



# ***University of Iowa Health Care***

***Presentation to  
The Board of Regents, State of Iowa  
February 4-5, 2015***

- Opening Remarks (Robillard)
- Operating and Financial Performance (Kates, Fisher)
- Health Information Technology Driving Clinical Value (Van Daele, Carmen)



## *Opening Remarks*

Jean Robillard, MD  
Vice President for Medical Affairs



## ***Operating and Financial Performance Update***

Ken Kates, Associate Vice President &  
Chief Executive Officer, UI Hospitals & Clinics

Ken Fisher, Associate Vice President for Finance  
and Chief Financial Officer, UI Hospitals & Clinics

# Volume Indicators

Fiscal Year to Date December 2014

Operating Review (YTD)	Actual	Budget	Prior Year *	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Discharges	16,159	15,887	15,748	272	1.7% ○	411	2.6% ●
Patient Days	101,419	99,258	99,243	2,161	2.2% ○	2,177	2.2% ○
Length of Stay	6.18	6.21	6.27	(0.03)	-0.5% ○	(0.09)	-1.4% ○
Average Daily Census	551.19	539.45	539.36	11.74	2.2% ○	11.83	2.2% ○
Total Surgeries	14,808	15,310	14,850	(502)	-3.3% ●	(42)	-0.3% ○
- Inpatient	5,965	6,114	5,943	(149)	-2.4% ○	22	0.4% ○
- Outpatient	8,843	9,196	8,907	(353)	-3.8% ●	(64)	-0.7% ○
ED Visits	28,789	27,709	30,476	1,080	3.9% ●	(1,687)	-5.5% ●
Total Clinic Visits	415,796	417,278	410,592	(1,482)	-0.4% ○	5,204	1.3% ○

\* from ongoing operations

● Greater than 2.5% Favorable	○ Neutral	● Greater than 2.5% Unfavorable
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# Discharges by Type

## Fiscal Year to Date December 2014

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Adult Medical	4,655	4,901	4,872	(246)	-5.0% ●	(217)	-4.5% ●
Adult Surgical	8,182	7,992	7,905	190	2.4% ○	277	3.5% ●
Adult Psych	707	709	706	(2)	-0.3% ○	1	0.1% ○
<i>Subtotal – Adult</i>	<i>13,544</i>	<i>13,602</i>	<i>13,483</i>	<i>(58)</i>	<i>-0.4% ○</i>	<i>61</i>	<i>0.4% ○</i>
Pediatric Medical & Surgical	1,855	1,604	1,588	251	15.7% ●	267	16.8% ●
Pediatric Critical Care	426	404	402	22	5.5% ●	24	6.0% ●
Pediatric Psych	334	277	275	57	20.6% ●	59	21.5% ●
<i>Subtotal – Pediatrics w/o newborn</i>	<i>2,615</i>	<i>2,285</i>	<i>2,265</i>	<i>330</i>	<i>14.4% ●</i>	<i>350</i>	<i>15.5% ●</i>
Newborn	789	789	747	0	0.0% ○	42	5.6% ●
<b>TOTAL w/o Newborn</b>	<b>16,159</b>	<b>15,887</b>	<b>15,748</b>	<b>272</b>	<b>1.7% ○</b>	<b>411</b>	<b>2.6% ●</b>

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

# Discharge Days by Type

Fiscal Year to Date December 2014

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Adult Medical	25,352	26,363	26,316	(1,011)	-3.8% ●	(964)	-3.7% ●
Adult Surgical	41,932	40,494	40,528	1,438	3.6% ●	1,404	3.5% ●
Adult Psych	10,543	10,172	10,175	371	3.7% ●	368	3.6% ●
<i>Subtotal – Adult</i>	<i>77,827</i>	<i>77,029</i>	<i>77,019</i>	<i>798</i>	<i>1.0%</i> ○	<i>808</i>	<i>1.1%</i> ○
Pediatric Medical & Surgical	8,750	8,517	8,523	233	2.7% ●	227	2.7% ●
Pediatric Critical Care	10,743	10,766	10,758	(23)	-0.2% ○	(15)	-0.1% ○
Pediatric Psych	2,585	2,422	2,418	163	6.7% ●	167	6.9% ●
<i>Subtotal – Pediatrics w/o newborn</i>	<i>22,078</i>	<i>21,705</i>	<i>21,699</i>	<i>373</i>	<i>1.7%</i> ○	<i>379</i>	<i>1.8%</i> ○
Newborn	1,762	1,703	1,651	59	3.5% ●	111	6.7% ●
<b>TOTAL w/o Newborn</b>	<b>99,905</b>	<b>98,734</b>	<b>98,718</b>	<b>1,171</b>	<b>1.2%</b> ○	<b>1,187</b>	<b>1.2%</b> ○

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

# Average Length of Stay by Type

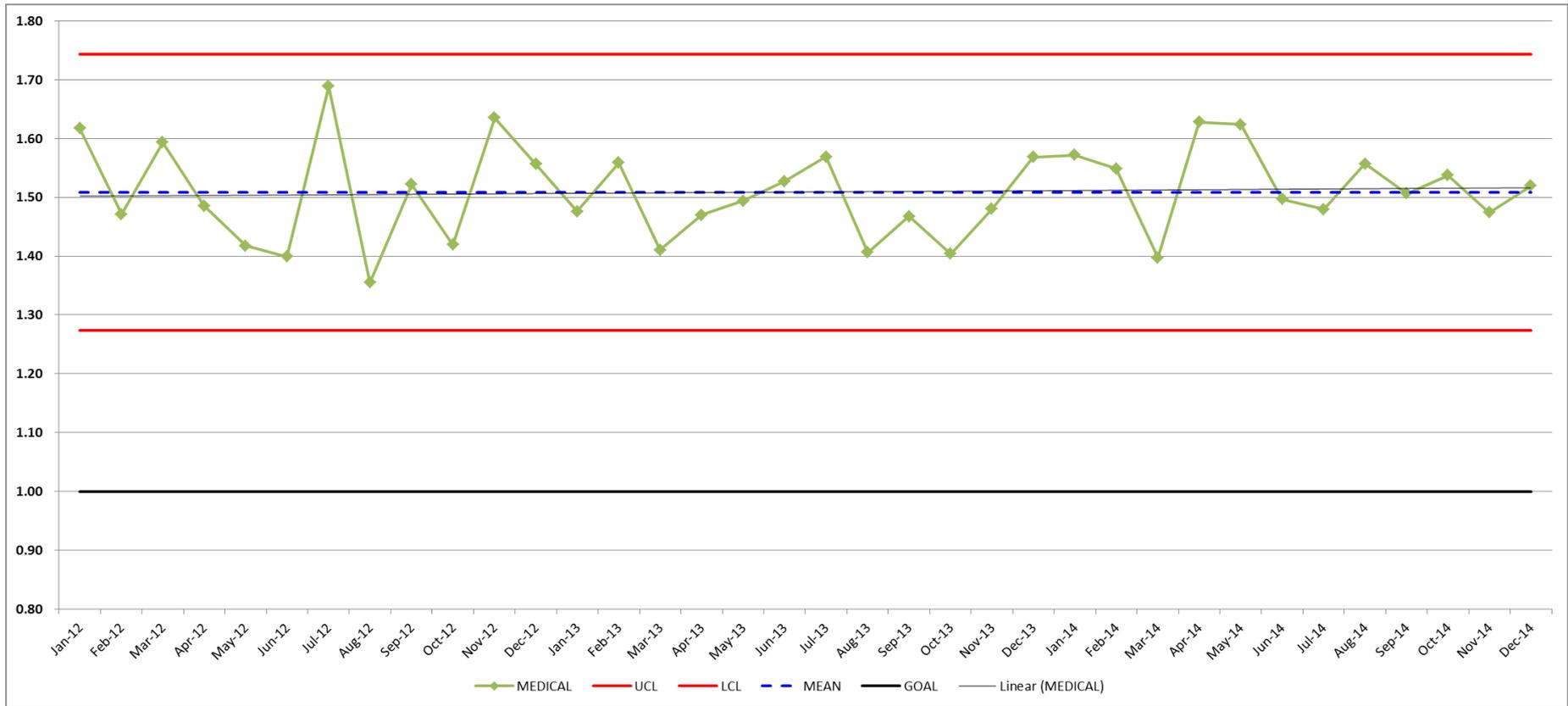
Fiscal Year to Date December 2014

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Adult Medical	5.45	5.38	5.40	0.07	1.3% ○	0.05	0.8% ○
Adult Surgical	5.12	5.07	5.13	0.05	1.2% ○	(0.01)	0.0% ○
Adult Psych	14.91	14.35	14.41	0.56	3.9% ●	0.50	3.5% ●
Subtotal – Adult	5.75	5.66	5.71	0.09	1.5% ○	0.04	0.6% ○
Pediatric Medical & Surgical	4.72	5.31	5.37	(0.59)	-11.2% ●	(0.65)	-12.1% ●
Pediatric Critical Care	25.22	26.65	26.76	(1.43)	-5.4% ●	(1.54)	-5.8% ●
Pediatric Psych	7.74	8.74	8.79	(1.00)	-11.5% ●	(1.05)	-12.0% ●
Subtotal – Pediatrics w/o newborn	8.44	9.50	9.58	(1.06)	-11.1% ●	(1.14)	-11.9% ●
Newborn	2.23	2.16	2.21	0.07	3.5% ●	0.02	1.0% ○
<b>TOTAL w/o Newborn</b>	<b>6.18</b>	<b>6.21</b>	<b>6.27</b>	<b>(0.03)</b>	<b>-0.5% ○</b>	<b>(0.09)</b>	<b>-1.4% ○</b>

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

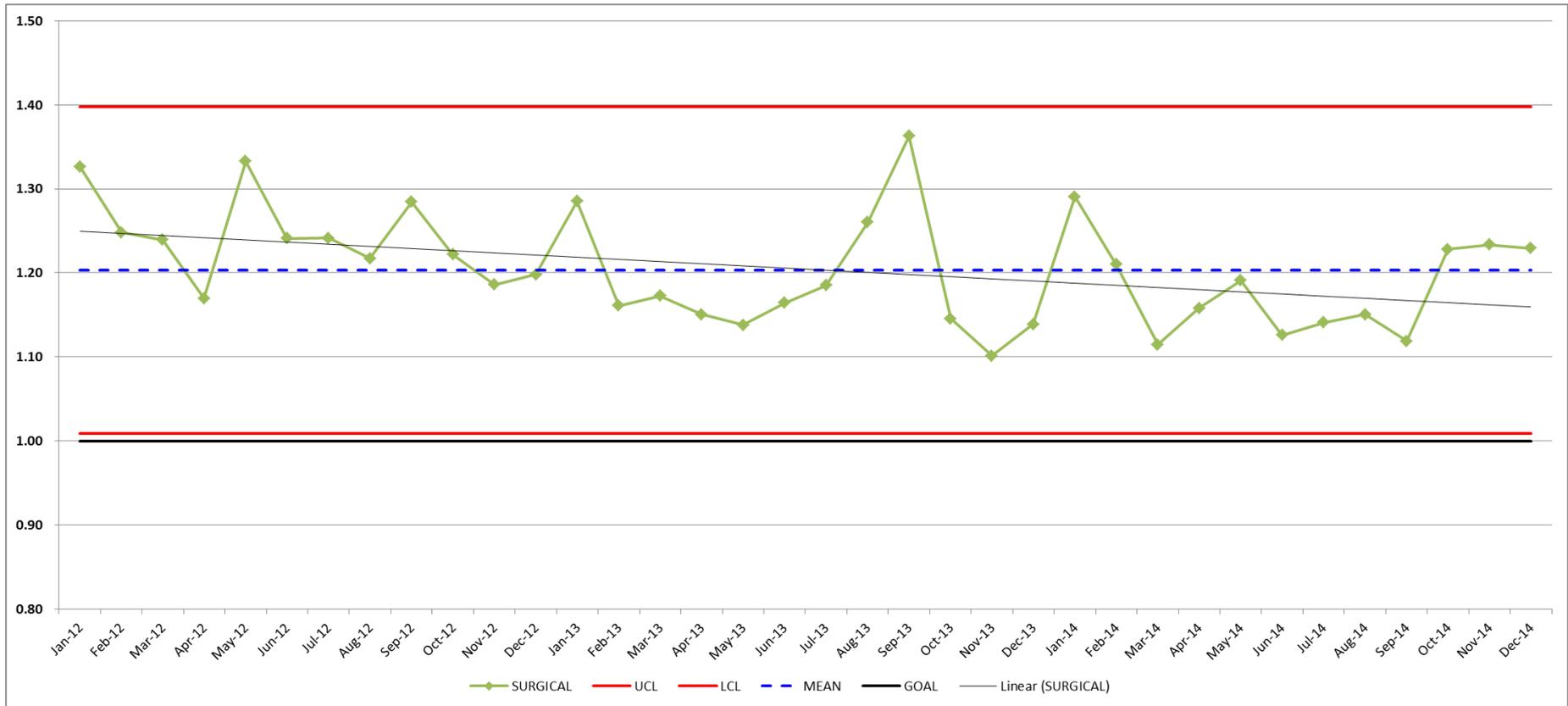
# Length of Stay Index – Medical

January 2012 through December 2014

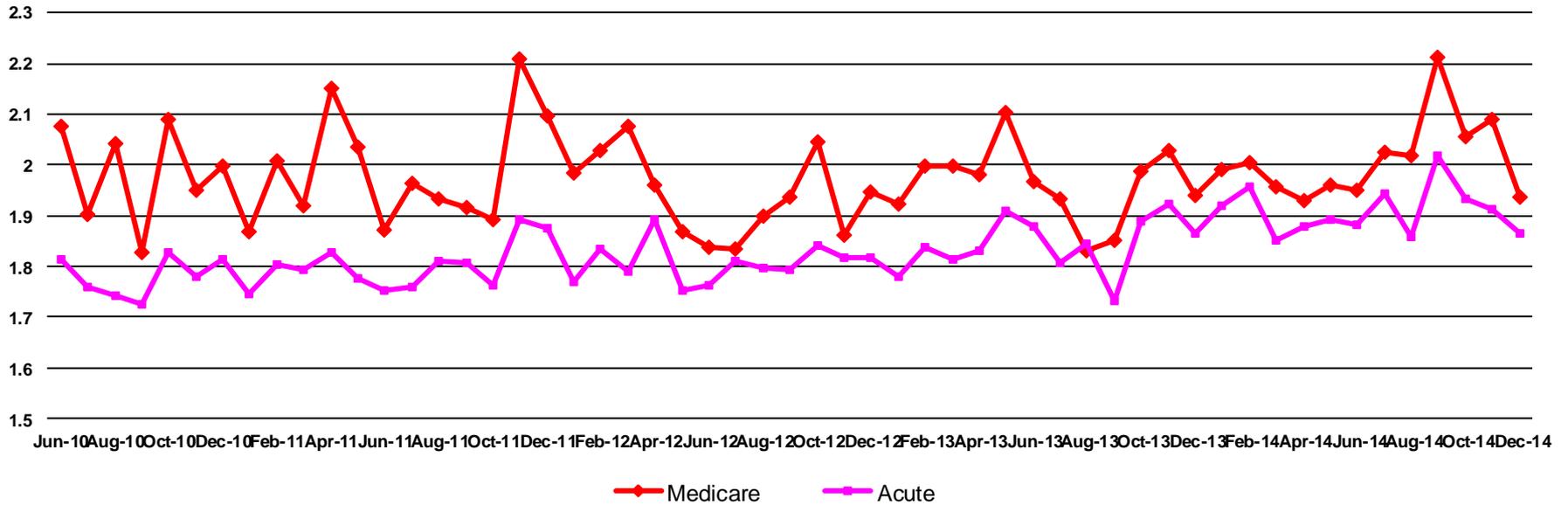


# Length of Stay Index – Surgical

January 2012 through December 2014



# Case Mix Index



# Inpatient Surgeries – by Clinical Department

Fiscal Year to Date December 2014

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Cardiothoracic	521	534	538	(13)	-2.4% ○	(17)	-3.2% ●
Dentistry	124	99	92	25	25.8% ●	32	34.8% ●
General Surgery	1,645	1,774	1,745	(129)	-7.3% ●	(100)	-5.7% ●
Gynecology	401	347	334	54	15.6% ●	67	20.1% ●
Neurosurgery	910	916	876	(6)	-0.7% ○	34	3.9% ●
Ophthalmology	57	63	60	(6)	-9.5% ●	(3)	-5.0% ●
Orthopedics	1,484	1,542	1,503	(58)	-3.8% ●	(19)	-1.3% ○
Otolaryngology	370	346	311	24	6.9% ●	59	19.0% ●
Radiology – Interventional	48	47	43	1	2.3% ○	5	11.6% ●
Urology w/ Procedure Ste.	405	446	441	(41)	-9.2% ●	(36)	-8.2% ●
<b>Total</b>	<b>5,965</b>	<b>6,114</b>	<b>5,943</b>	<b>(149)</b>	<b>-2.4%</b> ○	<b>22</b>	<b>0.4%</b> ○

Solid Organ Transplants	153	177	139	(24)	-13.6% ●	14	10.1% ●
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 Greater than 2.5% Favorable	 Neutral	 Greater than 2.5% Unfavorable
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# Outpatient Surgeries – by Clinical Department

Fiscal Year to Date December 2014

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Cardiothoracic	30	36	38	(6)	-16.3% ●	(8)	-21.1% ●
Dentistry	299	345	317	(46)	-13.4% ●	(18)	-5.7% ●
Dermatology	15	18	21	(3)	-18.7% ●	(6)	-28.6% ●
General Surgery	1,364	1,442	1,399	(78)	-5.4% ●	(35)	-2.5% ○
Gynecology	413	417	406	(4)	-0.9% ○	7	1.7% ○
Internal Medicine	2	3	4	(1)	-33.3% ●	(2)	-50.0% ●
Neurosurgery	466	378	350	88	23.3% ●	116	33.1% ●
Ophthalmology	1,876	1,965	1,964	(89)	-4.5% ●	(88)	-4.5% ●
Orthopedics	2,116	2,175	2,109	(59)	-2.7% ●	7	0.3% ○
Otolaryngology	1,224	1,272	1,231	(48)	-3.8% ●	(7)	-0.6% ○
Pediatrics	1	1	1	0	0.0% ○	0	0.0% ○
Radiology – Interventional	32	12	15	20	164.0% ●	17	113.3% ●
Urology w/ Procedure Ste.	1,005	1,132	1,052	(127)	-11.2% ●	(47)	-4.5% ●
<b>Total</b>	<b>8,843</b>	<b>9,196</b>	<b>8,907</b>	<b>(353)</b>	<b>-3.8% ●</b>	<b>(64)</b>	<b>-0.7% ○</b>

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

# Emergency Department

## Fiscal Year to Date December 2014

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
ED Visits	28,789	27,709	30,476	1,080	3.9% 	(1,687)	-5.5% 
ED Admits	8,527	8,418	9,256	109	1.3% 	(729)	-7.9% 
ED Conversion Factor	29.6%	30.4%	30.4%		-2.5% 		-2.5% 
ED Admits / Total Admits	52.8%	52.7%	58.9%		0.2% 		-10.4% 

		
Greater than 2.5% Favorable	Neutral	Greater than 2.5% Unfavorable

# Clinic Visits by Specialty

Fiscal Year to Date December 2014

Operating Review (YTD)	Actual	Budget	Variance to Budget	Variance to Budget %	
Burn Clinic	1,592	1,734	(142)	-8.2%	●
Center for Disabilities & Development	4,512	4,982	(470)	-9.4%	●
Center for Digestive Disease	8,882	9,652	(770)	-8.0%	●
Clinical Cancer Center	24,435	27,244	(2,809)	-10.3%	●
Dermatology	11,610	11,933	(323)	-2.7%	●
General Surgery	8,455	8,756	(301)	-3.4%	●
Hospital Dentistry	7,796	8,308	(512)	-6.2%	●
Internal Medicine	14,810	16,186	(1,376)	-8.5%	●
Neurology	7,324	6,418	906	14.1%	●
Neurosurgery	5,892	4,676	1,216	20.6%	●
Obstetrics/Gynecology	24,239	25,185	(946)	-3.8%	●
Ophthalmology	32,024	33,691	(1,667)	-4.9%	●
Orthopedics	36,128	37,849	(1,721)	-4.5%	●
Otolaryngology	10,062	9,688	374	3.9%	●
Pediatrics	28,862	29,325	(463)	-1.6%	○
Primary Care (non-IRL)	89,150	85,439	3,711	4.3%	●
Psychiatry	16,990	17,894	(904)	-5.1%	●
Urology	7,259	7,739	(480)	-6.2%	●
UI Heart Center	8,758	9,081	(323)	-3.6%	●
IRL	67,016	61,498	5,518	9.0%	●
<b>Total</b>	<b>415,796</b>	<b>417,278</b>	<b>(1,482)</b>	<b>-0.4%</b>	○



Greater than 2.5% Favorable



Neutral



Greater than 2.5% Unfavorable

# Clinic Visits by Location

Fiscal Year to Date December 2014

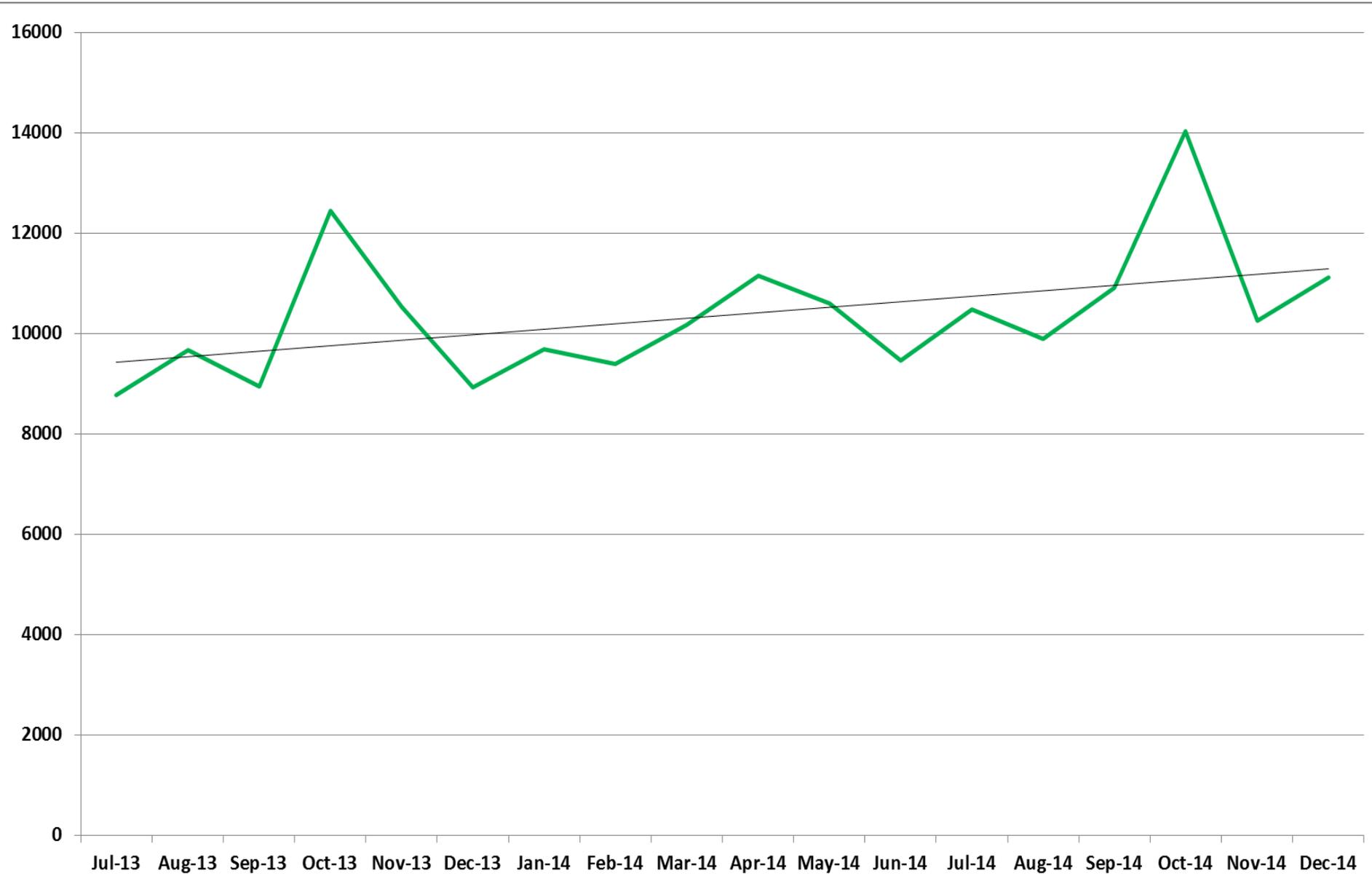
Operating Review (YTD)	FY15 Actual				FY14 Actual *				Variance to Prior Year	%
	On-Site	IRL	UICMS & QuickCare	Total	On-Site	IRL	UICMS & QuickCare	Total		
Family Medicine	25,656		63,494	89,150	28,394		59,052	87,446	1,704	2.0% 
General Internal Medicine		14,245		14,245		14,019		14,019	226	1.6% 
Pediatrics		13,996		13,296		12,696		12,696	1,300	10.2% 
<i>Subtotal - Primary Care</i>	<i>25,656</i>	<i>28,241</i>	<i>63,494</i>	<i>117,291</i>	<i>28,394</i>	<i>26,715</i>	<i>59,052</i>	<i>114,161</i>	<i>3,230</i>	<i>2.8%</i> 
Burn Clinic	1,592			1,592	1,570			1,570	22	1.4% 
Center for Disabilities & Development	4,512			4,512	4,517			4,517	(5)	-0.1% 
Center for Digestive Disease	8,882	1,741		10,623	9,975	1,897		11,872	(1,249)	-10.5% 
Clinical Cancer Center	24,435			24,435	27,806			27,806	(3,371)	-12.2% 
Dermatology	11,610	4,312		15,922	10,953	2,808		13,761	2,161	15.7% 
General Surgery	8,455			8,455	7,979			7,979	476	6.0% 
Hospital Dentistry	7,796			7,796	8,495			8,495	(699)	-8.2% 
Internal Medicine	14,810	4,036		18,846	17,940	2,491		20,431	(1,585)	-7.8% 
Neurology	7,324			7,324	6,628			6,628	696	10.5% 
Neurosurgery	5,892			5,892	5,882			5,882	10	0.2% 
Obstetrics/Gynecology	24,239	11,813		36,052	24,926	9,737		34,663	1,389	4.0% 
Ophthalmology	32,024	5,474		37,498	32,497	3,676		36,173	1,325	3.7% 
Orthopedics	36,128	148		36,276	36,726			36,726	(450)	-1.2% 
Otolaryngology	10,062	2,496		12,558	10,125	3,323		13,448	(890)	-6.6% 
Pediatrics	28,862			28,862	26,606			26,606	2,256	8.5% 
Psychiatry	16,990			16,990	16,136			16,136	854	5.3% 
Urology	7,259	2,761		10,020	7,022	2,976		9,998	22	0.2% 
UI Heart Center	8,758	5,994		14,752	8,101	5,639		13,740	1,012	7.4% 
<i>Subtotal – Specialty Care</i>	<i>259,630</i>	<i>38,775</i>		<i>298,405</i>	<i>263,883</i>	<i>32,547</i>		<i>296,431</i>	<i>1,974</i>	<i>0.7%</i> 
<b>Total</b>	<b>285,286</b>	<b>67,016</b>	<b>63,494</b>	<b>415,796</b>	<b>292,277</b>	<b>59,262</b>	<b>59,052</b>	<b>410,592</b>	<b>5,204</b>	<b>1.3%</b> 

\* from ongoing operations  
 Greater than 2.5% Favorable

 Neutral

 Greater than 2.5% Unfavorable

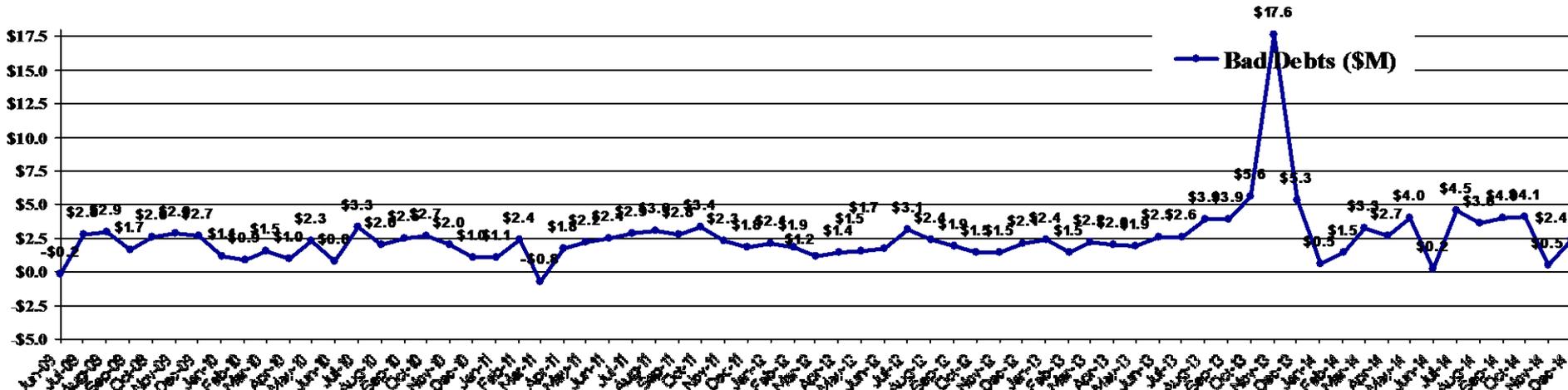
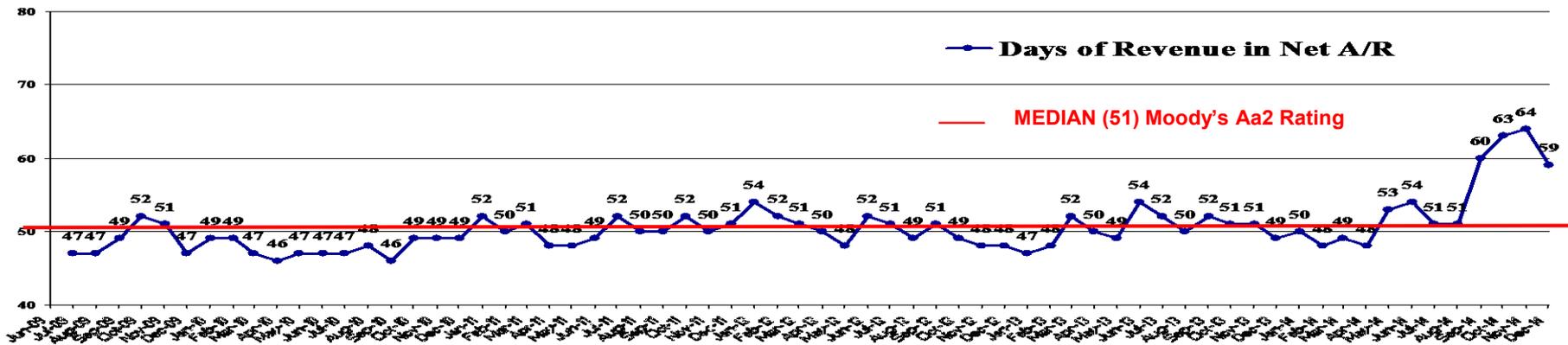
# Iowa River Landing Ambulatory Visits



# Comparative Accounts Receivable

at December 31, 2014

	June 30, 2013	June 30, 2014	December 31, 2014
Net Accounts Receivable	\$161,942,694	\$176,695,824	\$203,183,052
Net Days in AR	54	54	59



# UIHC Comparative Financial Results

December 2014

Dollars in Thousands

<b>NET REVENUES:</b>	<b>Actual</b>	<b>Budget</b>	<b>Prior Year</b>	<b>Variance to Budget</b>	<b>% Variance to Budget</b>	<b>Variance to Prior Year</b>	<b>% Variance to Prior Year</b>
Patient Revenue	\$103,826	\$95,746	\$92,437	\$8,079	8.4%	\$11,389	12.3%
Other Operating Revenue	4,159	4,367	3,997	(207)	-4.8%	162	4.1%
<b>Total Revenue</b>	<b>\$107,985</b>	<b>\$100,113</b>	<b>\$96,434</b>	<b>\$7,872</b>	<b>7.9%</b>	<b>\$11,551</b>	<b>12.0%</b>

## EXPENSES:

Salaries and Wages	\$50,701	\$49,828	\$48,349	\$873	1.8%	\$2,352	4.9%
General Expenses	44,117	42,280	38,657	1,836	4.3%	5,460	14.1%
Operating Expense before Capital	\$94,817	\$92,108	\$87,006	\$2,709	2.9%	\$7,811	9.0%
<b>Cash Flow Operating Margin</b>	<b>\$13,168</b>	<b>\$8,005</b>	<b>\$9,428</b>	<b>\$5,163</b>	<b>64.5%</b>	<b>\$3,740</b>	<b>39.7%</b>
Capital- Depreciation and Amortization	6,430	6,720	6,541	(290)	-4.3%	(111)	-1.7%
Total Operating Expense	\$101,247	\$98,828	\$93,547	\$2,419	2.4%	\$7,700	8.2%

<b>Operating Income</b>	<b>\$6,738</b>	<b>\$1,285</b>	<b>\$2,887</b>	<b>\$5,453</b>	<b>424.2%</b>	<b>\$3,851</b>	<b>133.4%</b>
<b>Operating Margin %</b>	<b>6.2%</b>	<b>1.3%</b>	<b>3.0%</b>		<b>4.9%</b>		<b>3.2%</b>
Gain (Loss) on Investments	2,172	2,111	521	61	2.9%	1,650	316.8%
Other Non-Operating	422	(740)	254	1,162	157.1%	167	65.7%
<b>Net Income</b>	<b>\$9,332</b>	<b>\$2,656</b>	<b>\$3,662</b>	<b>\$6,676</b>	<b>251.3%</b>	<b>\$5,670</b>	<b>154.8%</b>
<b>Net Margin %</b>	<b>8.4%</b>	<b>2.6%</b>	<b>3.8%</b>		<b>5.8%</b>		<b>4.6%</b>

\* Gain/(Loss) on Investments based on information available at close. Final investment return for this period is reflected in Fiscal Year to Date returns in the subsequent reporting cycle.

# UIHC Comparative Financial Results

Fiscal Year to Date December 2014

Dollars in Thousands

<b>NET REVENUES:</b>	<b>Actual</b>	<b>Budget</b>	<b>Prior Year</b>	<b>Variance to Budget</b>	<b>% Variance to Budget</b>	<b>Variance to Prior Year</b>	<b>% Variance to Prior Year</b>
Patient Revenue	\$613,306	\$594,826	\$561,782	\$18,480	3.1%	\$51,525	9.2%
Other Operating Revenue	26,350	26,278	24,875	71	0.3%	1,475	5.9%
<b>Total Revenue</b>	<b>\$639,656</b>	<b>\$621,105</b>	<b>\$586,657</b>	<b>\$18,551</b>	<b>3.0%</b>	<b>\$52,999</b>	<b>9.0%</b>

## EXPENSES:

Salaries and Wages	\$298,676	\$303,204	\$288,517	(\$4,528)	-1.5%	\$10,159	3.5%
General Expenses	265,559	262,630	243,079	2,929	1.1%	22,480	9.2%
Operating Expense before Capital	\$564,234	\$565,834	\$531,596	(\$1,600)	-0.3%	\$32,638	6.1%
<b>Cash Flow Operating Margin</b>	<b>\$75,422</b>	<b>\$55,271</b>	<b>\$55,061</b>	<b>\$20,151</b>	<b>36.5%</b>	<b>\$20,361</b>	<b>37.0%</b>
Capital- Depreciation and Amortization	37,318	40,318	37,085	(3,000)	-7.4%	233	0.6%
Total Operating Expense	\$601,552	\$606,152	\$568,681	(\$4,600)	-0.8%	\$32,871	5.8%

<b>Operating Income</b>	<b>\$38,104</b>	<b>\$14,952</b>	<b>\$17,976</b>	<b>\$23,151</b>	<b>154.8%</b>	<b>\$20,127</b>	<b>112.0%</b>
<b>Operating Margin %</b>	<b>6.0%</b>	<b>2.4%</b>	<b>3.1%</b>		<b>3.6%</b>		<b>2.9%</b>
Gain on Investments	1,561	12,666	16,812	(11,105)	-87.7%	(15,252)	-90.7%
Other Non-Operating	(3,406)	(4,439)	(5,985)	1,033	23.3%	2,579	43.1%
<b>Net Income</b>	<b>\$36,258</b>	<b>\$23,179</b>	<b>\$28,803</b>	<b>\$13,079</b>	<b>56.4%</b>	<b>\$7,456</b>	<b>25.9%</b>
<b>Net Margin %</b>	<b>5.7%</b>	<b>3.7%</b>	<b>4.8%</b>		<b>2.0%</b>		<b>0.9%</b>

\* Gain/(Loss) on Investments based on information available at close. Final investment return for this period is reflected in Fiscal Year to Date returns in the subsequent reporting cycle.



## ***Health Information Technology Driving Clinical Value***

Douglas J. Van Daele, MD, FACS  
Chief Medical Information Officer  
Associate Dean for Clinical Affairs

Lee T. Carmen  
Associate VP for Information Systems

## ● UI Health Care recent IT History

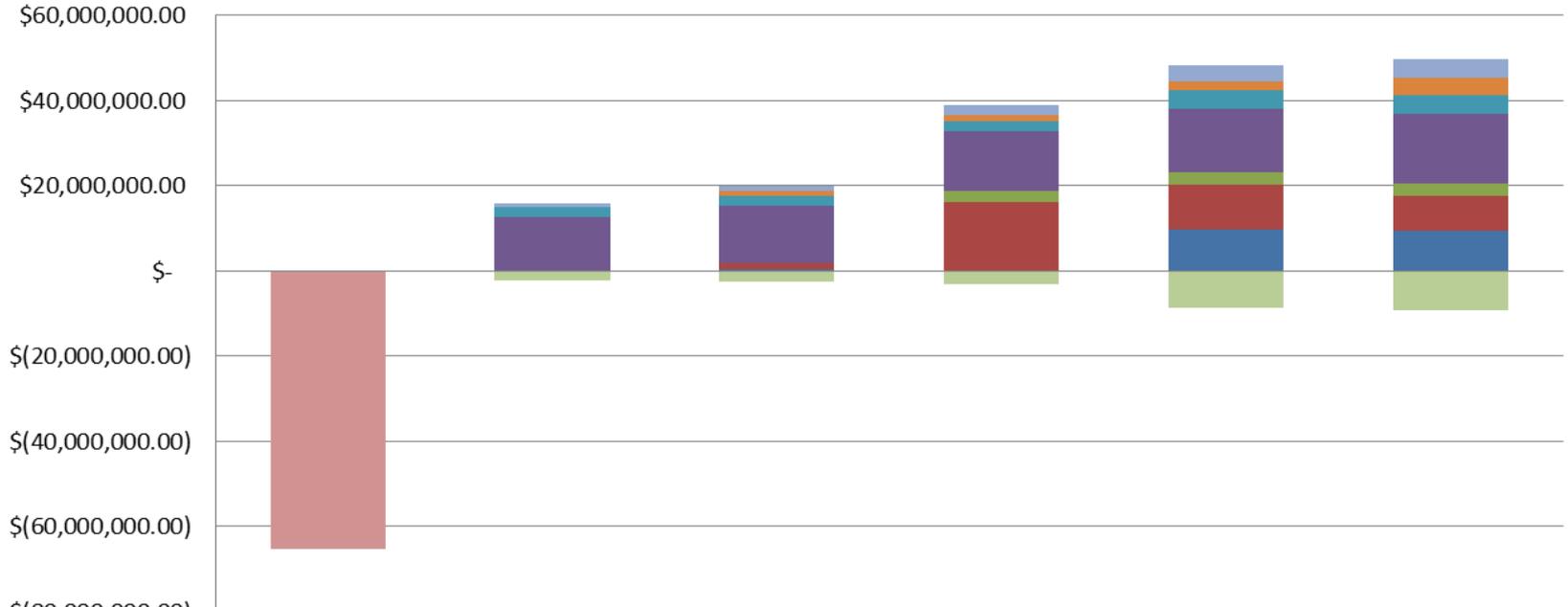
- Engaged with Epic with go-lives starting in 2008
- Initial investment ~\$63M
- What was the return on investment?
  - At a 3.5% Discount Rate, Net Present Value NPV = \$82.1M, Internal Rate of Return IRR = 33%

## ● HIMSS Analytics

- Global Health IT Organization Provides Scoring of Automation
  - Stage 7 Inpatient (3.4% of 5,453 sites)
  - Stage 7 Outpatient (4.4% of 27,000 sites)
- Davies Enterprise Award (1 of 35 sites since 1995)
  - Recognizes excellence in driving clinical value using Health IT



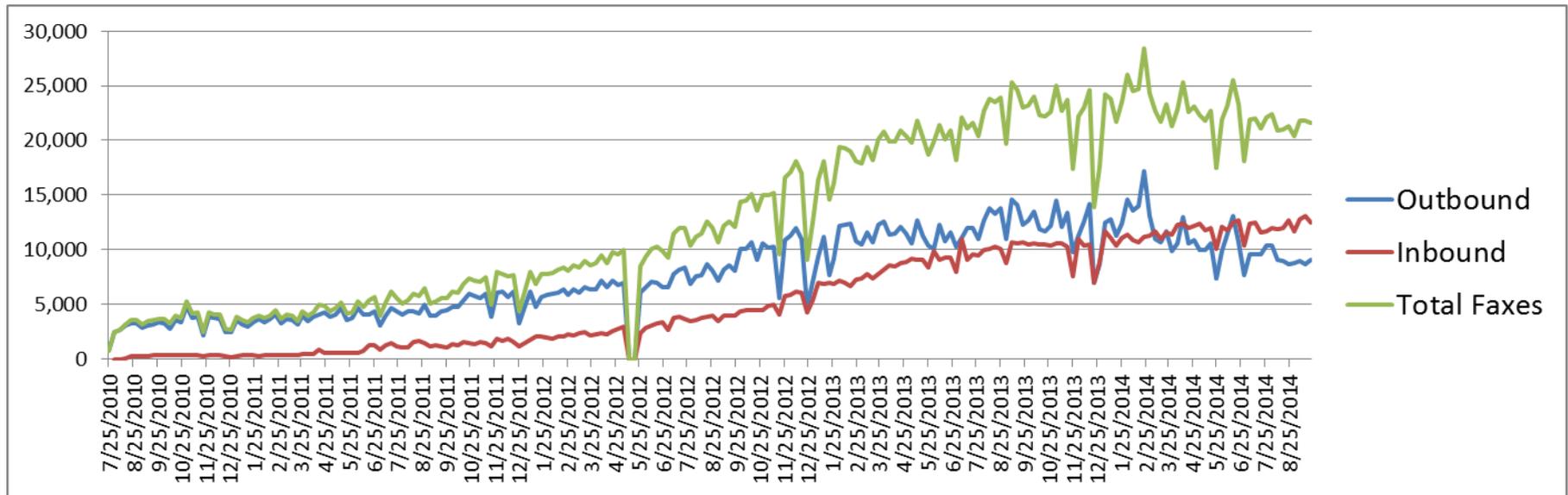
# Annual Benefits



	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Operating Costs		\$(2,180,397.13)	\$(2,616,476.56)	\$(3,139,771.87)	\$(8,663,380.37)	\$(9,250,340.82)
Initial Investment	\$(65,295,268)					
Paper and Voice Communications		\$652,000	\$1,298,723	\$2,506,429	\$3,723,059	\$4,573,395
Patient Safety		\$141,837	\$1,072,143	\$1,323,666	\$2,120,143	\$4,042,570
Lab Test Utilization		\$2,278,860	\$2,349,340	\$2,422,000	\$4,320,446	\$4,320,446
Reduced Labor Costs		\$12,632,007	\$13,557,333	\$14,107,304	\$15,013,386	\$16,534,228
Grants		\$-	\$-	\$2,566,666	\$2,916,666	\$2,916,666
Government Incentives		\$-	\$1,437,932	\$16,059,799	\$10,333,797	\$7,966,771
Increased Revenue		\$-	\$239,000	\$-	\$9,722,484	\$9,453,997

# Administrative Savings

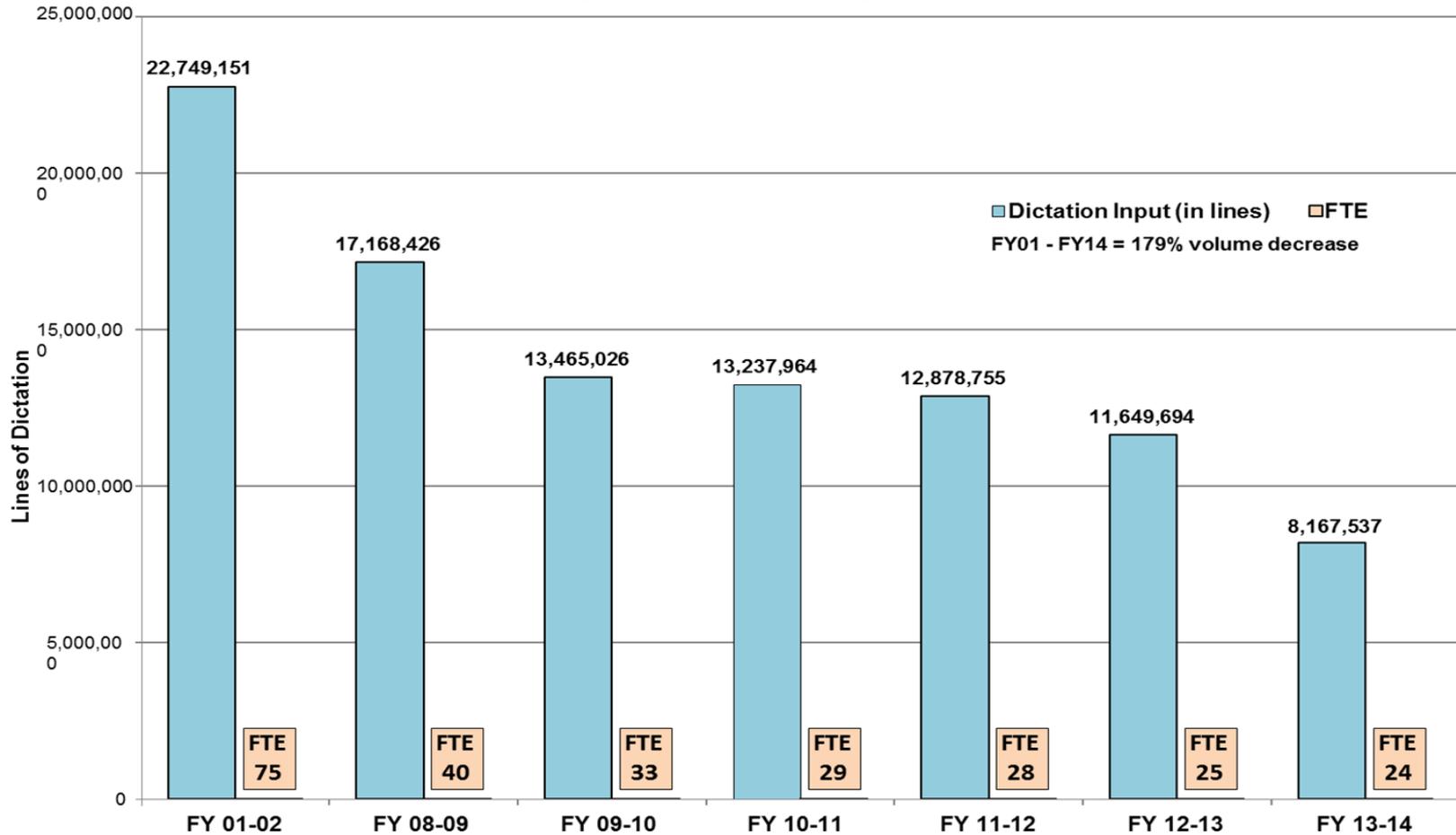
- EHR and Outlook integrated with e-fax serving technologies reduced reliance on paper
- Significant reduction in paper usage of \$8.8M over 5 years



# Administrative Savings

- A reduction in chart control staff of 68.5 FTE's led to savings of \$22.3M over 5 years
- Transcription services reduction led to \$6.6M savings

Centralized Transcription Services  
Yearly Dictation Input Comparison



FY01-02: \$2.2 million in outsource transcription assistance  
FY13-14: \$163,600 in outsource transcription assistance

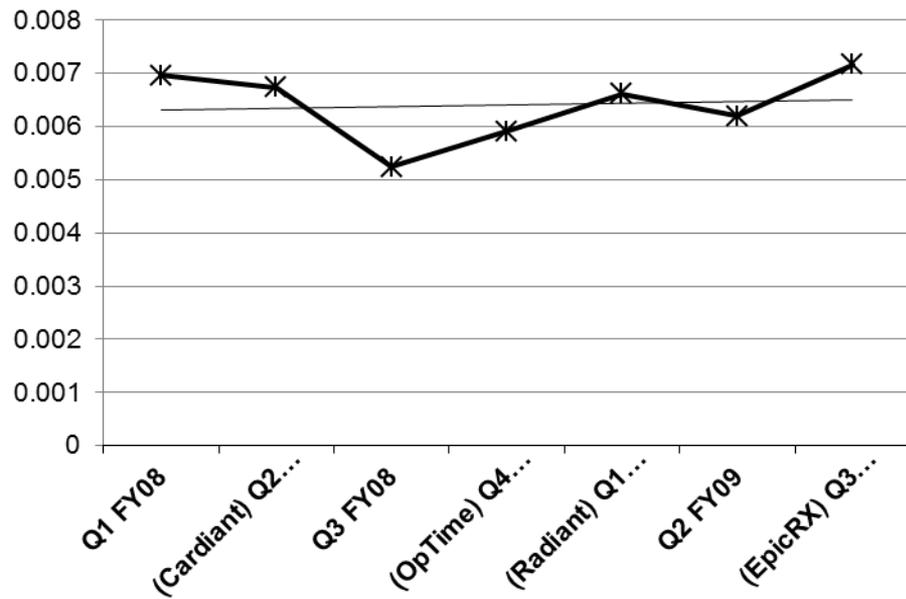
## ● Device Integration

- 13 types of devices feeding data directly to Epic
- Based on a reduction in staff time to complete manual entry tasks, the following three items reflected 5 year savings:
  - Monitors - \$37M
  - Ventilators - \$1.9M
  - AccuChecks - \$1.4M

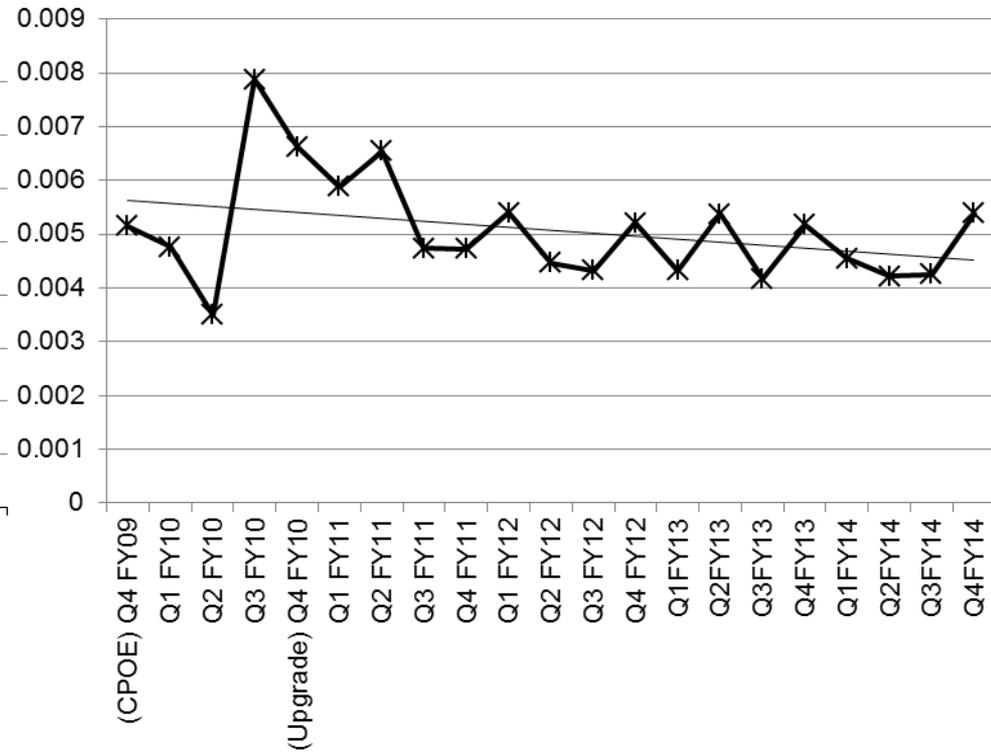
<i>ICU MONITOR ILLUSTRATION (YEARLY)</i>	
Seconds to Manually enter Column of Data	75
Seconds to Verify Column of Data	10
Savings in seconds for a Column of Data	65
Number of Columns per Patient Per Day (4xhr 24Hours)	96
Savings in seconds per patient per day	6,240
Savings in hours per patient per day	1.73
Count of Monitors Sending Epic Data	269
Savings overall per day in Hours	466
Annual Hours Savings	170,187
Average NRS Rate with Fringe	\$ 46.37
Annual Amount of Savings	\$ 7,891,586

## All Medication Error Reduction

### Pre Medication Errors/Patient Days



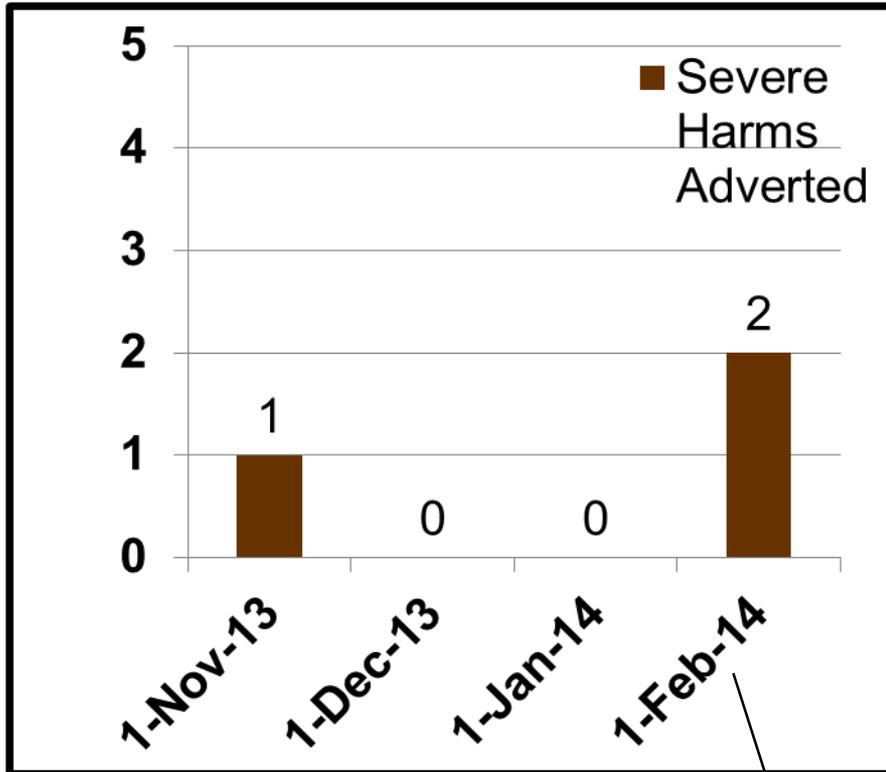
### Medication Errors/Patient Days



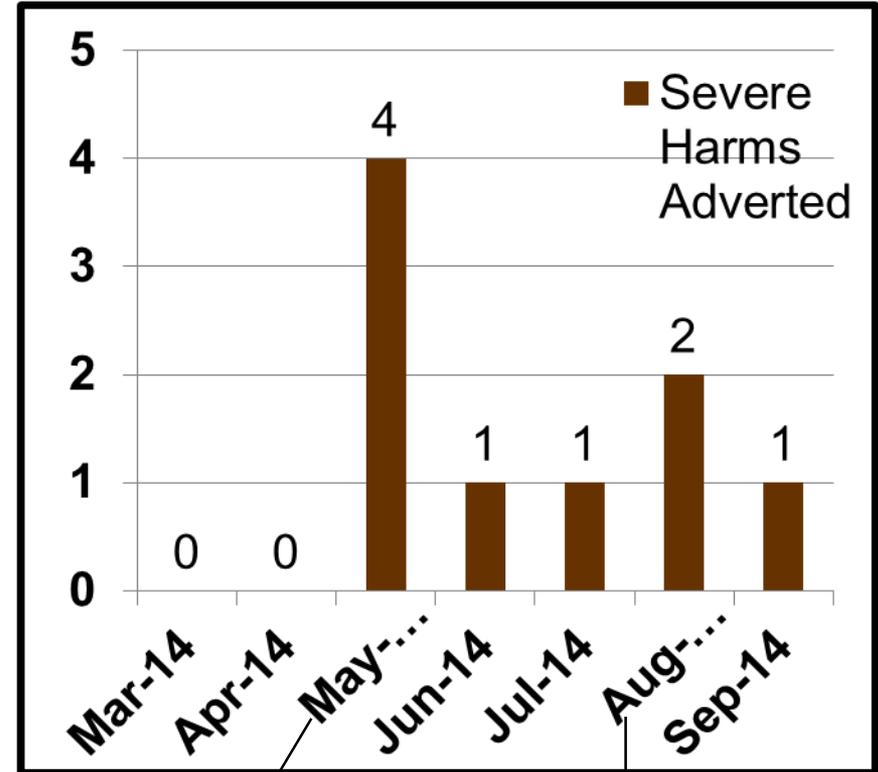
*\*\* Previously using barcode scanning for medication administration*

## Medication Administration Error Avoidance

### Pre-Integration



### Post-Integration



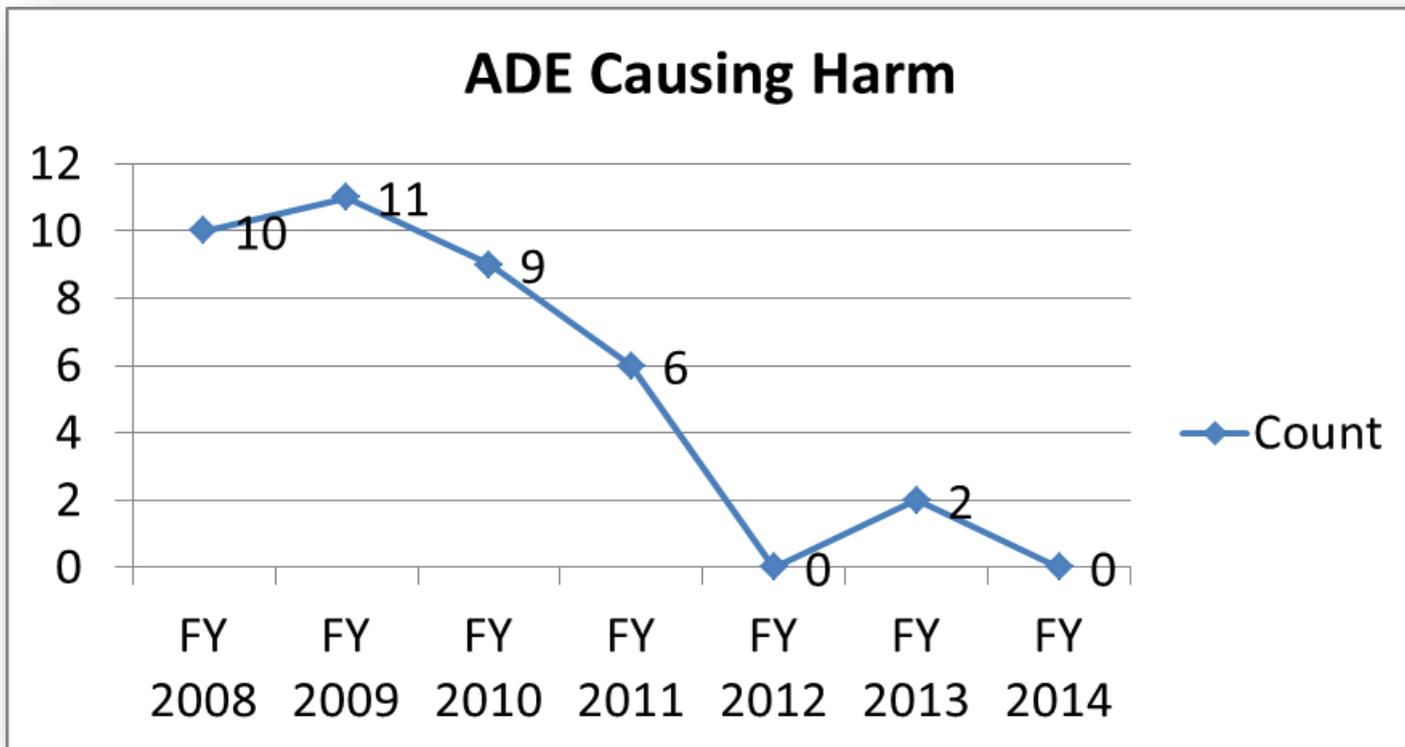
Provides instances within the infusion data of reprogramming events with drugs classified as being high risk being reprogrammed after initially programmed  $\geq 2.5$  times the limit.

**Pilot Unit**

**Weekly add on all non-ICU**

## Adverse Drug Event Reduction

- Based on a conservative estimate of \$2,595 per ADE with an increase in LOS of 2.2 days\*
  - Five year savings over baseline \$7.2M

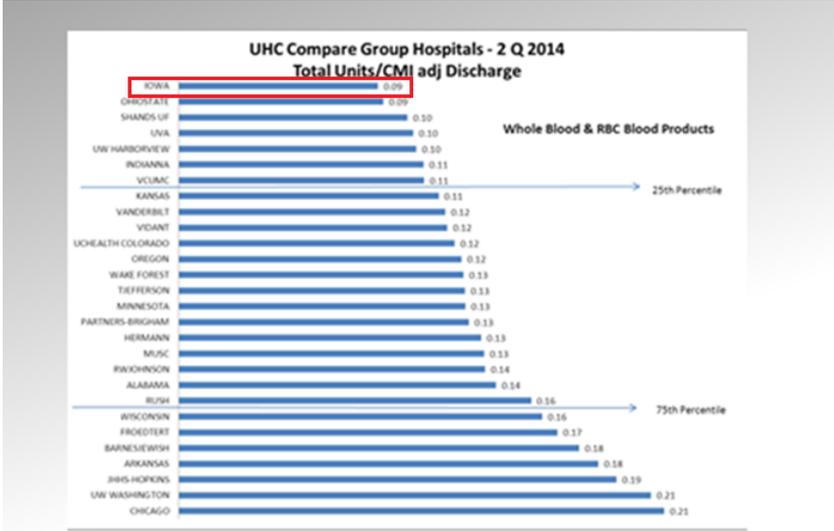
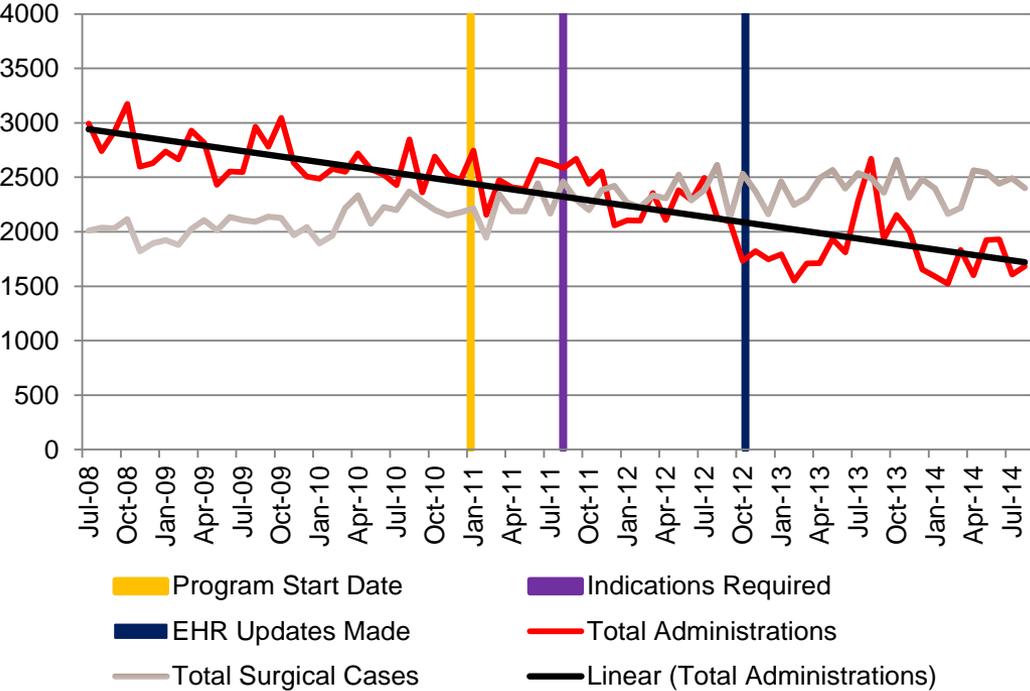


*\*Patient Safety Net events classified as permanent harm, severe permanent harm or death*

- Blood transfusions can be a dangerous and expensive proposition
- Educational program initiated both in the IT system and grand rounds
- Improved:
  - the number of patient blood draws per day
    - alerted ordering providers of duplicates/add on opportunity
  - the number of patient identification errors
    - changed the patient and blood checking workflow within the IT system
  - the number of blood products administered
    - changed the defaults from 1 to 2 units in the IT system

## Savings Over 3 Years of \$18,621,808

### Total Blood Product Administrations Compared With Total Surgical Cases



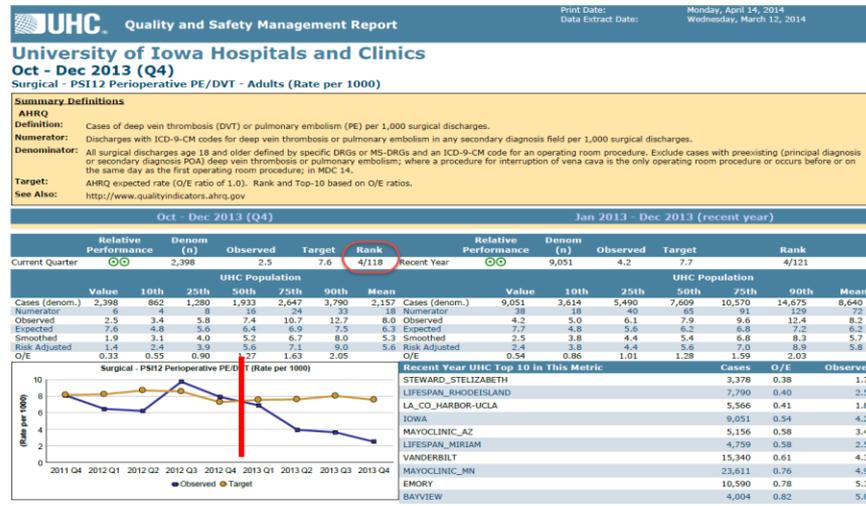


# Clinical Value – DVT

- Q1 2013 -UHC rank 25/116 academic centers - rate of perioperative Deep Vein Thrombosis/Pulmonary Embolism
- Q2 / Q3 tightened up the surgical order sets mandating Deep Vein Thrombosis/Pulmonary Embolism risk assessment
- Q4 turned on 7 Deep Vein Thrombosis/Pulmonary Embolism prevention BPAs across the hospital

Improved ranking from 25<sup>th</sup> to 4<sup>th</sup>

Improved expected ratio from .79 to .33



This patient meets clinical criteria for high DVT risk and has not been prescribed high risk DVT prophylaxis medications or orders. Please consider ordering high risk DVT prophylaxis medications or orders. Subcutaneous heparin is not considered adequate prophylaxis for high-risk patients. ( BPA-id # 1901 )

**DVT pocket card**

If prescribing pharmacological anticoagulation, make sure the patient is not going to undergo an invasive procedure in the near future where this would be contraindicated.

If prescribing warfarin, please also order daily INR testing.

Reference: [Source Attributes](#)

Acknowledge reason:

Risk outweighs benefits  Palliative care patient  Consulting only provider - will refer I...

Place order: enoxaparin (LOVENOX) 40mg injection qd  
 Place order: enoxaparin (LOVENOX) 40mg injection q12 ( if BMI >= 40 )  
 Place order: enoxaparin (LOVENOX) 30mg injection q12  
 Place order: enoxaparin (LOVENOX) 30mg injection qd (if CrCl < 30ml/min)  
 Place order: warfarin (COUMADIN) tablet qPM [INR goal 2.0-3.0]  
 Place order: INR now and qAM  
 Place order: warfarin (COUMADIN) tablet qPM [INR goal 1.5-2.2]

Non-pharmacological DVT/PE management was chosen for this patient on admission. No order for Anti-embolism Device or Ted Hose has been placed. Please place this order. ( BPA-id # 2915 )

Acknowledge reason:

Patient refused  Risks outweigh benefits

Place order: ANTI-EMBOLISM DEVICE  
 Place order: TED HOSE

Nursing has indicated a reason for not using mechanical prophylaxis, and no pharmacological prophylaxis has been ordered. Please reconsider pharmacological prophylaxis or document risk outweighs benefits. ( BPA-id # 2922 )

Reason documented by nursing: **patient refused**

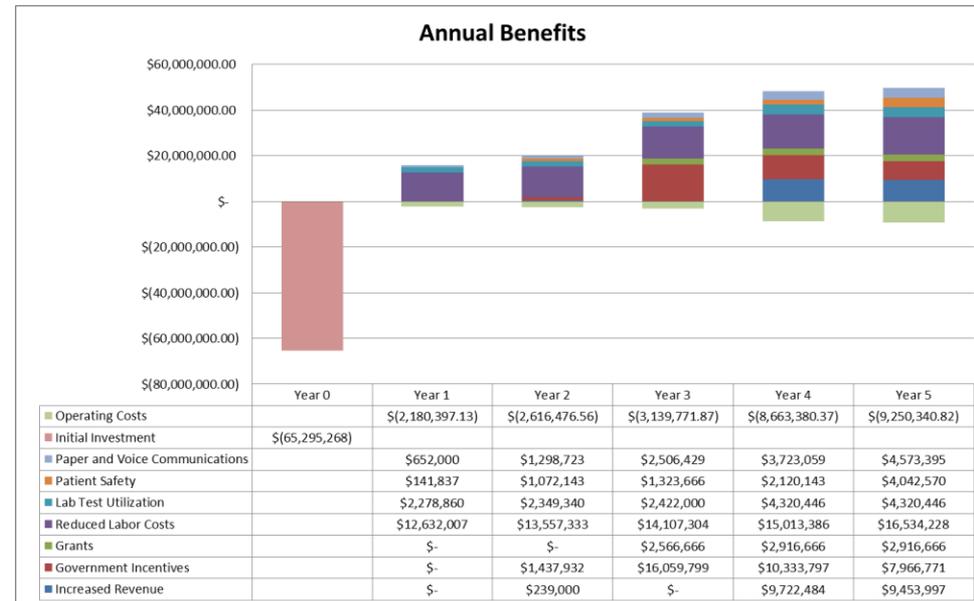
Acknowledge reason:

Will order pharmacological prophylaxis  Pt refused pharmacological prophylaxis  Risks outweigh benefits

Open Order Set: MED:DVT PROPHYLAXIS:INPATIENT [preview](#)

# Health IT Driving Clinical Value Summary

- \$63M investment
  - 159% return on investment in 5 years
- HIMSS global recognition as best in health IT
  - Attracts the highest quality IT workers
- Reduced administrative costs
  - Lessens transcription by nursing
- Foundation to improve care
  - Improved medication safety
  - Improved blood transfusion
  - Improved CAUTI rates
  - Decreased DVT rates



- Next Steps
  - Communication/Smartphone Platform (Voalte)
  - Patient Engagement Platform (Nurse Call, Patient Device Integration)

