



University of Iowa Health Care

*Presentation to
The Board of Regents, State of Iowa
December 10-11, 2008*

Agenda

- Opening Remarks
- Carver College of Medicine Report
- UI Hospitals and Clinics
 - Volume and Financial Performance
 - Expense Moderation Strategy
 - Actively Managing Length of Stay
- Clinical Information Systems Update
- Dance Marathon



Carver College of Medicine Report

Paul Rothman, MD
Dean, UI Carver College of Medicine



UI Hospitals and Clinics Report

Volume and Financial Performance
Expense Moderation Strategy
Length of Stay Reduction Plan



Volume and Financial Performance

Ken Kates

Associate Vice President and CEO, UI Hospitals and Clinics

Ken Fisher

Associate Vice President for Finance and CFO, UI Hospitals and Clinics

Volume Indicators

July 2008 through October 2008



Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Admissions	9,945	10,091	9,962	(146)	-1.4% ○	(17)	-0.2% ○
Patient Days	66,175	63,988	64,575	2,187	3.4% ●	1,600	2.5% ○
Length of Stay	6.65	6.34	6.48	0.31	4.9% ●	0.17	2.6% ●
Average Daily Census	538.01	520.23	525.00	17.78	3.4% ●	13.01	2.5% ○
Surgeries – Inpatient	3,840	4,373	3,800	(533)	-12.2% ●	40	1.1% ○
Surgeries – Outpatient	4,355	3,934	3,837	421	10.7% ●	518	13.5% ●
Emergency Treatment Center Visits	16,473	15,237	14,867	1,236	8.1% ●	1,606	10.8% ●
Outpatient Clinic Visits	254,490	249,746	240,207	4,744	1.9% ○	14,283	5.9% ●
Case Mix	1.8416	1.7722	1.7463	0.0694	3.9%	0.0953	5.5%
Medicare Case Mix	1.9837	1.9188	1.8626	0.0649	3.4%	0.1211	6.5%

● Greater than 2.5% Favorable	○ Neutral	● Greater than 2.5% Unfavorable
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Admissions by Clinical Department

July 2008 through October 2008



	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Family Medicine	429	417	398	12	2.9% ●	31	7.8% ●
General Surgery	1,094	1,075	1,118	19	1.8% ○	(24)	-2.2% ○
Internal Medicine	2,863	3,012	2,998	(149)	-4.9% ●	(135)	-4.5% ●
Neurology	527	497	469	30	6.1% ●	58	12.4% ●
Neurosurgery	761	709	657	52	7.3% ●	104	15.8% ●
Obstetrics/Gynecology	1,062	1,034	1,026	28	2.8% ●	36	3.5% ●
Ophthalmology	37	36	36	1	2.8% ●	1	2.8% ●
Orthopedics	858	838	755	20	2.4% ○	103	13.6% ●
Otolaryngology	191	230	230	(39)	-17.0% ●	(39)	-17.0% ●
Pediatrics	811	926	884	(115)	-12.4% ●	(73)	-8.3% ●
Psychiatry	712	777	807	(65)	-8.4% ●	(95)	-11.8% ●
Cardiothoracic	225	168	136	57	33.5% ●	89	65.4% ●
Urology	281	318	363	(37)	-11.8% ●	(82)	-22.6% ●
Other	94	54	85	40	74.1% ●	9	10.6% ●
Total	9,945	10,091	9,962	(146)	-1.5% ○	(17)	-0.2% ○

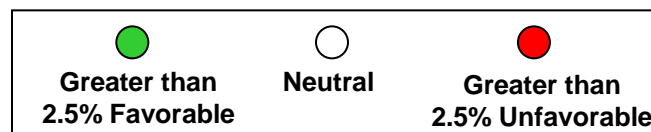
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Greater than 2.5% Favorable	Neutral	Greater than 2.5% Unfavorable

Outpatient Surgeries – by Clinical Department

July 2008 through October 2008



	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Cardiothoracic	23	16	29	7	43.2%	(6)	-20.7%
Dentistry	201	126	177	75	59.8%	24	13.6%
Dermatology	13	20	12	(7)	-34.7%	1	8.3%
General Surgery	601	454	492	147	32.4%	109	22.2%
Gynecology	223	208	214	15	7.0%	9	4.2%
Internal Medicine	0	3	3	(3)	-100.0%	(3)	-100.0%
Neurosurgery	102	24	25	78	325.4%	77	308.0%
Ophthalmology	1,202	1,076	1,082	126	11.8%	120	11.1%
Orthopedics	899	930	875	(31)	-3.3%	24	2.7%
Otolaryngology	639	550	548	89	16.2%	91	16.6%
Pediatrics	0	3	3	(3)	-100.0%	(3)	-100.0%
Urology w/ Procedure Ste.	452	524	377	(72)	-13.8%	75	19.9%
Total	4,355	3,934	3,837	421	10.7%	518	13.5%



Inpatient Surgeries – by Clinical Department

July 2008 through October 2008



	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Cardiothoracic	331	350	291	(19)	-5.5% ●	40	13.7% ●
Dentistry	52	65	51	(13)	-19.8% ●	1	2.0% ○
General Surgery	981	1,106	979	(125)	-11.3% ●	2	0.2% ○
Gynecology	264	310	275	(46)	-14.8% ●	(11)	-4.0% ●
Neurosurgery	623	687	613	(64)	-9.3% ●	10	1.6% ○
Ophthalmology	58	62	49	(4)	-7.1% ●	9	18.4% ●
Orthopedics	982	1,097	922	(115)	-10.5% ●	60	6.5% ●
Otolaryngology	283	339	309	(56)	-16.6% ●	(26)	-8.4% ●
Urology w/ Procedure Ste.	266	357	311	(91)	-25.5% ●	(45)	-14.5% ●
Total	3,840	4,373	3,800	(533)	-12.2% ●	40	1.1% ○

●	○	●
Greater than 2.5% Favorable	Neutral	Greater than 2.5% Unfavorable

Emergency Treatment Center

July 2008 through October 2008



	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
ETC Visits	16,473	15,237	14,867	1,236	8.1% ●	1,606	10.8% ●
ETC Admits	4,309	4,301	4,096	8	0.2% ○	213	5.2% ●
Conversion Factor	26.2%	28.2%	27.6%		-7.3% ●		-5.1% ●
ETC Admits / Total Admits	43.3%	42.6%	41.1%		1.7% ●		5.4% ●

●	○	●
Greater than 2.5% Favorable	Neutral	Greater than 2.5% Unfavorable

Clinic Visits by Clinical Department

July 2007 through October 2008



	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget		Variance to Prior Year	% Variance to Prior Year
Anesthesia	5,065	5,774	5,694	(709)	-12.3%	●	(629)	-11.1%
CDD	2,613	2,382	2,416	231	9.7%	●	197	8.2%
Clinical Research	2,660	2,747	2,828	(87)	-3.2%	●	(168)	-5.9%
Dermatology	8,746	8,683	8,178	63	0.7%	○	568	7.0%
ETC	16,474	15,324	14,709	1,150	7.5%	●	1,765	12.0%
Employee Health Clinic	6,411	5,815	6,242	596	10.2%	●	169	2.7%
Family Care Center	33,167	35,230	34,526	(2,063)	-5.9%	●	(1,359)	-3.9%
General Surgery	9,380	9,128	9,274	252	2.8%	●	106	1.1%
Hospital Dentistry	8,062	8,232	8,033	(170)	-2.1%	○	29	0.4%
Internal Medicine	38,112	37,315	35,580	797	2.1%	○	2,532	7.1%
Neurology	5,478	5,404	5,481	74	1.4%	○	(3)	-0.1%
Neurosurgery	3,228	3,082	3,113	146	4.8%	●	115	3.7%
Obstetrics/Gynecology	23,795	23,007	21,826	788	3.4%	●	1,969	9.0%
Ophthalmology	24,663	26,121	22,154	(1,458)	-5.6%	●	2,509	11.3%
Orthopedics	18,378	18,206	17,850	172	1.0%	○	528	3.0%
Otolaryngology	9,906	9,510	9,614	396	4.2%	●	292	3.0%
Pediatrics	13,267	11,818	11,392	1,449	12.3%	●	1,875	16.5%
Psychiatry	13,666	13,689	13,308	(23)	-0.2%	○	358	2.7%
Cardiothoracic	864	777	722	87	11.2%	●	142	19.7%
Urology	5,481	5,158	4,916	323	6.3%	●	565	11.5%
Other	5,074	2,344	2,351	2,730	116.5%	●	2,723	115.8%
Total	254,490	249,746	240,207	4,744	1.9%	○	14,283	6.0%



Greater than 2.5% Favorable

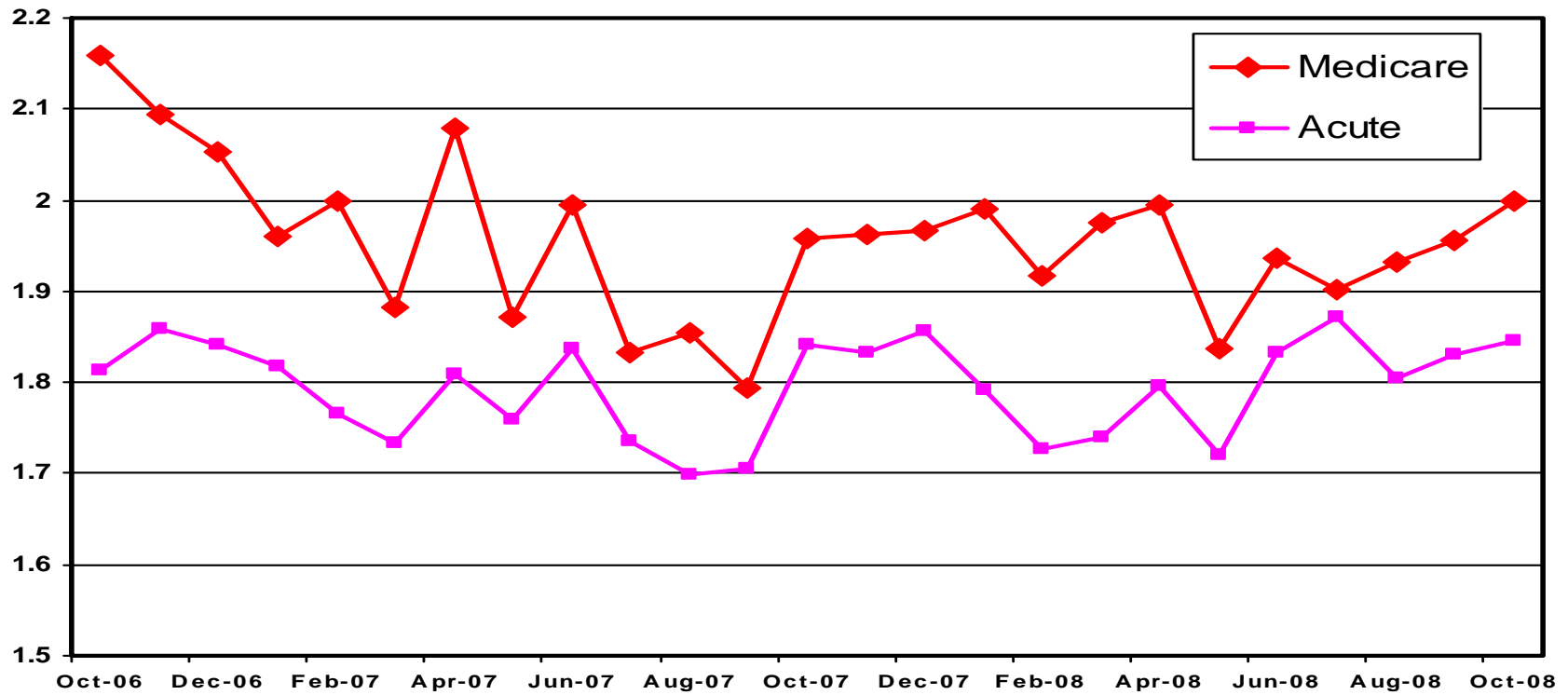


Neutral



Greater than 2.5% Unfavorable

Case Mix Index



UIHC Comparative Financial Results

Fiscal Year to Date October 2008



	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Patient Revenue	\$302,573	\$306,549	\$267,183	(\$3,976)	-1.3%	\$35,390	13.2%
Appropriations	2,339	2,339	4,683	0	0.0%	(2,344)	-50.1%
Other Operating Revenue	15,486	14,353	14,482	1,133	7.9%	1,004	6.9%
Total Revenue	\$320,398	\$323,241	\$286,348	(\$2,843)	-0.9%	\$34,050	11.9%
Salaries and Wages	\$171,485	\$166,941	\$145,436	\$4,544	2.7%	\$26,049	17.9%
General Expenses	126,661	122,425	109,912	4,236	3.5%	16,749	15.2%
Operating Expense before Capital	\$298,146	\$289,366	\$255,348	\$8,780	3.0%	\$42,798	16.8%
Cash Flow Operating Margin	\$22,252	\$33,875	\$31,000	(\$11,623)	-34.3%	(\$8,748)	-28.2%
Capital- Depreciation and Amortization	24,144	25,262	21,221	(1,118)	-4.4%	2,923	13.8%
Total Operating Expense	\$322,290	\$314,628	\$276,569	\$7,662	2.4%	\$45,721	16.5%
Operating Income	(\$1,892)	\$8,613	\$9,779	(\$10,505)	-122.0%	(\$11,671)	-119.3%
Operating Margin %	-0.6%	2.7%	3.4%		-3.3%		-4.0%
Gain (Loss) on Investments	(8,449)	5,717	7,533	(14,166)	-247.8%	(15,982)	-212.2%
Non-Recurring Items	-	-	-	0	0.0%	0	0.0%
Net Income	(\$10,341)	\$14,330	\$17,312	(\$24,671)	-172.2%	(\$27,653)	-159.7%
Net Margin %	-3.3%	4.4%	5.9%		-7.7%		-9.2%

UIHC Comparative Financial Results

October 2008

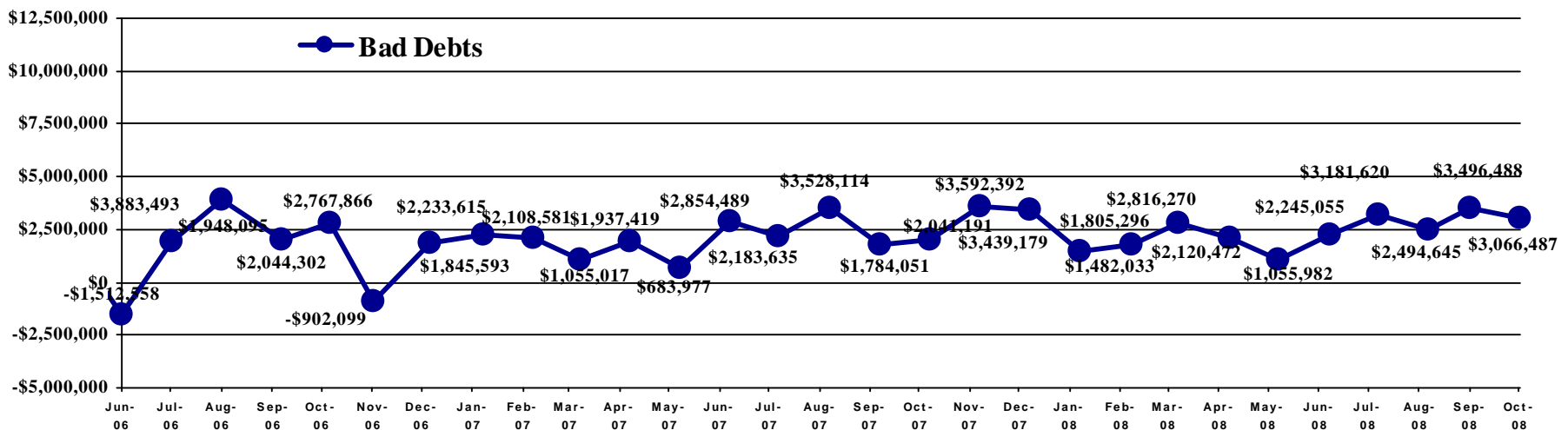
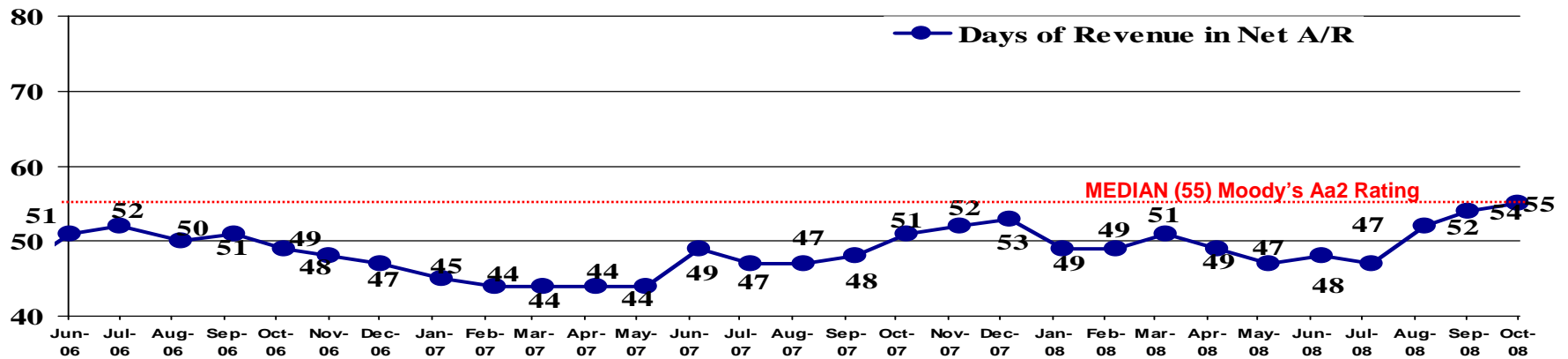


	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Patient Revenue	\$81,138	\$78,635	\$72,884	\$2,503	3.2%	8,254	11.3%
Appropriations	585	585	1,171	0	0.0%	(586)	-50.0%
Other Operating Revenue	3,806	3,631	4,067	175	4.8%	(261)	-6.4%
Total Revenue	\$85,529	\$82,851	\$78,122	\$2,678	3.2%	\$7,407	9.5%
Salaries and Wages	\$43,850	\$42,639	\$36,571	\$1,211	2.8%	\$7,279	19.9%
General Expenses	33,494	30,684	29,631	2,810	9.2%	3,863	13.0%
Operating Expense before Capital	\$77,344	\$73,323	\$66,202	\$4,021	5.5%	\$11,142	16.8%
Cash Flow Operating Margin	\$8,185	\$9,528	\$11,920	(\$1,343)	-14.1%	(\$3,735)	-31.3%
Capital- Depreciation and Amortization	6,238	6,315	4,270	(77)	-1.2%	1,968	46.1%
Total Operating Expense	\$83,582	\$79,638	\$70,472	\$3,944	5.0%	\$13,110	18.6%
Operating Income	\$1,947	\$3,213	\$7,650	(\$1,266)	-39.4%	(\$5,703)	-74.5%
Operating Margin %	2.3%	3.9%	9.8%		-1.6%		-7.5%
Gain (Loss) on Investments	(11,321)	1,429	1,814	(12,750)	-892.2%	(13,135)	-724.1%
Non-Recurring Items	-	-	-	0	0.0%	0	0.0%
Net Income	(\$9,374)	\$4,642	\$9,464	(\$14,016)	-301.9%	(\$18,838)	-199.0%
Net Margin %	-12.6%	5.5%	11.8%		-18.1%		-24.4%

Comparative Accounts Receivable at October 31, 2008



	June 30, 2007	June 30, 2008 (Preliminary)	October 31, 2008
Net Accounts Receivable	\$101,254,328	\$110,533,709	\$134,521,812
Net Days in AR	49	48	55





Expense Moderation Strategy

Ken Kates
Associate Vice President and CEO, UI Hospitals and Clinics

Healthcare News



The New York Times

November 7, 2008

Hospitals See Drop in Paying Patients

By Reed Abelson

The New York Times

October 15, 2008

Disappearing Credit Forces Hospitals to Delay Improvements

By Reed Abelson

THE WALL STREET JOURNAL.

November 7, 2008

Hospital Boards Feel Street's Pain

THE WALL STREET JOURNAL.

September 22, 2008

Consumers Cut Health Spending, As Economic Downturn Takes Toll

By Vanessa Fuhrmans

THE WALL STREET JOURNAL.

September 22, 2008

Wall Street Meltdown Worries New York Hospitals

The New York Times

November 7, 2008

The Health Care Challenge Sailing Into a Perfect Storm

By Uwe E. Reinhardt

Modern Healthcare

April 21, 2008

NOWHERE TO RUN, OR HIDE; Current Economic downturn may exacerbate hospitals' weaknesses with building, technology costs, reimbursements

Expense Moderation Strategy

- 1) **Rigorous expense management limiting budget additions and excess payroll growth – budget authority to flex based on activity**
- 2) **Recast the FY 09 operating budget to achieve targeted operating margin**
- 3) **Manage downward length of stay, especially in Internal Medicine**
- 4) **Fully deploy physical capacity and utilize efficiently (beds, ORs, high tech imaging)**
- 5) **Improve access and throughput (Bed Management Initiative)**
- 6) **Continued focus on supply chain opportunities - benchmarks**
- 7) **Link investments to performance – targeted outcomes agreed to up front with ongoing measurement**
- 8) **Provide support to leadership team to enhance execution of targeted initiatives (Program Management Office)**
- 9) **Track performance – shared throughout the enterprise (balanced scorecard)**

Actual Performance – FY09 First Four Months



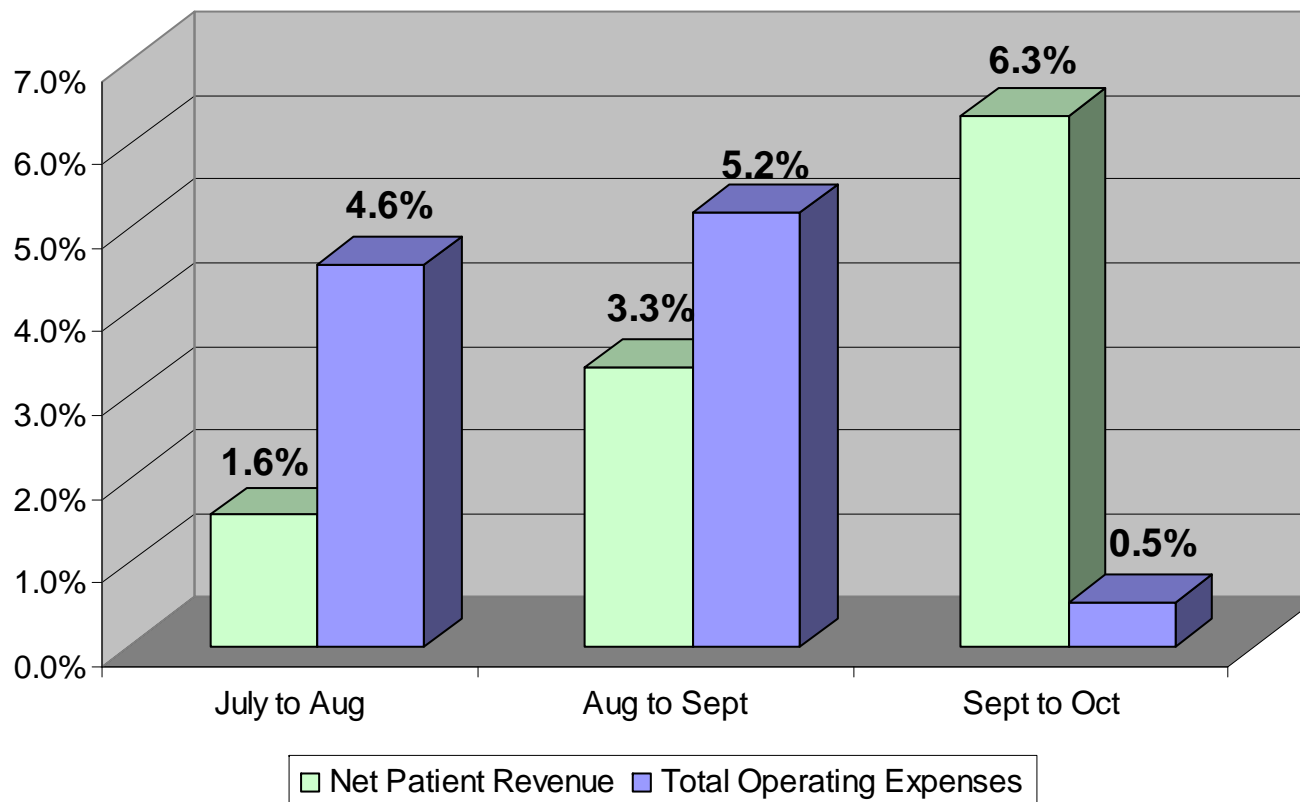
- October was the first month of this fiscal year where our expense growth month over month was not greater than revenue growth. While not hitting our targeted operating margin, it was the strongest financial performance year to date driven by strong revenues and holding expense growth. There is a continued focus on reducing the cost base.

Fiscal Year 2009	July	August	September	October
<u>Operating Expense</u>				
Salary / Wage / Benefits	\$ 41.0	\$ 42.2	\$ 44.5	\$ 43.8
Other Expenses	\$ 29.1	\$ 31.6	\$ 32.4	\$ 33.5
Total Operating Expenses	\$ 70.1	\$ 73.8	\$ 76.9	\$ 77.3
	+ \$7M +10%			+ \$0.4M +0.5%
<u>Revenue</u>				
Net Patient Revenue	\$ 72.1	\$ 73.3	\$ 76.0	\$ 81.2
	+ \$4M +5%			+ \$5M +6%
Operating Income	\$ 0.6	\$ (1.9)	\$ (2.5)	\$ 1.9

Month over Month Revenue and Expense Growth

- In October, net patient revenues increased by 6% compared to September while expenses were essentially flat month over month. This is the first month where our expense growth did not increase compared to the previous month and where the growth in expenses was less than the growth in revenues.

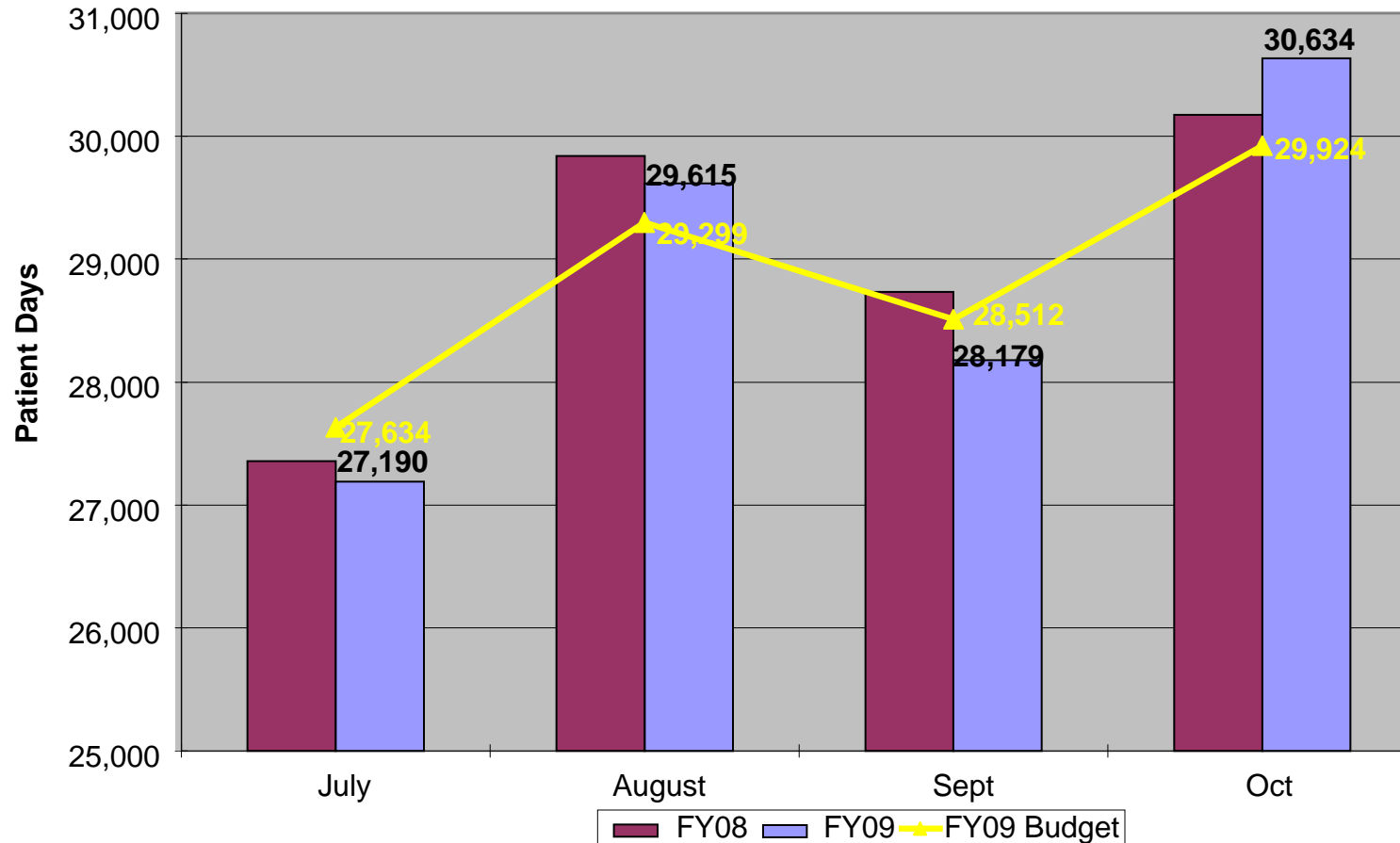
Variations in Month over Month Revenues and Expenses



Adjusted Patient Days

- Adjusted patient days is a metric that is widely used in healthcare organizations to track overall clinical activity and key performance ratios
- It is calculated by taking the actual inpatient days and adjusting for outpatient activity
- Through October, adjusted patient days are running very slightly below budget and last year's activity. October was the highest volume month of the fiscal year, up approximately 2% from both budget and last October's activity

Adjusted Patient Days

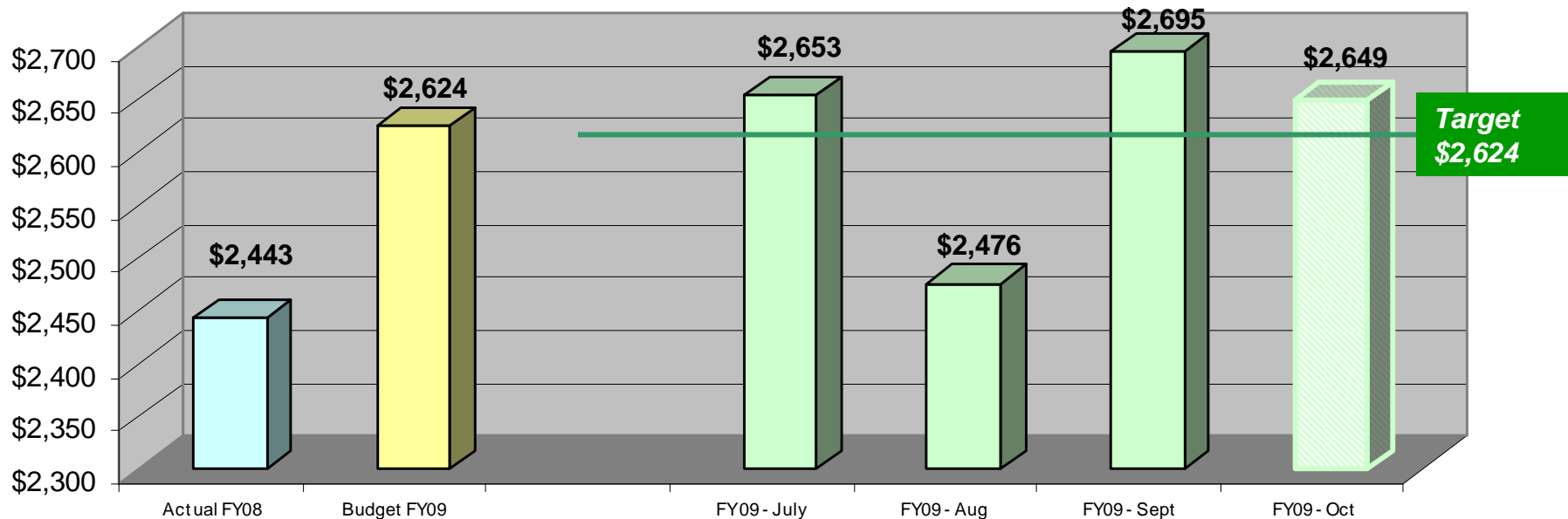


Net Patient Revenues per Adjusted Patient Day



October's net patient revenues per adjusted patient day were down 3% from September's net patient revenues, but up 1% from the first quarter average and hitting the target required to achieve the FY09 net patient revenue budget.

Net Patient Revenue per Adjusted Patient Day

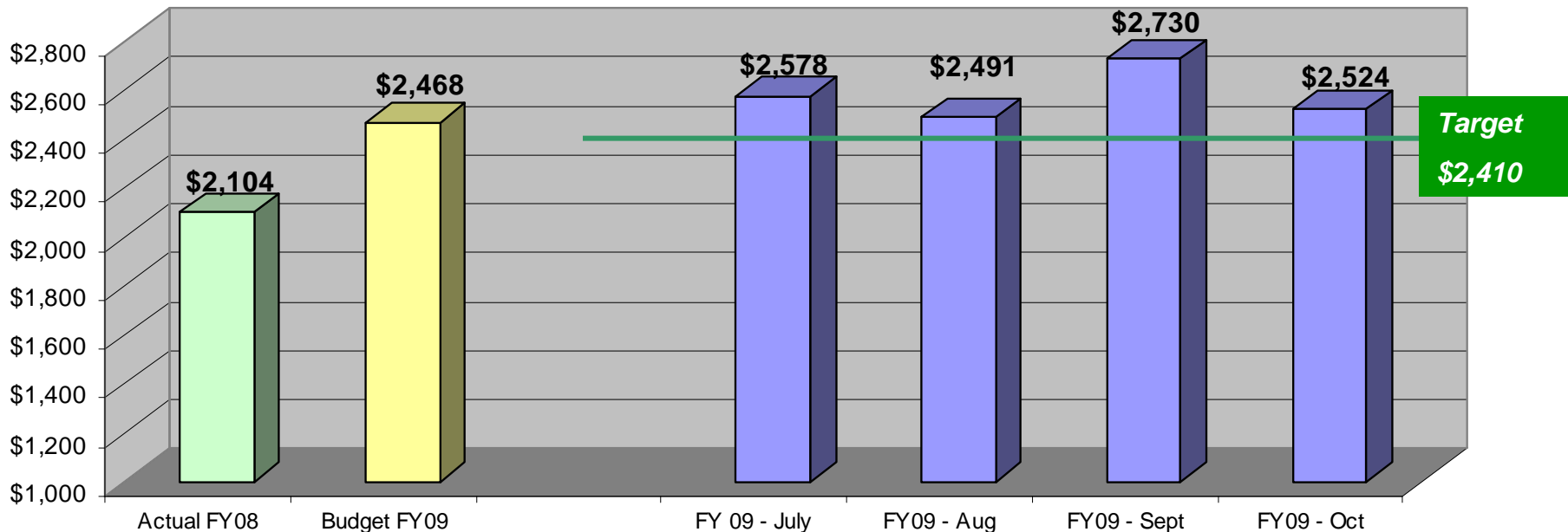


Operating Expenses per Adjusted Patient Day



October's total operating expenses per adjusted patient day were down by 7% from September and down 2% from the first quarter. However, they are still running above the target by 6%.

Total Operating Expenses per Adjusted Patient Day



Quaternary Very High Cost Patients

- Hemophilia patient admitted as the result of a fall.
 - Costs of the Hemophilia Factor Drug equaled \$1.1M
 - This was 62% of the total Hemophilia Factor use for inpatients in all of FY08

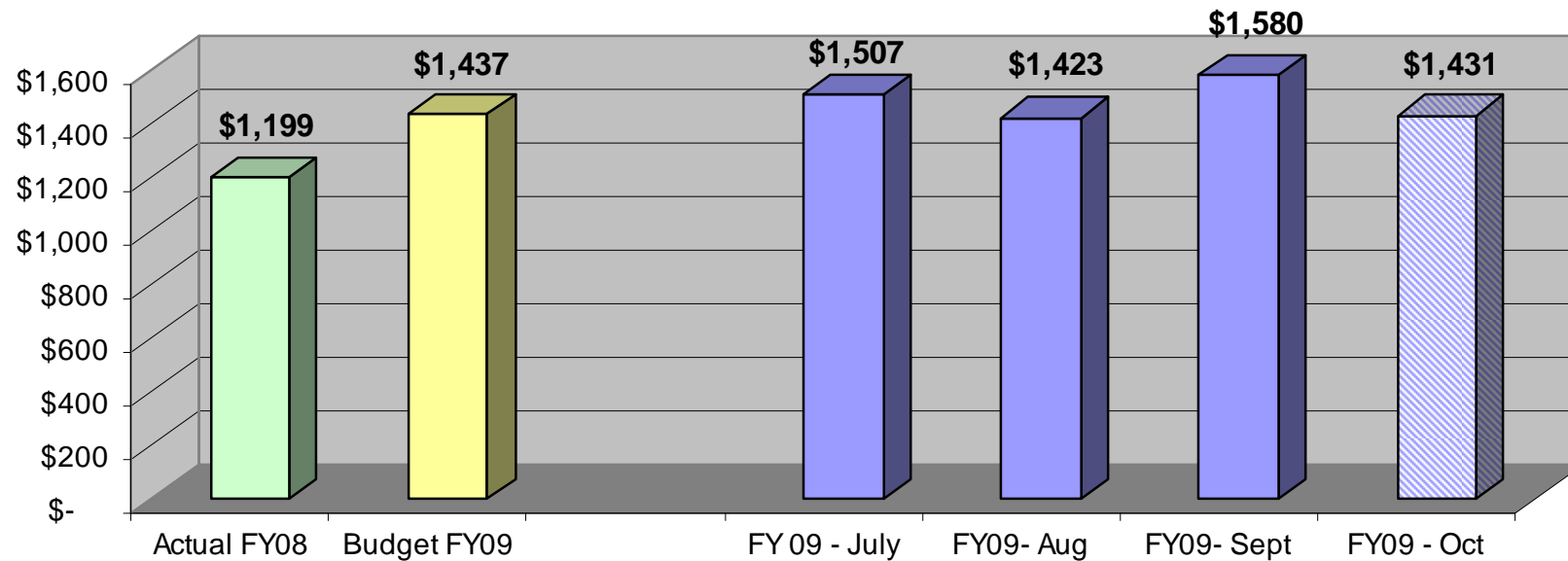
- Neonate discharged home in October (after 154 days in the hospital).
 - Neonate with gestational age < 24 weeks and weighing 712 grams
 - Total charges equaled \$1M

Labor Costs per Adjusted Patient Day



October's total salary/ benefit costs per adjusted patient day were down (9%) from September's actual costs and down 5% from the first quarter average

Total Salary/ Benefit Costs per Adjusted Patient Day



Cost Savings Initiatives



- The Senior leadership team has been working closely with faculty and staff over the past several weeks to identify opportunities to grow revenues and reduce operating expenses
- Over 200 initiatives estimated to save \$22m in this fiscal year are being implemented
- Approximately half of the savings are being achieved by not filling vacant positions and providing the necessary staffing through a redistribution of existing staff throughout the enterprise
- Reductions are also being achieved through non labor savings such as supply cost reductions, renegotiation of service contracts, standardization of high cost implants and improved inventory management. Additional focus on further improving the supply chain is also underway

	<u>100%</u>	<u>90%</u>	<u>75%</u>
Vacant positions	\$ 11,726,289	\$ 10,553,660	\$ 8,794,717
Hourly positions	\$ 125,517	\$ 112,965	\$ 94,138
Non labor	\$ 9,813,090	\$ 8,831,781	\$ 7,359,818
Revenue	\$ 1,435,630	\$ 1,292,067	\$ 1,076,723
Total	\$ 22,580,380	\$ 20,790,473	\$ 17,325,396

FY09 Recast Operating Budget

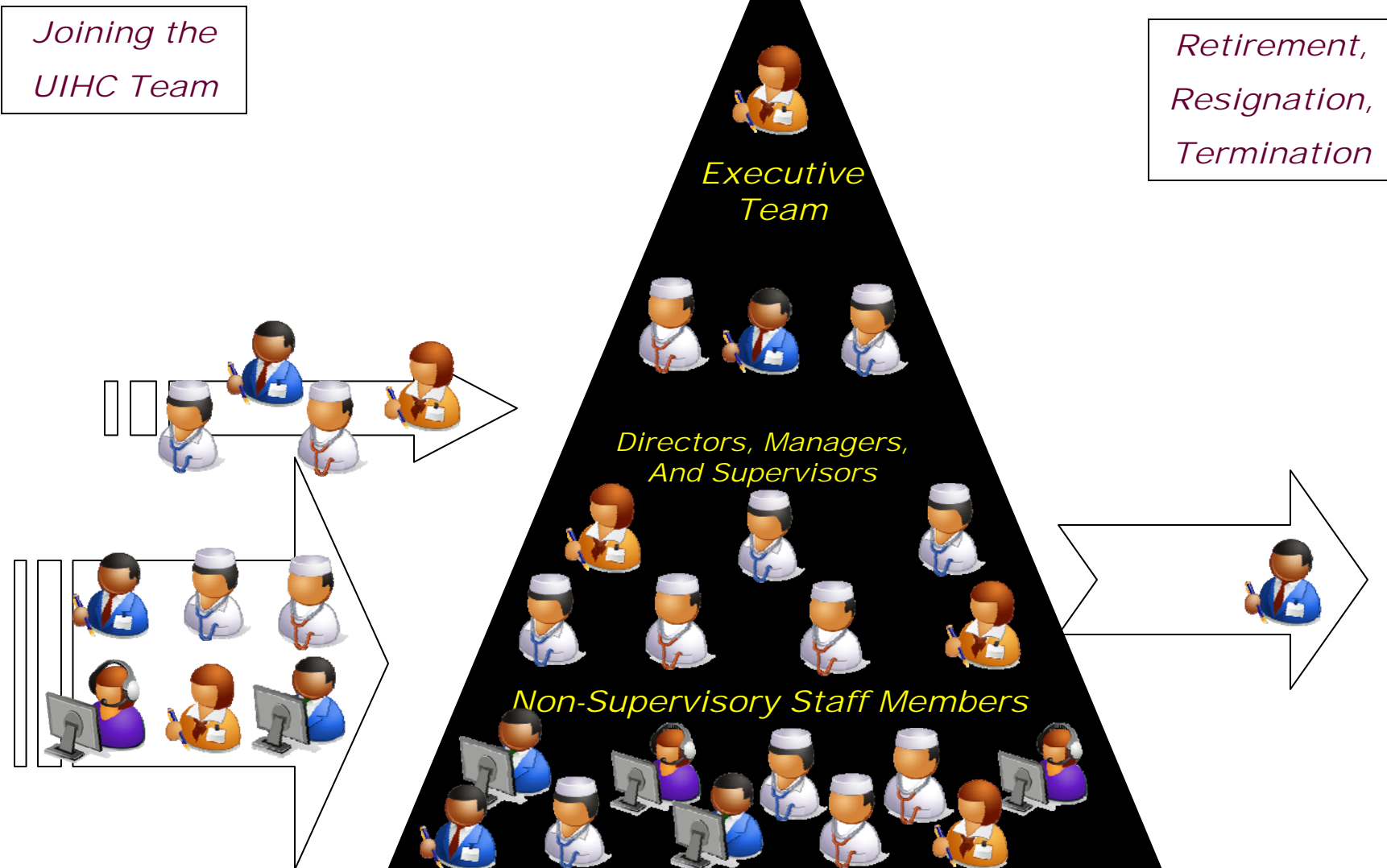


The FY09 Operating Budget has been recast \$23m lower than the original budget. Additional areas of opportunity continue to be explored.

Service Area	FY09 Original Budget	FY09 Revised Budget	% Reduction
A	\$ 187,544,400	\$ 183,154,859	-2.3%
B	\$ 67,337,000	\$ 66,635,443	-1.0%
C	\$ 5,876,700	\$ 5,725,700	-2.6%
D	\$ 40,798,000	\$ 39,420,800	-3.4%
E	\$ 1,348,900	\$ 1,348,900	0.0%
F	\$ 298,300	\$ 298,300	0.0%
G	\$ 11,548,200	\$ 10,970,790	-5.0%
H	\$ 28,446,700	\$ 27,486,342	-5.8%
I		\$ (685,734)	
J	\$ 104,646,200	\$ 102,207,952	-3.0%
K		\$ (749,896)	
L	\$ 26,136,400	\$ 26,136,400	0.0%
M	\$ 5,749,800	\$ 5,510,995	-4.2%
N	\$ 10,684,900	\$ 10,144,576	-5.1%
O	\$ 910,100	\$ 825,093	-9.3%
P	\$ 47,523,000	\$ 46,476,946	-2.2%
Q	\$ 5,553,000	\$ 5,553,000	0.0%
R	\$ 17,040,400	\$ 13,826,510	-18.9%
S	\$ 4,667,500	\$ 4,467,620	-4.3%
T	\$ 47,880,900	\$ 47,517,400	-0.8%
U	\$ 1,188,400	\$ 969,400	-18.4%
V	\$ 62,367,600	\$ 62,367,600	0.0%
W	\$ 8,747,800	\$ 8,747,800	0.0%
X	\$ 176,472,400	\$ 170,393,794	-3.4%
Total	\$ 862,766,600	\$ 838,750,590	-2.8%

Recruiting and Growing from Within

Key to our cost moderation strategy is managing staffing to high productivity benchmark levels. Existing personnel will be redistributed to areas within the enterprise based upon activity and staffing needs.





Actively Managing Length of Stay

Ken Kates

Associate Vice President and CEO, UI Hospitals and Clinics

Ann Williamson

Associate VP for Nursing and CNO, UI Hospitals and Clinics

Actively Managing Length of Stay

- To support our growing clinical programs, we must optimally utilize our current resources, increasing capacity incrementally and efficiently – bridging from today until new facilities are on line
- While incremental beds are being opened, greater operational efficiencies are required to provide additional capacity and reduce costs
- To build on progress that has been achieved, we are identifying and implementing guidelines and processes that will further improve patient access and throughput.

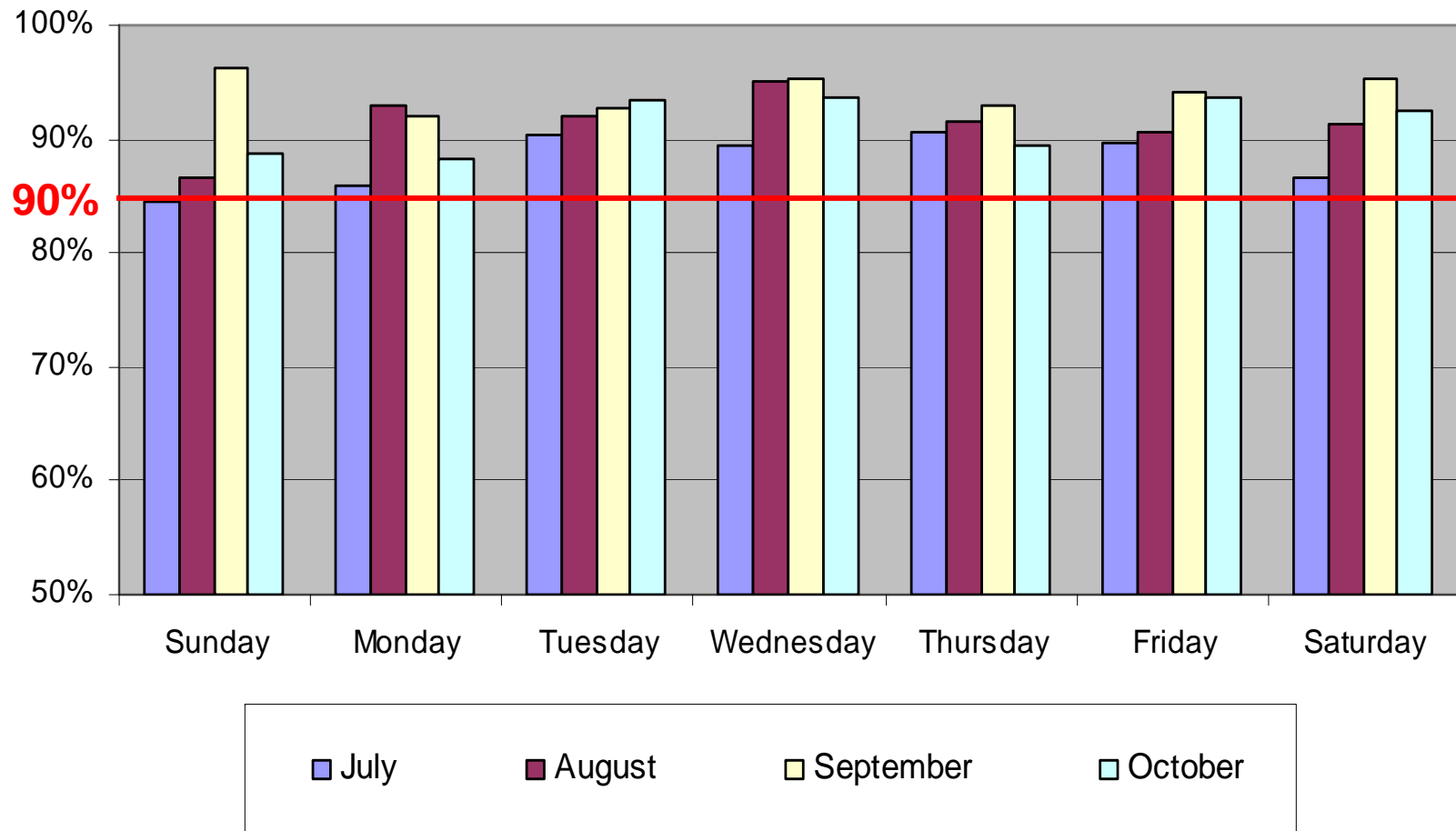
Measures of Success

- Standardized discharge process
- Increased capacity for incremental inpatient admissions
- Improved timeliness of admitting and discharging patients
- Improved satisfaction of referring physicians (timeliness of their referrals being admitted)
- Enhanced patient and family satisfaction
- Enhanced staff satisfaction
- Reduced length of stay
- Improved overall costs per inpatient admission

Adult Intensive Care Beds Running at Maximum



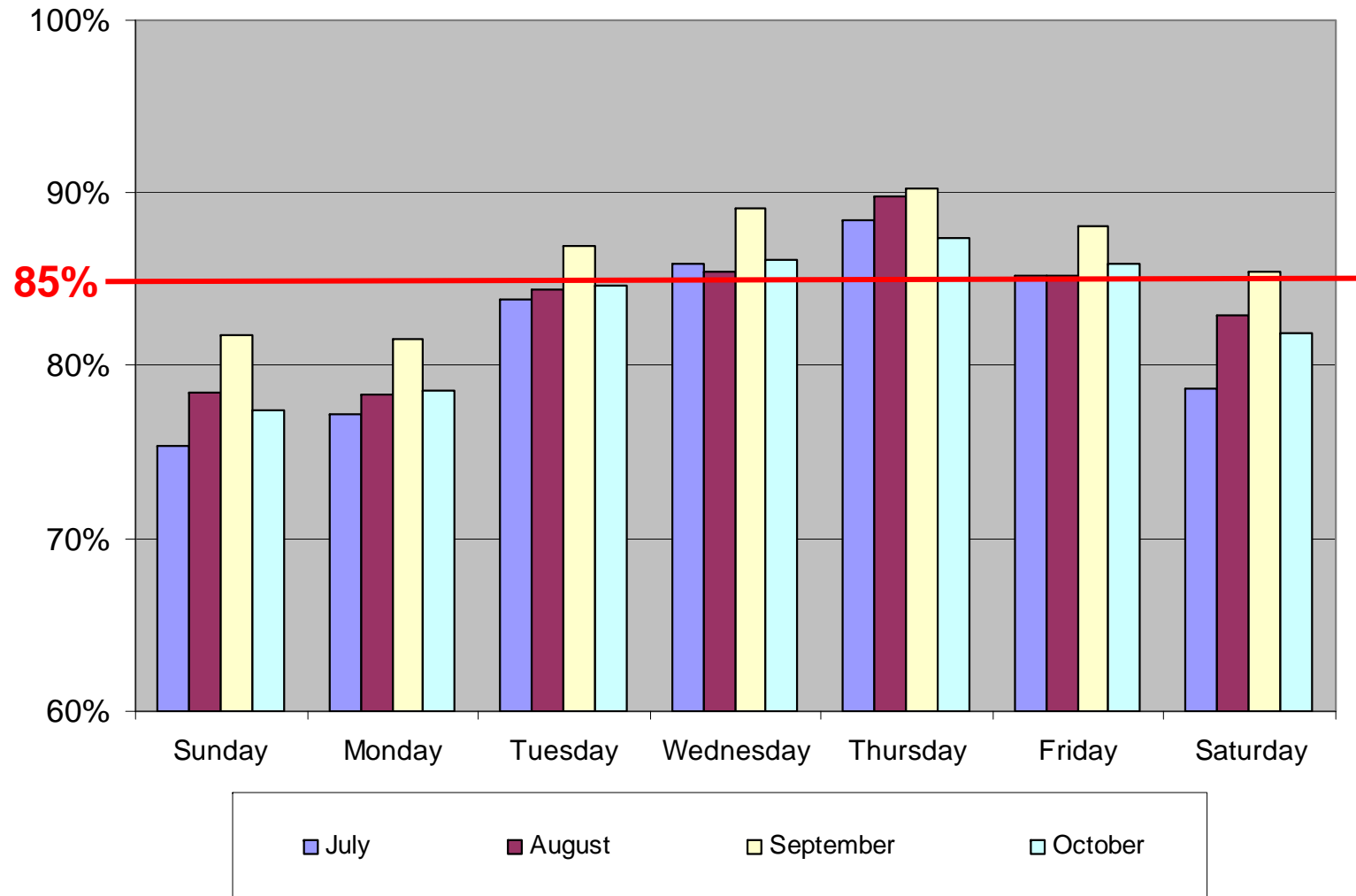
Adult Intensive Care Unit Occupancy by Day



Adult Medical/Surgical Bed Capacity Very Tight



Adult Med/Surg Occupancy by Day

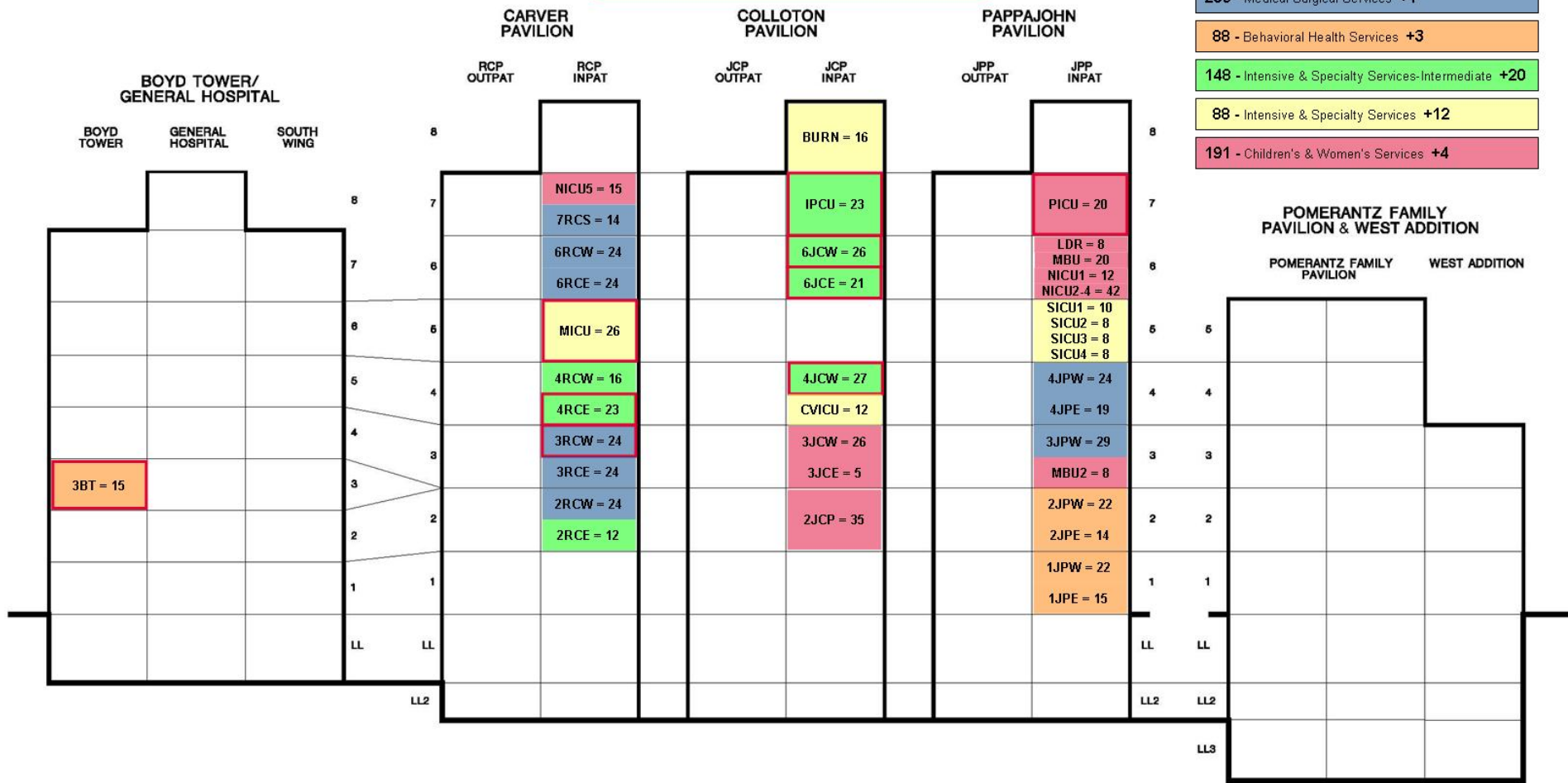


Incremental Beds

LOCATIONS OF FY2009 ADDITIONAL INPATIENT BEDS

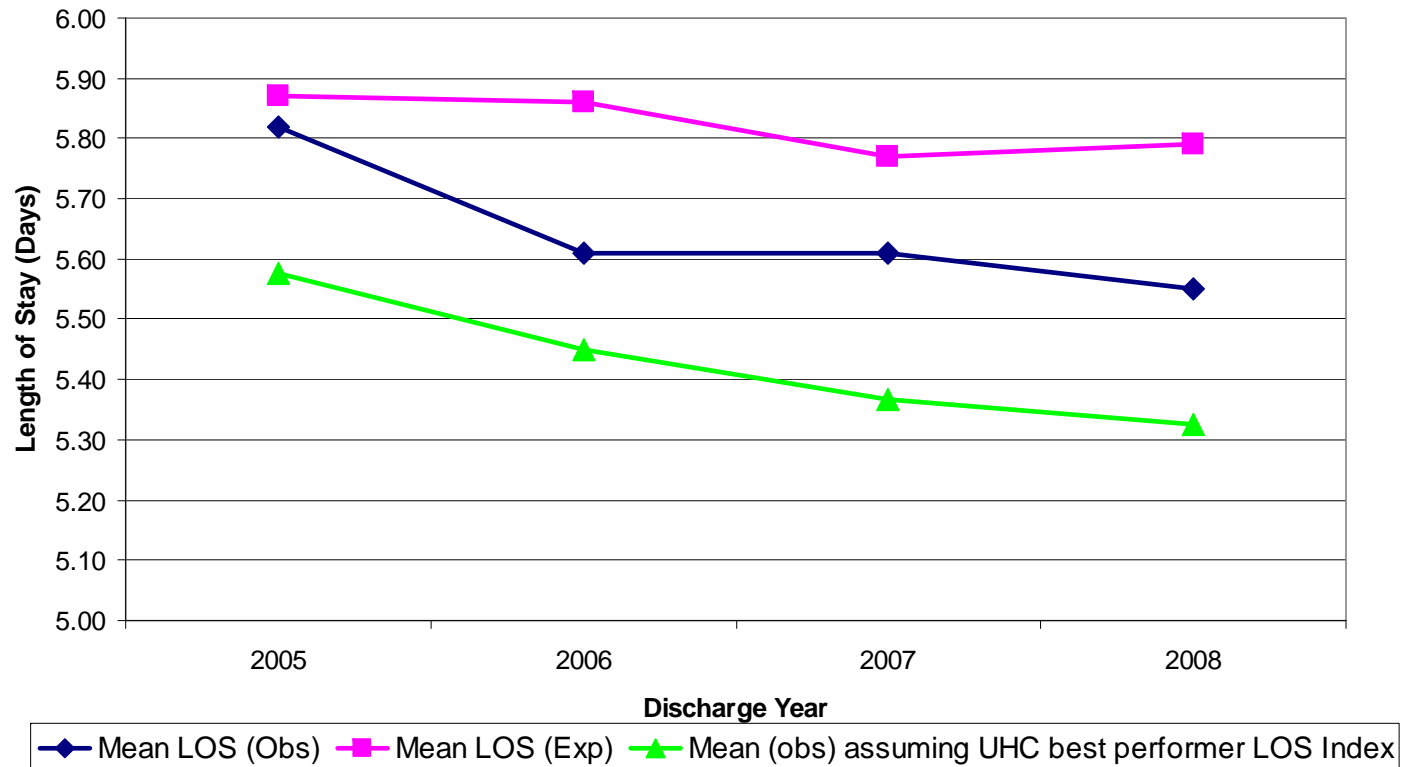
40 ADDITIONAL BEDS - TOTAL 721

- 206 - Medical Surgical Services +1
- 88 - Behavioral Health Services +3
- 148 - Intensive & Specialty Services-Intermediate +20
- 88 - Intensive & Specialty Services +12
- 191 - Children's & Women's Services +4



Overall Trends in Length of Stay

Overall observed (actual) average length of stay performance is favorable compared to expected length of stay

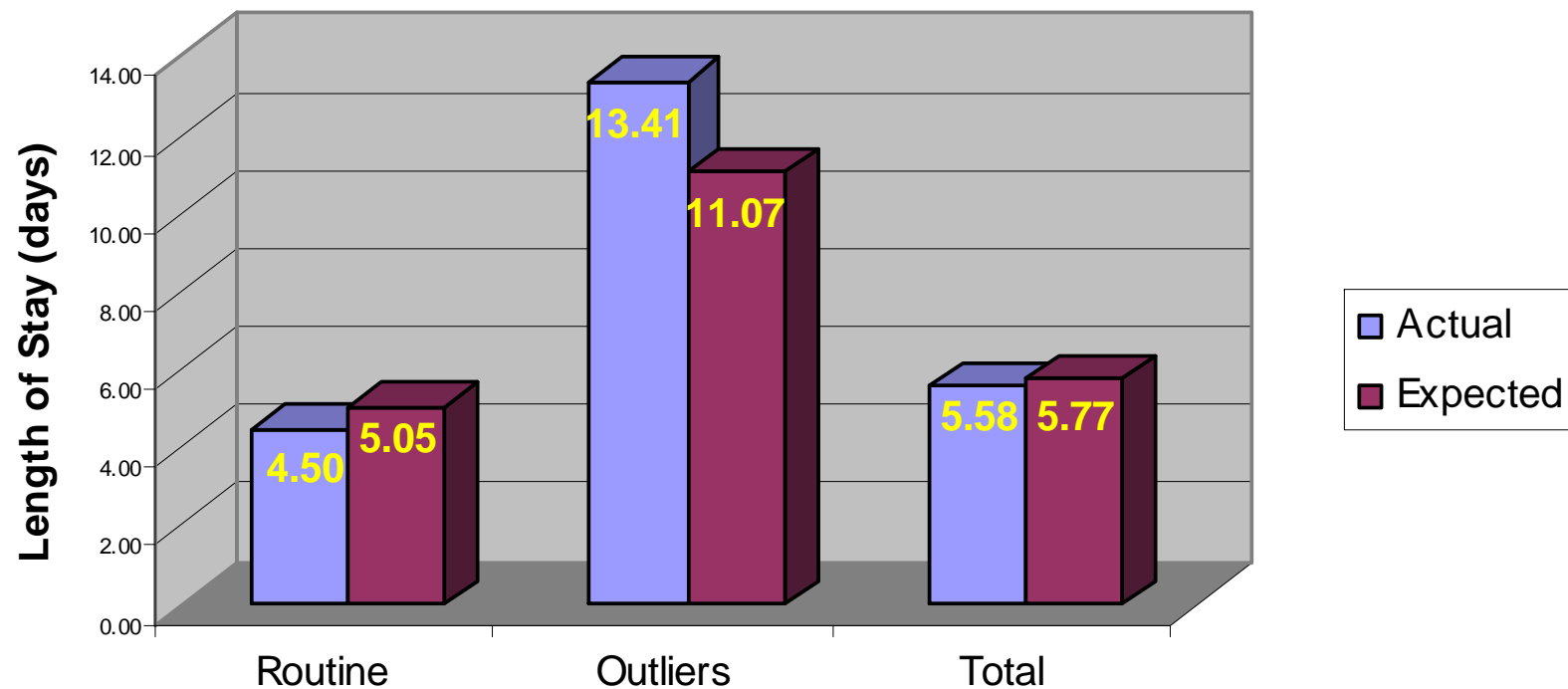


Length of Stay Performance – Last Four Quarters(*)



Compared to the mean benchmark in the University HealthSystem Consortium clinical data base, the average length of stay for 88% of our inpatient cases is at or better than the benchmark (routine cases), while 12% (outlier cases) is 21% poorer than the mean benchmark.

Routine and Outlier Cases - Adult Admissions excluding Psychiatry

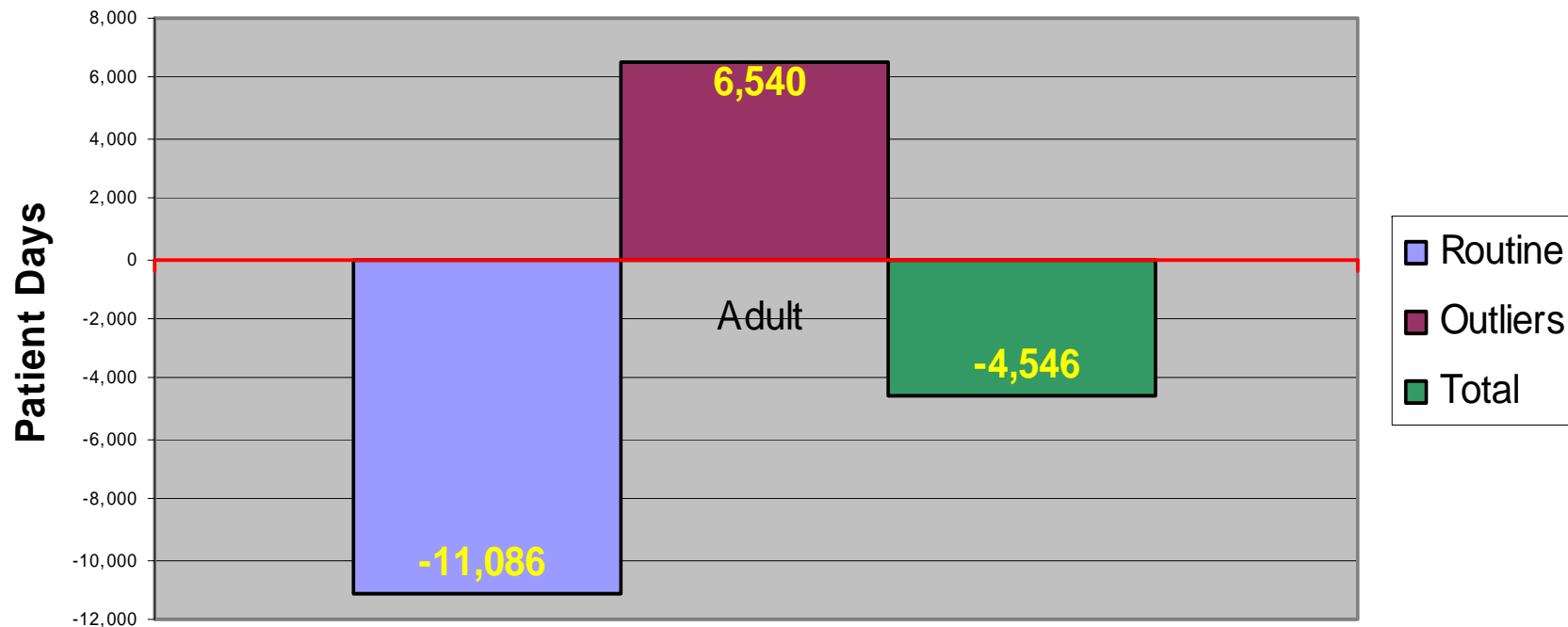


Length of Stay Performance – Last Four Quarters(*)

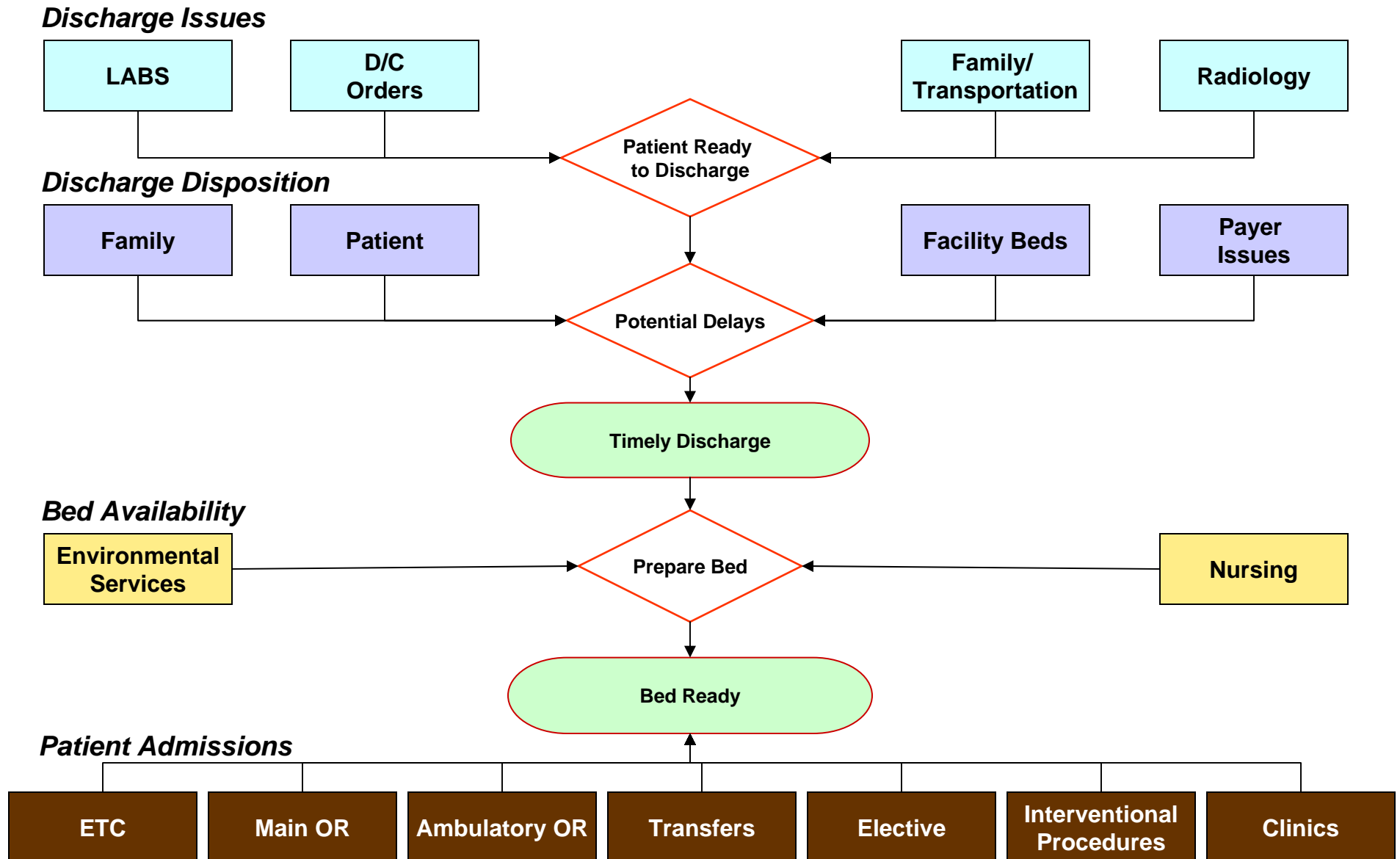


Effective length of stay management for routine adult cases resulted in 11,000 days being available for other patients. If outlier cases were managed at the mean length of stay benchmark, 6,500 days would be freed up providing additional capacity to care for 600 patients.

Patient Days Variance - Adult Admissions excluding Psychiatry



Factors Affecting Timeliness of Discharge & Bed Availability



Tactics to Actively Manage Length of Stay



- Identify services with the greatest potential for improvement (outlier cases)
- Develop & implement processes that facilitate earlier discharge times on these services
- Monitor performance against metrics
- Identify & mitigate internal and external impediments (e.g. delays related to ancillary test results, lack of nursing home beds)
- Increase selectivity of inpatient admissions (screening for eligibility)

Bed Management Task Force		
Task Force Leaders	Faculty Members	Administrative Members
Eric Dickson, MD Ann Williamson, RN	Karl Kreder, MD Scott Wilson, MD George Phillips, MD Janet Schlechte, MD	Heidi Nobiling, RN Peggy O'Neill, RN Ginette Budreau, RN Joelle Jensen, RN Greg Jensen, MSW Staff – PMO

Recommended Metrics

Process Metrics

- Average discharge time (overall, Adult/Children's/Psych, by service, by unit)
- Bed turnaround time (elapsed time between patient leaving bed to bed cleaned)
 - time patient leaves bed until EVS notified that bed is empty
 - time EVS notified bed requires cleaning until bed ready for new admission
- Average Length of Stay (observed versus expected)
- Readmission rates (readmit within 30 days of discharge)

Outcome Metrics

- Appropriate (medically necessary) outside transfers placed within 24 hours of request
- Emergency Treatment Center bed time (lag between bed request to leaving ETC)
- PACU delays
- Number of hours ETC curtails transfers per month
- Patient satisfaction data

Recommended Tools

Process Improvements

- Identification of proposed discharge date/time at time of admission
- Selection of discharge site prior to admit for planned admissions
- White boards in patient rooms
- Daily bed meetings
- Multi-disciplinary rounds on the nursing unit related to plan of care and use of discharge checklist
- Conditional discharges
- Prioritization of testing (i.e. Lab, Radiology, Respiratory) for pending discharges
- Rapid bed turnaround times
- Alpha broadcast pages – for very high census situations

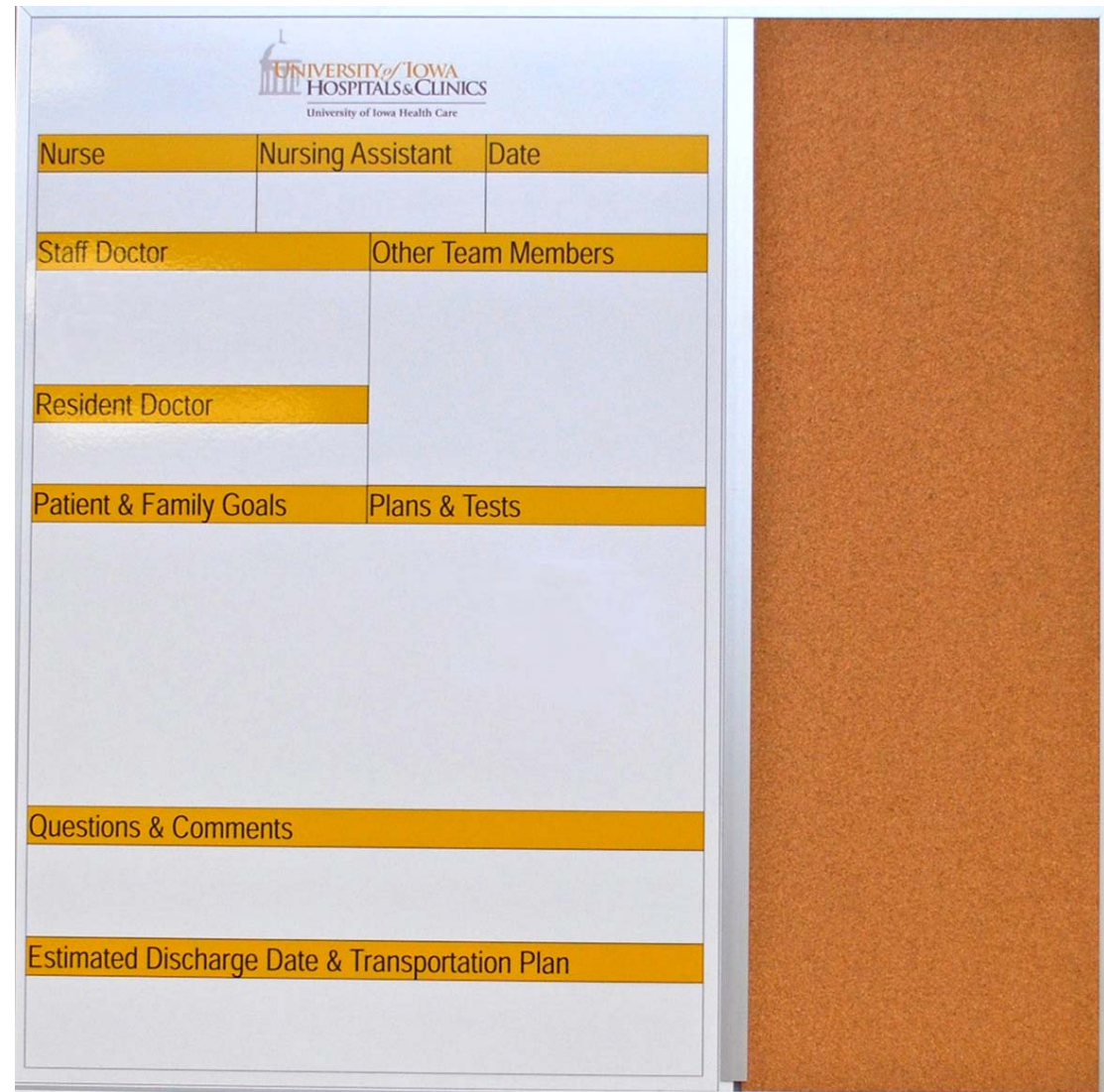
Resource Deployment

- Case Management
- Navigators
- Utilization Review

Infrastructure for Metric/ Data Gathering and Presentation

Process Improvement Example – Identification/Notification of Proposed Discharge Date/Time

- Determine anticipated length of stay for patient's identified disease / procedure utilizing nationally recognized criteria
- Post anticipated discharge date and note time as prior to 11am on white board
- Educate patient and Family about anticipated discharge date



The whiteboard template features the University of Iowa Hospitals & Clinics logo at the top center. It is divided into several sections with yellow headers:

Nurse		Nursing Assistant	Date
Staff Doctor		Other Team Members	
Resident Doctor			
Patient & Family Goals		Plans & Tests	
Questions & Comments			
Estimated Discharge Date & Transportation Plan			

Process Improvement Example – Daily Bed Meetings

- Multidisciplinary teams meet daily for 15-30 minutes and discusses:
 - Starting census
 - Service/attending classifications
 - Pending discharges
 - Are there any procedures, tests, issues, etc. that could cause a delay in the patient's discharge?
 - Cancelled discharges/unanticipated discharges from the previous day
 - Why? Are there opportunities for improvement?
 - Concerns around non-acute days/insurance denials
 - Systems delays
 - Expected admissions
 - Pre-admits, patients waiting in the ETC, transfers between services, patients coming out of the OR/PACU, outside transfers
 - What is our projected bed need for the day?

Next Steps / Timeline

- Convene reconstituted Bed Management Task Force (November)
- Complete ongoing assessment and identification of services with the greatest potential for length of stay improvement (November)
- Finalize desired metrics / gather baseline data (November/December)
- Recommend guidelines and processes that will facilitate improved length of stay performance, with an implementation plan for specific services with the greatest potential for improvement (December)
- Recommend system to measure and monitor performance against metrics with an implementation plan (December)
- Pilot on two services (December)
- Refine initiative based on results of pilots (January)
- Implement on additional services (February)
- Implement on all remaining services (March)



UI Hospitals and Clinics Clinical Information Systems

Lee Carmen
Associate Vice President for Information Systems

Clinical Information Systems at UIHC



- 1970 – 2005 : Internal development of electronic medical record system (INFORMM / IPR)
- 1995 - 1996 : Acquisition / implementation of commercial laboratory / inpatient pharmacy system (Cerner)
- 2001 – 2003 : Acquisition / implementation of commercial patient access / patient accounting system (GE / IDX)
- 2005 – 2006 : Selection / acquisition of commercial clinical information system (Epic)
- 2007 – 2009 : Implementation of Epic

- Improving Quality & Safety
 - Reduce adverse drug events
 - Reduce inefficient therapies
 - Reduce order / documentation interpretation errors
 - Improve patient identification process
 - Reduce patient order-to-administration wait times
 - Reduce verbal orders
 - Enable rules-based electronic alerts
 - Reduce patient turn-around times
 - Improve use of standard clinical protocols
 - Reduce practice variation

- Improving Operational Efficiencies
 - Decrease demand for manual data acquisition / data entry
 - Reduce time needed for duplicate documentation
 - Reduce time needed to manage paperwork
 - Improve ability to retrieve / analyze data
 - Improve ability to track orders
 - Eliminate manual / duplicate documentation of medication administration
 - Eliminate manual charge processing of medication administration
 - Eliminate manual entry of orders in ancillary systems
 - Provide automatic renewal of physician orders
 - Enhance ability for remote consultations
 - Reduce duplicate / unnecessary orders

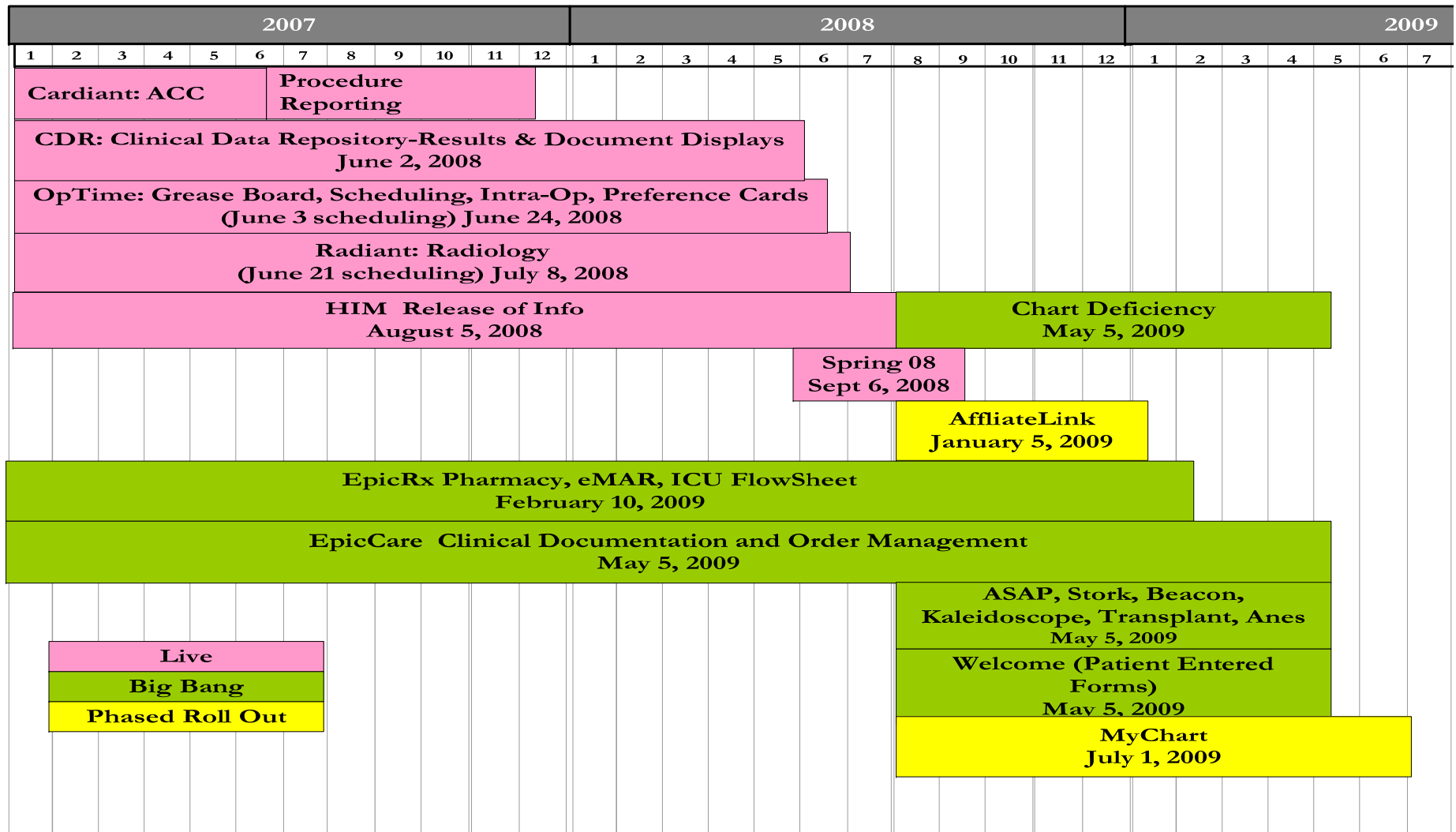
- Enterprise solution
- Highly integrated
- Wisconsin-based vendor
- Focuses on large integrated healthcare delivery networks, academics, children's hospitals
- Contract signed fall 2006
- Project kick-off January 2007

Epic Clinical Information Systems Project Scope



- Clinical documentation, Order Entry, Results Reporting (inpt/outpt)
- Inpatient Pharmacy
- Electronic Medication Administration Record
- Operating Room Management System
- Anesthesia
- Radiology
- Health Information Management
- Critical Care
- Cardiology
- Oncology
- Ophthalmology
- Transplant
- Emergency Room
- Labor & Delivery
- Patient Web Portal
- Referring Physician Web Portal
- Clinical Data Warehouse

Epic Project Timeline



Clinical Information Systems

Total Cost of Ownership



Software		
Primary Vendor	License Fees	\$ 12.3 M
	Maintenance	\$ 2.85 M / Yr
Third Party	License Fees	\$ 3 M
	Maintenance	\$ 400 K / Yr
Hardware	Acquisition	\$ 13 M
	Maintenance	\$ 3.4 M / Yr
Implementation & Training	Primary Vendor Staff	\$ 10 M
	Third Party Staff	\$ 3.0 M
	UIHC Staff	\$ 13 M

Contract Term: Perpetual License

Calculations Assume Minimum 7 Year Use

Return On Investment Analysis



Benefit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Pharmacy	\$1,953,948	\$2,032,106	\$2,113,390	\$2,197,926	\$2,285,843	\$2,337,277	\$2,472,368
Laboratory	\$1,183,442	\$1,230,780	\$1,255,395	\$1,280,503	\$1,306,113	\$1,332,236	\$1,358,880
Radiology	\$687,360	\$714,854	\$729,151	\$743,735	\$758,609	\$773,781	\$789,257
Patient Safety	\$3,201,919	\$3,329,996	\$3,436,097	\$3,545,901	\$3,659,544	\$3,777,170	\$3,898,924
Clinical Staff Efficiencies	\$1,349,227	\$2,698,455	\$4,047,682	\$5,396,909	\$5,612,785	\$5,837,297	\$6,070,789
Medical Records Management	\$210,000	\$218,400	\$227,136	\$236,221	\$245,670	\$255,497	\$265,717
Revenue Cycle	\$1,027,500	\$1,059,000	\$1,091,760	\$1,125,830	\$1,161,264	\$1,198,114	\$1,236,439
TOTAL	\$9.6 M	\$11.2 M	\$12.9 M	\$14.5 M	\$15 M	\$15.5 M	\$16 M
							\$94.9 M

Pharmacy Calculations provided by UIHC Pharmacy based upon Leapfrog formulas and published case studies

Calculations provided by 2 External Firms based upon UIHC Service metrics in 2002

Estimates based on 2002 Expenses, Assume 4% Expense Growth

Epic Implementation Challenges

- Clinician engagement
- Project staff recruitment / retention
- Project impact on operations
- Managing expectations
- Interim workflows
- Staff training
- Data conversions
- Integration with existing systems
- System testing



Dance Marathon

Katie Guckert
Executive Director, University of Iowa Dance Marathon 2009