussed during meetings between the two organizations to plan for the potential future integration of the two hospitals. It is important to stress that this proposal has no bearing on the SRHS/HSR transaction and is being pursued to address current volume levels at YNHH. The 70 additional beds are required whether or not the SRHS/HSR transaction occurs.

Actual Hospital and Medical-Surgical Inpatient Demand – pages 14 through 16

5. On the days when bed occupancy exceeded 85% (according to the midnight census), provide the total number of inpatients and a breakdown of those patients receiving elective and non-elective procedures.

   Response

   YNHH does not collect or track data which would identify whether a patient is receiving an elective or non-elective procedure. Admissions are categorized as either emergency or elective/scheduled. Emergency admissions apply to patients admitted via the YNHH Emergency Department or direct admissions arriving in less than 24 hours. All other patients are categorized as scheduled or elective admissions. However, it should be noted that there are many patients who are scheduled admissions but have urgent medical needs (e.g., patient requiring excision of a brain tumor, procedure required for vascular blockage, etc.).

   In FY 2011, 73% of admissions were categorized as emergency and the remainder was categorized as elective/scheduled. This percentage increases to 76% if you exclude maternity, pediatrics and psychiatry.

6. Has YNHH attempted to modify the scheduling process of elective procedures requiring an inpatient stay to help better manage bed occupancy rates? Provide details of steps taken.

   Response

   Because more than 75% of YNHH's medical and surgical admissions are emergency admissions and many of those categorized as elective still have urgent medical or surgical needs, YNHH is very limited in its ability to modify the scheduling process of elective inpatient procedures to better manage bed occupancy.

   YNHH has expanded the hours of operation of the operating rooms, cardiac catheterization laboratory and interventional radiology to help facilitate booking elective procedures. For example, YNHH's operating room scheduling policy has been recently updated to more effectively manage block time, add on cases and increase utilization of the operating rooms on Saturdays. YNHH electively schedules all 44 operating rooms until 3:30 pm, 15 rooms until 6:00 pm and 4 rooms until 8:00 pm. Often, due to long cases and other factors which may extend the hours of operation, many operating rooms run later than 3:30 pm. The cardiac catheterization and interventional radiology laboratories now have staffing to operate until 8:00 pm which has increased elective capacity. Additional on-call teams have also been added to handle neuro/interventional radiology interventions and electrophysiology/cardiovascular interventions as well. If a physician requests weekend hours for an elective procedure, YNHH attempts to accommodate such requests.

7. Provide evidence from independent sources that substantiates the Hospital's assertion that "80% occupancy is generally acknowledged as an optimal level for efficient operation of inpatient services, effective patient flow, and allows a hospital to best incorporate urgent admissions and acute transfers from other institutions."

Response

As OHCA is aware from its efforts associated with the Acute Care Subcommittee of the State-Wide Health Care Facilities and Services Plan Advisory Body, there is no current national guideline on target occupancy levels. OHCA's Acute Care Subcommittee members conducted extensive research to identify supporting literature or guidelines and identified information from three states; South Carolina, North Carolina and Alabama that address occupancy planning standards. Each of these states utilize overall target occupancy levels below 80% as provided in the Applicant's original CON submission on pages 130-152. This information from three other states serves as supporting evidence for the Hospital's reference to 80% target occupancy, from independent sources.

The absence of current national or state-wide inpatient occupancy guidelines may be due in part to the extensive number of related factors which impact bed utilization. These include, but are not limited to, the size of facility, ability to flex with demand, surge capacity, patient mix, number of single rooms, gender and age differences and isolation needs. These factors were, in fact, part of the extensive discussions held by OHCA's Acute Care Subcommittee and are reflected in the subcommittee's minutes available on OHCA's website.

Additionally, YNHH has provided two letters from healthcare architectural firms, Heery International, Inc. and Cannon Design, which address the industry's target occupancy standards for hospitals utilized by healthcare architects.

Heery International, Inc. is a full-service architecture, interior design, engineering and construction management firm, with more than 100 healthcare clients and approximately $4 billion in healthcare projects that has designed hospital facilities throughout the United States. Heery International has provided a letter which addresses industry standards for target occupancy rates used to determine hospital bed need. Heery's letter includes 80% as the highest target occupancy and areas such as obstetrics, pediatric critical care, etc. have target occupancy rates as low as 70%. The letter also stresses that the target occupancy levels do flex based on institution efficiency and private/semi-private bed mix.

Cannon Design is a full service, international architecture and design firm. The firm has an extensive healthcare practice and has designed hospitals throughout the United States. Cannon Design has provided a letter which addresses industry standard occupancy rates utilized by clinical area for both private bed models and semi-private bed models. In the case of semi-private models, which accounts for the majority of YNHH's medical-surgical patient rooms, target occupancy levels for medical and

surgical beds do not exceed 75%. Obstetrics and pediatrics include occupancy levels between 60-75% for private bed models which is similar to YNHH's obstetrics and pediatric bed complement.

Please see Attachment II for copies of both the Heery and Cannon Design letters referenced above.

The variety of evidence referenced in this response clearly supports the Hospital's overall target occupancy of 80%.

Current & Proposed Bed Count – pages 16 & 17

8. Please provide an itemization of the Hospital's current and proposed staffed and licensed bed configuration by service **without the proposed HSR/SRHS acquisition** in the following format:

Response

Table 1 has been completed below. Please note that clinical areas included in the table below were revised to be consistent with YNHH's organization of departments/divisions and beds. In addition, there is no difference between staffed and licensed beds since YNHH will continue to operate all of its licensed beds. As OHCA is aware, licensed bed allocation is not restricted by the hospital's acute care license. The bed allocation provided in the table below is subject to change based on clinical needs. Proposed beds assume OHCA approval of the 70 beds requested in this CON application.

Table 1: Current and Proposed Staffed and Licensed Hospital Beds w/o the Acquisition

General Medical/Surgical*	Current Staffed Beds	Proposed Staffed Beds	Current Licensed Beds	Proposed Licensed Beds
Heart & Vascular(1)	97	97	97	97
Internal Medicine(1)	305	368	305	368
Neuroscience(1)	40	47	40	47
GYN	28	28	28	28
Surgery(1)	140	140	140	140
Orthopedics	30	30	30	30
Specialty Services				
Maternity	56	56	56	56
Psychiatric	73	73	73	73
Pediatrics(1)**	105	105	105	105
Total Bed Count	**874**	**944**	**874**	**944**
Newborn (Bassinets)	92	92	92	92
Total Beds & Bassinets	**966**	**1,036**	**966**	**1,036**

Source: YNHH Financial Planning

Notes:

(1) Includes critical care beds as follows: 32 for Heart & Vascular, 40 for Medicine, 14 for Neurosciences and 21 for surgery
**Table has been revised to reflect where the Med/Surg beds are located.*
*** Includes child psychiatry*

9. Please provide an itemization of the Hospital's current and proposed staffed and licensed bed configuration by service **with the proposed SRHS/HSR acquisition** in the following format:

Response

Please refer to the response to question 1. Since the specific beds by service by campus have not yet been identified, the following table represents YNHH's bed allocation as presented in response to question 8 above and the current bed allocation at HSR. This allocation is subject to change.

In addition, due to renovations made on the HSR campus, 27 of its 511 beds are currently not operational. It is planned that 15 of the 27 beds can be made operational in the short term and therefore are reflected in the proposed staffed and licensed bed counts for the HSR campus in the table below. The remaining 12 beds will be established at some point in the future, once more detailed plans for their specific location can be determined. HSR's current staffed beds reflect average daily census and two closed units.

All nursing units at YNHH are and will remain fully open.

Bed categorization differs between HSR and YNHH and has been reflected in the table below. As OHCA is aware, licensed bed allocation is not restricted by the hospital's acute care license. The bed allocation provided in the table below for HSR is based on how the units have been historically used (e.g., medicine vs. surgery) and is subject to change based on clinical needs.

Table 2: Current and Proposed Staffed and Licensed Hospital Beds with the Acquisition

General Medical/ Surgical*	Current YNHH Staffed Beds	Proposed YNHH Staffed Beds	Current YNHH Licensed Beds	Proposed YNHH Licensed Beds	Current HSR Staffed Beds*	Proposed HSR Campus Staffed Beds**	Current HSR Licensed Beds*	Proposed HSR Campus Licensed Beds**
Heart & Vascular(1)	97	97	97	97				
Internal Medicine(1)	305	368	305	368				
Neuroscience(1)	40	47	40	47				
GYN	28	28	28	28				
Surgery(1)	140	140	140	140				
Orthopedics	30	30	30	30				
Medicine					84	137	124	137
Surgery					61	119	119	119
Telemetry					72	83	83	83

General Medical/ Surgical*	Current YNHH Staffed Beds	Proposed YNHH Staffed Beds	Current YNHH Licensed Beds	Proposed YNHH Licensed Beds	Current HSR Staffed Beds*	Proposed HSR Campus Staffed Beds**	Current HSR Licensed Beds*	Proposed HSR Campus Licensed Beds**
Critical Care					62	75	75	75
Specialty Services								
Rehab, Exempt					11	18	18	18
Maternity	56	56	56	56	16	22	22	22
Psychiatric	73	73	73	73	37	45	43	45
Pediatrics(1)**	105	105	105	105				
Total Bed Count	**874**	**944**	**874**	**944**	**343**	**499**	**484**	**499**
Newborn (Bassinets)***	92	92	92	92	22	22	22	22
Total Beds & Bassinets (in service)	**966**	**1,036**	**966**	**1,036**	**365**	**521**	**506**	**521**
Temporarily out of service							27	12
Licensed Beds			**966**	**1,036**			**511**	**511**

*** HSR staffed beds reflects 2 closed units and staffing levels at average daily census.**
****Although HSR is licensed for 511 beds, a total of 27 beds have been taken out of service in recent years due to renovations to nursing units, such as the creation of more private rooms and the construction of a rehabilitation gym next to the inpatient rehabilitation unit. At this time, it is estimated that 15 of those 27 beds could be brought back on-line in the short term with some renovations. Therefore, the proposed beds at the HSR campus, both staffed and licensed, reflect the addition of 15 beds to the current 484 operational beds for a total of 499. The remaining 12 licensed beds would be made operational at a later date once a location is determined.**
***** Please note that bassinets at HSR are not staffed separately since nursing staff care for mother and baby. For the purposes of this chart, all 22 bassinets have been listed, but the number in use varies.**

<u>Clear Public Need</u> – Volume Growth - pages 17 through 25

10. Provide any available evidence that substantiates the Hospital's assertion that "due to the lack of general medical/surgical beds, transfers out of an ICU to a regular bed can be delayed, thus impacting ICU bed availability."

    <u>Response</u>

    YNHH tracks the number of adult medical and surgical intensive care patients who are ready for transfer out of the ICU but waited more than 24 hours for a regular bed due to bed unavailability. Included in Attachment III are reports which provide the number of patients during a given week that waited beyond 24 hours to transfer out of either the Medical Intensive Care Unit (MICU) or Surgical Intensive Care Unit (SICU). This problem is most significant in the Medical ICU where on some weeks there were as many as 17 patients who had to wait more than 24 hours to transfer out of the Medical Intensive Care Unit.

11. The Hospital indicates the following: Because of the large and frequent fluctuations in census, pediatrics and obstetrics are two departments that experience significant fluctuations in occupancy. As these areas must maintain a lower average occupancy level in order to

accommodate the spikes in census, 75% is indicated as the target occupancy level for each service. Provide any available evidence that substantiates this Hospital assertion.

Response

Please refer to the response to question 7.

12. For fiscal years 2009, 2010, 2011 and the first four months of FY 2012, please provide the daily total inpatient census numbers for each day by month and year in the following format:

Response

Please refer to Attachment IV for midnight census statistics. As discussed on Applicant page 18 and 19, the midnight census does not reflect the true number of patients that flow in and out of YNHH each day. YNHH measures the contact census which can be higher than the midnight census by 20-40 patients at its peak.

Table 3: Daily Total Inpatient Census Numbers

Daily Total Inpatient Census Numbers	FY 2009 Actual		FY 2010 Actual		FY 2011 Actual		FY 2012 Actual 1st 4 mos.
October 1							
2							
3....							
31							
November 1							
2							
3...							
30							
December 1							
2							
3.....							
31							
Etc., with the Remaining Months & Days in the Fiscal Year							

Note: Each day with a given FY is to be reflected as a separate line in the table.

13. For fiscal years 2009, 2010, 2011 and the first four months of FY 2012, please provide the daily medical-surgical inpatient census numbers for each day by month and year in the following format:

Please refer to Attachment V for medical-surgical midnight census statistics. As discussed on Applicant page 18 and 19, the midnight census does not reflect the true number of patients that flow in and out of YNHH each day. YNHH measures the contact census which can be higher than the midnight census by 20-40 patients at its peak.

Table 4: Daily Medical-Surgical Inpatient Census Numbers

Daily Medical-Surgical Inpatient Census Numbers	FY 2009 Actual		FY 2010 Actual		FY 2011 Actual		FY 2012 Actual 1st 4 mos.
October 1							

2							
3....							
31							
November 1							
2							
3...							
30							
December 1							
2							
3.....							
31							
Etc., with the Remaining Months & Days in the Fiscal Year							

Note: Each day with a given FY is to be reflected as a separate line in the table.

Physician Recruitment – page 25

14. What are the Hospital's current programmatic objectives with respect to attracting additional physicians to its medical staff?

Response

Yale-New Haven Hospital's current programmatic objectives with respect to attracting additional physicians to its medical staff are focused on continuing to be a leading nationally recognized institution. The institution's five major service lines include Pediatrics, Oncology, Heart and Vascular, Neurosciences and Transplant. Physician recruitments to support and grow these five areas are major priorities. Additionally, medical staff are recruited to other clinical areas when physicians leave or retire. Many of the recruitments made to date have helped to support the rapid growth of the Y Access Line referrals and transfers.

There is an ongoing joint planning process, involving both the Hospital administration and clinical leadership that identifies recruitment needs and opportunities to enhance YNHH's clinical breadth, depth, safety and quality and national reputation. As was provided in the original CON application on Applicant pages 25 and 26, there have been a significant number of physician recruitments in recent years and many more planned. Responses to completeness questions 16a and 16b further demonstrate the significant increases to the medical staff with new physicians and physician leaders or those with specialized expertise and capabilities.

Medical staff recruitment plans are continually assessed and when appropriate, new areas may be targeted.

15. Certain physician specialties, whose recruitment have or are expected to result in increasing incremental service volume, have been identified with an asterisk in Table V. What determines whether a recently recruited physician or an anticipated physician recruit will effectuate incremental service volume increases?

Response

YNHH conducts a business planning process for the recruitment of physicians. During this process discussions are held with the physician candidate as well as clinical leadership to determine appropriate projected volume, both inpatient and outpatient. These volume projections reflect a number of factors including the specialty, areas of expertise, availability of services elsewhere in Connecticut, etc. It should be noted that even in the case of a physician recruitment that is being pursued to replace a physician leaving or retiring, this process is undertaken because often a newly recruited physician will bring somewhat different expertise and may generate incremental volume to the institution.

As a result of this process, as indicated previously, volume projections associated with new physicians have been developed and are incorporated into the organization's five year plan.

Those physicians with an asterisk in Table V on CON applicant pages 25 and 26 were identified as physicians who will have incremental inpatient cases.

16. With regard to Table V., Recent and Planned Physician Recruitment, please recast the table to provide the following additional information:

    a. For each specialty in Column 1, identify the individual number of physicians in Columns 2 and 3 that are considered clinical physician leaders whose specialized capabilities, expertise, and advanced skills have expanded the clinical services available at the Hospital.

    Response

    Table V has been provided below and for each specialty in Column 1, the individual number of physicians have been identified that are considered clinical physician leaders whose capabilities and expertise have expanded the clinical services available at the Hospital.

    Note: Numbers in red represent a physician leader (e.g., section/dept chief), others offer capabilities/expertise that have/will expand the clinical services available.

Table V. Recent and Planned Physician Recruitments – Revised for Physician Leaders & Replacement MDs

Department/Division	Recent Physician Recruitments (FY 2009, 2010, 2011)	Number of MDs- Physician Leaders/ Expertise	Planned Physician Recruitments (FY 2012-2015)	Number of MDs- Physician Leaders/ Expertise
Surgery	1 GI Surgeon 2 Breast Surgeons 2 ENTs 2 Plastic Surgeons 1 Urologist	 1 2 2 1	1 Plastic Surgeon* 5 Urologists	1 1, 3

Department/Division	Recent Physician Recruitments (FY 2009, 2010, 2011)	Number of MDs- Physician Leaders/ Expertise	Planned Physician Recruitments (FY 2012-2015)	Number of MDs- Physician Leaders/ Expertise
Orthopedics	3 Orthopedic Surgeons		1 Orthopedic Surgeon*	1
Neurosciences	1 Gen'l Neurology 2 MS 1 Neuromuscular 1 Pedi Neurosurgery 1 Gen'l Neurosurgery 3 Epilepsy 1 Neurovascular 1 Neuro-oncologist*	 1 1 1 1 1	2 Epilepsy* 2 Pedi Epilepsy 1 Neuro- Degenerative* 1 Stroke* 1 Neurointerventionalist 1 Neuro-ophthalmologist 1 Movement Disorders	1 2 1 1 1 1
Internal Medicine	2 Thoracic Intervention(* for 1) 1 GI 3 Infectious Disease	1, 1 1, 2		
Heart & Vascular	1 VAD* 1 Pedi Card Chief 1 Peripheral Vascular* 1 Heart Failure 1 CV Medicine 1 Noninvasive Surg* 1 Thoracic Surgery 1 Electrophysiology* 1 Interventional Radiology	1 1 1 1 1 	1 Vascular* 1 Heart Failure* 1 Pedi CT Surgery Chief*	
OB/GYN	2 OB/GYNs			
Pediatrics	1 Emergency Med 1 Nephrologist 3 Neonatologists 1 Pedi Surgery 1 Hematology 1 GI 1 Neurology			
Oncology	2 Thoracic* 2 Breast* 2 GI* 1 Hematology*		2 Urology-Oncology*	
Ophthalmology	1 Ophthalmologist			

b. For each specialty in Column 1, identify the individual number of physicians in Columns 2 and 3 that are considered in the category of replenishing the medical staff complement of the Hospital due to physicians leaving the Hospital system.

Response

The table below provides the physician recruitments as originally identified in Table V and also indicates the number and specialty of replacement medical staff due to physicians leaving the Hospital system. As is clear from the information below, the overwhelming majority of recent and planned recruitments represent incremental physicians, thus increasing the overall size of the medical staff and contributing to the recent and planned increase in demand.

Department/Division	Recent Physician Recruitments (FY 2009, 2010, 2011)	Replacement MDs	Planned Physician Recruitments (FY 2012-2015)	Replacement MDs
Surgery	1 GI Surgeon 2 Breast Surgeons 2 ENTs 2 Plastic Surgeons 1 Urologist	1 Breast Surgeon 1 ENT 1 Plastic Surgeon	1 Plastic Surgeon* 5 Urologists	None
Orthopedics	3 Orthopedic Surgeons	None	1 Orthopedic Surgeon*	None
Neurosciences	1 Gen'l Neurology 2 MS 1 Neuromuscular 1 Pedi Neurosurgery 1 Gen'l Neurosurgery 3 Epilepsy 1 Neurovascular 1 Neuro-oncologist*	2 MS 1 Epilepsy	2 Epilepsy* 2 Pedi Epilepsy 1 Neuro-Degenerative* 1 Stroke* 1 Neurointerventionalist 1 Neuro-ophthalmologist 1 Movement Disorders	None
Internal Medicine	2 Thoracic Intervention(* for 1) 1 GI 3 Infectious Disease	1 GI 1 Infectious Disease		

Department/Division	Recent Physician Recruitments (FY 2009, 2010, 2011)	Replacement MDs	Planned Physician Recruitments (FY 2012-2015)	Replacement MDs
Heart & Vascular	1 VAD* 1 Pedi Card Chief 1 Peripheral Vascular* 1 Heart Failure 1 CV Medicine 1 Noninvasive Surg* 1 Thoracic Surgery 1 Electrophysiology* 1 Interventional Radiology	None	1 Vascular* 1 Heart Failure* 1 Pedi CT Surgery Chief*	None
OB/GYN	2 OB/GYNs	None		
Pediatrics	1 Emergency Med 1 Nephrologist 3 Neonatologists 1 Pedi Surgery 1 Hematology 1 GI 1 Neurology	1 Neo-natologist		
Oncology	2 Thoracic* 2 Breast* 2 GI* 1 Hematology*	1 Hematologist	2 Urology-Oncology*	None
Ophthalmology	1 Ophthalmologist	None		
TOTAL Count	56 MDs	10 MDs	21 MDs	0

24/7 Y Access Line – pages 26 & 27

17. How does the 24/7 Y Access Line facilitate the direct admission and inter-facility transfer of acutely ill patients from physician offices, smaller community hospitals, and other healthcare facilities to YNHH?

Response

The Y Access Line is a single-source phone center exclusively for physicians who want to refer/transfer a patient to YNHH. Physicians can speak directly with a clinician who is ready to expedite their request for a transfer. There is a toll free number (888-964-4233) which is staffed 24 hours per day, 7 days per week by registered nurses and paramedics. Following a call, Y Access Line staff facilitates discussions with YNHH specialists and if a transfer is indicated, make all necessary arrangements.

Included in Attachment VI are an educational DVD and a Y Access Line brochure which are provided to referring physicians and institutions.

18. How does the program provide referring physicians with ongoing access and communication regarding their patients' conditions?

Response

Many patients referred to YNHH through the Y Access Line are referred by an emergency room physician at another hospital. However, in other cases, the referring physician may be a patient's primary care provider or regular specialist. YNHH's Y Access Line provides secure remote access to YNHH's electronic medical record for Y Access Line patients' primary care or specialist physician. In the case of a transfer from another hospital's emergency department, information is obtained from the patient/family once they arrive at YNHH regarding the identification of their regular physician. This physician is then contacted about the transfer and information is provided to allow the patient's regular physician access to ongoing information about their patient's condition via remote connection.

Please also refer to the DVD referenced in response to question 17.

19. Provide data as summarized in Table VI. Access Line to YNHH by Service Line for the first five months of FY 2012, October 1, 2011 through February 29, 2012, and annualized for FY 2012.

Response

Table VI has been revised to include the first 5 months of FY 2012 and FY 2012 annualized.

Y Access Line: Transfers to YNHH by Service Line

Service	FY 2012 YTD: Oct 1 – February 29, 2012	FY 2012 Annualized
Medicine	338	811
Surgery	235	564
Cardiac (Cardiology & Cardiothoracic Surgery	527	1,265
OB-GYN	41	98
Neurosciences (Neurology & Neurosurgery)	219	526
Orthopedics	39	94
Pediatrics	457	1,097
Other	59	142
TOTAL	**1,915**	**4,596**

20. Provide a projection of the Hospital's inpatient transferred cases (i.e. TOTAL Line for the sum of all services) for FYs 2013, 2014 and 2015.

Response

Projected inpatient transferred cases for FY 2013, 2014 and 2015 have been provided below.

	FY 2013	FY 2014	FY 2015
Projected inpatient transferred cases – all services*	5,201	5,536	5,818

Source: YNHH Financial Planning
* Total inpatient transferred cases includes those from Y Access Line as well as a small number that are not handled by Y Access (e.g., psychiatry).

Projected inpatient transfer cases for FY 2013 – FY 2015 were conservatively developed by evaluating the historical case volumes and the percentage of transfer cases compared to total inpatient cases. As summarized in the table below, historical transfer cases grew from 3,449 in FY 2010 to 4,165 in FY 2011. Based on year-to-date figures for FY 2012 through January, annualized transfer cases are projected to reach 4,765 in FY 2012. The percentage of transfer cases to all inpatient cases grew between FY 2010 and 2012 (ytd), from 6.1% to 8%, respectively.

Inpatient transferred cases – all services*	FY 2010	FY 2011	FY 2012 Oct-Jan
Transfer Cases	3,449	4,165	1,508
Transfers as % of All Cases	6.1%	7.3%	8.0%

Source: YNHH Financial Planning

21. The Hospital states "In the first full year of the Y Access Line implementation, YNHH received referrals from 45 different Connecticut health care facilities outside the Yale-New Haven Delivery Network, 53 U.S. hospitals in 13 states outside of Connecticut and 7 hospitals outside the continental U.S. including Puerto Rico and 4 foreign countries." Identify by the four aforementioned categories the health care facilities that have referred/transferred to the Hospital in year 1 of the Y Access Line.

Response

Healthcare facilities within the four aforementioned categories which have referred patients to YNHH's Y Access Line during the first full fiscal year are listed below. Based upon this detailed review of referring facilities, please note the Applicant would like to correct the original statement quoted above to reflect the following:

- **In the first full fiscal year, the Y Access Line received referrals from:**
  - **34 CT hospitals/healthcare facilities outside the YNHH Health System (Health System includes Bridgeport and Greenwich Hospitals);**
  - **39 hospitals/healthcare facilities outside CT, but within the continental US, representing 9 states;**
  - **3 hospitals/healthcare facilities from Puerto Rico; and**
  - **4 foreign countries.**

Category	Facilities that Referred to YNHH Y Access Line
Outside YNHH Health System - CT	1. Bradley Memorial Hospital 2. Bristol Hospital 3. Charlotte Hungerford Hospital 4. CT Children's Hospital 5. Danbury Hospital 6. Day Kimball Hospital

Category	Facilities that Referred to YNHH Y Access Line
	7. Gaylord Hospital 8. Griffin Hospital 9. Hartford Hospital 10. CT Hospice 11. Hospital for Special care 12. Hospital of Central Connecticut 13. Hospital of Saint Raphael 14. Johnson Memorial Hospital 15. John Dempsey Medical Center (UCONN) 16. Lawrence & Memorial Hospital & Pequot ED 17. Manchester Memorial Hospital 18. Mid-State Medical Center 19. Midstate Mediquick 20. Middlesex Memorial Hospital and Centers at Marlborough and Essex Shoreline 21. Milford Hospital 22. New Britain General Hospital 23. New Milford Hospital 24. Norwalk Hospital 25. Rockville Hospital 26. Sharon Hospital 27. St. Francis Hospital 28. St. Mary's Hospital 29. St. Vincent's Medical Center 30. Stamford Hospital 31. Veterans Administration Hospital of West Haven 32. Waterbury Hospital 33. William Backus Hospital 34. Windham Community Memorial Hospital
Outside CT	1. Albany Medical Center (NY) 2. Baystate Medical Center (MA) 3. Boston Children's (MA) 4. Brattleboro Memorial Hospital (VT) 5. Cape Cod Hospital (MA) 6. Cape May Regional Medical Center (NJ) 7. Columbia Presbyterian Hospital (NY) 8. Cooley Dickinson Hospital (MA) 9. Dartmouth-Hitchcock Medical Center (NH) 10. Franklin Memorial Hospital (PA) 11. Good Samaritan Medical Center (MA) 12. Hasbro Children's Hospital (RI) 13. Holyoke Medical Center (MA) 14. Hudson Valley Medical Center (NY) 15. Hunterdon Medical Center (NJ) 16. Inova Fairfax Hospital (VA) 17. Jupiter Medical Center (FL) 18. Kingston Hospital (NY)

Category	Facilities that Referred to YNHH Y Access Line
	19. Lenox Hill Hospital (NY) 20. Lourdes Hospital (NY) 21. New York Queens Hospital (NY) 22. Northern Westchester Hospital (NY) 23. Northshore LIJ (NY) 24. Palm Beach Medical Center (FL) 25. Pepin Heart Hospital (FL) 26. Phelps Memorial Hospital (NY) 27. Putnam Hospital (NY) 28. Rhode Island Hospital (RI) 29. Riverview Medical Center (NJ) 30. Saints Medical Center (MA) 31. Sound Shore Hospital (NY) 32. South County Hospital (RI) 33. St. Barnabas Hospital (NY) 34. St. Luke's Hospital (MO) 35. University of Miami Medical Center (FL) 36. Vassar Brothers Hospital (NY) 37. Weeks Medical Center (NH) 38. Westerly Hospital (RI) 39. White Plains Hospital (NY)
Outside continental US (including Puerto Rico)	1. Hospital Pediatrico Universitario (Puerto Rico) 2. Puerto Rico Medical Center (Puerto Rico) 3. San Jorge Medical Center (Puerto Rico)
Foreign Countries	1. Belize Medical Associates (Belize) 2. Etobicoke General Hospital (Canada) 3. King South County Hospital (Bermuda) 4. Queens Elizabeth Hospital (Barbados)

Performance Improvements – pages 28 through 30

22. In 2008 the Hospital embarked on its Safe Patient Flow Initiative as its performance improvement solution to address volume growth, overcrowding and limited space and staff resources. Identify and discuss whether YNHH plans to undertake any other performance improvement initiatives prior to FY 2016 to address the aforementioned problems.

Response

The Hospital's Safe Patient Flow Initiative is an ongoing effort that will continue to be part of YNHH's daily operations beyond 2016. Although the Hospital believes it has already accomplished the majority of major improvements that can be obtained, the process is iterative and the Hospital continues to seek new opportunities as it focuses on particular areas.

There are several groups that are part of this ongoing initiative and were described in the original CON submission on applicant page 29. These groups continue to meet on a regular basis as noted below:

- **Steering committee: meets every other week**

- **Vice President Update Group: meets weekly**
- **Front Line Manager "Huddles": occur daily**
- **Operations Council: meets at least monthly**

There is a constant focus on the efficient use of beds and safe patient flow. An example of a recent effort has involved a focus on transfers out of the MICU and a concerted effort to identify and transfer patients out of the MICU, when a floor bed is available, before 9:00 am each day. This effort has already achieved a 45% increase in the percentage of early morning transfer requests from the MICU and the time requirement for bed assignment for transfers out of the MICU has decreased by 21 minutes. This effort is ongoing this fiscal year and will begin to incorporate the Surgical ICU and the Cardiac ICU.

Focus on length of stay management is also an ongoing effort and will continue into the future. Related initiatives by department and disease state are underway and include the development of length of stay targets. These targets have been built into the financial projections which were provided in the Applicant's original CON submission and are summarized on Applicant page 42. Despite historical, current and future efforts to lower average length of stay, reductions will be challenging to achieve given the growing size of the acutely ill patient population coming to YNHH via the Y Access Line and their longer length of stay as described on Applicant page 27 of the original CON application.

Proposal's Effect on Existing Providers – page 35

23. The Hospital indicates that "Given that the majority of patients seek care at YNHH or physicians refer patients to YNHH for its specialized tertiary and quaternary services, minimal effect is expected on other existing providers." Explain why the Hospital feels that the expansion of 70 inpatient beds would impact only tertiary and quaternary services and not primary and secondary hospital services.

Response

The expansion of 70 inpatient beds is not expected to impact only tertiary and quaternary services. Because YNHH offers tertiary and quaternary services, and in certain areas is the only or one of few providers in Connecticut for such services (please refer to applicant page 33 and 34 for a list of YNHH's distinctive services), demand for overall inpatient services has continued to increase and has contributed to the current discharge levels and demands on inpatient beds. The additional 70 beds will serve all levels of patients. The majority of the beds will be designated as medical units and 7 beds will be utilized for Surgical ICU patients. Please refer to the response to question 8.

Quality Measures – pages 43 & 44

24. YNHH retained Helicon Consulting, Inc. to conduct a bed capacity and stacking study. Submit a list of all key professional, administrative, and analytical personnel from Helicon Consulting related to the development of the bed study. Attach a copy of their Curriculum Vitae.

Response

Ms. Jancy Strauman, founder and Principal of Helicon Consulting, Inc., performed all of the work related to the development of the bed study. Ms. Strauman has numerous advanced degrees, including a Master of Business Administration, Master of Public Health and a Master of Nursing. Helicon Consulting specializes in healthcare facility and space-planning with hospital and healthcare system clients throughout the Midwest and East coast.

Helicon Consulting's firm profile and Ms. Strauman's CV are included in Attachment VII.

25. The Hospital states that "The YNHH Trauma Department relies on an 80% or lower bed occupancy level to accept transfers because the department will not decline a transfer from a lower level trauma center based on bed availability. When bed occupancy is too high to accommodate new trauma patients or assign them to the appropriate beds, they are triaged and prioritized to accommodate the critical patients by temporarily moving the most stable patients to rooms with beds that are not fully appropriate for that patient's condition. In order to do this, there must be acute bed availability and flexibility. Quantify the number of occasions that a stable patient has been relocated to accommodate new trauma patients annually for the last three fiscal years and year-to-date for 2012 (i.e. October 1, 2011 through January 31, 2012).

Response

YNHH does not track occasions that a stable patient has been relocated to accommodate a new trauma patient. However, transfers out of the Surgical Intensive Care Unit (SICU and SP 7-1), Cardiothoracic Intensive Care Unit (3CT) and Neuro Intensive Care Unit (NICU), excluding deaths, between the hours of 10:00 pm and 7:00 am have been identified and are likely the result of a trauma or other emergency patient (including a Y Access Line transfer), who is critically ill and must be placed in an intensive care bed. This assumption has been made since transfers out of the ICU generally occur during the day or early evening so patients are not disturbed during the night. However, there are times when this cannot be avoided.

The table below summarizes the number of times this occurred by month between October 2008 and March 11, 2012. Generally between 40 and 60 patients/month were transferred out of the ICU during the hours noted above.

YNHH					
	10PM to 7AM ICU Discharges or "transfers out" by ICU				
Month of ICU Discharge or Transfer Out	3CT	NICU	SICU	SP71	Total Transfers or Discharges
Oct-08	17	26	15	--	58
Nov-08	24	25	17	--	66
Dec-08	29	29	22	--	80
Jan-09	35	30	18	--	83
Feb-09	30	23	17	--	70
Mar-09	14	22	22	--	58
Apr-09	29	26	16	--	71
May-09	14	24	25	--	63
Jun-09	8	25	15	--	48
Jul-09	8	21	22	--	51
Aug-09	7	21	15	--	43
Sep-09	21	25	10	--	56
Oct-09	10	26	19	--	55
Nov-09	22	22	13	--	57
Dec-09	23	23	16	--	62
Jan-10	23	23	13	--	59
Feb-10	23	19	13	--	55
Mar-10	19	23	7	--	49
Apr-10	19	27	8	--	54
May-10	14	31	13	--	58
Jun-10	25	34	18	--	77
Jul-10	21	28	16	--	65
Aug-10	17	31	17	--	65
Sep-10	24	30	13	--	67
Oct-10	11	35	9	--	55
Nov-10	12	22	13	--	47
Dec-10	13	26	14	12	65
Jan-11	9	18	19	6	52
Feb-11	8	25	23	9	65
Mar-11	15	24	17	9	65
Apr-11	11	19	17	16	63
May-11	8	20	22	8	58
Jun-11	11	15	16	15	57
Jul-11	20	24	27	10	81
Aug-11	19	28	18	6	71
Sep-11	7	18	19	12	56
Oct-11	13	22	28	8	71
Nov-11	6	21	27	10	64
Dec-11	16	12	20	8	56
Jan-12	7	11	20	9	47
Feb-12	12	20	13	13	58
3/1-3/11/2012	2	7	5	0	14
Total Transfers or discharges	676	981	707	151	2,515

Financial Information – pages 44 & 45

26. Provide a short description of the costs contained in each of the following capital expenditure categories:

a. Medical Equipment Purchases:
Medical equipment purchases include: pyxis systems, monitoring equipment, installation of nurse call stations, beds and other minor medical equipment (thermometers, glucometers, compression devices, feeding pumps and patient lift equipment)

b. Non-Medical Equipment Purchases:
Non-medical equipment purchases comprise: signage, carts, sharps cabinets, various appliances, linen, IS&T (phones, faxes, copiers, high volume printers, wireless carts), parex boards, storage bins and various other patient furniture.

c. Construction/Renovation:
Construction/renovation expenses include: minor anticipated repairs, project management, wiring and installation of equipment accounted for within the non-medical category.

d. Other non Construction (Specify):
Other include: 15% contingency for construction efforts and 5% contingency for equipment purchases

Type of Financing – page 45

27. Explain how funded depreciation will cover 80% of the proposal's capital expenditure.
Response
The Hospital budgeting process uses depreciation as a source of funds for capital projects. Depreciation is considered an estimated expense within the income statement and does not affect the cash balance. Therefore a portion of this expense is expected to fund various capital projects.

28. How will YNNH's proposed acquisition of the Saint Raphael Healthcare System, Inc. and the Hospital of Saint Raphael affect the funding of the proposed bed addition project?
Response
The funding of the proposed bed addition is considered independent of and outside the planned acquisition of the Hospital of Saint Raphael.

Revenue, Expense and Volume Projections – pages 46 and 221

29. Explain why the addition of the remaining 42 inpatient beds in FY 2013 results in a projected $2,599,000 incremental loss when incremental gains are projected in FY 2012 (the fiscal year in which the first 28 inpatient beds go on-line), FY 2014 and FY 2015.
Response
The financial projections included in the CON application assume that one unit will become operational in FY 2012 with the remaining units placed into service in FY 2013. Therefore, it is not until FY 2013 when the full amount of the incremental expenses associated with the additional beds is included in the financial projections and as such results in an incremental loss. However, incremental revenue in FY 2014 and 2015 then offset any incremental expenses.

Proposal's Cost Effectiveness – page 47

30. How does this proposal to expand inpatient capacity translate to the Hospital's ability to provide services in a more cost effective manner?
Response
The proposed additional 70 beds will permit YNHH to more efficiently and effectively meet inpatient demand. By having these additional beds, patient throughput is improved which translates to more cost effective care. Specifically, the additional 70 beds will contribute to the following:

- **Shorter stays in the emergency department for patients being admitted, resulting in earlier initiation of inpatient care;**
- **More timely transfer from an intensive care bed to a floor bed, thus reducing the cost of the admission since intensive care resources are more costly than routine inpatient units;**
- **Fewer patients being cared for on nursing units not generally accustomed to a specific patient type (e.g., neurology patient cared for on a general medical floor) which will more often match patients with specially trained and experienced nursing staff. This will improve the efficiency of care and can reduce length of stay;**
- **Fewer inter-unit transfers which will improve efficiency and can reduce length of stay; and**
- **Fewer patients waiting in the recovery room for a bed, resulting in earlier initiation of post-operative care, which could reduce length of stay and costs.**

ATTACHMENT I

Minutes from the Hospital Board of Director's Meeting
June 22, 2011

YALE-NEW HAVEN HOSPITAL

BOARD OF TRUSTEES

RESOLUTIONS RELATING TO THE INCREASE IN LICENSED BED CAPACITY

June 22, 2011

WHEREAS, Yale-New Haven Hospital ("Hospital"), a destination hospital and medical center consistently ranked as one of the top hospitals in the country and one of the two Level I pediatric and adult trauma centers in the State, desires to continue supporting health care delivery, access and quality to all of its patients;

WHEREAS, Hospital is currently licensed to operate 966 beds, and seeks to increase its licensed bed capacity by 70 new beds;

WHEREAS, Connecticut law requires that certain healthcare facilities, including Hospital, obtain authorization (a "Certificate of Need" or "CON") from the State of Connecticut's Office of Health Care Access ("OHCA") before engaging in certain transactions or making certain purchases or establishing new services, programs, facilities or locations;

WHEREAS, the addition of 70 licensed beds requires a Certificate of Need and changes to the Hospital's license from the Department of Public Health;

WHEREAS, the Board of Trustees has determined that the addition of 70 licensed beds, for a total of 1036 beds, is in the best interest of Hospital.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Trustees, as follows:

Section 1. The Board of Trustees hereby approves the addition of 70 licensed beds at Hospital and authorizes the Hospital's Chief Executive Officer, Hospital's Chief Financial Officer, and their respective designees to seek all necessary regulatory approvals, including but not limited to a

Certificate of Need and the approval of the Department of Public Health.

Section 2. Hospital's Chief Executive Officer, Hospital's Chief Financial Officer, and their respective designees are, and each of them hereby is, authorized and directed to perform and take such other actions as may be necessary and proper to accomplish the intent and purposes expressed in these resolutions.

Section 3. Any and all actions previously taken by the officers or employees of the Hospital in connection with the foregoing resolutions are hereby ratified, approved and confirmed in all respects.

Section 4. The Board of Trustees hereby recommends that the foregoing resolutions be approved by YNH Network Corporation and Yale-New Haven Health Services Corporation.

CERTIFICATION

The undersigned secretary of Yale-New Haven Hospital hereby certifies that the foregoing resolution was adopted by the Board of Trustees and remains in full force and effect without amendment as of the date hereof.

Adopted this 22nd day of June, 2011.

Robert A. Haversat
Secretary

ATTACHMENT II

Occupation Validation Letters from Heery Design and Cannon Design

HEERY design

March 6, 2012

C. Bradford Bevers, Director
Facilities, Construction and Design
Yale-New Haven Hospital
20 York St, Rm TE 106
New Haven, CT 06504

RE: Inpatient Occupancy Rates

Dear Brad:

As part of the programming and planning process, Heery utilizes target occupancy rates to determine the proposed bed need. The occupancy rates vary depending on the type of unit and the availability of similar beds in alternate locations. Units with little flexibility (such as critical care and obstetric units) are planned with a lower desired occupancy to accommodate peaks and valleys in demand. Units for which alternate areas are available (such as general medical / surgical units) are planned for higher occupancy levels. The factors below are industry standards that have been adjusted for academic medical center inpatient facilities with mostly private beds.

Target Occupancy Rates	
Medical / Surgical	80%
Critical Care	75%
Pediatrics	80%
PICU	75%
NBSCU	70%
Obstetrics	70%
Psych	80%
Pediatric Psych	80%
Other	80%

The target occupancy rates listed above are the guidelines we use as a starting point. These factors can fluctuate 5-10% up or down depending on the institution's efficient and private/semi-private bed mix.

Sincerely,

Heery International, Inc.

Doug Infelt, AIA, LEED AP

DI/drs

Heery International, Inc.
A group of professional services practices
125 South Dubuque Street, Suite 500, Iowa City, Iowa 52240-4003
Telephone 319 354-4700 Fax 319 354-4707

Offices Nationwide

CANNONDESIGN

March 12, 2012

Brad Bevers
Yale New Haven Hospital
TE 102
New Haven, CT 06504

Dear Brad,

Thank you for contacting Cannon Design regarding industry planning standards for inpatient bed unit occupany rates. The chart below contains the mena occupancy rates for select inpatient bed types assuming a bedded care model of 80-100% private beds, and a bedded care model in which semi-private beds, less than 50% private are utilized.

Bed Type	Planned Occupancy Rate Private Bed Model	Planned Occupancy Rate Semi-Private Beds
Medical-Surgical Beds	80-85%	65-75%
Step Down/ Telemetry Beds	80-85%	65-75%
Intensive Care Beds	60-70%	60-70%
Pediatric	65-75%	60-65%
Postpartum	70-80%	65-65%
Medical & Geriatric Psychiatric	75- 85%	60-65%
Behavioral Psychiatric*	80- 90%	80-90%

Note: Contemporary models assumes double occupancy for behavioral health patients.

Based upon Cannon Design's research, for semi-private beds we recommend a lower utilization rate to reflect patient compatibility issues such as patient gender, infection contol and prevention and patient personality incompatibility, which can limit the utilization of the second bed within a semi-private patient room.

For select specialty bed types, Cannon Design recommends a slightly lower occupany rate, when compared to medical-surgical beds, to reflect variations in specialty bed utilization due to seasonalties or inconsistent deman in patient services, e.g. pediatric and intensive care. To accommodate demand variations, a lower occupany rate is recommened to allow for flexibility in bed capacity, to accommodate the service demand volatility.

Please do not hesitate to contact me should you have questions.

Sincerely,

Michael Pukszta

Mike Pukszta
Principal

St. Louis
Baltimore
Boston
Buffalo
Calgary
Chicago
Houston
Los Angeles
Mumbai
New York
Phoenix
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ATTACHMENT III

Transfers from ICU – Longer than 24 hours Wait

MICU Weekly Patient Flow Figures (10/3/10 - 2/19/12)

Date	Patient Count for ED Metrics	Patient Count for MICU Metrics	ED LOS ICU	ED Admit Order to BedAssignment	ED Bed Assignment to Transfer	Bed Request to Assignment from MICU	Bed Assignment to Transfer from MICU	Number of Patients Waiting Greater than 24 hours for Bed Assignment
10/3/2010	37	43	3:35	0:10	0:52	3:18	1:11	7
10/10/2010	36	52	3:50	0:35	0:53	5:02	1:35	6
10/17/2010	28	48	3:26	0:19	0:54	2:34	1:35	6
10/24/2010	29	43	3:26	0:19	0:37	1:26	1:36	3
10/31/2010	29	50	3:25	0:16	0:43	1:18	1:17	4
11/7/2010	31	43	4:08	0:23	0:53	1:10	1:26	6
11/14/2010	21	40	2:55	0:15	0:33	4:01	1:45	2
11/21/2010	29	37	3:44	0:18	0:45	1:56	1:24	4
11/28/2010	29	47	3:39	0:06	0:38	1:58	1:17	4
12/5/2010	27	43	3:42	0:13	0:48	4:03	1:57	4
12/12/2010	20	44	3:06	0:23	0:41	3:44	1:58	6
12/19/2010	22	35	4:59	0:30	0:42	3:24	1:42	1
12/26/2010	31	47	3:02	0:16	0:44	1:56	1:33	4
1/2/2011	37	55	3:50	0:15	0:43	5:07	1:33	9
1/9/2011	47	57	4:54	0:36	0:48	4:24	1:37	8
1/16/2011	28	48	4:01	0:04	0:48	4:20	1:44	7
1/23/2011	31	48	4:51	0:41	0:52	8:52	1:26	17
1/30/2011	31	53	3:51	0:21	0:46	3:02	1:44	5
2/6/2011	32	45	4:01	0:15	0:40	7:11	1:23	10
2/13/2011	20	52	5:18	0:29	0:56	4:19	1:30	11
2/20/2011	23	50	4:10	0:13	0:40	3:34	1:34	11
2/27/2011	22	43	4:55	0:23	0:59	4:44	1:35	9
3/6/2011	33	52	4:36	0:30	0:51	8:54	1:30	17
3/13/2011	37	54	4:06	0:26	0:48	5:55	1:33	12
3/20/2011	28	40	3:20	0:16	0:36	9:30	1:36	13
3/27/2011	28	50	3:46	0:12	0:44	5:00	1:27	6
4/3/2011	36	55	3:53	0:29	0:48	7:15	1:26	11
4/10/2011	15	32	3:35	0:29	0:38	8:07	1:19	14
4/17/2011	26	47	3:46	0:18	0:53	6:10	1:19	13
4/24/2011	27	47	4:50	0:32	1:03	4:38	1:18	5
5/1/2011	31	48	4:07	0:19	0:50	3:41	1:20	2
'8/2011	31	53	4:36	0:47	0:42	4:54	1:18	13
15/2011	35	53	4:17	0:20	1:09	4:27	1:26	6
5/22/2011	28	51	4:29	0:18	1:05	1:26	1:22	5
5/29/2011	34	53	3:48	0:10	0:36	3:39	1:21	6
6/5/2011	25	51	3:29	0:03	1:04	5:35	1:22	13
6/12/2011	30	57	4:04	0:11	1:00	3:19	1:08	6
6/19/2011	24	44	3:23	0:06	0:48	3:39	1:06	6
6/26/2011	30	28	4:33	0:20	1:00	2:13	1:07	2
7/3/2011	31	48	3:56	0:20	0:57	1:22	1:07	5
7/10/2011	21	35	4:54	0:23	1:02	4:33	1:15	2
7/17/2011	25	45	4:18	0:12	1:01	3:45	1:19	3
7/24/2011	34	52	4:23	0:17	0:46	5:13	1:28	6
7/31/2011	19	42	4:08	0:11	0:59	4:50	1:05	9
8/7/2011	26	55	4:34	0:07	0:52	5:50	1:07	15
8/14/2011	23	32	4:50	0:05	0:54	7:27	1:02	7
8/21/2011	25	40	3:59	0:17	0:42	10:03	1:15	12
8/28/2011	28	45	4:33	0:19	0:55	5:40	1:22	14
9/4/2011	29	50	4:40	0:06	0:48	3:19	1:13	9
9/11/2011	28	50	3:36	0:04	0:54	3:38	1:16	4
9/18/2011	19	36	4:01	0:02	0:45	3:35	1:17	8
9/25/2011	26	36	5:42	0:12	0:59	4:52	1:03	8
10/2/2011	34	36	4:18	0:22	0:49	1:22	1:02	3
10/9/2011	26	37	4:35	0:13	0:57	2:44	0:57	3
10/16/2011	25	38	3:42	0:19	0:48	4:42	1:10	6
10/23/2011	24	46	4:06	0:14	0:55	2:32	1:07	8
10/30/2011	14	43	4:04	0:06	1:00	2:40	0:59	5
11/6/2011	30	43	4:32	0:07	0:43	9:46	1:03	10
11/13/2011	17	31	3:27	0:12	0:37	9:26	1:03	11
11/20/2011	18	40	3:40	0:11	0:57	1:14	0:56	1
11/27/2011	18	36	3:42	0:18	1:05	1:06	0:56	3
12/4/2011	28	48	5:36	0:51	1:14	2:17	1:15	3
12/11/2011	18	43	4:07	0:08	0:48	1:07	1:10	4
12/18/2011	16	41	3:24	0:27	0:37	1:51	1:19	5
12/25/2011	29	34	3:53	0:11	0:54	1:53	0:58	2
/1/2012	34	40	3:51	0:13	0:40	1:36	0:59	2
/8/2012	33	52	3:44	0:19	0:51	3:30	1:10	4
1/15/2012	26	47	3:52	0:11	0:44	2:33	1:04	4
1/22/2012	27	47	4:03	0:20	0:53	1:44	1:06	1
1/29/2012	21	31	4:41	0:19	0:46	6:19	1:06	7
2/5/2012	26	35	3:34	0:13	0:42	1:26	1:04	3
2/12/2012	18	28	4:41	0:31	0:48	4:23	1:09	5
2/19/2012	19	31	3:32	0:13	0:43	3:04	1:09	1

SICU Weekly Patient Flow Figures (6/19/11 - 2/26/12)

Date	Patient Count for ED Metrics	Patient Count for SICU Metrics	Patient Count in PACU	ED LOS ICU	ED Admit Order to BedAssignment	ED Bed Assignment to Transfer	Bed Request to Assignment from SICU	Bed Assignment to Transfer from SICU	Number of Patients Waiting Greater than 24 hours for Bed Assignment	PACU LOS
6/19/2011	2	22	1	2:47	0:05	0:37	1:18	2:22	1	1:40
6/26/2011	5	12	0	1:35	0:01	0:16	1:09	2:04	4	0:00
7/24/2011	10	18	58	5:48	0:19	0:24	2:10	2:26	3	1:51
7/31/2011	8	19	37	2:27	0:20	0:42	1:38	3:03	1	1:33
8/7/2011	8	23	34	2:43	0:01	0:27	0:44	2:18	1	1:18
8/14/2011	7	18	20	3:39	0:04	0:32	2:25	2:29	2	2:07
8/21/2011	9	31	40	3:18	0:23	0:25	0:35	2:30	2	1:15
8/28/2011	13	28	54	5:05	0:04	0:13	4:54	2:14	6	1:38
9/4/2011	12	24	44	3:28	0:11	0:32	0:33	2:17	2	0:55
9/11/2011	14	20	53	2:35	0:01	0:32	1:08	2:48	1	1:31
9/18/2011	6	21	22	2:17	0:13	0:16	1:49	1:52	0	2:51
9/25/2011	8	24	40	2:32	0:01	0:35	1:46	2:10	1	0:59
10/2/2011	11	19	31	3:00	0:02	0:53	1:16	2:04	0	0:47
10/9/2011	3	25	45	4:15	0:01	0:19	1:58	2:33	6	1:22
10/16/2011	8	21	24	2:43	0:03	0:22	1:02	1:35	1	1:13
10/23/2011	6	21	20	3:23	0:03	0:42	2:03	1:58	2	1:41
10/30/2011	12	19	65	2:40	0:04	0:28	1:49	2:14	3	2:01
11/6/2011	10	20	48	2:26	0:03	0:22	2:44	2:01	3	1:20
11/13/2011	8	19	43	2:18	0:02	0:46	1:02	2:17	4	1:24
11/20/2011	10	30	16	2:02	0:04	0:48	1:18	2:26	1	0:48
11/27/2011	10	23	21	1:54	0:10	0:23	1:19	1:52	1	1:01
12/4/2011	6	20	23	1:36	1:21	0:54	0:38	2:22	0	1:42
12/11/2011	2	15	51	5:06	2:13	0:31	2:11	2:58	2	1:58
12/18/2011	11	21	19	3:24	0:03	0:31	1:33	1:50	1	0:59
12/25/2011	6	15	6	1:22	0:11	0:09	0:23	1:20	0	0:21
1/1/2012	6	18	9	4:14	0:01	0:37	1:04	2:34	1	0:33
1/8/2012	9	24	27	5:33	0:06	0:34	0:56	1:39	1	1:20
1/15/2012	7	26	20	3:06	0:09	0:52	1:11	2:31	1	1:21
1/22/2012	6	18	28	3:16	0:11	0:28	1:14	2:04	0	1:21
1/29/2012	3	18	14	5:28	0:20	0:45	1:19	2:29	4	1:01
2/5/2012	8	28	21	2:54	0:07	0:27	1:32	1:48	3	2:09
2/12/2012	4	19	26	3:27	0:04	0:36	1:33	2:23	1	1:30
2/19/2012	4	15	32	1:34	0:01	0:37	1:51	1:41	2	1:02
2/26/2012	3	14	17	7:17	0:30	0:05	2:07	1:30	2	0:45

ATTACHMENT IV

Midnight Census by Day FY 2009-FY 2012 (through January 2012)

Table 3: Daily Total Inpatient Census Numbers

YNHH Daily Total Inpatient Census Numbers		FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
October	1	797	803	833	771
	2	796	746	756	767
	3	747	719	761	823
	4	701	733	823	848
	5	706	772	820	837
	6	752	746	816	840
	7	793	741	842	814
	8	780	739	828	784
	9	785	691	783	791
	10	759	670	780	845
	11	732	660	845	869
	12	710	695	866	882
	13	735	748	847	885
	14	732	730	882	837
	15	774	732	859	791
	16	771	673	807	784
	17	768	647	786	844
	18	728	666	825	866
	19	695	707	856	850
	20	744	732	841	827
	21	777	779	836	810
	22	799	792	796	785
	23	802	752	762	797
	24	783	715	752	854
	25	718	706	794	842
	26	724	742	827	861
	27	774	765	861	830
	28	804	773	856	797
	29	813	761	824	765
	30	792	734	731	769
	31	747	666	704	823
November	1	710	680	779	845
	2	697	743	820	843
	3	758	784	826	859
	4	776	779	851	826
	5	783	770	847	805
	6	811	762	775	792
	7	807	727	739	850
	8	768	736	811	911
	9	765	786	849	909
	10	797	797	841	892
	11	830	824	824	851
	12	854	822	775	807
	13	840	809	743	788
	14	796	762	735	851
	15	741	776	782	895
	16	742	806	812	920
	17	779	837	804	883
	18	778	850	840	882
	19	788	823	785	826

YNHH Daily Total Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
20	807	772	734	809
21	772	754	747	841
22	699	743	770	817
23	700	780	765	727
24	733	762	683	681
25	726	683	653	717
26	666	660	653	701
27	643	679	641	695
28	661	682	677	791
29	647	696	767	817
30	670	774	758	844
December 1	741	766	761	842
2	751	780	787	812
3	751	784	759	761
4	768	769	723	741
5	739	725	739	829
6	706	715	822	899
7	702	739	804	899
8	746	753	803	894
9	791	786	806	832
10	814	774	801	790
11	825	775	787	783
12	798	712	781	863
13	729	697	852	902
14	734	749	880	872
15	777	803	865	863
16	782	802	889	863
17	800	790	846	786
18	789	770	781	780
19	777	694	773	836
20	731	702	817	843
21	724	741	831	819
22	755	716	795	757
23	706	670	726	694
24	607	558	600	608
25	593	564	598	608
26	621	586	654	616
27	621	641	750	668
28	652	684	773	731
29	690	707	807	730
30	683	682	755	673
31	651	642	666	645
January 1	651	640	684	623
2	663	640	694	668
3	673	652	763	751
4	681	722	819	798
5	766	758	855	807
6	807	786	885	819
7	807	803	855	811
8	807	779	805	786
9	809	739	783	873
10	759	710	842	862

YNHH Daily Total Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
11	738	803	868	866
12	786	815	891	900
13	771	794	845	881
14	770	780	826	794
15	801	784	752	776
16	775	748	758	767
17	735	744	746	840
18	737	760	808	857
19	755	830	846	876
20	757	858	873	841
21	793	821	893	842
22	804	812	855	816
23	800	785	845	837
24	748	770	900	862
25	734	831	886	863
26	794	862	857	864
27	782	848	859	842
28	777	843	822	808
29	788	810	791	784
30	747	791	781	828
31	724	786	813	818
February 1	738	822	811	
2	788	816	818	
3	809	795	798	
4	814	778	753	
5	790	767	735	
6	769	728	740	
7	721	709	826	
8	714	772	883	
9	760	741	858	
10	818	775	874	
11	820	759	860	
12	845	755	805	
13	797	743	799	
14	752	745	855	
15	761	793	881	
16	805	768	896	
17	807	789	873	
18	803	837	809	
19	808	817	807	
20	801	783	814	
21	716	766	859	
22	723	813	856	
23	785	845	838	
24	823	840	867	
25	841	836	854	
26	852	838	834	
27	777	815	797	
28	738	802	882	
March 1	736	836	897	
2	785	852	913	
3	809	867	889	

YNHH Daily Total Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
4	800	851	824	
5	820	786	798	
6	805	761	802	
7	748	771	860	
8	725	835	869	
9	784	842	859	
10	825	826	883	
11	837	842	828	
12	818	810	782	
13	823	761	792	
14	796	761	817	
15	770	823	804	
16	789	834	836	
17	795	832	836	
18	790	814	847	
19	801	813	782	
20	765	754	775	
21	751	754	826	
22	751	810	841	
23	771	842	824	
24	781	877	848	
25	794	846	808	
26	800	807	758	
27	766	783	762	
28	729	792	853	
29	724	834	863	
30	774	843	864	
31	822	840	844	
April 1	810	818	836	
2	807	758	791	
3	792	736	783	
4	778	749	859	
5	787	797	886	
6	840	820	895	
7	836	846	923	
8	811	865	901	
9	825	808	829	
10	748	788	843	
11	719	805	843	
12	725	829	835	
13	762	812	831	
14	789	793	838	
15	798	784	880	
16	767	767	823	
17	752	722	800	
18	731	718	846	
19	713	764	872	
20	774	817	891	
21	795	804	863	
22	817	842	740	
23	802	833	736	
24	787	771	721	

YNHH Daily Total Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
25	714	768	802	
26	734	842	858	
27	802	878	870	
28	815	859	855	
29	791	855	828	
30	784	797	789	
May 1	768	765	794	
2	732	770	844	
3	713	828	867	
4	739	828	902	
5	753	838	887	
6	771	835	867	
7	802	815	792	
8	772	780	780	
9	748	772	848	
10	733	804	845	
11	781	838	854	
12	781	829	846	
13	784	832	851	
14	781	806	808	
15	750	758	793	
16	726	739	879	
17	732	792	886	
18	754	823	889	
19	731	847	918	
20	749	841	881	
21	754	799	838	
22	728	738	807	
23	683	739	889	
24	664	828	890	
25	676	826	887	
26	725	819	900	
27	722	805	862	
28	748	733	782	
29	720	721	788	
30	703	719	768	
31	719	718	839	
June 1	761	783	831	
2	765	823	852	
3	762	795	872	
4	770	759	814	
5	773	728	789	
6	741	704	875	
7	734	780	902	
8	778	820	882	
9	815	828	888	
10	824	805	852	
11	835	801	797	
12	778	748	789	
13	743	758	835	
14	739	818	843	
15	794	798	847	

YNHH Daily Total Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
16	795	790	880	
17	797	801	874	
18	825	794	819	
19	747	762	826	
20	736	749	881	
21	749	806	843	
22	793	855	863	
23	788	873	887	
24	795	863	836	
25	792	848	803	
26	753	791	773	
27	727	800	802	
28	761	844	820	
29	823	856	802	
30	822	833	830	
July 1	794	843	803	
2	800	768	754	
3	732	706	729	
4	700	701	708	
5	695	727	796	
6	744	758	796	
7	780	827	819	
8	772	822	820	
9	756	790	801	
10	756	779	809	
11	688	748	858	
12	712	822	899	
13	751	836	908	
14	769	824	899	
15	762	820	851	
16	765	798	806	
17	736	763	774	
18	710	755	830	
19	679	793	851	
20	733	799	900	
21	756	817	911	
22	779	791	893	
23	804	787	872	
24	794	731	868	
25	761	715	903	
26	744	756	919	
27	782	768	882	
28	786	802	860	
29	804	826	851	
30	794	765	819	
31	759	723	793	
August 1	731	713	854	
2	723	788	846	
3	730	800	862	
4	733	788	851	
5	725	796	841	
6	747	803	788	

YNHH Daily Total Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
7	715	773	785	
8	680	770	857	
9	681	811	892	
10	731	834	892	
11	761	830	853	
12	783	783	806	
13	794	789	771	
14	747	773	770	
15	726	751	825	
16	719	799	855	
17	765	815	850	
18	768	818	819	
19	753	793	807	
20	767	786	800	
21	752	757	778	
22	723	767	835	
23	744	789	837	
24	747	799	832	
25	773	799	854	
26	783	785	822	
27	760	786	782	
28	717	729	841	
29	695	728	858	
30	699	788	856	
31	754	805	869	
September 1	762	803	846	
2	745	822	800	
3	733	799	754	
4	686	750	749	
5	664	730	756	
6	657	709	790	
7	661	762	791	
8	715	805	820	
9	752	812	863	
10	734	789	840	
11	727	750	810	
12	722	732	848	
13	705	826	889	
14	736	831	887	
15	801	825	867	
16	806	845	842	
17	793	831	797	
18	763	776	781	
19	747	790	832	
20	731	837	828	
21	782	854	821	
22	814	855	815	
23	804	899	832	
24	826	861	761	
25	814	814	756	
26	750	816	813	
27	765	882	832	

YNHH Daily Total Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
28	767	919	873	
29	787	900	838	
30	824	859	803	

ATTACHMENT V

Midnight Census by Day (Med/Surg) FY 2009-FY 2012 (through January 2012)

Table 4: Daily Medical-Surgical Inpatient Census Numbers

YNHH Daily Medical-Surgical Inpatient Census Numbers		FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
October	1	528	524	553	528
	2	521	472	505	530
	3	481	472	514	566
	4	448	489	545	566
	5	450	511	547	561
	6	497	495	542	563
	7	533	488	552	556
	8	513	491	544	540
	9	505	449	521	545
	10	485	431	524	599
	11	474	430	574	601
	12	466	442	585	609
	13	478	483	567	614
	14	485	456	587	555
	15	506	466	568	525
	16	512	427	531	527
	17	499	407	530	572
	18	457	422	551	586
	19	451	463	569	581
	20	484	488	552	570
	21	512	507	550	538
	22	531	519	523	527
	23	535	497	499	525
	24	513	454	487	581
	25	468	452	534	573
	26	477	475	548	596
	27	529	478	566	568
	28	537	488	566	532
	29	514	487	547	511
	30	507	457	489	519
	31	481	415	482	564
November	1	456	427	537	595
	2	452	483	549	574
	3	492	526	543	578
	4	506	520	549	539
	5	503	498	548	537
	6	506	485	509	539
	7	513	476	497	597
	8	484	493	537	625
	9	491	527	549	611
	10	514	543	544	609
	11	539	539	543	560
	12	540	529	511	515
	13	538	528	482	516
	14	507	491	485	572
	15	472	514	519	605
	16	468	554	557	613
	17	498	570	541	583
	18	495	576	561	591
	19	494	560	545	553

YNHH Daily Medical-Surgical Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
20	500	533	493	543
21	489	519	497	572
22	446	516	527	543
23	458	538	518	468
24	488	502	440	435
25	475	438	421	458
26	433	424	426	457
27	407	441	425	465
28	427	450	452	544
29	426	481	512	564
30	447	554	529	584
December 1	506	537	527	559
2	508	554	544	530
3	500	545	512	493
4	498	507	484	491
5	487	482	496	551
6	470	477	547	595
7	460	509	535	589
8	508	512	534	577
9	537	530	533	553
10	545	506	531	534
11	548	503	520	537
12	527	463	525	585
13	486	450	580	587
14	487	505	600	586
15	523	541	582	591
16	520	538	591	589
17	529	542	577	531
18	507	518	525	522
19	496	462	513	560
20	466	457	567	556
21	471	484	566	539
22	503	466	521	485
23	466	431	461	445
24	392	359	390	378
25	388	373	393	385
26	417	387	426	393
27	411	421	491	438
28	436	442	481	482
29	453	446	504	483
30	457	431	482	423
31	425	405	428	409
January 1	424	417	450	391
2	447	411	458	428
3	443	431	505	488
4	449	481	531	517
5	523	508	554	527
6	545	526	574	538
7	546	548	544	527
8	523	549	530	510
9	524	529	514	583
10	499	506	558	572

YNHH Daily Medical-Surgical Inpatient Census Numbers		FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
	11	502	569	578	568
	12	533	556	606	600
	13	520	543	573	595
	14	503	537	558	545
	15	501	541	509	529
	16	490	512	498	512
	17	458	505	493	565
	18	465	508	541	577
	19	480	561	557	589
	20	493	557	585	567
	21	509	540	586	561
	22	512	535	568	
	23	512	515	591	
	24	473	499	615	
	25	475	536	584	
	26	514	558	581	
	27	511	545	575	
	28	510	534	550	
	29	509	508	541	
	30	481	483	535	
	31	471	500	558	
February	1	483	540	552	
	2	539	543	560	
	3	534	534	533	
	4	534	502	494	
	5	516	491	483	
	6	493	475	503	
	7	457	476	574	
	8	457	523	607	
	9	511	498	584	
	10	543	527	587	
	11	536	512	570	
	12	550	515	543	
	13	523	495	549	
	14	500	493	585	
	15	508	530	595	
	16	528	526	596	
	17	528	531	580	
	18	514	554	534	
	19	525	532	513	
	20	517	511	523	
	21	469	511	562	
	22	484	561	563	
	23	520	580	576	
	24	545	566	585	
	25	554	559	558	
	26	552	559	548	
	27	508	542	530	
	28	475	538	591	
March	1	470	587	608	
	2	510	590	608	
	3	526	595	596	

YNHH Daily Medical-Surgical Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
4	524	595	540	
5	530	548	529	
6	519	524	536	
7	487	529	577	
8	482	562	579	
9	521	568	581	
10	534	550	583	
11	532	563	540	
12	526	540	524	
13	521	502	548	
14	512	500	578	
15	520	547	542	
16	538	557	564	
17	524	547	572	
18	521	534	593	
19	523	529	552	
20	507	481	550	
21	479	490	588	
22	470	539	593	
23	490	564	578	
24	483	581	583	
25	490	564	555	
26	503	528	519	
27	477	514	507	
28	445	520	565	
29	465	559	577	
30	496	555	575	
31	526	563	563	
April 1	509	537	555	
2	503	489	526	
3	499	472	525	
4	480	486	586	
5	502	528	603	
6	548	536	594	
7	524	562	606	
8	517	576	597	
9	528	557	560	
10	472	529	557	
11	473	538	571	
12	477	560	559	
13	520	532	554	
14	546	508	557	
15	540	508	590	
16	507	510	555	
17	499	469	542	
18	491	460	593	
19	477	498	603	
20	534	538	606	
21	538	522	600	
22	544	543	521	
23	522	532	519	
24	505	502	498	

YNHH Daily Medical-Surgical Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
25	472	503	556	
26	494	549	586	
27	538	567	579	
28	535	562	571	
29	525	565	562	
30	520	518	532	
May 1	504	493	541	
2	476	502	566	
3	464	536	579	
4	487	550	600	
5	491	557	581	
6	495	556	568	
7	511	544	522	
8	475	505	497	
9	474	510	570	
10	481	531	582	
11	513	554	589	
12	507	550	576	
13	500	548	554	
14	492	529	524	
15	471	510	530	
16	455	508	589	
17	461	534	598	
18	487	542	590	
19	469	551	604	
20	472	558	573	
21	480	530	552	
22	468	494	543	
23	428	484	598	
24	410	549	594	
25	426	553	596	
26	459	553	582	
27	454	548	561	
28	475	485	507	
29	444	469	519	
30	427	475	507	
31	440	475	576	
June 1	476	518	563	
2	480	537	568	
3	494	529	585	
4	496	492	551	
5	504	473	531	
6	490	473	592	
7	494	525	610	
8	525	549	611	
9	547	554	611	
10	537	529	585	
11	540	518	549	
12	500	496	553	
13	477	503	573	
14	490	540	574	
15	531	523	584	

YNHH Daily Medical-Surgical Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
16	535	523	601	
17	513	531	592	
18	524	514	546	
19	477	479	549	
20	477	480	605	
21	491	524	581	
22	538	566	599	
23	517	576	610	
24	517	565	561	
25	515	552	538	
26	484	517	526	
27	479	537	554	
28	500	577	559	
29	550	590	546	
30	550	563	579	
July 1	543	561	543	
2	541	525	513	
3	479	477	512	
4	442	463	486	
5	455	478	545	
6	479	500	530	
7	496	543	552	
8	497	547	538	
9	493	517	530	
10	496	501	549	
11	456	479	588	
12	482	551	591	
13	508	565	597	
14	508	549	588	
15	511	545	541	
16	521	529	528	
17	492	497	518	
18	489	504	556	
19	479	527	569	
20	509	536	607	
21	503	562	614	
22	530	528	574	
23	528	520	558	
24	523	485	578	
25	495	479	616	
26	490	494	618	
27	538	506	608	
28	535	518	582	
29	539	539	574	
30	515	513	538	
31	486	466	526	
August 1	457	466	572	
2	460	517	564	
3	474	510	579	
4	460	522	579	
5	466	521	558	
6	477	523	526	

YNHH Daily Medical-Surgical Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
7	452	521	528	
8	439	524	579	
9	447	550	605	
10	476	556	592	
11	511	554	572	
12	525	518	549	
13	520	510	524	
14	501	497	538	
15	487	492	581	
16	485	541	575	
17	520	538	554	
18	514	551	553	
19	497	516	552	
20	501	503	556	
21	485	501	542	
22	463	514	594	
23	484	521	592	
24	492	520	581	
25	512	519	604	
26	511	505	568	
27	501	513	554	
28	473	467	597	
29	453	471	604	
30	454	528	589	
31	506	542	595	
September 1	508	543	582	
2	478	555	552	
3	473	531	507	
4	449	508	498	
5	436	492	519	
6	426	476	544	
7	428	518	536	
8	470	544	555	
9	491	538	579	
10	490	504	566	
11	483	478	555	
12	465	468	590	
13	457	534	607	
14	497	556	595	
15	538	563	583	
16	544	558	556	
17	525	553	528	
18	507	513	520	
19	485	517	563	
20	481	542	554	
21	522	570	547	
22	537	565	554	
23	530	596	560	
24	547	564	507	
25	550	542	523	
26	487	548	570	
27	499	581	585	

YNHH Daily Medical-Surgical Inpatient Census Numbers	FY 2009 Actual	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual 1st 4 mos
28	533	611	606	
29	538	595	586	
30	549	567	549	

ATTACHMENT VI

Y Access Line DVD and Brochure

ATTACHMENT VII

Helicon Consulting Firm Profile and Ms. Strauman's CV

HELICON CONSULTING, INC.

Firm Profile

Helicon Consulting, Inc. is a healthcare facility and space-planning firm founded on the principle that investments in facilities should contribute to the successful realization of the organization's strategic plan.

The strategic opportunities that can be maximized from well-planned space include the following:

- Achieve operational efficiency – improve room throughput; increase staff productivity; reduce operation cost.
- Enhance care delivery – introduce new technologies and practice patterns; cluster collaborating services; increase available capacity.
- Improve customer service – improve access; reduce patient transfers and movement; enrich the environment; incorporate family spaces.
- Advance market share – increase patient volumes; reduce patient or procedure out-migration; provide content for "word of mouth" advertising.

Organization-wide planning – strategic, as well as information system, marketing, and finance – is incorporated into all facility plans, whether global in scope or specific to a single department.

Based in North Carolina, Helicon Consulting has clients located throughout the Midwest and Eastern seaboard, including rural and urban community hospitals, tertiary medical centers, and healthcare systems. On-going and long-standing associations with numerous clients demonstrate client satisfaction.

* Mount Helicon was the home of the nine daughters of Zeus who presided over the arts and sciences.

HELICON CONSULTING, INC.

Services

Helicon Consulting offers a broad range of hospital, ambulatory care, and medical office facility planning services:

- ***Strategic facility plans***

  The outcome of a successful Strategic facility plan is a capital investment approach that moves the organization toward the realization of their Strategic Plan. Similar to a Master Facility Plan our multidisciplinary team evaluates all services and facilities to qualify space and facility deficiencies. Our approach is unique in that options and solutions focus on the strategic priorities.

- ***Service/department-specific plans***

  Helicon Consulting approaches planning for specific product areas with an eye toward national healthcare trends and benchmarks, but also with an understanding that each hospital is unique and defined by its specific patient mix, provider mix, corporate culture, and payer panel. With this in mind, we approach the project with a willingness to "ask hard questions" and "challenge the status quo" while listening attentively to the staff regarding operations and the facility attributes needed to continue to make their organization distinct. Service or department planning varies by clinical area, although each plan includes clearly defining or redefining the scope of clinical service and identifying an optimum operational model within the process of determining the facility and location requirements.

- ***Inpatient bed and unit planning***

  Bed planning includes projecting the number of beds that are needed at each acuity level and medical specialty. This involves applying the opposing trends of managed care and an aging population on current census data and developing potential future scenarios. Practice pattern trends, optimal unit attributes, and operational objectives are used to stack the bed tower (assign bed locations) and develop unit configurations.

- ***Space and functional programming***

  We approach space and functional programming in the context of both operations and the strategic agenda. The process begins with an exploration of the operational assumptions and concludes by testing the program against the objectives and success criteria established at project initiation. The deliverable is ready for hand-off to the architectural team for design development.

- ***Capacity requirement analysis***

  The calculation of clinical capacity requirements estimates rooms, equipment, and support spaces required to accommodate the future patient volume at optimal utilization rates. Annual patient volume, budgeted or estimated growth projections, average case time, and routine hours of operation are included in the analysis. Where growth projections are uncertain, scenarios representing possible alternate futures are developed and compared. Volume levels that trigger the need for additional capacity are also determined to assist in the decision of "how much capacity" to build (i.e., an additional room is not needed until volumes reach 10,000 annual procedures).

HELICON CONSULTING, INC.

Jancy Strauman
Principal
4905 Montvale Dr.
Durham, NC 27705
(919) 824-6489 cell
jstrauman@earthlink.net

EXPERTISE

Strong analytical and assessment skills.
Prioritization and judgment skills.
Budgeting and cost analysis.
Leadership and motivational skills.
Team facilitation and decision making.
Business analysis and strategic planning.
Highly effective communication skills.
Championing new initiatives.
Working with all levels of management.
Delegation and monitoring.

EDUCATION

Master of Business Administration, Marketing – University of Wisconsin, Madison
Master of Public Health – Columbia University, New York
Master of Nursing – University of Washington, Seattle
Bachelor of Nursing – University of Washington, Seattle

EXPERIENCE

Helicon Consulting, Inc. Durham, NC
Principal 2000 – present

Founder and manager all aspects of a Helicon Consulting: marketing, budget and accounting, licensure and regulation, and operations. Successfully planned, managed and conducted planning engagements for healthcare and higher education institutions. Served as lead on multi-firm teams and worked with staff at all organizational levels, including board members.

Engagements require working closely with healthcare providers, executives and physicians to resolve operational and facility problems. Outcomes result in

Growth: Introducing new services or expanding market share and/or service area.

Efficiency: Maximizing capacity utilization and enhancing facility and equipment flexibility.

Customer Service: Improving patient and staff work flow.

Projects require on-going and detailed verbal and written communication with executive teams, board members, physician groups, and community organizations.

Frequent repeat engagements and long-standing associations with numerous organizations demonstrated success.

Space Diagnostics, Inc. Madison, WI
Senior Associate 1992 – 1993, 1994- 2000

Healthcare facility planning consultant. Worked independently and as a member of both firm-based and multi-firm teams. Began as a novice in the industry and evolved into an independent consultant with a roster of loyal clients. Projects included determination of capacity requirements and projections, space planning/ programming, facility utilization, space optimization, strategic positioning, operational efficiency, client satisfaction, and improved market share.

University of Wisconsin, Department of Family Medicine Madison, WI
Program Administrator, HEART Project 1993

Business manager for a multi-million dollar heart disease prevention grant. Worked with investigators during phase I, recruiting community based primary care practices and initiated audits and education interventions. During a short tenure I resolved a crippling personnel problem, assembled accurate accounting records from fragmented documents and revised the year by year budget projections to reflect progress achieved.

University of Wisconsin Hospital and Clinics Madison, WI
Clinical Nurse Specialist and Manager, Radiation Oncology 1987 - 1990

Combined clinical and management position. I was responsible for day-to-day clinical operations, quality assurance, and served as a clinical resource for inpatient and outpatient services hospital-wide.

Montefiore Medical Center, Albert Einstein College of Medicine Bronx, NY
Clinical Research Specialist, Department of Oncology 1983 - 1987

Managed and coordinated NIH and pharmaceutical company clinical trials as well as administering experimental patient treatments for the Department of Oncology. I was responsible for NIH on-site audits of research records. In addition, I was the principal investigator on symptom identification studies for phase I and phase II antineoplastic agents. I also have the distinction of being a member of the first nurse investigator team to be awarded an American Cancer Society development grant.

University of Maryland School of Nursing Baltimore, MD
Associate Faculty 1982 – 1983

Adjunct clinical faculty for graduate student clinical experience.

Baltimore Cancer Research Center, Leukemia Branch - National Cancer Institute Baltimore, MD
Nurse Manager 1981 - 1983

Twenty-four hour clinical and administrative responsibility – budget, personnel, operations – for a 30 bed, 63 FTE inpatient unit.

Fred Hutchinson Cancer Center Seattle, WA
Staff Nurse 1977 - 1981

Privileged to begin my career at one of the finest cancer research facility in the world.

PUBLICATIONS

Strauman, J. (2009) Data Driven Inpatient Bed Planning. In Kovner, A.R., Fine, D. J., & D'Aquila, R. (Eds.). *Evidence-Based Management in HealthCare*. (pp. 189-206). Chicago: Health Administration Press.

PRESENTATIONS

Strauman, J.J. (November 2005) The Value of Coordinating Space and Facility Planning with Strategic and Market Analysis. Carolinas Healthcare Public Relations & Marketing Society and Carolinas Society for Healthcare Strategy and Market Development, *Fall Conference: Bridging the Gaps*.

DeChant, T., & Strauman J. (March 1997) Capital Investment Trade-offs: Bricks, Bits, or Bottom Line. American Society of Healthcare Engineers, *International Summit & Exhibition on Health Facility Planning, Design & Construction.*

Strauman J. (March 1996) Enhancing Managed Healthcare Delivery: A new patient aggregation model. American Society of Healthcare Engineers, *International Summit & Exhibition on Health Facility Planning, Design & Construction*.

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Office of Health Care Access

May 3, 2012 VIA FAX & EMAIL ONLY

Ms. Jean Ahn
System Director
Yale-New Haven Hospital
Planning & Business Development Office
20 York Street (Howe 3)
New Haven, CT 06504

RE: Certificate of Need Application; Docket Number: 12-31745-CON
Yale-New Haven Hospital and Bridgeport Hospital
Proposal to Increase Yale-New Haven Hospital's Licensed Bed Count by 70, from 874 to 966 Licensed Inpatient Hospital Beds

Dear Ms. Ahn:

On April 4, 2012, the Office of Health Care Access ("OHCA") received completeness responses to the Certificate of Need ("CON") Application of Yale-New Haven Hospital ("YNHH" or "Hospital") proposing to increase its licensed bed count (less bassinets) by 70, from 874 to 944 licensed inpatient hospital beds.

OHCA has incorporated the information provided in completeness responses into the initial submission and requests additional information pursuant to Connecticut General Statutes § 19a-639a(c).

1. Please provide the calculations and assumptions that support the projected growth from FY 2012 to FY 2016 in average daily census ("ADC") for medical/surgical beds, rehabilitation beds, psychiatric beds, pediatric beds, maternity beds, newborn critical care (NBSCU) and newborn bassinets as depicted in the chart entitled Projected Combined ADC and Bed Need on page 233 of YNHH's Completeness Responses. In furnishing YNHH's response for each service category, please also provide:

    a. The actual FY 2011 ADCs for YNHH and the Hospital of Saint Raphael ("HSR") that serve as a baseline for the projections in each service category.

    b. An explanation why YNHH's projected total ADC and the ADCs for YNHH's medical/surgical, obstetrics, pediatrics and psychiatry service categories for FYs

An Equal Opportunity Employer
410 Capitol Ave., MS#13HCA, P.O. Box 340308, Hartford, CT 06134-0308
Telephone: (860) 418-7001 Toll-Free: 1-800-797-9688
Fax: (860) 418-7053

2012-2015 as provided at Tables IX-a through X-e on pages 36 through 38 of the CON Application differ with the totals for YNHH depicted in the Bed Need Capacity spreadsheets shown at Attachment II to the April 12, 2012 completeness responses submitted under Docket No. 12-31747-CON. For example, in Table IX-b, YNHH's projected total ADC for medical/surgical beds is 580, 591, 602, and 614 for FYs 2012-2015 while in Attachment II to the Docket No. 12-31747-CON submission the projected total ADC for YNHH in those same years is 569, 579, 579 and 602.

c. Confirmation that the projected contribution to the combined total ADC made by HSR in each service category for FYs 2012-2016 is the same as depicted in the Bed Need Capacity spreadsheets shown at Attachment II to the April 12, 2012 completeness responses submitted under Docket No. 12-31747-CON or an explanation as to why this is not the case.

2. Please provide the following information to supplement the response to Question 2e:

   a. Where does YNHH plan to relocate the observation beds being moved in order to open Medicine Unit EP 5-7/8?
   b. How many observation beds are presently in operation at this location and how many will be relocated?

3. Please supplement the response to Question 5 by providing the breakdown between emergency and elective/scheduled admissions at YNHH for FYs 2009 and 2010. Please also project the same breakdown for FYs 2012-2014. With respect to the projections, please provide the supporting calculations and assumptions.

4. Please explain why, if the CON for YNHH's acquisition of HSR is approved, the additional 70 medical/surgical beds requested by YNHH cannot be accommodated by the currently licensed but unstaffed medicine, surgery, telemetry and critical care beds located at HSR as depicted in Table 2 on pages 244-45 of YNHH's completeness response.

5. With respect to its response to Question 23 where YNHH states that the proposed 70 additional beds will be providing services to patients requiring primary and secondary care as well as tertiary and quaternary care, please clarify:

   a. Why YNHH believes approval of the proposed CON will have a minimal impact on existing providers.
   b. Describe the nature of the anticipated impact on existing providers.

In responding to the questions contained in this letter, please repeat each question before providing your response. Paginate and date your response. Information filed must be numbered sequentially from the applicants' document preceding it. For example, if the last submission concludes with page 100, your completeness response letter would begin with page 101. Please reference "Docket Number 12-31745-CON" and submit one (1) original and five (5) hard copies

of your response. In addition, please submit a scanned copy of your response, including all attachments, on CD using MS Word format or Adobe Acrobat.

Upon receipt of the responses to this letter and after incorporating the provided information into the previous submissions, OHCA staff will review the CON application to determine completeness. If you have any questions concerning this letter, please feel free to contact me or Brian Carney at OHCA at (860) 418-7001.

Sincerely,

Jack A. Huber
Health Care Analyst

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2898
RECIPIENT ADDRESS	912036885013
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RESULT	OK

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
OFFICE OF HEALTH CARE ACCESS

FAX SHEET

TO: JEAN AHN

FAX: (203) 688-5013

AGENCY: YALE NEW HAVEN HOSPTIAL

FROM: JACK HUBER

DATE: 5/3/12 **TIME:**

NUMBER OF PAGES:
(including transmittal sheet

Comments: Docket 12-31745-CON Completeness Questions

PLEASE PHONE IF THERE ARE ANY TRANSMISSION PROBLEMS.

YALE-NEW HAVEN HOSPITAL

May 11, 2012

Ms. Kimberly Martone, Director of Operations
Office of Health Care Access
410 Capital Avenue, MS #13HCA
P. O. Box 340308
Hartford, CT 06106

RE: Yale-New Haven Hospital CON Application DN 12-31745-CON
Proposal to Increase the Hospital's Licensed Bed Count (less Bassinets) by 70
CON Application Completeness Question Responses

Dear Director Martone,

Enclosed please find Yale-New Haven Hospital's responses to the completeness questions posed by the Office of Health Care Access (OHCA) on May 3, 2012.

We have worked hard to provide these responses quickly in order to facilitate OHCA's completeness review process and provide all of the information necessary to deem this CON application complete.

Please do not hesitate to contact me with any questions or concerns. I can be reached at (203) 688-2609.

Thank you for your time and support of this project.

Sincerely,

Jean Ahn
System Director, Planning & Business Development

Enclosures

cc: William Aseltyne, Esq.

20 York Street
New Haven, CT 06504

Yale-New Haven Hospital

Certificate of Need Application
Docket Number: 12-31745-CON
Proposal to Increase the Hospital's Licensed Bed Count (less Bassinets)
By 70, from 874 to 944 Licensed Inpatient Hospital Beds
(New Haven Campus)

Responses to Second Set of Completeness Questions

1. Please provide the calculations and assumptions that support the projected growth from FY 2012 to FY 2016 in average daily census ("ADC") for medical/surgical beds, rehabilitation beds, psychiatric beds, pediatric beds, maternity beds, newborn critical care (NBSCU) and newborn bassinets as depicted in the chart entitled Projected Combined ADC and Bed Need on page 233 of YNHH's Completeness Responses. In furnishing YNHH's response for each service category, please also provide:

Response

The projected ADC included in the table on page 233 included the following calculations and assumptions:

- **ADC was calculated by dividing the projected patient days by clinical area by 365.**
- **HSR ADC remains at FY 2011 levels (total ADC was 333.7) for all projection years.**
- **Projected discharges and patient days for YNHH were prepared by YNHH's Department of Financial Planning and as described on Applicant pages 40 through 42 and throughout the CON application were conservatively developed. An overall average annual growth in discharges of 2.8% has been projected when historical average annual growth between FY 2008 and FY 2011 was 3.4%. Length of stay and patient day projections were described on applicant pages 41 and 42 and represent continued efforts to reduce length of stay. YNHH has demonstrated that it developed conservative volume projections and exceeded those projections as described on pages 10 through 24 with regard to the Smilow Cancer Center CON application. The Smilow Cancer Center projected inpatient occupancy at 80.2% in FY 2011 however occupancy was 90.2%. The projections contained in this CON application are also conservative. Based on these projections and as noted on page 38 of the CON application, in FY 2011, 65 additional beds were required to operate at target occupancy levels. By 2014, 113 additional beds will be required to operate at target occupancy rates.**
- **The ADC statistics on page 233 include both YNHH and HSR. YNHH ADC is based on projected patient days by clinical area according to how each department utilizes beds throughout the institution. ADC is calculated by dividing the patient days in each clinical area by 365. Assignment of patient days to clinical areas on page 233 differs somewhat from the tables included on pages 37 and 38 of the original CON. The tables on pages 37 and 38 are**

organized by the discharging physician's department assignment. However, when one examines the specific nursing units where patients are cared for, there are certain specialties that utilize beds in more than one department. For example, the Department of Orthopedics which was included in Medicine/Surgery figures on page 37 has 10% of its patient days in pediatric beds. *Attachment I* includes a table which summarizes the differences between how the patient days and ADC were assigned in the tables on pages 37 and 38 and on page 233. For the purposes of bed and utilization planning, the method used to determine the statistics on page 233 is more appropriate and specific.

a. The actual FY 2011 ADCs for YNHH and the Hospital of Saint Raphael ("HSR") that serve as a baseline for the projections in each service category.

Response

The actual FY 2011 ADC for YNHH and HSR is provided in the table below:

YNHH and HSR ADC for FY 2011					
Clinical Categories	YNHH	HSR			
Adult Med/Surg					
General	471.8	203.1			
Critical Care	90.4	59.9			
Children's Hospital					
General Care	51.6	0.6			
Critical Care	10.6				
Rehab	0	11			
Psych	73	21.4			
Child Psych	12.5	14.8			
Maternity	38.5	10.9			
ADC Subtotal (non newborn)	748.4	321.7			
Bassinets					
NBSCU	41.6	4.5			
Newborn	26.1	7.5			
Newborns Subtotal	67.7	12.0			
Grand Total (ADC)	816.1	333.7			
Source: YNHH Bed Capacity and Bed Need Scenarios Revised (for HSR)					
YNHH 2011 ADC as per Helicon Consulting					

b. An explanation why YNHH's projected total ADC and the ADCs for YNHH's medical/surgical, obstetrics, pediatrics and psychiatry service categories for FYs

2012-2015 as provided at Tables IX-a through X-e on pages 36 through 38 of the CON Application differ with the totals for YNHH depicted in the Bed Need Capacity spreadsheets shown at Attachment II to the April 12, 2012 completeness responses submitted under Docket No. 12-31747-CON. For example, in Table IX-b, YNHH's projected total ADC for medical/surgical beds is 580, 591, 602, and 614 for FYs 2012-2015 while in Attachment II to the Docket No. 12-31747-CON submission the projected total ADC for YNHH in those same years is 569, 579, 579 and 602.

Response

Please refer to the response immediately following question 1 above. Attachment II to the April 12, 2012 completeness responses submitted under Docket No. 12-31747-CON utilized the same categories as those included on page 233 of completeness responses to Docket No. 12-31745-CON. Critical care census and bed need for adult medical/surgical were combined with general care beds in one category. The same was done with critical care and general beds for pediatrics. A revised version of Attachment II from Docket No. 12-31747, as referenced in this response, has been included as *Attachment II* to these completeness responses in order to correct a few minor typographical errors.

c. Confirmation that the projected contribution to the combined total ADC made by HSR in each service category for FYs 2012-2016 is the same as depicted in the Bed Need Capacity spreadsheets shown at Attachment II to the April 12, 2012 completeness responses submitted under Docket No. 12-31747-CON or an explanation as to why this is not the case.

Response

The combined total ADC made by HSR in each service category for FY 2012 – 2016 is the same as depicted in the Bed Need Capacity spreadsheets which were provided in Attachment II to the April 12, 2012 completeness responses submitted under Docket No. 12-31747-CON. As noted above, please refer to the updated version included in Attachment II of these completeness responses.

2. Please provide the following information to supplement the response to Question 2e:

a. Where does YNHH plan to relocate the observation beds being moved in order to open Medicine Unit EP 5-7/8?

Response

Finding alternative space for the observation beds is challenging and must be in areas that cannot be used for inpatient care given the critical need for additional inpatient beds. At this time YNHH is planning to relocate 17 of its 26 observation beds that are currently located in the East Pavilion 5-7/8 to two locations; East Pavilion 4-5 (7 observation beds) and shell space on the second floor in the South Pavilion (10 observation beds). For the remaining 9 observation beds, YNHH is considering moving them to a procedural recovery space.

b. How many observation beds are presently in operation at this location and how many will be relocated?

Response

Please review to the response to question 2a.

3. Please supplement the response to Question 5 by providing the breakdown between emergency and elective/scheduled admissions at YNHH for FYs 2009 and 2010. Please also project the same breakdown for FYs 2012-2014. With respect to the projections, please provide the supporting calculations and assumptions.

Response

The table below provides the breakdown of emergency and elective/scheduled adult medical/surgical admissions at YNHH for FY 2009 and 2010 as well as a projected breakdown for FY 2012 through 2014.

YNHH- Adult Medical/Surgical	2009	2010	2011	2012	2013	2014
Emergency Admissions (%)	77.1%	75.9%	76.3%	75%	77%	78%
Elective/Scheduled Admissions (%)	22.9%	24.1%	23.7%	25%	23%	22%

FY 2012 represents 7 months of actual volume. An increase of 1% and a corresponding decrease of 1% have been projected between FY 2012 and 2013 and FY 2013 and 2014 to reflect the projected growth of Y Access cases which are emergency admissions.

4. Please explain why, if the CON for YNHH's acquisition of HSR is approved, the additional 70 medical/surgical beds requested by YNHH cannot be accommodated by the currently licensed but unstaffed medicine, surgery, telemetry and critical care beds located at HSR as depicted in Table 2 on pages 244-45 of YNHH's completeness response.

Response

Please refer to *Attachment II*, previously referenced in response to question 1b, which outlines the projected occupancy levels for YNHH with the acquisition of HSR and 70 additional beds. This scenario is represented in the far right column of Attachment II (on pages 2 through 5). The column to the left of the far right column on page 2 of the attachment represents YNHH's projected occupancy with the acquisition of HSR without the 70 additional beds.

As clearly depicted, occupancy levels for adult medical/surgical areas grow from 80% in FY 2012 to 83% by FY 2013 if YNHH is unable to add 70 beds. With 70 additional beds, in addition to all of HSR's beds that can be made operational (499 beds); medical/surgical occupancy levels are more manageable and range between 75% and 78%.

The addition of 70 beds and the acquisition of HSR is the only scenario that will permit YNHH to avoid the need to build an additional bed tower to house its projected patient growth. Without the 70 beds, even with the acquisition of HSR, occupancy levels quickly exceed 80% (FY 2014) and will soon require expenditures and resources to plan for added capacity.

5. With respect to its response to Question 23 where YNHH states that the proposed 70 additional beds will be providing services to patients requiring primary and secondary care as well as tertiary and quaternary care, please clarify:

   a. Why YNHH believes approval of the proposed CON will have a minimal impact on existing providers.

   Response

   Minimal impact on existing providers is expected because the proposed 70 beds are being requested to improve YNHH's ability to meet inpatient demand at levels already achieved in FY 2011. As demonstrated by the findings of Helicon Consulting's Bed Capacity and Stacking Study, in FY 2011, YNHH required 65 additional beds. The inpatient volume for the requested 70 beds already exists at YNHH and therefore will have minimal impact on existing providers of inpatient care.

   b. Describe the nature of the anticipated impact on existing providers.

   Response

   As described in response to question 5(a) above, although the requested 70 beds are not expected to have any significant impact on existing providers because they are being requested to meet the inpatient bed days already present at YNHH, there is in fact a negative effect on existing providers if these beds are not approved. The presence of 70 additional beds at YNHH will facilitate the institution's ability to accept and place acutely ill patients that require transfer to YNHH from hospitals via the Y Access Line, which continues to grow (33% increase in inpatient transfer cases during first year of Y Access Line operation). Without adequate bed availability, timely transfer is negatively impacted and could lead to negative impacts on both the patient (e.g. delay in receiving specialized clinical services) and the referring institution (e.g. significant strain on staff and institutional resources to maintain a critically ill patient in need of transfer).

YNHH - ADC Projections (New Haven Campus)
Comparison of Bed Scenario Model to MD Depatment Model
Attachment I 70 Bed CON Docket No. 12-31745

	Bed Scenarios (1)		MD Department (2)		Bed Scenarios (1)		MD Department (2)		Bed Scenarios (1)		MD Department (2)		Bed Scenarios (1)		MD Department (2)		Bed Scenarios (1)		MD Department (2)	
	2012		2012		2013		2013		2014		2014		2015		2015		2016		2016	
Clinical Categories	Days	ADC	Days	ADC	Days	ADC	Days	ADC	Days	ADC	Days	ADC	Days	ADC	Days	ADC	Days	ADC	Days	ADC
Adult Med/Surg	207,495		211,660	580	211,485		215,722	591	215,586		219,897	602	219,802		224,186	614	223,866		Not included	
General	173,806	476.2			177,037	485			180,359	494.5			183,777	503.5			187,072	512.5		
Critical Care	33,689	92.3			34,448	94.4			35,227	96.5			36,025	98.7			36,794	100.8		
Children's Hospital	23,991				24,500				25,018				25,546				26,057			
General Care	19,913	54.5			20,335	55.7			20,765	56.9			21,203	58.1			21,627	59.3		
Critical Care	4,078	11.2			4,165	11.4			4,253	11.6			4,343	11.9			4,430	12.1		
Pediatrics - Finance			40,167	110			41,000	112			41,850	115			42,724	117				
Rehab	0	0			0	0			0	0			0	0			0	0		
Psych	26,799	73.4	27,202	75	27,202	74.5	27,202	75	27,617	75.7	27,202	75	28,046	76.8	27,202	75	28,461	78		
Child Psych	4,941	13.5			5,037	13.8			5,141	14.1			5,246	14.4			5,347	14.6		
Maternity	14,346	39.3			14,528	39.8			14,716	40.3			14,906	40.8			15,092	41.3		
Obstetrics - Finance			25,413	70			25,834	71			26,264	72			26,708	73				
Beds Subtotal	277,572	760.4			282,752	774.6			288,078	789.6			293,546	804.2			298,823	818.6		
Bassinets																				
NBSCU	15,351	42.1			15,671	42.9			15,994	43.8			16,330	44.7			16,654	45.6		
Newborn	9,990	27.4			10,195	27.9			10,405	28.5			10,622	29.1			10,830	29.7		
Bassinets Subtotal	25,341	69.5	*not provided*		25,866	70.8			26,399	72.3			26,952	73.8			27,484	75.3		
Grand Total	302,913	829.9	304,504	834	308,618	845.4	310,229	850	314,477	861.9	316,108	866	320,498	878	322,151	883	326,307	893.9		
L&D	1,591				1,611				1,631				1,653				1,673			
Total with L&D	**304,504**				**310,229**				**316,108**				**322,151**				**327,980**			

Sources:
(1) Bed Scenario Model corresponds to Attachment II of April 12 Completeness Responses to DN: 12-31747, revised (5/9/12)
(2) MD Department model as per Tables in 70-Bed CON pages 37 and 38.

Attachment 2
to Completeness Responses
dated May 11, 2012
Docket No. 12-31745

YNHH Bed Capacity and Bed Need[1] for FY 2012 based on Projected Annual ADC[2] according to Three Scenarios:
1. Addition of 70 beds, 2. Acquisition of HSR, 3. Addition of 70 beds and Acquisition of HSR

	YNHH FY 2012	HSR FY 2011	Physical Bed Capacity Scenarios				FY 2012 Bed Need @ Target Utilization Based on Projected ADC			Variance between Capacity & Need				FY 2012 Projected Bed Utilization			
	ADC	ADC	YNHH - existing	Scenario 1 YNHH + 23 of requested 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + 23 of requested 70 beds + HSR	YNHH	HSR	Total	YNHH - existing	Scenario 1 YNHH + 23 of requested 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + 23 of requested 70 beds + HSR	YNHH - existing	Scenario 1 YNHH + 23 of requested 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + 23 of requested 70 beds + HSR
Adult Medical/ Surgical																	
General Care	476.2	203.1	583	556	859	882	595	254	849	-62	-39	10	33	89%	86%	79%	77%
Critical Care	92.3	59.9	107	107	182	182	115	75	190	-8	-8	-8	-8	86%	86%	84%	84%
Adult Med/Surg Subtotal	*568.5*	*263.0*	*640*	*663*	*1,041*	*1,064*	*710*	*329*	*1,039*	*-70*	*-47*	*2*	*25*	*89%*	*86%*	*80%*	*78%*
Children's Hospital																	
General Care	54.5	0.6	71	71	74	74	73	1	74	-2	-2	0	0	77%	77%	75%	75%
Critical Care	11.2		19	19	19	19	15		15	4	4	4	4	59%	59%	59%	59%
Children's Subtotal	*65.7*	*0.6*	*90*	*90*	*93*	*93*	*88*	*1*	*89*	*2*	*2*	*4*	*4*	*73%*	*73%*	*71%*	*71%*
Rehab	0.0	11.0	0	0	18	18		14	14	0	0	4	4			61%	61%
Psychiatry	73.4	21.4	73	73	99	99	82	24	106	-9	-9	-5	-5	101%	101%	97%	97%
Child Psychiatry	13.5	14.8	15	15	33	33	15	16	31	0	0	2	2	90%	90%	86%	86%
Maternity	39.3	10.9	56	56	75	75	52	15	67	4	4	8	8	70%	70%	67%	67%
Available Beds Total	760.4	321.7	874	897	1,359	1,381	947	398	1,345	-73	-50	12	35	87%	85%	80%	78%
NBSCU - Critical Care Bassinets	42.1	4.5	52	52	60	60	56	6	62	-4	-4	-2	-2	81%	81%	78%	78%
Newborn Bassinets	27.4	7.5	40	40	54	54	37	10	47	3	3	7	7	69%	69%	65%	65%
Bassinets Subtotal	69.5	12.0	92	92	114	114	93	16	109	-1	-1	5	5	76%	76%	71%	71%
Total	829.9	333.7	966	989	1,472	1,495	1,040	415	1,455	-74	-51	17	40	86%	84%	78%	76%

[1] Projected Bed Need was based on inpatient projections only. Observation patients and other outpatient care for in inpatient bed were excluded. Target Utilization; Adult med/surg and Rehab: 80%, Psychiatric: 90%, Pediatrics, Maternity, & Bassinets: 75%.

[2] YNHH projected annual ADC is based on growth projections discharges and patient days developed by Finance. HSR growth assumed to be flat.

YNHH Bed Capacity and Bed Need[3] for FY 2013 based on Projected Annual ADC[4] according to Three Scenarios

	YNHH FY 2013	HSR FY 2011	Physical Bed Capacity Scenarios				FY 2013 Bed Need @ Target Utilization Based on Projected ADC			Variance between Capacity & Need				FY 2013 Projected Bed Utilization			
	ADC	ADC	YNHH - existing	Scenario 1 YNHH + additional 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + additional 70 beds + HSR	YNHH	HSR	Total	YNHH - existing	Scenario 1 YNHH + additional 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + additional 70 beds + HSR	YNHH - existing	Scenario 1 YNHH + additional 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + additional 70 beds + HSR
Adult Medical/ Surgical																	
General Care	485.0	203.1	533	596	872	935	606	254	860	-73	-10	12	75	91%	81%	79%	74%
Critical Care	94.4	59.9	107	114	182	189	118	75	193	-11	-4	-11	-4	88%	83%	86%	82%
Adult Med/Surg Subtotal	*579.4*	*263.0*	*640*	*710*	*1,054*	*1,124*	*724*	*329*	*1,053*	*-84*	*-14*	*1*	*71*	*91%*	*82%*	*80%*	*75%*
Children's Hospital																	
General Care	55.7	0.6	71	71	74	74	74	1	75	-3	-3	-1	-1	78%	78%	76%	76%
Critical Care	11.4		19	19	19	19	15		15	4	4	4	4	60%	60%	60%	60%
Children's Subtotal	*67.1*	*0.6*	*90*	*90*	*93*	*93*	*89*	*1*	*90*	*1*	*1*	*3*	*3*	*75%*	*75%*	*73%*	*73%*
Rehab	0.0	11.0	0	0	18	18		14	14	0	0	4	4			61%	61%
Psychiatry	74.5	21.4	73	73	98	98	83	24	107	-10	-10	-9	-9	102%	102%	98%	98%
Child Psychiatry	13.8	14.8	15	15	35	35	15	16	31	0	0	4	4	92%	92%	82%	82%
Maternity	39.8	10.9	56	56	75	75	53	15	68	3	3	7	7	71%	71%	66%	66%
Available Beds Total	774.6	321.7	874	944	1,373	1,443	964	399	1,363	-90	-20	9	79	89%	82%	80%	76%
NBSCU - Critical Care Bassinets	42.9	4.5	52	52	60	60	57	6	63	-5	-5	-3	-3	83%	83%	79%	79%
Newborn Bassinets	27.9	7.5	40	40	54	54	37	10	47	3	3	7	7	70%	70%	66%	66%
Bassinets Subtotal	70.8	12.0	92	92	114	114	94	16	110	-2	-2	4	4	77%	77%	73%	73%
Total	845.4	333.7	966	1,036	1,487	1,557	1,058	415	1,473	-92	-22	13	83	88%	82%	79%	76%

[3] Target Utilization; Adult med/surg & Rehab: 80%, Psychiatric: 90%, Pediatrics, Maternity, & Bassinets: 75%.
[4] YNHH projected annual ADC is based on growth projections discharges and patient days developed by Finance. HSR growth assumed to be flat.

YNHH Bed Capacity and Bed Need[5] for FY 2014 based on Projected Annual ADC[6] according to Three Scenarios

	YNHH FY 2014	HSR FY 2011	Physical Bed Capacity Scenarios				FY 2014 Bed Need @ Target Utilization Based on Projected ADC			Variance between Capacity & Need				FY 2014 Projected Bed Utilization			
	ADC	ADC	YNHH - existing	Scenario 1 YNHH + additional 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + additional 70 beds + HSR	YNHH	HSR	Total	YNHH - existing	Scenario 1 YNHH + additional 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + additional 70 beds + HSR	YNHH - existing	Scenario 1 YNHH + additional 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + additional 70 beds + HSR
Adult Medical/ Surgical																	
General Care	494.5	203.1	533	596	672	935	618	254	872	-85	-22	0	63	93%	83%	80%	75%
Critical Care	96.6	59.9	107	114	182	189	121	75	196	-14	-7	-14	-7	90%	85%	86%	83%
Adult Med/Surg Subtotal	*591.0*	*263.0*	*640*	*710*	*1,054*	*1,124*	*739*	*329*	*1,068*	*-99*	*-29*	*-14*	*57*	*92%*	*83%*	*81%*	*76%*
Children's Hospital																	
General Care	56.9	0.6	71	71	74	74	76	1	77	-5	-5	-3	-3	80%	80%	76%	76%
Critical Care	11.6		19	19	19	19	16		16	3	3	3	3	61%	61%	61%	61%
Children's Subtotal	*68.5*	*0.6*	*90*	*90*	*93*	*93*	*92*	*1*	*93*	*-2*	*-2*	*0*	*1*	*76%*	*76%*	*74%*	*74%*
Rehab	0.0	11.0	0	0	18	18		14	14	0	0	4	4			61%	61%
Psychiatry	75.7	21.4	73	73	98	98	84	24	108	-11	-11	-10	-10	104%	104%	99%	99%
Child Psychiatry	14.1	14.8	15	15	35	35	16	16	32	-1	-1	3	3	94%	94%	83%	83%
Maternity	40.3	10.9	56	56	75	75	54	15	69	2	2	6	6	72%	72%	68%	68%
Available Beds Total	789.5	321.7	874	944	1,373	1,443	985	399	1,384	-111	-41	-11	59	90%	84%	81%	77%
NBSCU - Critical Care Bassinets	43.8	4.5	52	52	60	60	58	6	64	-6	-6	-4	-4	84%	84%	81%	81%
Newborn Bassinets	28.5	7.5	40	40	54	54	38	10	48	2	2	6	6	71%	71%	67%	67%
Bassinets Subtotal	72.3	12.0	92	92	114	114	96	16	112	-4	-4	2	2	79%	79%	74%	74%
Total	861.9	333.7	966	1,036	1,487	1,557	1,081	415	1,496	-115	-45	-9	61	89%	83%	80%	77%

[5] Target Utilization; Adult med/surg & Rehab: 80%, Psychiatric: 90%, Pediatrics, Maternity, & Bassinets: 75%.

[6] YNHH projected annual ADC is based on growth projections discharges and patient days developed by Finance. HSR growth assumed to be flat.

YNHH Bed Capacity and Bed Need[7] for FY 2015 based on Projected Annual ADC[8] according to Three Scenarios

	YNHH FY 2015	HSR FY 2011	Physical Bed Capacity Scenarios				FY 2015 Bed Need @ Target Utilization Based on Projected ADC			Variance between Capacity & Need				FY 2015 Projected Bed Utilization			
				Scenario 1	Scenario 2	Scenario 3					Scenario 1	Scenario 2	Scenario 3		Scenario 1	Scenario 2	Scenario 3
	ADC	ADC	YNHH - existing	YNHH + additional 70 beds	YNHH + HSR	YNHH + additional 70 beds + HSR	YNHH	HSR	Total	YNHH - existing	YNHH + additional 70 beds	YNHH + HSR	YNHH + additional 70 beds + HSR	YNHH - existing	YNHH + additional 70 beds	YNHH + HSR	YNHH + additional 70 beds + HSR
Adult Medical/ Surgical																	
General Care	503.5	203.1	533	596	872	935	630	254	884	-97	-34	-12	51	94%	84%	81%	76%
Critical Care	98.7	59.9	107	114	182	189	129	75	198	-16	-9	-16	-9	92%	87%	87%	84%
Adult Med/Surg Subtotal	*602.2*	*263.0*	*640*	*710*	*1,054*	*1,124*	*759*	*329*	*1,082*	*-113*	*-43*	*-28*	*42*	*94%*	*85%*	*82%*	*77%*
Children's Hospital																	
General Care	58.1	0.5	71	71	74	74	77	1	78	-6	-6	-4	-4	82%	82%	79%	79%
Critical Care	11.9		19	19	19	19	16		16	3	3	3	3	63%	63%	63%	63%
Children's Subtotal	*70.0*	*0.5*	*90*	*90*	*93*	*93*	*93*	*1*	*94*	*-3*	*-3*	*-1*	*-1*	*78%*	*78%*	*76%*	*76%*
Rehab	0.0	11.0	0	0	18	18		14	14	0	0	4	4			61%	61%
Psychiatry	76.8	21.4	73	73	98	98	85	24	109	-12	-12	-11	-11	105%	105%	100%	100%
Child Psychiatry	14.4	14.8	15	15	35	35	16	16	32	-1	-1	3	3	96%	96%	83%	83%
Maternity	40.8	10.9	56	56	75	75	54	15	69	2	2	6	6	73%	73%	69%	69%
Available Beds Total	804.2	321.7	874	944	1,373	1,443	1,001	399	1,400	-127	-57	-27	43	92%	85%	82%	78%
NBSCU - Critical Care Bassinets	44.7	4.5	52	52	60	60	60	6	66	-8	-8	-6	-6	86%	86%	82%	82%
Newborn Bassinets	29.1	7.5	40	40	54	54	39	10	49	1	1	5	5	73%	73%	68%	68%
Bassinets Subtotal	73.8	12.0	92	92	114	114	99	16	115	-7	-7	-1	-1	80%	80%	75%	75%
Total	878.0	333.7	966	1,036	1,487	1,557	1,100	415	1,515	-134	-64	-28	42	91%	85%	81%	78%

[7] Target Utilization; Adult med/surg & Rehab: 80%, Psychiatric: 90%, Pediatrics, Maternity, & Bassinets: 75%.
[8] YNHH projected annual ADC is based on growth projections discharges and patient days developed by Finance. HSR growth assumed to be flat.

YNHH Bed Capacity and Bed Need[9] for FY 2016 based on Projected Annual ADC[10] according to Three Scenarios

	YNHH FY 2016	HSR FY 2011	Physical Bed Capacity Scenarios				FY 2016 Bed Need @ Target Utilization Based on Projected ADC			Variance between Capacity & Need				FY 2016 Projected Bed Utilization			
	ADC	ADC	YNHH - existing	Scenario 1 YNHH + additional 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + additional 70 beds + HSR	YNHH	HSR	Total	YNHH - existing	Scenario 1 YNHH + additional 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + additional 70 beds + HSR	YNHH - existing	Scenario 1 YNHH + additional 70 beds	Scenario 2 YNHH + HSR	Scenario 3 YNHH + additional 70 beds + HSR
Adult Medical/ Surgical																	
General Care	512.5	203.1	535	596	872	935	641	254	895	-106	-45	-23	40	96%	86%	82%	77%
Critical Care	100.8	59.9	107	114	182	189	126	75	201	-19	-12	-19	-12	94%	88%	88%	85%
Adult Med/Surg Subtotal	*613.3*	*263.0*	*640*	*710*	*1,054*	*1,124*	*767*	*329*	*1,096*	*-127*	*-57*	*-42*	*28*	*96%*	*86%*	*83%*	*78%*
Children's Hospital																	
General Care	59.3	0.6	71	71	74	74	70	1	80	-8	-8	-6	-6	84%	84%	81%	81%
Critical Care	12.1		19	19	19	19	16		16	3	3	3	3	64%	64%	64%	64%
Children's Subtotal	*71.4*	*0.6*	*90*	*90*	*93*	*93*	*95*	*1*	*96*	*-5*	*-5*	*-3*	*-3*	*79%*	*79%*	*77%*	*77%*
Rehab	0.0	11.0	0	0	18	18		14	14	0	0	4	4			61%	61%
Psychiatry	76.0	21.4	73	73	98	98	87	24	111	-14	-14	-13	-13	107%	107%	101%	101%
Child Psychiatry	14.8	14.8	15	15	35	35	16	16	32	-1	-1	3	3	97%	97%	84%	84%
Maternity	41.3	10.9	56	56	75	75	55	15	70	1	1	5	5	74%	74%	70%	70%
Available Beds Total	818.8	321.7	874	944	1,373	1,443	1,020	399	1,419	-146	-76	-46	24	94%	87%	83%	79%
NBSCU - Critical Care Bassinets	45.6	4.5	52	52	60	60	61	6	67	-9	-9	-7	-7	88%	88%	84%	84%
Newborn Bassinets	29.7	7.5	40	40	54	54	40	10	50	0	0	4	4	74%	74%	69%	69%
Bassinets Subtotal	75.3	12.0	92	92	114	114	101	16	117	-9	-9	-3	-3	82%	82%	77%	77%
Total	893.9	333.7	966	1,036	1,487	1,557	1,121	415	1,536	-155	-85	-49	21	93%	86%	83%	79%

[9] Target Utilization; Adult med/surg & Rehab: 80%, Psychiatric: 90%, Pediatrics, Maternity, & Bassinets: 75%.
[10] YNHH projected annual ADC is based on growth projections discharges and patient days developed by Finance. HSR growth assumed to be flat.

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Office of Health Care Access

May 14, 2012 Via Fax and Regular Mail

Ms. Jean Ahn
System Director
Yale-New Haven Hospital
20 York Street (Howe 3)
New Haven, CT 06504

RE: Certificate of Need Application; Docket Number: 12-31745-CON
Proposal of Yale New Haven Hospital to Increase its General Hospital Licensed Bed Count by 70, from 896 to 966 Licensed Beds

Dear Ms. Ahn,

This letter is to inform you that, pursuant to Section 19a-639a(d) of the Connecticut General Statutes, the Office of Health Care Access has determined that the above-referenced application has been deemed complete as of May 14, 2012. The date of May 14, 2012, also begins the ninety-day review period of the application.

If you have any questions regarding this matter, please feel free to contact me at (860) 418-7069.

Sincerely,

Jack A. Huber

Jack A. Huber
OHCA Health Care Analyst

****
*** TX REPORT ***
****

TRANSMISSION OK

TX/RX NO	2914
RECIPIENT ADDRESS	912036885013
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PAGES SENT	2
RESULT	OK

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
OFFICE OF HEALTH CARE ACCESS

FAX SHEET

TO: JEAN AHN

FAX: (203) 688-5013

AGENCY: YALE-NEW HAVEN HOSPITAL

FROM: JACK HUBER

DATE: 5/14/2012 **Time:** ~2:10 pm

NUMBER OF PAGES: 2
(including transmittal sheet)

Comments: Transmitted: YNHH's Proposal to Add 70 Additional Beds
Letter Deeming CON Application Complete under
Docket Number: 12-31745-CON

PLEASE PHONE Jack A. Huber at (860) 418-7069
IF THERE ARE ANY TRANSMISSION PROBLEMS.

Greer, Leslie

From: Martone, Kim
Sent: Tuesday, May 15, 2012 1:53 PM
To: Greer, Leslie
Cc: Lazarus, Steven
Subject: FW: YNHH Proposal to Increase licensed beds by 70 Docket #12-31745 CON
Attachments: YNHH Withdrawal 051512.pdf

Kimberly R. Martone
Director of Operations
Office of Health Care Access
860-418-7029

From: Capozzalo, Gayle [mailto:Gayle.Capozzalo@ynhh.org]
Sent: Tuesday, May 15, 2012 1:40 PM
To: Martone, Kim
Cc: Ahn, Jean; Aseltyne, Bill; Banoff, Karen; Borgstrom, Marna; Capozzalo, Gayle; Daquila, Richard; Petrini, Vincent
Subject: YNHH Proposal to Increase licensed beds by 70 Docket #12-31745 CON

Kim,

Attached please find a letter from Richard D'Aquila, President and Chief Operating Officer of Yale-New Haven Hospital, withdrawing the Yale-New Haven Hospital Docket #12-31745 CON Proposal to Increase the Hospital's Licensed Bed Count (less Bassinets) by 70. Thank you.

Gayle Capozzalo
Executive Vice President
Strategy & System Development
Yale New Haven Health System

Office of the President

YALE-NEW HAVEN HOSPITAL

May 15, 2012

Ms. Kimberly Martone
Director of Operations
Office of Healthcare Access
410 Capitol Avenue
MS #13HCA
P.O. Box 340308
Hartford, CT 06106

Re: Yale-New Haven Hospital (YNHH)
Proposal to Increase the Hospital's Licensed Bed Count (less Bassinets) by 70
Docket Number: 12-31745-CON

Dear Ms. Martone:

YNHH would like to withdraw the above mentioned Certificate of Need Application in order to permit the expeditious review of Docket Number: 12-31747-CON, Yale-New Haven Hospital's Acquisition of the Saint Raphael Healthcare System and the Hospital of Saint Raphael and the Transfer of Saint Raphael Healthcare System's (DePaul Health Services Corporation) Ownership Interest in Saint Raphael Magnetic Resonance Imaging (SRMRC) to Yale-New Haven Hospital.

YNHH remains absolutely convinced of the need for expanding its current bed license by 70-beds in addition to the acquisition of the Hospital of Saint Raphael. However, we recognize and appreciate the constraints faced by OHCA in considering both simultaneously. As a result, the Hospital is willing to re-submit the 70 Bed CON following the completion of OHCA's review and a decision on the above mentioned CON applications.

Please do not hesitate to contact me at (203) 688-7541 if you have any questions.

Sincerely,

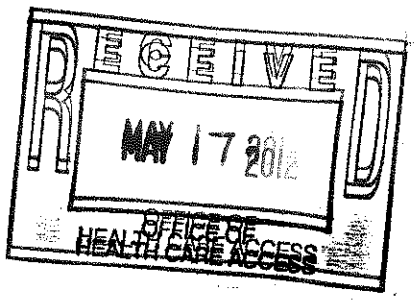
Richard D'Aquila
President and Chief Operating Officer

20 York Street
New Haven, CT 06510-3202
203.688.2608
Fax 203.688.3257

Office of the President

YALE-NEW HAVEN HOSPITAL

May 15, 2012



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